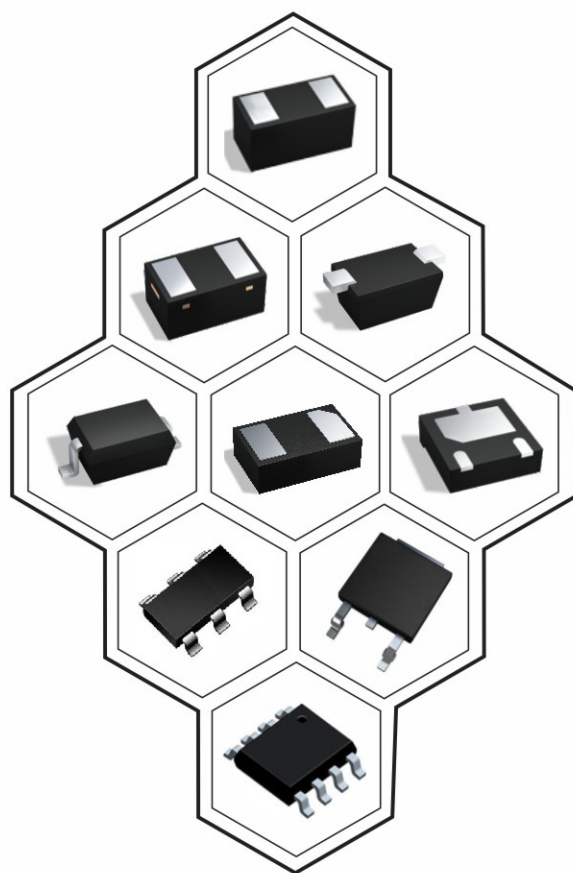




# 广东佳讯电子有限责任公司

Guangdong Jiaxun Electronic Co.,Ltd.



自主品牌 • 卓越品质

合作 共赢 创新

10 年专注 ESD 器件 13 年专业 EMC 团队 1314 + 专心服务





广东佳讯电子有限责任公司是一家专业从事晶体管分立器件研发、生产、销售、技术服务于一体的中外合资高新技术企业。公司拥有高素质的科技研发中心，具备雄厚的技术研发能力，通过不断开发创新，产品营销世界各地，在业界居领导地位。

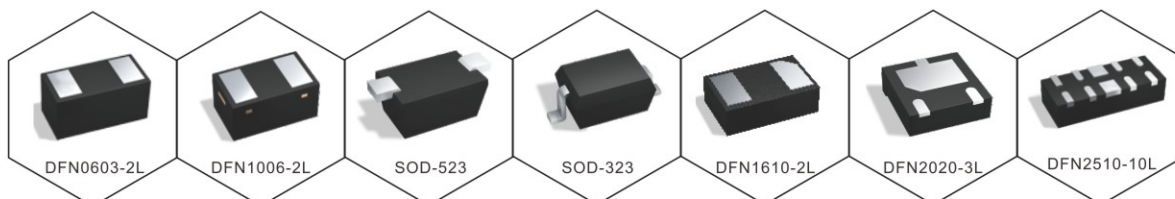
公司主营产品包括半导体ESD、大功率浪涌TVS、MOS管等半导体器件，在汽车电子、安防、医疗、军工产品、通信、计算机/服务器、家电、工业控制、数码消费等领域得到广泛应用。

Guangdong Jiaxun Electronics Co., Ltd. is a Sino foreign joint venture high-tech enterprise specializing in the R & D, production, sales and technical service of semiconductor discrete devices. The company has a high-quality technology R & D center and strong technology R & D capability. Through continuous development and innovation, the company's products are marketed all over the world and occupies a leading position in the industry.

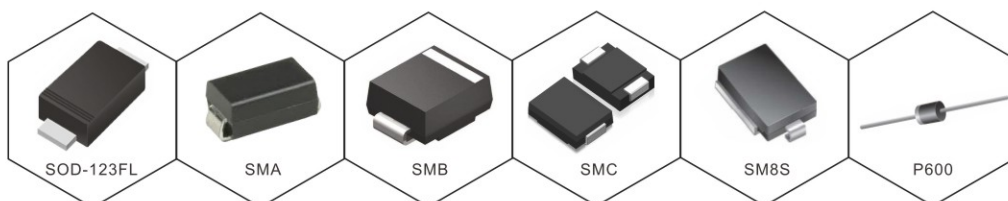
The company's main products include semiconductor ESD, high-power surge TVS, MOS tube, voltage regulator and other semiconductor devices, which are widely used in automotive electronics, security, medical, military products, communications, computer/server, home appliances, industrial control, digital consumption and other fields.

# Product catalog 产品目录

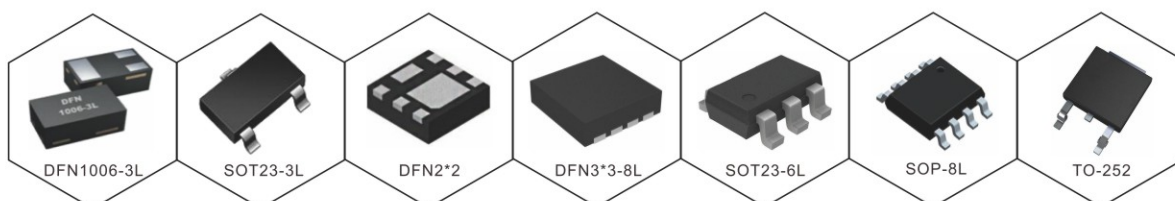
ESD ( 静电保护管 ) Semiconductor ESD ( 半导体ESD )



TVS ( 瞬态抑制器 ) High Power Surge TVS ( 大功率浪涌TVS )



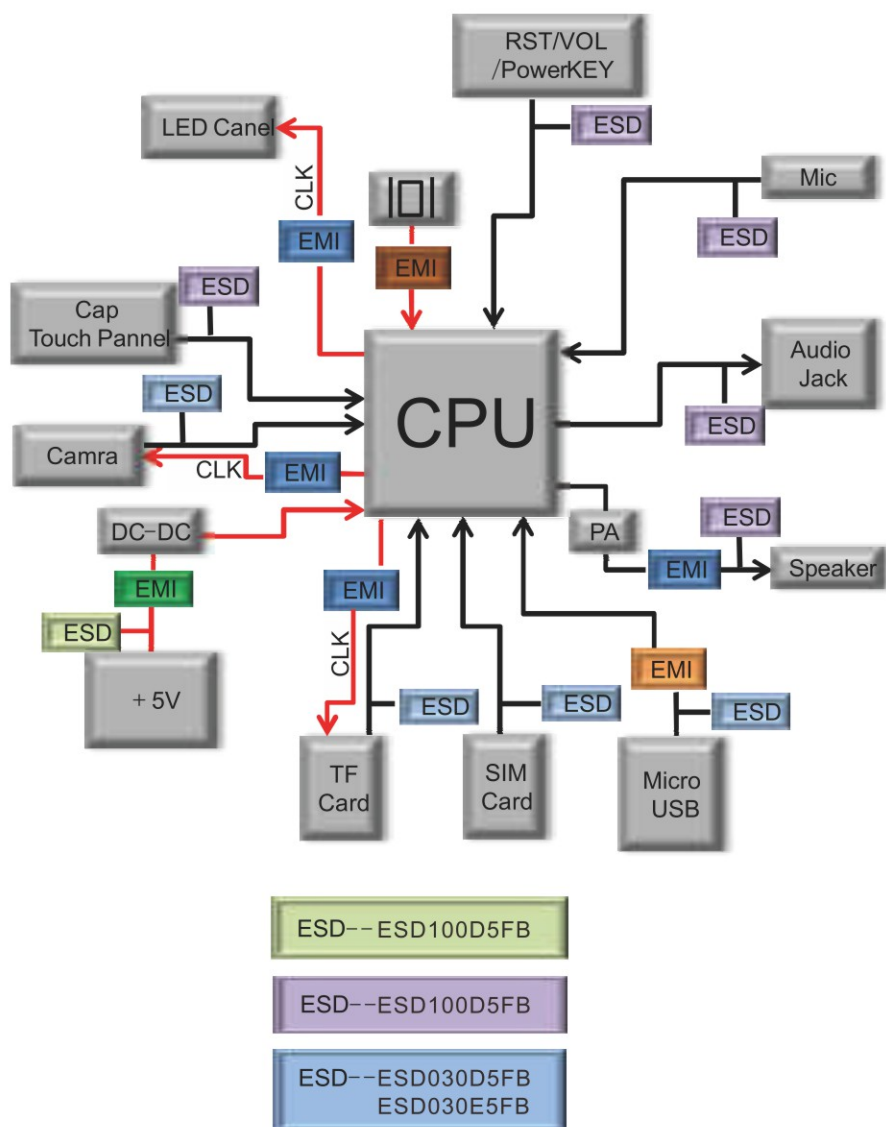
MOS ( MOS管 ) Metal-Oxide-Semiconductor Field-Effect Transistor



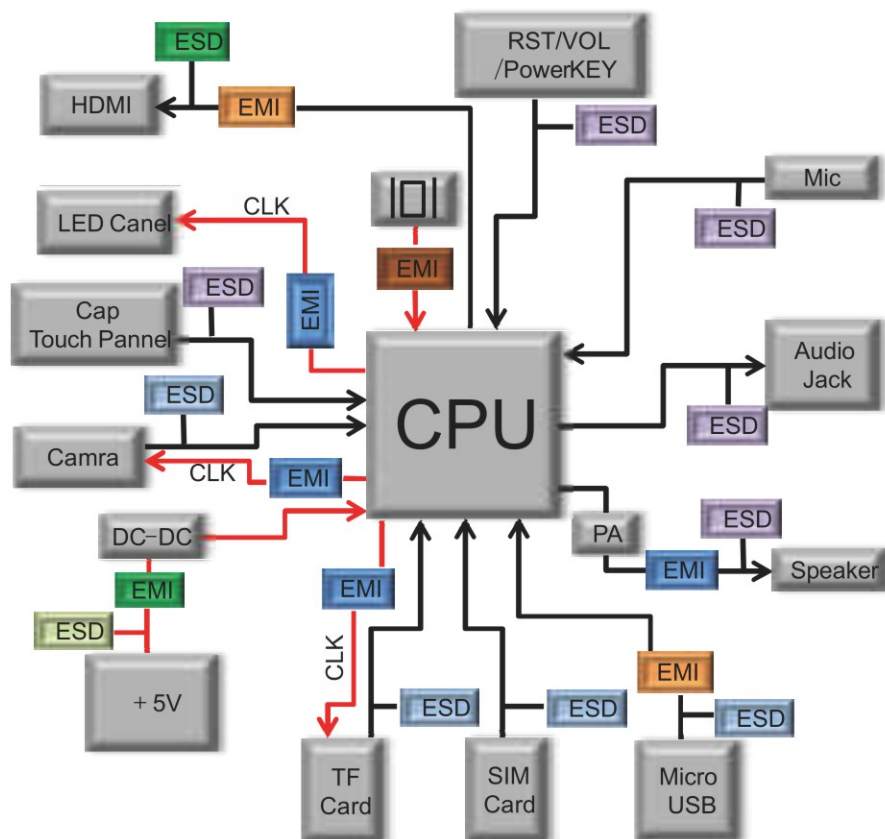
⚠ 注意:

- 本画册所记载的产品规格，因受篇幅限制，只提供主要产品规格。若有变更或其中产品停产，恕不另行通知，请在订购前向我公司销售代表或产品工程师查询。
- 带的 “\*\*” 为我公司常用推荐产品。

## 手机EMC器件设计示意图

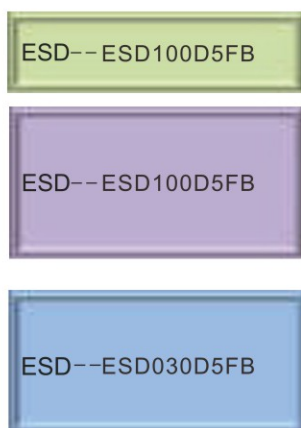
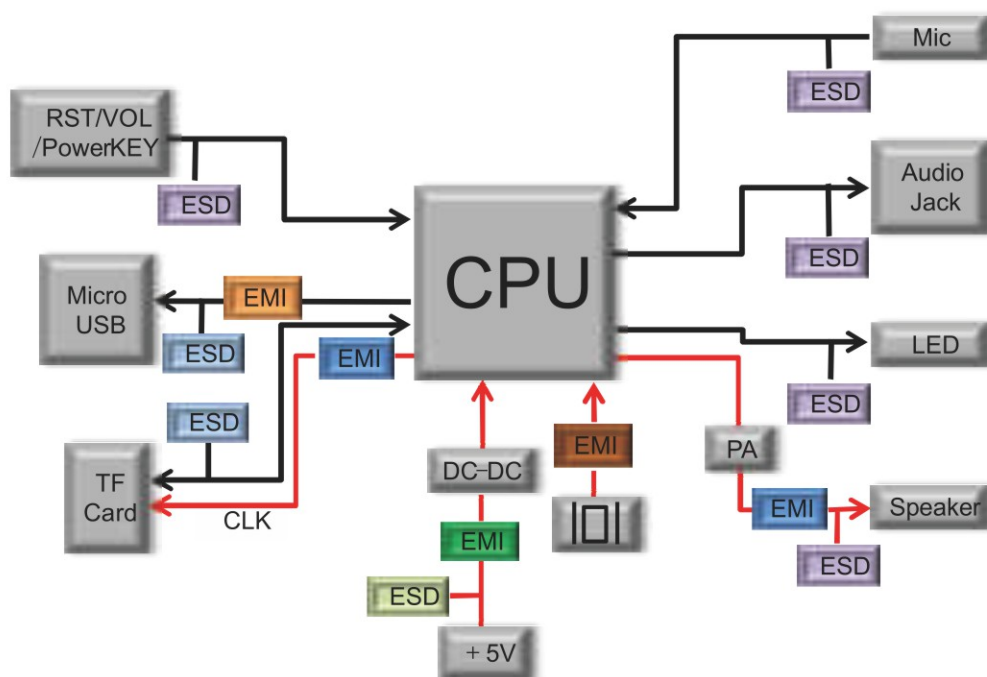


## 平板电脑EMC器件设计示意图

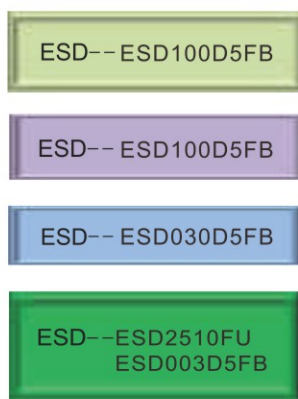
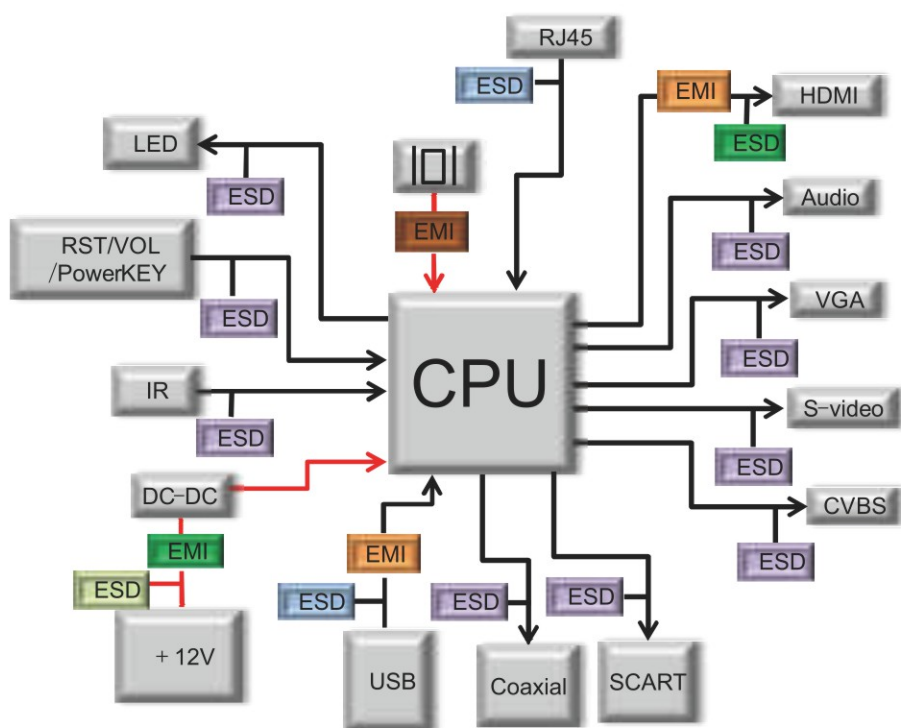


|                               |
|-------------------------------|
| ESD-- ESD100D5FB              |
| ESD--ESD100D5FB               |
| ESD--ESD030D5FB               |
| ESD-- ESD2510FU<br>ESD003D5FB |

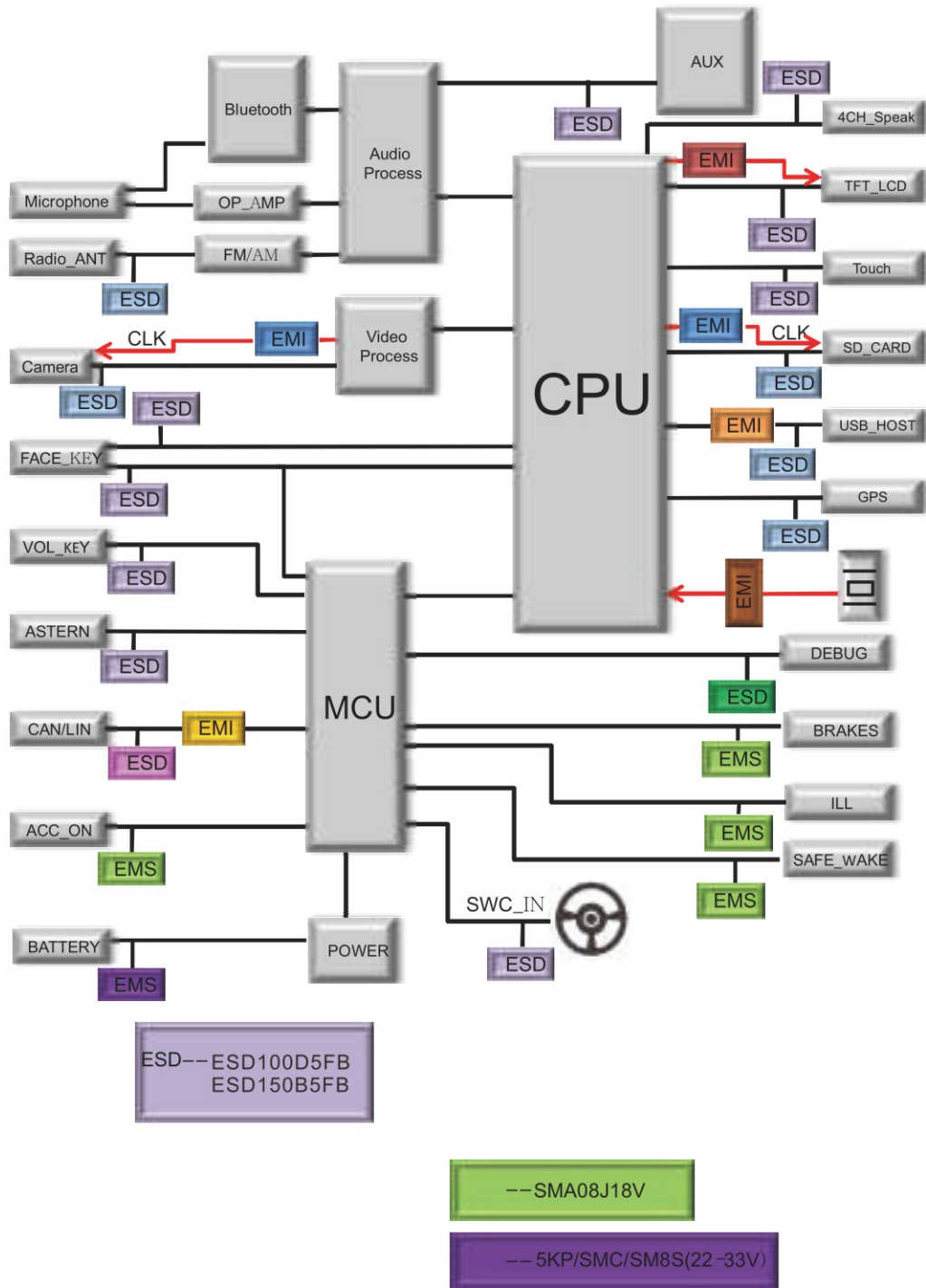
## 蓝牙音响EMC器件设计示意图



## 电视机顶盒EMC器件设计示意图



## 车载设备EMC器件设计示意图

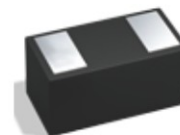


## DFN0603-2L Series

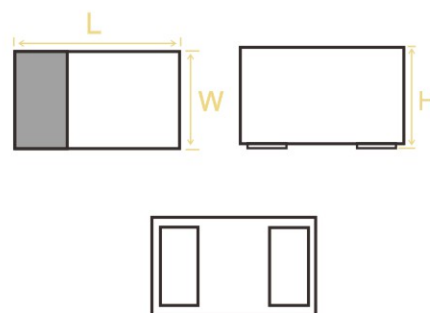
## Descriptions

低导通内阻和快速响应时间；可对电源，信号I/O口受到ESD脉冲冲击时，起到吸收保护效果，封装尺小（0.6mm\*0.3mm），有利于PCB 板的布局。

Low on resistance and fast response time; It can absorb and protect the power supply and signal I / O port from the impact of ESD pulse. The package size is small (0.6 mm \* 0.3 mm), which is beneficial to the layout of PCB.



DFN0603-2L



## Applications

- Cellular handsets and accessories
- Portable electronics
- Wear, Watches

Unit:mm

| L           | W           | H           |
|-------------|-------------|-------------|
| 0.575-0.625 | 0.275-0.325 | 0.280-0.320 |

## Electrical Characteristics(TA=25°C unless other wise noted)

| Part NO.<br>R:Uni-directional<br>A:Bi-directional | Reverse Stand-off Voltage<br>( $V_{RWM}$ )<br>(V) | Reverse Breakdown Voltage<br>( $V_{BR}$ )<br>(V) | Clamping Voltage<br>( $V_{CL}$ )<br>@IPP<br>(V) | Peak Pulse Current<br>( $t_p=8/20\mu s$ )<br>Max Ipp(A) | Junction Capacitance<br>( $C_J$ )<br>(pF) | Package    |
|---------------------------------------------------|---------------------------------------------------|--------------------------------------------------|-------------------------------------------------|---------------------------------------------------------|-------------------------------------------|------------|
| * ESD003E3V3SB                                    | 3.3                                               | 7.0                                              | 7V@1A<br>10V@4A                                 | 4.0                                                     | 0.40                                      | DFN0603-2L |
| * ESD100E3V3FB                                    | 3.3                                               | 4.2                                              | 7V@1A<br>9V@8A                                  | 8.0                                                     | 15.0                                      | DFN0603-2L |
| * ESD150E3V3FB                                    | 3.3                                               | 4.0                                              | 7V@1A<br>8V@8A                                  | 8.0                                                     | 15.0                                      | DFN0603-2L |
| * ESD003E5FB                                      | 5.0                                               | 6.5                                              | 15V@1A<br>25V@4A                                | 4.0                                                     | 0.30                                      | DFN0603-2L |
| * ESD030E5FB                                      | 5.0                                               | 5.5                                              | 9V@1A<br>11.5V@3A                               | 3.0                                                     | 3.0                                       | DFN0603-2L |
| * ESD150E5FB                                      | 5.0                                               | 5.5                                              | 5.9V@1A<br>7.14V@8A                             | 8.0                                                     | 15.0                                      | DFN0603-2L |
| * ESD100E7FB                                      | 7.0                                               | 7.3                                              | 10.5V@1A<br>13V@5A                              | 5.0                                                     | 10.0                                      | DFN0603-2L |
| ESD080E12FB                                       | 12.0                                              | 13.0                                             | 16V@1A<br>20V@6A                                | 6.0                                                     | 8.0                                       | DFN0603-2L |

## ESD——Semiconductor ESD(半导体ESD)

### DFN1006-2L Series

#### Descriptions

低导通内阻和快速响应时间；可对电源，信号I/O口受到ESD脉冲冲击时，起到吸收保护效果，封装尺寸小（1.0mm\*0.6mm）。

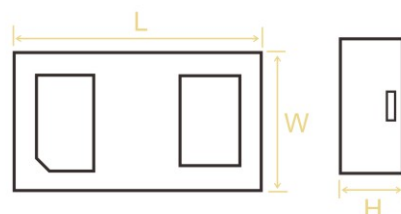
Low on resistance and fast response time; It can absorb and protect the power supply and signal I / O port from the impact of ESD pulse. The package size is small (1.0 mm \* 0.6 mm).

#### Applications

- Cellular phones
- Portable devices
- Digital cameras
- Power supplies



DFN1006-2L



Unit:mm

| L           | W           | H           |
|-------------|-------------|-------------|
| 0.950-1.050 | 0.550-0.650 | 0.465-0.500 |

#### Electrical Characteristics(TA=25°C unless other wise noted)

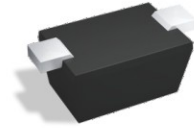
|   | Part NO.<br>R:Uni-directional<br>A:Bi-directional | Reverse<br>Stand-off<br>Voltage<br>(V <sub>RWM</sub> ) | Reverse Breakdown<br>Voltage<br>(V <sub>BR</sub> )<br>(V)Min. | Clamping Voltage<br>(V <sub>CL</sub> )<br>@Max IPP<br>(V) | Peak Pulse<br>Current<br>(tp=8/20μs)<br>Max Ipp(A) | Junction<br>Capacitance<br>(C <sub>J</sub> )<br>(pF)Typ. | Package    |
|---|---------------------------------------------------|--------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------|----------------------------------------------------------|------------|
| * | ESD005D2SB                                        | 2.0                                                    | 6.5                                                           | 5V@1A<br>6V@4A                                            | 4.0                                                | 0.50                                                     | DFN1006-2L |
| * | ESD150D3V3FB                                      | 3.3                                                    | 4.0                                                           | 5V@1A<br>8.5V@8A                                          | 8.0                                                | 15.0                                                     | DFN1006-2L |
| * | ESD003D5FB                                        | 5.0                                                    | 6.0                                                           | 13V@1A<br>20V@4A                                          | 4.0                                                | 0.30                                                     | DFN1006-2L |
| * | ESD030D5FB                                        | 5.0                                                    | 5.5                                                           | 9V@1A<br>12V@2A                                           | 2.0                                                | 3.0                                                      | DFN1006-2L |
| * | ESD080D5FB                                        | 5.0                                                    | 5.5                                                           | 8.5V@1A<br>12V@5A                                         | 5.0                                                | 10.0                                                     | DFN1006-2L |
| * | ESD100D5FB                                        | 5.0                                                    | 5.5                                                           | 7.2V@1A<br>11V@8A                                         | 8.0                                                | 15.0                                                     | DFN1006-2L |
| * | ESD100D7FB                                        | 7.0                                                    | 7.5                                                           | 11.5V@1A<br>13V@5A                                        | 5.0                                                | 15.0                                                     | DFN1006-2L |
| * | ESD080D12FB                                       | 12.0                                                   | 13.0                                                          | 16V@1A<br>24V@8A                                          | 8.0                                                | 10.0                                                     | DFN1006-2L |
| * | ESD500D15FU                                       | 15.0                                                   | 16.0                                                          | 22V@1A<br>30V@26A                                         | 26.0                                               | 50.0                                                     | DFN1006-2L |
| * | ESD250D24FB                                       | 24.0                                                   | 25.5                                                          | 36V@1A<br>46V@4A                                          | 4.0                                                | 20.0                                                     | DFN1006-2L |
| * | ESD200D36FB                                       | 36.0                                                   | 40.0                                                          | 60V@1A<br>75V@2A                                          | 2.0                                                | 20.0                                                     | DFN1006-2L |

## SOD-923 Series

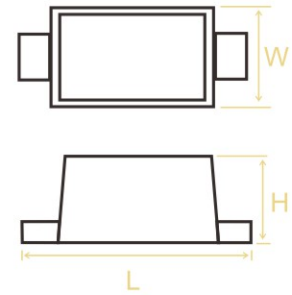
### Descriptions

低导通内阻和极快的响应时间；可对电源，信号I/O口受到ESD脉冲冲击时，起到吸收保护效果，封装尺寸小（1.0mm\*0.6mm），有利于PCB 板的布局。

Low on resistance and fast response time; It can absorb and protect the power supply and signal I / O port from the impact of ESD pulse. The package size is small (1.0 mm \* 0.6 mm), which is beneficial to the layout of PCB.



SOD-923



Unit:mm

| L           | W           | H           |
|-------------|-------------|-------------|
| 0.950-1.050 | 0.550-0.650 | 0.340-0.400 |

### Applications

- Cellular phones
- Portable devices
- Digital cameras
- Power supplies

### Electrical Characteristics(TA=25°C unless other wise noted)

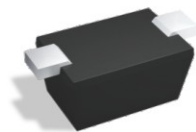
| Part NO.<br>R:Uni-directional<br>A:Bi-directional | Reverse<br>Stand-off<br>Voltage<br>(V <sub>RWM</sub> ) | Reverse Breakdown<br>Voltage<br>(V <sub>BR</sub> )<br>(V)Min. | Clamping Voltage<br>(V <sub>CL</sub> )<br>@Max IPP<br>(V) | Peak Pulse<br>Current<br>(tp=8/20μs)<br>Max Ipp(A) | Junction<br>Capacitance<br>(C <sub>J</sub> )<br>(pF)Typ. | Package |
|---------------------------------------------------|--------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------|----------------------------------------------------------|---------|
| ESD150C5FB                                        | 5.0                                                    | 6.0                                                           | 7.5V@1A<br>12V@8A                                         | 8.0                                                | 15.0                                                     | SOD-923 |

SOD-523 Series

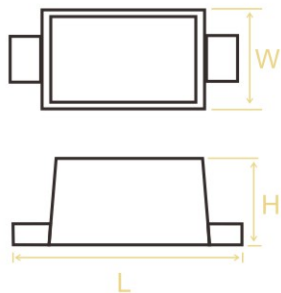
Descriptions

优异的钳位能力，低泄漏，反应时间快，使这些器件成为防护ESD的理想选择，利于电路板有限的设计空间。

Excellent clamping capability, low leakage and fast response time make these devices ideal for ESD protection, which is conducive to the limited design space of circuit board.



SOD-523



Unit:mm

| L           | W           | H           |
|-------------|-------------|-------------|
| 1.500-1.700 | 0.750-0.850 | 0.510-0.770 |

Applications

- Cellular phones
- Portable devices
- Digital cameras
- Power supplies

Electrical Characteristics(TA=25°C unless other wise noted)

| Part NO.<br>R:Uni-directional<br>A:Bi-directional | Reverse<br>Stand-off<br>Voltage<br>(V <sub>RWM</sub> ) | Reverse<br>Breakdown<br>Voltage<br>(V <sub>BR</sub> ) | Clamping Voltage<br>(V <sub>CL</sub> )<br>@ IPP<br>(V) | Peak Pulse Current<br>(tp=8/20μs)<br>Max Ipp(A) | Junction<br>Capacitance<br>(C <sub>J</sub> )<br>(pF)Typ. | Package |
|---------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------|-------------------------------------------------|----------------------------------------------------------|---------|
| ESD150B3V3FB                                      | 3.3                                                    | 4.5                                                   | 7V@1A<br>10V@9A                                        | 9.0                                             | 10.0                                                     | SOD-523 |
| ESD101B3V3FU                                      | 3.3                                                    | 5.0                                                   | 7.5V@1A<br>15V@10A                                     | 10.0                                            | 100.0                                                    | SOD-523 |
| * ESD150B5FB                                      | 5.0                                                    | 5.6                                                   | 9.5V@1A<br>13V@10A                                     | 10.0                                            | 15.0                                                     | SOD-523 |
| * ESD100B7FB                                      | 7.0                                                    | 13.5                                                  | 11.5V@1A<br>13.0V@5A                                   | 5.0                                             | 15.0                                                     | SOD-523 |
| ESD550B12FU                                       | 12.0                                                   | 13.5                                                  | 16.5V@1A<br>25V@5A                                     | 5.0                                             | 25.0                                                     | SOD-523 |
| ESD250B18FU                                       | 18.0                                                   | 22.0                                                  | 30V@1A<br>50V@6A                                       | 6.0                                             | 25.0                                                     | SOD-523 |
| ESD300B24FU                                       | 24.0                                                   | 26.0                                                  | 33V@1A<br>52V@6.5A                                     | 6.50                                            | 25.0                                                     | SOD-523 |

## SOD-323 Series

### Descriptions

较大的峰值电流，能够在吸收静电脉冲的同时，对电源和I/O口的小型浪涌脉冲起到较好的吸收保护效果。

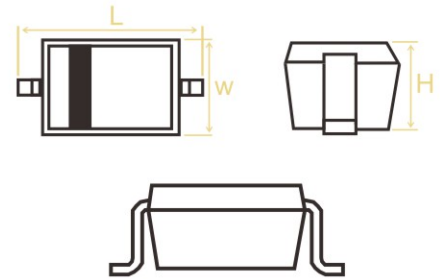
Larger peak current can absorb electrostatic pulse and protect small surge pulse of power supply and I / O port.

### Applications

- Cellular Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants(PDA'S)
- Notebooks, Desktops, and Servers



SOD-323



Unit:mm

| L           | W           | H           |
|-------------|-------------|-------------|
| 2.300-2.700 | 1.150-1.350 | 0.800-1.000 |

### Electrical Characteristics(TA=25°C unless other wise noted)

| Part NO.<br>R:Uni-directional<br>A:Bi-directional | Reverse<br>Stand-off<br>Voltage<br>(V <sub>RWM</sub> ) | Reverse Breakdown<br>Voltage<br>(V <sub>BR</sub> )<br>(V) | Clamping<br>Voltage<br>(V <sub>CL</sub> )<br>@IPP | Peak Pulse Current<br>(tp=8/20μs)<br>Max Ipp(A) | Junction<br>Capacitance<br>(C <sub>J</sub> )<br>(pF)Typ. | Package |
|---------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|-------------------------------------------------|----------------------------------------------------------|---------|
| * ESD005A3V3FB                                    | 3.3                                                    | 4.0                                                       | 9V@1A<br>20V@20A                                  | 20.0                                            | 1.0                                                      | SOD-323 |
| ESD500A3V3FB                                      | 3.3                                                    | 4.0                                                       | 6.5V@1A<br>12V@20A                                | 30.0                                            | 50.0                                                     | SOD-323 |
| * ESD005A5FB                                      | 5.0                                                    | 7.0                                                       | 10V@1A<br>18V@13A                                 | 13.0                                            | 1.0                                                      | SOD-323 |
| * ESD150A5FB                                      | 5.0                                                    | 7.0                                                       | 16V@5A<br>18.6V@9.6A                              | 9.60                                            | 15.0                                                     | SOD-323 |
| * ESD600A5FB                                      | 5.0                                                    | 6.0                                                       | 10V@5A<br>15V@33A                                 | 33.0                                            | 60.0                                                     | SOD-323 |
| ESD100A7FB                                        | 7.0                                                    | 7.8                                                       | 10V@1A<br>12V@5A                                  | 5.0                                             | 10.0                                                     | SOD-323 |
| ESD500A12FU                                       | 12.0                                                   | 13.5                                                      | 18V@1A<br>23V@15A                                 | 15.0                                            | 80.0                                                     | SOD-323 |
| ESD350A15FB                                       | 15.0                                                   | 17.0                                                      | 21V@1A<br>35V@10A                                 | 10.0                                            | 35.0                                                     | SOD-323 |
| ESD250A24FB                                       | 24.0                                                   | 25.5                                                      | 32V@1A<br>52V@6A                                  | 6.0                                             | 25.0                                                     | SOD-323 |
| ESD150A36FB                                       | 36.0                                                   | 43.0                                                      | 45.5V@1A<br>72V@7A                                | 7.0                                             | 15.0                                                     | SOD-323 |

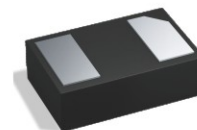
## DFN1610-2L Series

### Descriptions

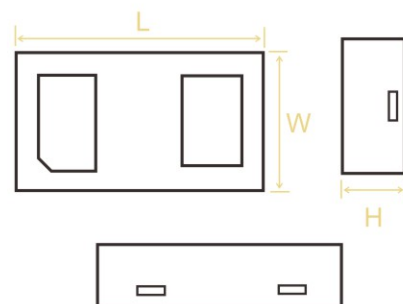
应用于电源，由于电源上经常会出现较大的浪涌电流，常规的ESD器件容易被这种浪涌电流击穿短路。ESD H系列很好的解决了电源上出现的静电和浪涌问题。

ESD H系封装更小，方便PCB板布局。

When applied to power supply, conventional ESD devices are easy to be broken down and short circuited by the surge current due to the large surge current on the power supply. ESD H series solves the problems of static electricity and surge on the power supply. ESD H series package is smaller and convenient for PCB layout.



DFN1610-2L



Unit:mm

| L           | W           | H           |
|-------------|-------------|-------------|
| 1.550-1.650 | 0.950-1.050 | 0.450-0.550 |

### Applications

- DC POWER
- Personal digital assistants (PDA)
- Cellular handsets & Accessories
- Portable devices
- Portable instrumentation

### Electrical Characteristics(TA=25°C unless other wise noted)

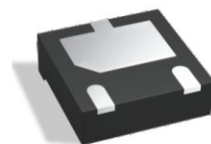
|   | Part NO.<br>R:Uni-directional<br>A:Bi-directional | Reverse<br>Stand-off<br>Voltage<br>(V <sub>RWM</sub> ) | Reverse<br>Breakdown<br>Voltage<br>(V <sub>BR</sub> ) | Clamping Voltage<br>(V <sub>CL</sub> )<br>@ IPP<br>(V) | Peak Pulse Current<br>(tp=8/20μs)<br>Max Ipp(A) | Junction<br>Capacitance<br>(C <sub>J</sub> )<br>(pF)Typ. | Package    |
|---|---------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------|-------------------------------------------------|----------------------------------------------------------|------------|
| * | ESD501H5FU                                        | 5.0                                                    | 5.4                                                   | 6.0V@1A<br>12V@150A                                    | 150.0                                           | 500.0                                                    | DFN1610-2L |
| * | ESD701H7FU                                        | 7.0                                                    | 7.5                                                   | 15.5V@100A<br>8V@100A                                  | 100.0                                           | 700.0                                                    | DFN1610-2L |
| * | ESD401H12FU                                       | 12.0                                                   | 13.5                                                  | 26V@75A<br>18V@150A                                    | 150.0                                           | 400.0                                                    | DFN1610-2L |
| * | ESD451H15FU                                       | 15.0                                                   | 16.5                                                  | 34V@60A                                                | 60.0                                            | 450.0                                                    | DFN1610-2L |
| * | ESD301H24FU                                       | 24.0                                                   | 25.5                                                  | 34V@100A                                               | 100.0                                           | 300.0                                                    | DFN1610-2L |
|   | ESD30H201TR                                       | 30.0                                                   | 31.0                                                  | 35V@1A<br>40V@100A                                     | 100.0                                           | 200.0                                                    | DFN1610-2L |

## DFN2020-3L Series

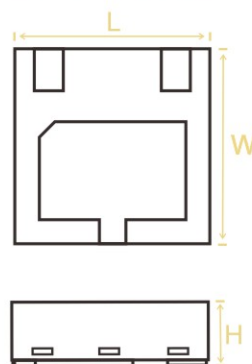
### Descriptions

应用于电源，由于电源上经常会出现较大的浪涌电流，常规的ESD器件容易被浪涌电流击穿短路。ESD J系列很好的解决了电源上出现的静电和浪涌问题。

When applied to power supply, conventional ESD devices are prone to breakdown and short circuit by surge current due to large surge current on power supply. ESD J series solves the problems of static electricity and surge on the power supply.



DFN2020-3L



### Applications

- DC POWER
- Personal digital assistants (PDA)
- Cellular handsets & Accessories
- Portable devices
- Portable instrumentation

Unit:mm

| L           | W           | H           |
|-------------|-------------|-------------|
| 1.900-2.100 | 1.900-2.100 | 0.550-0.650 |

### Electrical Characteristics(TA=25°C unless other wise noted)

| Part NO.<br>R:Uni-directional<br>A:Bi-directional | Reverse Stand-off Voltage<br>(V <sub>RWM</sub> ) | Reverse Breakdown Voltage<br>(V <sub>BR</sub> )<br>(V)Min. | Clamping Voltage<br>(V <sub>CL</sub> )<br>(V) | Peak Pulse Current<br>(tp=8/20μs)<br>Ipp(A) | Junction Capacitance<br>(C <sub>J</sub> )<br>(pF)Typ. | Package    |
|---------------------------------------------------|--------------------------------------------------|------------------------------------------------------------|-----------------------------------------------|---------------------------------------------|-------------------------------------------------------|------------|
| * ESD901J4V5FB                                    | 4.5                                              | 4.8                                                        | 9.5V@100A<br>17V@300A                         | 300.0                                       | 900.0                                                 | DFN2020-3L |
| * ESD551J12FUN                                    | 12.0                                             | 13.0                                                       | 18V@20A<br>30V@180A                           | 180.0                                       | 550.0                                                 | DFN2020-3L |
| * ESD501J15FUN                                    | 15.0                                             | 16.5                                                       | 21V@20A<br>34V@160A                           | 160.0                                       | 400.0                                                 | DFN2020-3L |
| * ESD401J24FUP                                    | 24.0                                             | 25.0                                                       | 32V@50A<br>50V@130A                           | 150.0                                       | 400.0                                                 | DFN2020-3L |
| * ESD601J24FUN                                    | 24.0                                             | 25.0                                                       | 32V@50A<br>50V@130A                           | 130.0                                       | 600.0                                                 | DFN2020-3L |
| * ESD501J30FUN                                    | 30.0                                             | 31.0                                                       | 36V@10A<br>40V@180A                           | 180.0                                       | 500.0                                                 | DFN2020-3L |

SOT23-6L Series

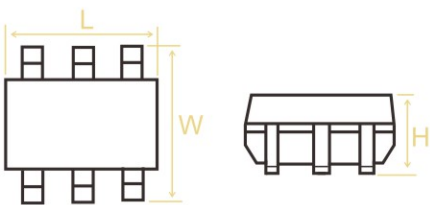
Descriptions

阵列型ESD，旨在用一颗ESD解决多路信号或多路电源的静电脉冲冲击问题，阵列型ESD使得PCB的布局更加合理。



SOT23-6L

Array ESD is designed to solve the problem of multi-channel signal or multi-channel power supply with one ESD,Array ESD makes the layout of PCB more reasonable.



Unit:mm

Applications

- USB 2.0
- USB OTG
- Monitors and Flat Panel Displays
- Digital Visual Interface (DVI)
- High-Definition Multimedia Interface (HDMI)
- Gigabit Ethernet
- SIM Ports
- IEEE 1394 Firewire Ports

| L           | W           | H           |
|-------------|-------------|-------------|
| 2.800-3.100 | 1.500-1.700 | 0.900-1.450 |

Electrical Characteristics(TA=25°C unless other wise noted)

| Part NO.<br>R:Uni-directional<br>A:Bi-directional | Reverse Stand-off Voltage<br>(V <sub>RWM</sub> )<br>(V) | Reverse Breakdown Voltage<br>(V <sub>BR</sub> )<br>(V)Min. | Clamping Voltage<br>(V <sub>CL</sub> )<br>@Max IPP<br>(V) | Peak Pulse Current<br>(tp=8/20μs)<br>Ipp(A) | Junction Capacitance<br>(C <sub>J</sub> )<br>(pF) Max. | Package  |
|---------------------------------------------------|---------------------------------------------------------|------------------------------------------------------------|-----------------------------------------------------------|---------------------------------------------|--------------------------------------------------------|----------|
| ESD030M5FU                                        | 5.0                                                     | 6.0                                                        | 17.5                                                      | 5.0                                         | 0.50                                                   | SOT23-6L |
| ESD900M12FU                                       | 12.0                                                    | 13.0                                                       | 21.0                                                      | 15.0                                        | 90.0                                                   | SOT23-6L |

## SOT23-3L Series

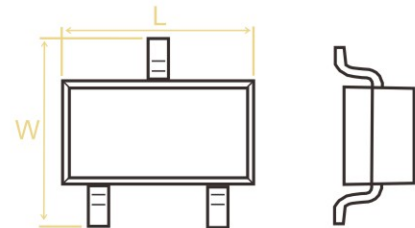
### Descriptions

阵列型ESD，旨在用一颗ESD解决多路信号或多路电源的静电脉冲冲击问题，阵列型ESD使得PCB的布局更加合理。

Array ESD is designed to solve the problem of multi-channel signal or multi-channel power supply with one ESD, Array ESD makes the layout of PCB more reasonable.



SOT23-3L



### Applications

- VGA interface
- Set-top box;
- Flat panel Monitors / Tvs;
- PC / Note book



Unit:mm

| L           | W           | H           |
|-------------|-------------|-------------|
| 2.800-3.000 | 2.250-2.550 | 0.900-1.150 |

### Electrical Characteristics(TA=25°C unless other wise noted)

| Part NO.<br>R:Uni-directional<br>A:Bi-directional | Reverse<br>Stand-off<br>Voltage<br>(V <sub>RWM</sub> ) | Reverse Breakdown<br>Voltage<br>(V <sub>BR</sub> )<br>(V)Min. | Clamping Voltage<br>(V <sub>CL</sub> )<br>(V) | Peak Pulse<br>Current<br>(tp=8/20μs)<br>Ipp(A) | Junction<br>Capacitance<br>(C <sub>j</sub> )<br>(pF)Typ. | Package  |
|---------------------------------------------------|--------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------|------------------------------------------------|----------------------------------------------------------|----------|
| ESD050R2V8FU                                      | 2.8                                                    | 3.0                                                           | 4V@1A<br>10V@10A                              | 10.0                                           | 5.0                                                      | SOT23-3L |
| ESD180R3V3FB                                      | 3.3                                                    | 4.0                                                           | 6.5V@1A<br>10V@8A                             | 8.0                                            | 18.0                                                     | SOT23-3L |
| ESD005R5FB                                        | 5.0                                                    | 7.0                                                           | 11V@1A<br>15V@4A                              | 4.0                                            | 0.40                                                     | SOT23-3L |
| ESD100R12FB                                       | 12.0                                                   | 13.0                                                          | 16V@1A<br>20V@5A                              | 5.0                                            | 10.0                                                     | SOT23-3L |
| ESD300R24FB                                       | 24.0                                                   | 26.5                                                          | 36V@1A<br>48V@8A                              | 8.0                                            | 30.0                                                     | SOT23-3L |

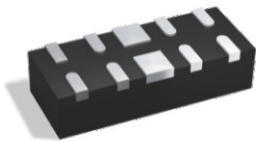
# Semiconductor ESD(半导体ESD静电管阵列)

## DFN2510-10L Series

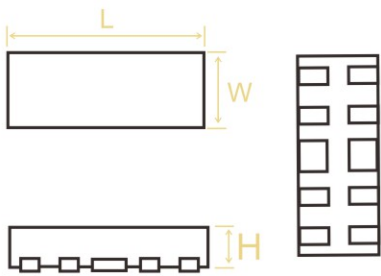
### Descriptions

半导体阵列型ESD，内部包含4路ESD器件，能同时放置在四组信号上，对ESD脉冲起到极好的吸收效果。由于其超低的寄生电容，使得其主要应用与高速差分信号。对高速差分信号的信号传输无影响。

Semiconductor array ESD, which contains four ESD devices, can be placed on four groups of signals at the same time, and has excellent absorption effect on ESD pulse. Because of its ultra-low parasitic capacitance, its main application is high-speed differential signal.



DFN2510-10L



Unit:mm

### Applications

- HDMI / DVI ports;
- Display Port interface;
- 10M / 100M / 1G Ethernet;
- USB 2.0/3.0 interface;
- VGA interface
- Set-top box;
- Flat panel Monitors / TVs;
- PC / Note book

| L           | W           | H           |
|-------------|-------------|-------------|
| 2.400-2.600 | 0.900-1.100 | 0.500-0.650 |

### Electrical Characteristics(TA=25°C unless other wise noted)

| Part NO.    | Reverse Stand-off Voltage (V <sub>RWM</sub> ) | Reverse Breakdown Voltage (V <sub>BR</sub> ) (V)Min. | Clamping Voltage (V <sub>CL</sub> ) (V) | Peak Pulse Current (tp=8/20μs) Ipp(A) | Junction Capacitance (C <sub>j</sub> ) (pF)Typ. | Package     |
|-------------|-----------------------------------------------|------------------------------------------------------|-----------------------------------------|---------------------------------------|-------------------------------------------------|-------------|
| * ESD2510FU | 5.0                                           | 6.0                                                  | 12.5V@4A                                | 4.0                                   | 0.30                                            | DFN2510-10L |
| ESD2510CR   | 3.3                                           | 4.0                                                  | 10V@8A<br>13.7V@16A                     | 16.0                                  | 35.0                                            | DFN2510-10L |

\* ESD0524CR适用于多路普通低速信号,不适用于高速信号线

# High Power Surge TVS(大功率浪涌TVS) SOD-123 Series

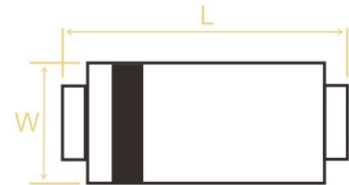
## SOD-123FL Series

### Feature

- High Peak pulse power:200 W (10/1000  $\mu$ s )
  - Low profile package
  - Excellent clamping capability
  - IEC61000-4-2 ESD 30kV Air 30kV contact compliance
  - Protects one I/O line
  - Lead-free parts meet RoHS requirments
- 
- 高峰值脉冲功率：200 W ( 10/1000 $\mu$ s )
  - EOS 10/1000  $\mu$ s浪涌保护器件
  - 薄型包装
  - 优异的电压钳位能力
  - 符合IEC61000-4-2 ESD 30kV空气，30kV接触标准
  - 保护I/O线
  - 符合RoHS要求



SOD-123FL



Unit:mm

### Applications

- Personal digital assistants (PDA)
- Cellular handsets & Accessories
- Portable devices
- Portable instrumentation

| L           | W           | H           |
|-------------|-------------|-------------|
| 2.600-2.900 | 1.700-1.900 | 0.900-1.100 |

### Electrical Characteristics(TA=25°C unless other wise noted)

| Part Number     |               | Reverse Stand-off Voltage | Breakdown Voltage |      | Test Current $I_T$ (mA) | Maximum Clamping Voltage @ $I_{pp}$ VC(V) | Maximum Peak Pulse Surge Current $I_{pp}$ (A) |
|-----------------|---------------|---------------------------|-------------------|------|-------------------------|-------------------------------------------|-----------------------------------------------|
| Uni-directional | Bidirectional |                           | Min.              | Max. |                         |                                           |                                               |
| * SODA5.0V-SH   | SODA5.0B-SH   | 5.0                       | 6.4               | 7.0  | 10.0                    | 9.2                                       | 21.7                                          |
| SODA6.0V-SH     | SODA6.0B-SH   | 6.0                       | 6.67              | 7.37 | 10.0                    | 10.3                                      | 19.4                                          |
| SODA6.5V-SH     | SODA6.5B-SH   | 6.5                       | 7.22              | 7.98 | 10.0                    | 11.2                                      | 17.9                                          |
| * SODA7.0V-SH   | SODA7.0B-SH   | 7.0                       | 7.78              | 8.6  | 10.0                    | 12.0                                      | 16.7                                          |
| SODA7.5V-SH     | SODA7.5B-SH   | 7.5                       | 8.33              | 9.21 | 1.0                     | 12.9                                      | 15.5                                          |
| * SODA8.0V-SH   | SODA8.0B-SH   | 8.0                       | 8.89              | 9.83 | 1.0                     | 13.6                                      | 14.7                                          |
| SODA8.5V-SH     | SODA8.5B-SH   | 8.5                       | 9.44              | 10.4 | 1.0                     | 14.4                                      | 13.9                                          |
| * SODA9.0V-SH   | SODA9.0B-SH   | 9.0                       | 10.0              | 11.1 | 1.0                     | 15.4                                      | 13.0                                          |
| * SODA10V-SH    | SODA10B-SH    | 10.0                      | 11.1              | 12.3 | 1.0                     | 17.0                                      | 11.8                                          |

## High Power Surge TVS(大功率浪涌TVS) SOD-123 Series

| Part Number     |               | Reverse Stand-off Voltage<br>$V_{RWM}(V)$ | Breakdown Voltage<br>$V_{BR}(V)$ |       | Test Current<br>$I_T$<br>(mA) | Maximum Clamping Voltage<br>@ $I_{PP} V_C(V)$ | Maximum Peak Pulse Surge Current<br>$I_{PP}(A)$ |
|-----------------|---------------|-------------------------------------------|----------------------------------|-------|-------------------------------|-----------------------------------------------|-------------------------------------------------|
| Uni-directional | Bidirectional |                                           | Min.                             | Max.  |                               |                                               |                                                 |
| SODA11V-SH      | SODA11B-SH    | 11.0                                      | 12.2                             | 13.5  | 1.0                           | 18.2                                          | 11.0                                            |
| SODA12V-SH      | SODA12B-SH    | 12.0                                      | 13.3                             | 14.7  | 1.0                           | 19.9                                          | 10.0                                            |
| SODA13V-SH      | SODA13B-SH    | 13.0                                      | 14.4                             | 15.9  | 1.0                           | 21.5                                          | 9.3                                             |
| SODA14V-SH      | SODA14B-SH    | 14.0                                      | 15.6                             | 17.2  | 1.0                           | 23.2                                          | 8.6                                             |
| SODA15V-SH      | SODA15B-SH    | 15.0                                      | 16.7                             | 18.5  | 1.0                           | 24.4                                          | 8.2                                             |
| SODA16V-SH      | SODA16B-SH    | 16.0                                      | 17.8                             | 19.7  | 1.0                           | 26.0                                          | 7.7                                             |
| SODA17V-SH      | SODA17B-SH    | 17.0                                      | 18.9                             | 20.9  | 1.0                           | 27.6                                          | 7.2                                             |
| SODA18V-SH      | SODA18B-SH    | 18.0                                      | 20.0                             | 22.1  | 1.0                           | 29.2                                          | 6.8                                             |
| SODA20V-SH      | SODA20B-SH    | 20.0                                      | 22.2                             | 24.5  | 1.0                           | 32.4                                          | 6.2                                             |
| SODA22V-SH      | SODA22B-SH    | 22.0                                      | 24.4                             | 26.9  | 1.0                           | 35.5                                          | 5.6                                             |
| SODA24V-SH      | SODA24B-SH    | 24.0                                      | 26.7                             | 29.5  | 1.0                           | 38.9                                          | 5.1                                             |
| SODA26V-SH      | SODA26B-SH    | 26.0                                      | 28.9                             | 31.9  | 1.0                           | 42.1                                          | 4.8                                             |
| SODA28V-SH      | SODA28B-SH    | 28.0                                      | 31.1                             | 34.4  | 1.0                           | 45.4                                          | 4.4                                             |
| SODA30V-SH      | SODA30B-SH    | 30.0                                      | 33.3                             | 36.8  | 1.0                           | 48.4                                          | 4.1                                             |
| SODA33V-SH      | SODA33B-SH    | 33.0                                      | 36.7                             | 40.6  | 1.0                           | 53.3                                          | 3.8                                             |
| SODA36V-SH      | SODA36B-SH    | 36.0                                      | 40.0                             | 44.2  | 1.0                           | 58.1                                          | 3.4                                             |
| SODA40V-SH      | SODA40B-SH    | 40.0                                      | 44.4                             | 49.1  | 1.0                           | 64.5                                          | 3.1                                             |
| SODA43V-SH      | SODA43B-SH    | 43.0                                      | 47.8                             | 52.8  | 1.0                           | 69.4                                          | 2.9                                             |
| SODA45V-SH      | SODA45B-SH    | 45.0                                      | 50.0                             | 55.3  | 1.0                           | 72.7                                          | 2.8                                             |
| SODA48V-SH      | SODA48B-SH    | 48.0                                      | 53.3                             | 58.9  | 1.0                           | 77.4                                          | 2.6                                             |
| SODA51V-SH      | SODA51B-SH    | 51.0                                      | 56.7                             | 62.7  | 1.0                           | 82.4                                          | 2.4                                             |
| SODA54V-SH      | SODA54B-SH    | 54.0                                      | 60.0                             | 66.3  | 1.0                           | 87.1                                          | 2.3                                             |
| SODA58V-SH      | SODA58B-SH    | 58.0                                      | 64.4                             | 71.2  | 1.0                           | 93.6                                          | 2.1                                             |
| SODA60V-SH      | SODA60B-SH    | 60.0                                      | 66.7                             | 73.7  | 1.0                           | 96.8                                          | 2.0                                             |
| SODA64V-SH      | SODA64B-SH    | 64.0                                      | 71.1                             | 78.6  | 1.0                           | 103.0                                         | 1.9                                             |
| SODA70V-SH      | SODA70B-SH    | 70.0                                      | 77.8                             | 86.0  | 1.0                           | 113.0                                         | 1.8                                             |
| SODA75V-SH      | SODA75B-SH    | 75.0                                      | 83.3                             | 92.1  | 1.0                           | 121.0                                         | 1.7                                             |
| SODA78V-SH      | SODA78B-SH    | 78.0                                      | 86.7                             | 95.8  | 1.0                           | 126.0                                         | 1.6                                             |
| SODA85V-SH      | SODA85B-SH    | 85.0                                      | 94.4                             | 104.0 | 1.0                           | 137.0                                         | 1.5                                             |
| SODA90V-SH      | SODA90B-SH    | 90.0                                      | 100.0                            | 111.0 | 1.0                           | 146.0                                         | 1.4                                             |
| SODA100V-SH     | SODA100B-SH   | 100.0                                     | 111.0                            | 123.0 | 1.0                           | 162.0                                         | 1.2                                             |
| SODA110V-SH     | SODA110B-SH   | 110.0                                     | 122.0                            | 135.0 | 1.0                           | 177.0                                         | 1.1                                             |
| SODA120V-SH     | SODA120B-SH   | 120.0                                     | 133.0                            | 147.0 | 1.0                           | 193.0                                         | 1.0                                             |
| SODA130V-SH     | SODA130B-SH   | 130.0                                     | 144.0                            | 159.0 | 1.0                           | 209.0                                         | 0.9                                             |
| SODA150V-SH     | SODA150B-SH   | 150.0                                     | 167.0                            | 185.0 | 1.0                           | 243.0                                         | 0.8                                             |
| SODA160V-SH     | SODA160B-SH   | 160.0                                     | 178.0                            | 197.0 | 1.0                           | 259.0                                         | 0.7                                             |
| SODA170V-SH     | SODA170B-SH   | 170.0                                     | 189.0                            | 209.0 | 1.0                           | 275.0                                         | 0.7                                             |

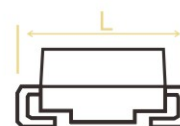
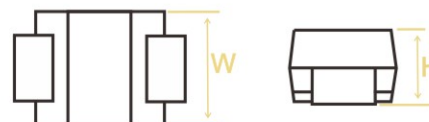
## SMA(DO-214AC) Series

### Feature

- Peak pulse power:400 W (10/1000  $\mu$ s)
- Stand off voltage range: from 5 V to 440 V
- Unidirectional and bidirectional types
- Low leakage current:0.2  $\mu$ A at 25 °C  
1  $\mu$ A at 85 °C
- Operating Tj max: 150 °C
- JEDEC registered package outline
- Resin meets UL 94, V0
- 峰值脉冲功率：400 W (10/1000  $\mu$ s)
- 关断电压范围：5V至440V
- 优异的钳位能力
- 响应时间非常快



SMA(DO-214AC)



### Applications

用于敏感电子保护，防止电感负载切换和 IC，MOSFET，消费电子，计算机，工业和电信传感器单元的信号线引起的电压瞬变。

Use in sensitive electronics protection against voltage transients induced by inductive load switching and lighting on IC, MOSFET, signal lines of sensor units for consumer, computer, industrial, and telecommunication.

Unit:mm

| L           | W           | H           |
|-------------|-------------|-------------|
| 4.800-5.350 | 2.250-2.900 | 1.900-2.450 |

### Electrical Characteristics(TA=25°C unless other wise noted)

| Part Number     |               | Breakdown Voltage<br>$V_{BR}@I_T$<br>(V) |      | Test Current<br>$I_T$<br>(mA) | Stand-off Voltage<br>$V_{RWM}$<br>(V) | Maximum Reverse Leakage<br>@ $V_{RWM}$<br>$I_D(\mu A)$ | Maximum Peak Pulse Surge Current<br>$I_{PP}(A)$ | Maximum Clamping Voltage @ $I_{PP}$<br>$V_C(V)$ |
|-----------------|---------------|------------------------------------------|------|-------------------------------|---------------------------------------|--------------------------------------------------------|-------------------------------------------------|-------------------------------------------------|
| Uni-directional | Bidirectional | Min.                                     | Max. |                               |                                       |                                                        |                                                 |                                                 |
| * SMA04J05V     | SMA04J05B     | 6.40                                     | 7.00 | 10.0                          | 5.0                                   | 800.0                                                  | 43.5                                            | 9.2                                             |
| * SMA04J06V     | SMA04J06B     | 6.67                                     | 7.37 | 10.0                          | 6.0                                   | 800.0                                                  | 38.8                                            | 10.3                                            |
| * SMA04J6V5V    | SMA04J6V5B    | 7.22                                     | 7.98 | 10.0                          | 6.5                                   | 500.0                                                  | 35.7                                            | 11.2                                            |
| * SMA04J07V     | SMA04J07B     | 7.78                                     | 8.60 | 10.0                          | 7.0                                   | 200.0                                                  | 33.3                                            | 12.0                                            |
| * SMA04J7V5V    | SMA04J7V5B    | 8.33                                     | 9.21 | 1.0                           | 7.5                                   | 100.0                                                  | 31.0                                            | 12.9                                            |
| * SMA04J08V     | SMA04J08B     | 8.89                                     | 9.83 | 1.0                           | 8.0                                   | 50.0                                                   | 29.4                                            | 13.6                                            |
| * SMA04J8V5V    | SMA04J8V5B    | 9.44                                     | 10.4 | 1.0                           | 8.5                                   | 20.0                                                   | 27.8                                            | 14.4                                            |
| * SMA04J09V     | SMA04J09B     | 10.0                                     | 11.1 | 1.0                           | 9.0                                   | 10.0                                                   | 26.0                                            | 15.4                                            |
| * SMA04J10V     | SMA04J10B     | 11.1                                     | 12.3 | 1.0                           | 10.0                                  | 5.0                                                    | 23.5                                            | 17.0                                            |
| * SMA04J11V     | SMA04J11B     | 12.2                                     | 13.5 | 1.0                           | 11.0                                  | 1.0                                                    | 22.0                                            | 18.2                                            |
| * SMA04J12V     | SMA04J12B     | 13.3                                     | 14.7 | 1.0                           | 12.0                                  | 1.0                                                    | 20.1                                            | 19.9                                            |
| * SMA04J13V     | SMA04J13B     | 14.4                                     | 15.9 | 1.0                           | 13.0                                  | 1.0                                                    | 18.6                                            | 21.5                                            |
| * SMA04J14V     | SMA04J14B     | 15.6                                     | 17.2 | 1.0                           | 14.0                                  | 1.0                                                    | 17.2                                            | 23.2                                            |
| * SMA04J15V     | SMA04J15B     | 16.7                                     | 18.5 | 1.0                           | 15.                                   | 1.0                                                    | 16.4                                            | 24.4                                            |

## High Power Surge TVS(大功率浪涌TVS) SMA Series

Electrical Characteristics(TA=25°C unless other wise noted)

| Part Number     |               | Breakdown Voltage<br>$V_{BR}@I_T$<br>(V) |       | Test Current<br>$I_T$<br>(mA) | Stand-off Voltage<br>$V_{RWM}$<br>(V) | Maximum Reverse Leakage<br>@ $V_{RWM}$<br>$I_D(\mu A)$ | maximum Peak Pulse Surge Current<br>$I_{PP}(A)$ | Maximum Clamping Voltage @ $I_{PP}$<br>$V_C(V)$ |       |
|-----------------|---------------|------------------------------------------|-------|-------------------------------|---------------------------------------|--------------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------|
| Uni-directional | Bidirectional | Min.                                     | Max.  |                               |                                       |                                                        |                                                 |                                                 |       |
| *<br>*          | SMA04J16V     | SMA04J16B                                | 17.8  | 19.7                          | 1.0                                   | 16.0                                                   | 1.0                                             | 15.4                                            | 26.0  |
| *               | SMA04J17V     | SMA04J17B                                | 18.9  | 20.9                          | 1.0                                   | 17.0                                                   | 1.0                                             | 14.5                                            | 27.6  |
| *               | SMA04J18V     | SMA04J18B                                | 20.0  | 22.1                          | 1.0                                   | 18.0                                                   | 1.0                                             | 13.7                                            | 29.2  |
| *               | SMA04J20V     | SMA04J20B                                | 22.2  | 24.5                          | 1.0                                   | 20.0                                                   | 1.0                                             | 12.3                                            | 32.4  |
| *               | SMA04J22V     | SMA04J22B                                | 24.4  | 26.9                          | 1.0                                   | 22.0                                                   | 1.0                                             | 11.3                                            | 35.5  |
| *               | SMA04J24V     | SMA04J24B                                | 26.7  | 29.5                          | 1.0                                   | 24.0                                                   | 1.0                                             | 10.3                                            | 38.9  |
| *               | SMA04J26V     | SMA04J26B                                | 28.9  | 31.9                          | 1.0                                   | 26.0                                                   | 1.0                                             | 9.5                                             | 42.1  |
| *               | SMA04J28V     | SMA04J28B                                | 31.1  | 34.4                          | 1.0                                   | 28.0                                                   | 1.0                                             | 8.8                                             | 45.4  |
| *               | SMA04J30V     | SMA04J30B                                | 33.3  | 36.8                          | 1.0                                   | 30.0                                                   | 1.0                                             | 8.3                                             | 48.4  |
| *               | SMA04J33V     | SMA04J33B                                | 36.7  | 40.6                          | 1.0                                   | 33.0                                                   | 1.0                                             | 7.5                                             | 53.3  |
| *               | SMA04J36V     | SMA04J36B                                | 40.0  | 44.2                          | 1.0                                   | 36.0                                                   | 1.0                                             | 6.9                                             | 58.1  |
| *               | SMA04J40V     | SMA04J40B                                | 44.4  | 49.1                          | 1.0                                   | 40.0                                                   | 1.0                                             | 6.2                                             | 64.5  |
| *               | SMA04J43V     | SMA04J43B                                | 47.8  | 52.8                          | 1.0                                   | 43.0                                                   | 1.0                                             | 5.8                                             | 69.4  |
| *               | SMA04J45V     | SMA04J45B                                | 50.0  | 55.3                          | 1.0                                   | 45.0                                                   | 1.0                                             | 5.5                                             | 72.7  |
|                 | SMA04J48V     | SMA04J48B                                | 53.3  | 58.9                          | 1.0                                   | 48.0                                                   | 1.0                                             | 5.2                                             | 77.4  |
|                 | SMA04J51V     | SMA04J51B                                | 56.7  | 62.7                          | 1.0                                   | 51.0                                                   | 1.0                                             | 4.9                                             | 82.4  |
|                 | SMA04J54V     | SMA04J54B                                | 60.0  | 66.3                          | 1.0                                   | 54.0                                                   | 1.0                                             | 4.6                                             | 87.1  |
|                 | SMA04J58V     | SMA04J58B                                | 64.4  | 71.2                          | 1.0                                   | 58.0                                                   | 1.0                                             | 4.3                                             | 93.6  |
|                 | SMA04J60V     | SMA04J60B                                | 66.7  | 73.7                          | 1.0                                   | 60.0                                                   | 1.0                                             | 4.1                                             | 96.8  |
|                 | SMA04J64V     | SMA04J64B                                | 71.1  | 78.6                          | 1.0                                   | 64.0                                                   | 1.0                                             | 3.9                                             | 103.0 |
|                 | SMA04J70V     | SMA04J70B                                | 77.8  | 86.0                          | 1.0                                   | 70.0                                                   | 1.0                                             | 3.5                                             | 113.0 |
|                 | SMA04J75V     | SMA04J75B                                | 83.3  | 92.1                          | 1.0                                   | 75.0                                                   | 1.0                                             | 3.3                                             | 121.0 |
|                 | SMA04J78V     | SMA04J78B                                | 86.7  | 95.8                          | 1.0                                   | 78.0                                                   | 1.0                                             | 3.2                                             | 126.0 |
|                 | SMA04J85V     | SMA04J85B                                | 94.4  | 104.0                         | 1.0                                   | 85.0                                                   | 1.0                                             | 2.9                                             | 137.0 |
|                 | SMA04J90V     | SMA04J90B                                | 100.0 | 111.0                         | 1.0                                   | 90.0                                                   | 1.0                                             | 2.7                                             | 146.0 |
|                 | SMA04J100V    | SMA04J100B                               | 111.0 | 123                           | 1.0                                   | 100.0                                                  | 1.0                                             | 2.5                                             | 162.0 |
|                 | SMA04J110V    | SMA04J110B                               | 122.0 | 135.0                         | 1.0                                   | 110.0                                                  | 1.0                                             | 2.3                                             | 177.0 |
|                 | SMA04J120V    | SMA04J120B                               | 133.0 | 147.0                         | 1.0                                   | 120.0                                                  | 1.0                                             | 2.1                                             | 193.0 |
|                 | SMA04J130V    | SMA04J130B                               | 144.0 | 159.0                         | 1.0                                   | 130.0                                                  | 1.0                                             | 1.9                                             | 209.0 |
|                 | SMA04J150V    | SMA04J150B                               | 167.0 | 185.0                         | 1.0                                   | 150.0                                                  | 1.0                                             | 1.6                                             | 243.0 |
|                 | SMA04J160V    | SMA04J160B                               | 178.0 | 197.0                         | 1.0                                   | 160.0                                                  | 1.0                                             | 1.5                                             | 259.0 |
|                 | SMA04J170V    | SMA04J170B                               | 189.0 | 209.0                         | 1.0                                   | 170.0                                                  | 1.0                                             | 1.5                                             | 275.0 |
|                 | SMA04J180V    | SMA04J180B                               | 201.0 | 222.0                         | 1.0                                   | 180.0                                                  | 1.0                                             | 1.4                                             | 292.0 |
|                 | SMA04J200V    | SMA04J200B                               | 224.0 | 247.0                         | 1.0                                   | 200.0                                                  | 1.0                                             | 1.2                                             | 324.0 |
|                 | SMA04J220V    | SMA04J220B                               | 246.0 | 272.0                         | 1.0                                   | 220.0                                                  | 1.0                                             | 1.1                                             | 356.0 |
|                 | SMA04J250V    | SMA04J250B                               | 279.0 | 309.0                         | 1.0                                   | 250.0                                                  | 1.0                                             | 1.0                                             | 405.0 |
|                 | SMA04J300V    | SMA04J300B                               | 335.0 | 371.0                         | 1.0                                   | 300.0                                                  | 1.0                                             | 0.8                                             | 486.0 |
|                 | SMA04J350V    | SMA04J350B                               | 391.0 | 432.0                         | 1.0                                   | 350.0                                                  | 1.0                                             | 0.7                                             | 567.0 |
|                 | SMA04J400V    | SMA04J400B                               | 447.0 | 494.0                         | 1.0                                   | 400.0                                                  | 1.0                                             | 0.6                                             | 648.0 |
|                 | SMA04J440V    | SMA04J440B                               | 492.0 | 543.0                         | 1.0                                   | 440.0                                                  | 1.0                                             | 0.6                                             | 713.0 |

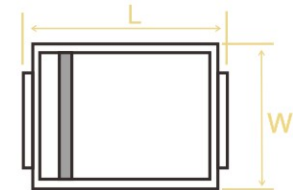
## SMB(DO-214AA) Series

### Feature

- Peak pulse power:600 W (10/1000  $\mu$ s)  
4 kW (8/20  $\mu$ s)
- Stand off voltage range: from 5 V to 188 V
- Unidirectional and bidirectional types
- Low leakage current:0.2  $\mu$ A at 25 °C  
1  $\mu$ A at 85 °C
- Operating Tj max: 150 °C
- JEDEC registered package outline
- Resin meets UL 94, V0
- 峰值脉冲功率：600 W (10/1000  $\mu$ s)
- 单向和双向类型
- 薄型封装
- 优异的钳位能力
- 响应时间非常快



SMB(DO-214AA)



Unit:mm

| L           | W           | H           |
|-------------|-------------|-------------|
| 5.210-5.590 | 3.300-3.940 | 2.130-2.440 |

### Applications

用于敏感电子保护，防止电感负载切换和 IC，MOSFET，消费电子，计算机，工业和电信传感器单元的信号线引起的电压瞬变。

Use in sensitive electronics protection against voltage transients induced by inductive load switching and lighting on IC, MOSFET, signal lines of sensor units for consumer, computer, industrial, and telecommunication.

### Electrical Characteristics(TA=25°C unless other wise noted)

| Part Number     |               | Breakdown Voltage<br>$V_{BR}@I_T$<br>(V) |      | Test Current<br>$I_T$<br>(mA) | Stand-off Voltage<br>$V_{RWM}$<br>(V) | Maximum Reverse Leakage<br>@ $V_{RWM}$<br>$I_D(\mu A)$ | Maximum Peak Pulse Surge Current<br>$I_{PP}(A)$ | Maximum Clamping Voltage<br>@ $I_{PP}$<br>$V_C(V)$ |
|-----------------|---------------|------------------------------------------|------|-------------------------------|---------------------------------------|--------------------------------------------------------|-------------------------------------------------|----------------------------------------------------|
| Uni-directional | Bidirectional | Min.                                     | Max. |                               |                                       |                                                        |                                                 |                                                    |
| * SMB06J05V     | SMB06J05B     | 6.40                                     | 7.07 | 10.0                          | 5.0                                   | 800.0                                                  | 65.2                                            | 9.2                                                |
| * SMB06J06V     | SMB06J06B     | 6.67                                     | 7.37 | 10.0                          | 6.0                                   | 800.0                                                  | 58.3                                            | 10.3                                               |
| * SMB06J6V5V    | SMB06J6V5B    | 7.22                                     | 7.98 | 10.0                          | 6.5                                   | 500.0                                                  | 53.6                                            | 11.2                                               |
| * SMB06J07V     | SMB06J07B     | 7.78                                     | 8.60 | 10.0                          | 7.0                                   | 200.0                                                  | 50.0                                            | 12.0                                               |
| * SMB06J7V5V    | SMB06J7V5B    | 8.33                                     | 9.21 | 1.0                           | 7.5                                   | 100.0                                                  | 46.5                                            | 12.9                                               |
| * SMB06J08V     | SMB06J08B     | 8.89                                     | 9.83 | 1.0                           | 8.0                                   | 50.0                                                   | 44.1                                            | 13.6                                               |
| * SMB06J8V5V    | SMB06J8V5B    | 9.44                                     | 10.4 | 1.0                           | 8.5                                   | 20.0                                                   | 41.7                                            | 14.4                                               |
| * SMB06J09V     | SMB06J09B     | 10.0                                     | 11.1 | 1.0                           | 9.0                                   | 10.0                                                   | 39.0                                            | 15.4                                               |
| * SMB06J10V     | SMB06J10B     | 11.1                                     | 12.3 | 1.0                           | 10.0                                  | 5.0                                                    | 35.3                                            | 17.0                                               |
| * SMB06J11V     | SMB06J11B     | 12.2                                     | 13.5 | 1.0                           | 11.0                                  | 5.0                                                    | 33.0                                            | 18.2                                               |

## High Power Surge TVS(大功率浪涌TVS) SMB Series

Electrical Characteristics(TA=25°C unless other wise noted)

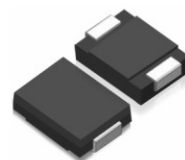
| Part Number     |               | Breakdown Voltage<br>$V_{BR}@I_T$<br>(V) |       | Test Current<br>$I_T$<br>(mA) | Stand-off Voltage<br>$V_{RWM}$<br>(V) | Maximum Reverse Leakage<br>@ $V_{RWM}$<br>$I_D(\mu A)$ | Maximum Peak Pulse Surge Current<br>$I_{PP}(A)$ | Maximum Clamping Voltage<br>@ $I_{PP}$<br>$V_C(V)$ |
|-----------------|---------------|------------------------------------------|-------|-------------------------------|---------------------------------------|--------------------------------------------------------|-------------------------------------------------|----------------------------------------------------|
| Uni-directional | Bidirectional | Min.                                     | Max.  |                               |                                       |                                                        |                                                 |                                                    |
| * SMB06J12V     | SMB06J12B     | 13.3                                     | 14.7  | 1.0                           | 12.0                                  | 5.0                                                    | 30.2                                            | 19.9                                               |
| * SMB06J13V     | SMB06J13B     | 14.4                                     | 15.9  | 1.0                           | 13.0                                  | 1.0                                                    | 27.9                                            | 21.5                                               |
| * SMB06J14V     | SMB06J14B     | 15.6                                     | 17.2  | 1.0                           | 14.0                                  | 1.0                                                    | 25.9                                            | 23.2                                               |
| * SMB06J15V     | SMB06J15B     | 16.7                                     | 18.5  | 1.0                           | 15.0                                  | 1.0                                                    | 24.6                                            | 24.4                                               |
| * SMB06J16V     | SMB06J16B     | 17.8                                     | 19.7  | 1.0                           | 16.0                                  | 1.0                                                    | 23.1                                            | 26.0                                               |
| * SMB06J17V     | SMB06J17B     | 18.9                                     | 20.9  | 1.0                           | 17.0                                  | 1.0                                                    | 21.7                                            | 27.6                                               |
| * SMB06J18V     | SMB06J18B     | 20.0                                     | 22.1  | 1.0                           | 18.0                                  | 1.0                                                    | 20.5                                            | 29.2                                               |
| * SMB06J20V     | SMB06J20B     | 22.2                                     | 24.5  | 1.0                           | 20.0                                  | 1.0                                                    | 18.5                                            | 32.4                                               |
| * SMB06J22V     | SMB06J22B     | 24.4                                     | 26.9  | 1.0                           | 22.0                                  | 1.0                                                    | 16.9                                            | 35.5                                               |
| * SMB06J24V     | SMB06J24B     | 26.7                                     | 29.5  | 1.0                           | 24.0                                  | 1.0                                                    | 15.4                                            | 38.9                                               |
| * SMB06J26V     | SMB06J26B     | 28.9                                     | 31.9  | 1.0                           | 26.0                                  | 1.0                                                    | 14.3                                            | 42.1                                               |
| * SMB06J28V     | SMB06J28B     | 31.1                                     | 34.4  | 1.0                           | 28.0                                  | 1.0                                                    | 13.2                                            | 45.4                                               |
| * SMB06J30V     | SMB06J30B     | 33.3                                     | 36.8  | 1.0                           | 30.0                                  | 1.0                                                    | 12.4                                            | 48.4                                               |
| * SMB06J33V     | SMB06J33B     | 36.7                                     | 40.6  | 1.0                           | 33.0                                  | 1.0                                                    | 11.3                                            | 53.3                                               |
| * SMB06J36V     | SMB06J36B     | 40.0                                     | 44.2  | 1.0                           | 36.0                                  | 1.0                                                    | 10.3                                            | 58.1                                               |
| * SMB06J40V     | SMB06J40B     | 44.4                                     | 49.1  | 1.0                           | 40.0                                  | 1.0                                                    | 9.3                                             | 64.5                                               |
| * SMB06J45V     | SMB06J45B     | 50.0                                     | 55.3  | 1.0                           | 45.0                                  | 1.0                                                    | 8.3                                             | 72.7                                               |
| * SMB06J48V     | SMB06J48B     | 53.3                                     | 58.9  | 1.0                           | 48.0                                  | 1.0                                                    | 7.8                                             | 77.4                                               |
| SMB06J54V       | SMB06J54B     | 60.0                                     | 66.3  | 1.0                           | 54.0                                  | 1.0                                                    | 6.9                                             | 87.1                                               |
| SMB06J58V       | SMB06J58B     | 64.4                                     | 71.2  | 1.0                           | 58.0                                  | 1.0                                                    | 6.4                                             | 93.6                                               |
| SMB06J60V       | SMB06J60B     | 66.7                                     | 73.7  | 1.0                           | 60.0                                  | 1.0                                                    | 6.2                                             | 96.8                                               |
| SMB06J64V       | SMB06J64B     | 71.1                                     | 78.6  | 1.0                           | 64.0                                  | 1.0                                                    | 5.8                                             | 103.0                                              |
| SMB06J70V       | SMB06J70B     | 77.8                                     | 86.0  | 1.0                           | 70.0                                  | 1.0                                                    | 5.3                                             | 113.0                                              |
| SMB06J75V       | SMB06J75B     | 83.3                                     | 92.1  | 1.0                           | 75.0                                  | 1.0                                                    | 5.0                                             | 121.0                                              |
| SMB06J78V       | SMB06J78B     | 86.7                                     | 95.8  | 1.0                           | 78.0                                  | 1.0                                                    | 4.8                                             | 126.0                                              |
| SMB06J85V       | SMB06J85B     | 94.4                                     | 104.0 | 1.0                           | 85.0                                  | 1.0                                                    | 4.4                                             | 137.0                                              |
| SMB06J90V       | SMB06J90B     | 100.0                                    | 111.0 | 1.0                           | 90.0                                  | 1.0                                                    | 4.1                                             | 146.0                                              |
| SMB06J100V      | SMB06J100B    | 111.0                                    | 123.0 | 1.0                           | 100.0                                 | 1.0                                                    | 3.7                                             | 162.0                                              |
| SMB06J110V      | SMB06J110B    | 122.0                                    | 135.0 | 1.0                           | 110.0                                 | 1.0                                                    | 3.4                                             | 177.0                                              |
| SMB06J120V      | SMB06J120B    | 133.0                                    | 147.0 | 1.0                           | 120.0                                 | 1.0                                                    | 3.1                                             | 193.0                                              |
| SMB06J130V      | SMB06J130B    | 144.0                                    | 159.0 | 1.0                           | 130.0                                 | 1.0                                                    | 2.9                                             | 209.0                                              |
| SMB06J150V      | SMB06J150B    | 167.0                                    | 185.0 | 1.0                           | 150.0                                 | 1.0                                                    | 2.5                                             | 243.0                                              |
| SMB06J160V      | SMB06J160B    | 178.0                                    | 197.0 | 1.0                           | 160.0                                 | 1.0                                                    | 2.3                                             | 259.0                                              |
| SMB06J170V      | SMB06J170B    | 189.0                                    | 209.0 | 1.0                           | 170.0                                 | 1.0                                                    | 2.2                                             | 275.0                                              |
| SMB06J188V      | SMB06J188B    | 209.0                                    | 231.0 | 1.0                           | 188.0                                 | 1.0                                                    | 2.0                                             | 328.0                                              |

## High Power Surge TVS(大功率浪涌TVS) SMC Series

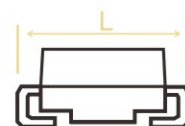
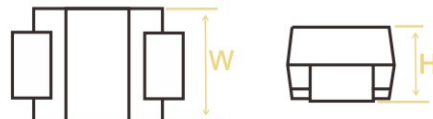
### SMC(DO-214AB) Series

#### Feature

- Peak pulse power: 1500 W (10/1000  $\mu$ s)
- Stand off voltage range: from 5V to 440V
- Unidirectional and bidirectional types
- High power capability at Tjmax:  
2200W(10/1000 $\mu$ s)
- Operating Tj max: 150 °C
- JEDEC registered package outline
- 峰值脉冲功率：1500 W (10/1000  $\mu$ s)
- 单向和双向类型
- 优异的钳位能力
- 响应时间非常快



SMC(DO-214AB)



Unit:mm

| L           | W           | H           |
|-------------|-------------|-------------|
| 7.750-8.150 | 5.550-6.250 | 1.900-2.450 |

#### Complies with the following standards

- ISO 7637-2(a)
  - Pulse 1: VS = -100 V
  - Pulse 2a: VS = +50 V
  - Pulse 3a: VS = -150 V
  - Pulse 3b: VS = +100 V

#### Electrical Characteristics(TA=25°C unless other wise noted)

| Part Number  |            | Breakdown Voltage<br>$V_{BR}@I_T$<br>(V) |      | Test Current<br>$I_T$<br>(mA) | Stand-off Voltage<br>$V_{RWM}$<br>(V) | Maximum Reverse Leakage<br>@ $V_{RWM}$<br>$I_D(\mu A)$ | Maximum Peak Pulse Surge Current<br>$I_{PP}(A)$ | Maximum Clamping Voltage<br>@ $I_{PP}$<br>$V_C(V)$ |
|--------------|------------|------------------------------------------|------|-------------------------------|---------------------------------------|--------------------------------------------------------|-------------------------------------------------|----------------------------------------------------|
|              |            | Min.                                     | Max. |                               |                                       |                                                        |                                                 |                                                    |
| * SMC15J5.0V | SMC15J5.0B | 6.40                                     | 7.00 | 10.0                          | 5.0                                   | 800.0                                                  | 163.0                                           | 9.20                                               |
| * SMC15J6.0V | SMC15J6.0B | 6.67                                     | 7.37 | 10.0                          | 6.0                                   | 800.0                                                  | 145.7                                           | 10.3                                               |
| * SMC15J6.5V | SMC15J6.5B | 7.22                                     | 7.98 | 10.0                          | 6.5                                   | 500.0                                                  | 134.0                                           | 11.2                                               |
| * SMC15J7.0V | SMC15J7.0B | 7.78                                     | 8.60 | 10.0                          | 7.0                                   | 200.0                                                  | 125.0                                           | 12.0                                               |
| * SMC15J7.5V | SMC15J7.5B | 8.33                                     | 9.21 | 1.0                           | 7.5                                   | 100.0                                                  | 116.3                                           | 12.9                                               |
| * SMC15J8.0V | SMC15J8.0B | 8.89                                     | 9.83 | 1.0                           | 8.0                                   | 50.0                                                   | 110.3                                           | 13.6                                               |
| * SMC15J8.5V | SMC15J8.5B | 9.44                                     | 10.4 | 1.0                           | 8.5                                   | 20.0                                                   | 104.2                                           | 14.4                                               |
| * SMC15J9.0V | SMC15J9.0B | 10.0                                     | 11.1 | 1.0                           | 9.0                                   | 10.0                                                   | 97.4                                            | 15.4                                               |
| * SMC15J10V  | SMC15J10B  | 11.1                                     | 12.3 | 1.0                           | 10.0                                  | 5.0                                                    | 88.3                                            | 17.0                                               |
| * SMC15J11V  | SMC15J11B  | 12.2                                     | 13.5 | 1.0                           | 11.0                                  | 1.0                                                    | 82.5                                            | 18.2                                               |
| * SMC15J12V  | SMC15J12B  | 13.3                                     | 14.7 | 1.0                           | 12.0                                  | 1.0                                                    | 75.4                                            | 19.9                                               |
| * SMC15J13V  | SMC15J13B  | 14.4                                     | 15.9 | 1.0                           | 13.0                                  | 1.0                                                    | 69.8                                            | 21.5                                               |
| * SMC15J14V  | SMC15J14B  | 15.6                                     | 17.2 | 1.0                           | 14.0                                  | 1.0                                                    | 64.7                                            | 23.2                                               |
| * SMC15J15V  | SMC15J15B  | 16.7                                     | 18.5 | 1.0                           | 15.0                                  | 1.0                                                    | 61.5                                            | 24.4                                               |
| * SMC15J16V  | SMC15J16B  | 17.8                                     | 19.7 | 1.0                           | 16.0                                  | 1.0                                                    | 57.7                                            | 26.0                                               |
| * SMC15J17V  | SMC15J17B  | 18.9                                     | 20.9 | 1.0                           | 17.0                                  | 1.0                                                    | 54.4                                            | 27.6                                               |
| * SMC15J18V  | SMC15J18B  | 20.0                                     | 22.1 | 1.0                           | 18.0                                  | 1.0                                                    | 51.4                                            | 29.2                                               |
| * SMC15J20V  | SMC15J20B  | 22.2                                     | 24.5 | 1.0                           | 20.0                                  | 1.0                                                    | 46.3                                            | 32.4                                               |

## High Power Surge TVS(大功率浪涌TVS) SMC Series

Electrical Characteristics(TA=25°C unless other wise noted)

| Part Number |            | Breakdown Voltage<br>$V_{BR}@I_T$<br>(V) |       | Test Current<br>$I_T$<br>(mA) | Stand-off Voltage<br>$V_{RWM}$<br>(V) | Maximum Reverse Leakage<br>@ $V_{RWM}$<br>ID( $\mu$ A) | Maximum Peak Pulse Surge Current<br>$I_{PP}$ (A) | Maximum Clamping Voltage<br>@ $I_{PP}$<br>$V_C$ (V) |
|-------------|------------|------------------------------------------|-------|-------------------------------|---------------------------------------|--------------------------------------------------------|--------------------------------------------------|-----------------------------------------------------|
|             |            | Min.                                     | Max.  |                               |                                       |                                                        |                                                  |                                                     |
| * SMC15J16V | SMC15J16B  | 17.8                                     | 19.7  | 1.0                           | 16.0                                  | 1.0                                                    | 57.7                                             | 26.0                                                |
| * SMC15J17V | SMC15J17B  | 18.9                                     | 20.9  | 1.0                           | 17.0                                  | 1.0                                                    | 54.4                                             | 27.6                                                |
| * SMC15J18V | SMC15J18B  | 20.0                                     | 22.1  | 1.0                           | 18.0                                  | 1.0                                                    | 51.4                                             | 29.2                                                |
| * SMC15J20V | SMC15J20B  | 22.2                                     | 24.5  | 1.0                           | 20.0                                  | 1.0                                                    | 46.3                                             | 32.4                                                |
| * SMC15J22V | SMC15J22B  | 24.4                                     | 26.9  | 1.0                           | 22.0                                  | 1.0                                                    | 42.3                                             | 35.5                                                |
| * SMC15J24V | SMC15J24B  | 26.7                                     | 29.5  | 1.0                           | 24.0                                  | 1.0                                                    | 38.6                                             | 38.9                                                |
| * SMC15J26V | SMC15J26B  | 28.9                                     | 31.9  | 1.0                           | 26.0                                  | 1.0                                                    | 35.7                                             | 42.1                                                |
| * SMC15J28V | SMC15J28B  | 31.1                                     | 34.4  | 1.0                           | 28.0                                  | 1.0                                                    | 33.1                                             | 45.4                                                |
| * SMC15J30V | SMC15J30B  | 33.3                                     | 36.8  | 1.0                           | 30.0                                  | 1.0                                                    | 31.0                                             | 48.4                                                |
| * SMC15J33V | SMC15J33B  | 36.7                                     | 40.6  | 1.0                           | 33.0                                  | 1.0                                                    | 28.2                                             | 53.3                                                |
| * SMC15J36V | SMC15J36B  | 40.0                                     | 44.2  | 1.0                           | 36.0                                  | 1.0                                                    | 25.9                                             | 58.1                                                |
| * SMC15J40V | SMC15J40B  | 44.4                                     | 49.1  | 1.0                           | 40.0                                  | 1.0                                                    | 23.3                                             | 64.5                                                |
| * SMC15J45V | SMC15J45B  | 50.0                                     | 55.3  | 1.0                           | 45.0                                  | 1.0                                                    | 20.6                                             | 72.7                                                |
| * SMC15J48V | SMC15J48B  | 53.3                                     | 58.9  | 1.0                           | 48.0                                  | 1.0                                                    | 19.4                                             | 77.4                                                |
| SMC15J51V   | SMC15J51B  | 56.7                                     | 62.7  | 1.0                           | 51.0                                  | 1.0                                                    | 18.2                                             | 82.4                                                |
| SMC15J54V   | SMC15J54B  | 60.0                                     | 66.3  | 1.0                           | 54.0                                  | 1.0                                                    | 17.3                                             | 87.1                                                |
| SMC15J58V   | SMC15J58B  | 64.4                                     | 71.2  | 1.0                           | 58.0                                  | 1.0                                                    | 16.1                                             | 93.6                                                |
| SMC15J60V   | SMC15J60B  | 66.7                                     | 73.7  | 1.0                           | 60.0                                  | 1.0                                                    | 15.5                                             | 96.8                                                |
| SMC15J64V   | SMC15J64B  | 71.1                                     | 78.6  | 1.0                           | 64.0                                  | 1.0                                                    | 14.6                                             | 103.0                                               |
| SMC15J70V   | SMC15J70B  | 77.8                                     | 86.0  | 1.0                           | 70.0                                  | 1.0                                                    | 13.3                                             | 113.0                                               |
| SMC15J75V   | SMC15J75B  | 83.3                                     | 92.1  | 1.0                           | 75.0                                  | 1.0                                                    | 12.4                                             | 121.0                                               |
| SMC15J78V   | SMC15J78B  | 86.7                                     | 95.8  | 1.0                           | 78.0                                  | 1.0                                                    | 11.9                                             | 126.0                                               |
| SMC15J85V   | SMC15J85B  | 94.4                                     | 104   | 1.0                           | 85.0                                  | 1.0                                                    | 11.0                                             | 137.0                                               |
| SMC15J90V   | SMC15J90B  | 100.0                                    | 111.0 | 1.0                           | 90.0                                  | 1.0                                                    | 10.3                                             | 146.0                                               |
| SMC15J100V  | SMC15J100B | 111.0                                    | 123.0 | 1.0                           | 100.0                                 | 1.0                                                    | 9.3                                              | 162.0                                               |
| SMC15J110V  | SMC15J110B | 122.0                                    | 135.0 | 1.0                           | 110.0                                 | 1.0                                                    | 8.5                                              | 177.0                                               |
| SMC15J120V  | SMC15J120B | 133.0                                    | 147.0 | 1.0                           | 120.0                                 | 1.0                                                    | 7.8                                              | 193.0                                               |
| SMC15J130V  | SMC15J130B | 144.0                                    | 159.0 | 1.0                           | 130.0                                 | 1.0                                                    | 7.2                                              | 209.0                                               |
| SMC15J150V  | SMC15J150B | 167.0                                    | 185.  | 1.0                           | 150.0                                 | 1.0                                                    | 6.2                                              | 243.0                                               |
| SMC15J160V  | SMC15J160B | 178.0                                    | 197.0 | 1.0                           | 160.0                                 | 1.0                                                    | 5.8                                              | 259.0                                               |
| SMC15J170V  | SMC15J170B | 189.0                                    | 209.0 | 1.0                           | 170.0                                 | 1.0                                                    | 5.5                                              | 275.0                                               |
| SMC15J180V  | SMC15J180B | 201.0                                    | 222.0 | 1.0                           | 180.0                                 | 1.0                                                    | 5.1                                              | 292.0                                               |

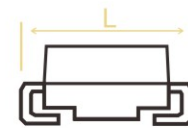
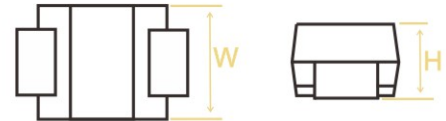
## SMD(DO-214AB) Series

### Feature

- Peak pulse power:3000 W (10/1000  $\mu$ s)
- Stand off voltage range:from 5 V to 180 V
- Unidirectional and bidirectional types
- Operating Tj max: 150 °C
- JEDEC registered package outline
- Resin meets UL 94, V0
- 峰值脉冲功率：3000 W (10/1000  $\mu$ s)
- 单向和双向类型
- 优异的钳位能力
- 响应时间非常快



SMD(DO-214AB)



Unit:mm

| L           | W           | H           |
|-------------|-------------|-------------|
| 5.210-5.590 | 3.300-3.940 | 2.130-2.440 |

### Complies with the following standards

- ISO 7637-2(a)
  - Pulse 1: VS = -100 V
  - Pulse 2a: VS = +50 V
  - Pulse 3a: VS = -150 V
  - Pulse 3b: VS = +100 V

### Electrical Characteristics(TA=25°C unless other wise noted)

| Part Number     |               | Breakdown Voltage<br>$V_{BR}@I_T$ |      | Test Current<br>$I_T$<br>(mA) | Stand-off Voltage<br>$V_{RWM}$<br>(V) | Maximum Reverse Leakage<br>@ $V_{RWM}$<br>$I_D(\mu A)$ | Maximum Peak Pulse Surge Current<br>$I_{PP}(A)$ | Maximum Clamping Voltage<br>@ $I_{PP}$<br>$V_C(V)$ |
|-----------------|---------------|-----------------------------------|------|-------------------------------|---------------------------------------|--------------------------------------------------------|-------------------------------------------------|----------------------------------------------------|
| Uni-directional | Bidirectional | Min.                              | Max. |                               |                                       |                                                        |                                                 |                                                    |
| SMD30J5.0V      | SMD30J5.0B    | 6.40                              | 7.00 | 10.0                          | 5.0                                   | 800.0                                                  | 326.1                                           | 9.2                                                |
| SMD30J6.0V      | SMD30J6.0B    | 6.67                              | 7.37 | 10.0                          | 6.0                                   | 800.0                                                  | 291.0                                           | 10.3                                               |
| SMD30J6.5V      | SMD30J6.5B    | 7.22                              | 7.98 | 10.0                          | 6.5                                   | 500.0                                                  | 267.9                                           | 11.2                                               |
| SMD30J7.0V      | SMD30J7.0B    | 7.78                              | 8.60 | 10.0                          | 7.0                                   | 200.0                                                  | 250.0                                           | 12.0                                               |
| SMD30J7.5V      | SMD30J7.5B    | 8.33                              | 9.21 | 1.0                           | 7.5                                   | 100.0                                                  | 232.6                                           | 12.9                                               |
| SMD30J8.0V      | SMD30J8.0B    | 8.89                              | 9.83 | 1.0                           | 8.0                                   | 50.0                                                   | 220.6                                           | 13.6                                               |
| SMD30J8.5V      | SMD30J8.5B    | 9.44                              | 10.4 | 1.0                           | 8.5                                   | 20.0                                                   | 208.3                                           | 14.4                                               |
| SMD30J9.0V      | SMD30J9.0B    | 10.0                              | 11.1 | 1.0                           | 9.0                                   | 5.0                                                    | 194.8                                           | 15.4                                               |
| SMD30J10V       | SMD30J10B     | 11.1                              | 12.3 | 1.0                           | 10.0                                  | 1.0                                                    | 176.5                                           | 17.0                                               |
| SMD30J11V       | SMD30J11B     | 12.2                              | 13.5 | 1.0                           | 11.0                                  | 1.0                                                    | 164.8                                           | 18.2                                               |
| SMD30J12V       | SMD30J12B     | 13.3                              | 14.7 | 1.0                           | 12.0                                  | 1.0                                                    | 150.8                                           | 19.9                                               |
| SMD30J14V       | SMD30J14B     | 15.6                              | 17.2 | 1.0                           | 14.0                                  | 1.0                                                    | 129.3                                           | 23.2                                               |
| SMD30J15V       | SMD30J15B     | 16.7                              | 18.5 | 1.0                           | 15.0                                  | 1.0                                                    | 123.0                                           | 24.4                                               |
| SMD30J16V       | SMD30J16B     | 17.8                              | 19.7 | 1.0                           | 16.0                                  | 1.0                                                    | 115.4                                           | 26.0                                               |
| SMD30J17V       | SMD30J17B     | 18.9                              | 20.9 | 1.0                           | 17.0                                  | 1.0                                                    | 108.7                                           | 27.6                                               |
| SMD30J18V       | SMD30J18B     | 20.0                              | 22.1 | 1.0                           | 18.0                                  | 1.0                                                    | 102.7                                           | 29.2                                               |
| SMD30J20V       | SMD30J20B     | 22.2                              | 24.5 | 1.0                           | 20.0                                  | 1.0                                                    | 92.6                                            | 32.4                                               |
| SMD30J22V       | SMD30J22B     | 24.4                              | 26.9 | 1.0                           | 22.0                                  | 1.0                                                    | 84.5                                            | 35.5                                               |
| SMD30J24V       | SMD30J24B     | 26.7                              | 29.5 | 1.0                           | 24.0                                  | 1.0                                                    | 77.1                                            | 38.9                                               |
| SMD30J26V       | SMD30J26B     | 28.9                              | 31.9 | 1.0                           | 26.0                                  | 1.0                                                    | 71.3                                            | 42.1                                               |

## High Power Surge TVS(大功率浪涌TVS) SMD Series

Electrical Characteristics(TA=25°C unless other wise noted)

| Part Number     |               | Breakdown Voltage<br>$V_{BR}@I_T$ |       | Test Current<br>$I_T$<br>(mA) | Stand-off Voltage<br>$V_{RWM}$<br>(V) | Maximum Reverse Leakage<br>@ $V_{RWM}$<br>$I_D(\mu A)$ | Maximum Peak Pulse Surge Current<br>$I_{PP}(A)$ | Maximum Clamping Voltage<br>@ $I_{PP}$<br>$V_C(V)$ |
|-----------------|---------------|-----------------------------------|-------|-------------------------------|---------------------------------------|--------------------------------------------------------|-------------------------------------------------|----------------------------------------------------|
| Uni-directional | Bidirectional | Min.                              | Max.  |                               |                                       |                                                        |                                                 |                                                    |
| SMD30J28V       | SMD30J28B     | 31.1                              | 34.4  | 1.0                           | 28.0                                  | 1.0                                                    | 66.1                                            | 45.4                                               |
| SMD30J30V       | SMD30J30B     | 33.3                              | 36.8  | 1.0                           | 30.0                                  | 1.0                                                    | 62.0                                            | 48.4                                               |
| SMD30J33V       | SMD30J33B     | 36.7                              | 40.6  | 1.0                           | 33.0                                  | 1.0                                                    | 56.3                                            | 53.3                                               |
| SMD30J36V       | SMD30J36B     | 40.0                              | 44.2  | 1.0                           | 36.0                                  | 1.0                                                    | 51.6                                            | 58.1                                               |
| SMD30J40V       | SMD30J40B     | 44.4                              | 49.1  | 1.0                           | 40.0                                  | 1.0                                                    | 46.5                                            | 64.5                                               |
| SMD30J43V       | SMD30J43B     | 47.8                              | 52.8  | 1.0                           | 43.0                                  | 1.0                                                    | 43.2                                            | 69.4                                               |
| SMD30J45V       | SMD30J45B     | 50.0                              | 55.3  | 1.0                           | 45.0                                  | 1.0                                                    | 41.3                                            | 72.7                                               |
| SMD30J48V       | SMD30J48B     | 53.3                              | 58.9  | 1.0                           | 48.0                                  | 1.0                                                    | 38.8                                            | 77.4                                               |
| SMD30J51V       | SMD30J51B     | 56.7                              | 62.7  | 1.0                           | 51.0                                  | 1.0                                                    | 36.4                                            | 82.4                                               |
| SMD30J54V       | SMD30J54B     | 60.0                              | 66.3  | 1.0                           | 54.0                                  | 1.0                                                    | 34.4                                            | 87.1                                               |
| SMD30J58V       | SMD30J58B     | 64.4                              | 71.2  | 1.0                           | 58.0                                  | 1.0                                                    | 32.1                                            | 93.6                                               |
| SMD30J60V       | SMD30J60B     | 66.7                              | 73.7  | 1.0                           | 60.0                                  | 1.0                                                    | 31.0                                            | 96.8                                               |
| SMD30J64V       | SMD30J64B     | 71.1                              | 78.6  | 1.0                           | 64.0                                  | 1.0                                                    | 29.1                                            | 103.0                                              |
| SMD30J70V       | SMD30J70B     | 77.8                              | 86.0  | 1.0                           | 70.0                                  | 1.0                                                    | 26.5                                            | 113.0                                              |
| SMD30J75V       | SMD30J75B     | 83.3                              | 92.1  | 1.0                           | 75.0                                  | 1.0                                                    | 24.8                                            | 121.0                                              |
| SMD30J78V       | SMD30J78B     | 86.7                              | 95.8  | 1.0                           | 78.0                                  | 1.0                                                    | 23.8                                            | 126.0                                              |
| SMD30J85V       | SMD30J85B     | 94.4                              | 104.0 | 1.0                           | 85.0                                  | 1.0                                                    | 21.9                                            | 137.0                                              |
| SMD30J90V       | SMD30J90B     | 100.0                             | 111.0 | 1.0                           | 90.0                                  | 1.0                                                    | 20.5                                            | 146.0                                              |
| SMD30J100V      | SMD30J100B    | 111.0                             | 123.0 | 1.0                           | 100.0                                 | 1.0                                                    | 18.5                                            | 162.0                                              |
| SMD30J110V      | SMD30J110B    | 122.0                             | 135.0 | 1.0                           | 110.0                                 | 1.0                                                    | 16.9                                            | 177.0                                              |
| SMD30J120V      | SMD30J120B    | 133.0                             | 147.0 | 1.0                           | 120.0                                 | 1.0                                                    | 15.5                                            | 193.0                                              |
| SMD30J130V      | SMD30J130B    | 144.0                             | 159.0 | 1.0                           | 130.0                                 | 1.0                                                    | 14.4                                            | 209.0                                              |
| SMD30J150V      | SMD30J150B    | 167.0                             | 185.0 | 1.0                           | 150.0                                 | 1.0                                                    | 12.3                                            | 243.0                                              |
| SMD30J160V      | SMD30J160B    | 178.0                             | 197.0 | 1.0                           | 160.0                                 | 1.0                                                    | 11.6                                            | 259.0                                              |
| SMD30J170V      | SMD30J170B    | 189.0                             | 209.0 | 1.0                           | 170.0                                 | 1.0                                                    | 10.9                                            | 275.0                                              |
| SMD30J180V      | SMD30J180B    | 201.0                             | 222.0 | 1.0                           | 180.0                                 | 1.0                                                    | 9.7                                             | 308.0                                              |

## High Power Surge TVS(大功率浪涌TVS) SMD Series

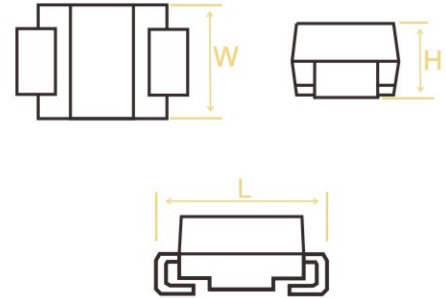
### SMD(DO-214AB) Series

#### Feature

- Peak pulse power:5000 W (10/1000  $\mu$ s)  
Up to 28 kW (8/20  $\mu$ s)
- Stand off voltage range: from 22 V to 170 V
- Unidirectional and bidirectional types
- High power capability at Tjmax:2200W(10/1000 $\mu$ s)
- Operating Tj max: 150 °C
- JEDEC registered package outline
- Resin meets UL 94, V0
- 峰值脉冲功率：5000 W (10/1000  $\mu$ s)
- 单向和双向类型
- 优异的钳位能力
- 响应时间非常快



SMD(DO-214AB)



Unit:mm

| L           | W           | H           |
|-------------|-------------|-------------|
| 5.210-5.590 | 3.300-3.940 | 2.130-2.440 |

#### Complies with the following standards

- ISO 7637-2(a)
  - Pulse 1: VS = -100 V
  - Pulse 2a: VS = +50 V
  - Pulse 3a: VS = -150 V
  - Pulse 3b: VS = +100 V

#### Electrical Characteristics(TA=25°C unless other wise noted)

| Part Number     |               | Breakdown Voltage<br>$V_{BR}@I_T$<br>(V) |      | Test Current<br>$I_T$<br>(mA) | Stand-off Voltage<br>$V_{RWM}$<br>(V) | Maximum Reverse Leakage<br>@ $V_{RWM}$<br>$I_D(\mu A)$ | Maximum Peak Pulse Surge Current<br>$I_{PP}(A)$ | Maximum Clamping Voltage<br>@ $I_{PP}$<br>$V_C(V)$ |
|-----------------|---------------|------------------------------------------|------|-------------------------------|---------------------------------------|--------------------------------------------------------|-------------------------------------------------|----------------------------------------------------|
| Uni-directional | Bidirectional | Min.                                     | Max. |                               |                                       |                                                        |                                                 |                                                    |
| SMD50J22V       | SMD50J22B     | 24.4                                     | 26.9 | 1.0                           | 22.0                                  | 5.0                                                    | 141.0                                           | 35.5                                               |
| SMD50J24V       | SMD50J24B     | 26.7                                     | 29.5 | 1.0                           | 24.0                                  | 5.0                                                    | 129.0                                           | 38.9                                               |
| SMD50J26V       | SMD50J26B     | 28.9                                     | 31.9 | 1.0                           | 26.0                                  | 5.0                                                    | 119.0                                           | 42.1                                               |
| SMD50J28V       | SMD50J28B     | 31.1                                     | 34.4 | 1.0                           | 28.0                                  | 5.0                                                    | 110.0                                           | 45.4                                               |
| SMD50J30V       | SMD50J30B     | 33.3                                     | 36.8 | 1.0                           | 30.0                                  | 5.0                                                    | 103.0                                           | 48.4                                               |
| SMD50J33V       | SMD50J33B     | 36.7                                     | 40.6 | 1.0                           | 33.0                                  | 5.0                                                    | 93.9                                            | 53.3                                               |
| SMD50J36V       | SMD50J36B     | 40.0                                     | 44.2 | 1.0                           | 36.0                                  | 5.0                                                    | 86.1                                            | 58.1                                               |
| SMD50J40V       | SMD50J40B     | 44.4                                     | 49.1 | 1.0                           | 40.0                                  | 5.0                                                    | 77.6                                            | 64.5                                               |
| SMD50J43V       | SMD50J43B     | 47.8                                     | 52.8 | 1.0                           | 43.0                                  | 5.0                                                    | 72.1                                            | 69.4                                               |
| SMD50J45V       | SMD50J45B     | 50.0                                     | 55.3 | 1.0                           | 45.0                                  | 5.0                                                    | 68.8                                            | 72.7                                               |
| SMD50J48V       |               | 53.3                                     | 58.9 | 1.0                           | 48.0                                  | 5.0                                                    | 64.7                                            | 77.4                                               |
| SMD50J51V       |               | 56.7                                     | 62.7 | 1.0                           | 51.0                                  | 5.0                                                    | 60.7                                            | 82.4                                               |
| SMD50J54V       |               | 60.0                                     | 66.3 | 1.0                           | 54.0                                  | 5.0                                                    | 57.5                                            | 87.1                                               |
| SMD50J58V       |               | 64.4                                     | 71.2 | 1.0                           | 58.0                                  | 5.0                                                    | 53.5                                            | 93.6                                               |

## High Power Surge TVS(大功率浪涌TVS) SMD Series

Electrical Characteristics(TA=25°C unless other wise noted)

| Part Number     |               | Breakdown Voltage<br>$V_{BR}@I_T$<br>(V) |       | Test Current<br>$I_T$<br>(mA) | Stand-off Voltage<br>$V_{RWM}$<br>(V) | Maximum Reverse Leakage<br>@ $V_{RWM}$<br>$I_D(\mu A)$ | Maximum Peak Pulse Surge Current<br>$I_{PP}(A)$ | Maximum Clamping Voltage<br>@ $I_{PP}$<br>$V_C(V)$ |
|-----------------|---------------|------------------------------------------|-------|-------------------------------|---------------------------------------|--------------------------------------------------------|-------------------------------------------------|----------------------------------------------------|
| Uni-directional | Bidirectional | Min.                                     | Max.  |                               |                                       |                                                        |                                                 |                                                    |
| SMD50J60V       |               | 66.7                                     | 73.7  | 1.0                           | 60.0                                  | 5.0                                                    | 51.7                                            | 96.8                                               |
| SMD50J64V       |               | 71.1                                     | 78.6  | 1.0                           | 64.0                                  | 5.0                                                    | 48.6                                            | 103.0                                              |
| SMD50J70V       |               | 77.8                                     | 86.0  | 1.0                           | 70.0                                  | 5.0                                                    | 44.3                                            | 113.0                                              |
| SMD50J75V       |               | 83.3                                     | 92.1  | 1.0                           | 75.0                                  | 5.0                                                    | 41.4                                            | 121.0                                              |
| SMD50J78V       |               | 86.7                                     | 95.8  | 1.0                           | 78.0                                  | 5.0                                                    | 39.7                                            | 126.0                                              |
| SMD50J85V       |               | 94.4                                     | 104.0 | 1.0                           | 85.0                                  | 5.0                                                    | 36.5                                            | 137.0                                              |
| SMD50J90V       |               | 100.0                                    | 111.0 | 1.0                           | 90.0                                  | 5.0                                                    | 34.3                                            | 146.0                                              |
| SMD50J100V      |               | 111.0                                    | 123.0 | 1.0                           | 100.0                                 | 5.0                                                    | 30.9                                            | 162.0                                              |
| SMD50J110V      |               | 122.0                                    | 135.0 | 1.0                           | 110.0                                 | 5.0                                                    | 28.3                                            | 177.0                                              |
| SMD50J120V      |               | 133.0                                    | 147.0 | 1.0                           | 120.0                                 | 5.0                                                    | 26.0                                            | 193.0                                              |
| SMD50J130V      |               | 144.0                                    | 159.0 | 1.0                           | 130.0                                 | 5.0                                                    | 24.0                                            | 209.0                                              |
| SMD50J150V      |               | 167.0                                    | 185.0 | 1.0                           | 150.0                                 | 5.0                                                    | 20.6                                            | 243.0                                              |
| SMD50J160V      |               | 178.0                                    | 197.0 | 1.0                           | 160.0                                 | 5.0                                                    | 19.3                                            | 259.0                                              |
| SMD50J170V      |               | 189.0                                    | 209.0 | 1.0                           | 170.0                                 | 5.0                                                    | 18.2                                            | 275.0                                              |

# High Power Surge TVS(大功率浪涌TVS) SM8S Series

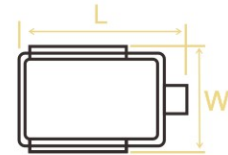
## SM8S(DO-218AB) Series

### Feature

- Peak pulse power:6600 W (10/1000  $\mu$ s)
- Stand off voltage range: from 10 V to 43 V
- Unidirectional and bidirectional types
- Low leakage current:0.2  $\mu$ A at 25 °C、1  $\mu$ A at 85 °C
- Operating Tj max: 150 °C
- JEDEC registered package outline
- Resin meets UL 94, V0
- 峰值脉冲功率：6600 W (10/1000  $\mu$ s)
- 单向类型、低漏电流、低正向压降、高浪涌抑制能力



DO-218AB



Unit:mm

### Complies with the following standards

- ISO 7637-2(a)
  - Pulse 1: VS = -100 V
  - Pulse 2a: VS = +50 V
  - Pulse 3a: VS = -150 V
  - Pulse 3b: VS = +100 V

| L           | W           | H           |
|-------------|-------------|-------------|
| 5.210-5.590 | 3.300-3.940 | 2.130-2.440 |

### Electrical Characteristics(TA=25°C unless other wise noted)

| Part Number<br>V:Uni-directional | Breakdown Voltage<br>$V_{BR}@I_T$<br>(V) |      | Test Current<br>$I_T$<br>(mA) | Stand-off Voltage<br>$V_{RWM}$<br>(V) | Maximum Reverse Leakage<br>@ $V_{RWM}$<br>$I_D(\mu A)$ | Maximum Peak Pulse Surge Current<br>$I_{PP}(A)$ | Maximum Clamping Voltage<br>@ $I_{PP}$<br>$V_C(V)$ |
|----------------------------------|------------------------------------------|------|-------------------------------|---------------------------------------|--------------------------------------------------------|-------------------------------------------------|----------------------------------------------------|
|                                  | Min.                                     | Max. |                               |                                       |                                                        |                                                 |                                                    |
| SM8S66J10V                       | 11.1                                     | 12.3 | 5.0                           | 10                                    | 15.0                                                   | 388.0                                           | 17.0                                               |
| SM8S66J11V                       | 12.2                                     | 13.5 | 5.0                           | 11                                    | 10.0                                                   | 363.0                                           | 18.2                                               |
| SM8S66J12V                       | 13.3                                     | 14.7 | 5.0                           | 12                                    | 10.0                                                   | 332.0                                           | 19.9                                               |
| SM8S66J13V                       | 14.4                                     | 15.9 | 5.0                           | 13                                    | 10.0                                                   | 307.0                                           | 21.5                                               |
| SM8S66J14V                       | 15.6                                     | 17.2 | 5.0                           | 14                                    | 10.0                                                   | 284.0                                           | 23.2                                               |
| SM8S66J15V                       | 16.7                                     | 18.5 | 5.0                           | 15                                    | 10.0                                                   | 270.0                                           | 24.4                                               |
| SM8S66J16V                       | 17.8                                     | 19.7 | 5.0                           | 16                                    | 10.0                                                   | 254.0                                           | 26.0                                               |
| SM8S66J17V                       | 18.9                                     | 20.9 | 5.0                           | 17                                    | 10.0                                                   | 239.0                                           | 27.6                                               |
| SM8S66J18V                       | 20.0                                     | 22.1 | 5.0                           | 18                                    | 10.0                                                   | 226.0                                           | 29.2                                               |
| SM8S66J20V                       | 22.2                                     | 24.5 | 5.0                           | 20                                    | 10.0                                                   | 204.0                                           | 32.4                                               |
| SM8S66J22V                       | 24.4                                     | 26.9 | 5.0                           | 22                                    | 10.0                                                   | 186.0                                           | 35.5                                               |
| * SM8S66J24V                     | 26.7                                     | 29.5 | 5.0                           | 24                                    | 10.0                                                   | 170.0                                           | 38.9                                               |
| * SM8S66J26V                     | 28.9                                     | 31.9 | 5.0                           | 26                                    | 10.0                                                   | 157.0                                           | 42.1                                               |
| * SM8S66J28V                     | 31.1                                     | 34.4 | 5.0                           | 28                                    | 10.0                                                   | 145.0                                           | 45.4                                               |
| * SM8S66J30V                     | 33.3                                     | 36.8 | 5.0                           | 30                                    | 10.0                                                   | 136.0                                           | 48.4                                               |
| SM8S66J33V                       | 36.7                                     | 40.6 | 5.0                           | 33                                    | 10.0                                                   | 124.0                                           | 53.3                                               |
| SM8S66J36V                       | 40.0                                     | 44.2 | 5.0                           | 36                                    | 10.0                                                   | 114.0                                           | 58.1                                               |
| SM8S66J40V                       | 44.4                                     | 49.1 | 5.0                           | 40                                    | 10.0                                                   | 102.0                                           | 64.5                                               |
| SM8S66J43V                       | 47.8                                     | 52.8 | 5.0                           | 43                                    | 10.0                                                   | 95.1                                            | 69.4                                               |

## High Power Surge TVS(大功率浪涌TVS) P600 Series

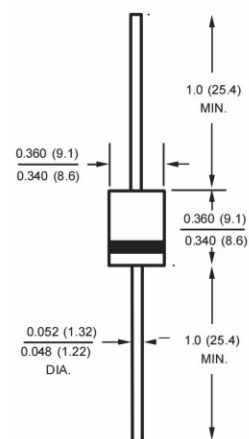
### P600 Series

#### Feature

- Peak pulse power:5000 W (10/1000  $\mu$ s)
- Stand off voltage range: from 5 V to 250 V
- Unidirectional and bidirectional types
- Low leakage current:0.2  $\mu$ A at 25 °C  
1  $\mu$ A at 85 °C
- Operating Tj max: 150 °C
- JEDEC registered package outline
- Resin meets UL 94, V0
- 峰值脉冲功率：5000 W (10/1000  $\mu$ s)
- 单向和双向类型
- 优异的钳位能力
- 响应时间非常快



P600



Unit:mm

#### Complies with the following standards

- ISO 7637-2(a)
  - Pulse 1: VS = -100 V
  - Pulse 2a: VS = +50 V
  - Pulse 3a: VS = -150 V
  - Pulse 3b: VS = +100 V
  - Pulse 5a: VS = +87 V(Rt=2R T=400ms)

#### Electrical Characteristics(TA=25°C unless other wise noted)

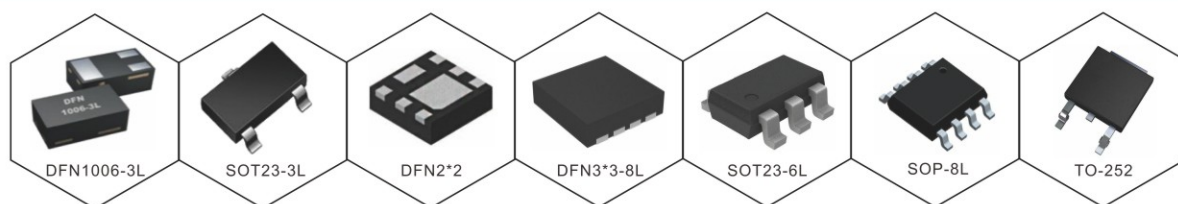
| Part Number     |               | Reverse Stand-off Voltage<br>$V_{RWM}(V)$ | Breakdown Voltage<br>$V_{BR}(V)$ |             | Test Current<br>$I_T$<br>(mA) | Maximum Clamping Voltage<br>@ $I_{PP}$ $V_C(V)$ | Maximum Peak Pulse Current<br>$I_{PP}(A)$ |
|-----------------|---------------|-------------------------------------------|----------------------------------|-------------|-------------------------------|-------------------------------------------------|-------------------------------------------|
| Uni-directional | Bidirectional |                                           | Min.@ $I_T$                      | Max.@ $I_T$ |                               |                                                 |                                           |
| 5KP5.0V         | 5KP5.0B       | 5.0                                       | 6.40                             | 7.00        | 50.0                          | 9.2                                             | 554.3                                     |
| 5KP6.0V         | 5KP6.0B       | 6.0                                       | 6.67                             | 7.37        | 50.0                          | 10.3                                            | 495.1                                     |
| 5KP6.5V         | 5KP6.5B       | 6.5                                       | 7.22                             | 7.98        | 50.0                          | 11.2                                            | 455.4                                     |
| 5KP7.0V         | 5KP7.0B       | 7.0                                       | 7.78                             | 8.60        | 50.0                          | 12.0                                            | 425.0                                     |
| 5KP7.5V         | 5KP7.5B       | 7.5                                       | 8.33                             | 9.21        | 5.0                           | 12.9                                            | 395.3                                     |
| 5KP8.0V         | 5KP8.0B       | 8.0                                       | 8.89                             | 9.83        | 5.0                           | 13.6                                            | 375.0                                     |
| 5KP8.5V         | 5KP8.5B       | 8.5                                       | 9.44                             | 10.40       | 5.0                           | 14.4                                            | 354.2                                     |
| 5KP9.0V         | 5KP9.0B       | 9.0                                       | 10.00                            | 11.10       | 5.0                           | 15.4                                            | 331.2                                     |
| 5KP10V          | 5KP10B        | 10.0                                      | 11.10                            | 12.30       | 5.0                           | 17.0                                            | 300.0                                     |
| 5KP11V          | 5KP11B        | 11.0                                      | 12.20                            | 13.50       | 5.0                           | 18.2                                            | 280.0                                     |
| 5KP12V          | 5KP12B        | 12.0                                      | 13.30                            | 14.70       | 5.0                           | 19.9                                            | 256.3                                     |
| 5KP13V          | 5KP13B        | 13.0                                      | 14.40                            | 15.90       | 5.0                           | 21.5                                            | 237.2                                     |

## High Power Surge TVS(大功率浪涌TVS) P600 Series

Electrical Characteristics(TA=25°C unless other wise noted)

| Part Number     |               | Reverse Stand-off Voltage<br>V <sub>RWM</sub> (V) | Breakdown Voltage<br>V <sub>BR</sub> (V) |                     | Test Current<br>I <sub>T</sub><br>(mA) | Maximum Clamping Voltage<br>@I <sub>pp</sub> V <sub>C</sub> (V) | Maximum Peak Pulse Current<br>I <sub>pp</sub> (A) |
|-----------------|---------------|---------------------------------------------------|------------------------------------------|---------------------|----------------------------------------|-----------------------------------------------------------------|---------------------------------------------------|
| Uni-directional | Bidirectional |                                                   | Min.@I <sub>T</sub>                      | Max.@I <sub>T</sub> |                                        |                                                                 |                                                   |
| 5KP14V          | 5KP14B        | 14.0                                              | 15.56                                    | 17.20               | 5.0                                    | 23.2                                                            | 219.8                                             |
| 5KP15V          | 5KP15B        | 15.0                                              | 16.70                                    | 18.50               | 5.0                                    | 24.4                                                            | 209.0                                             |
| 5KP16V          | 5KP16B        | 16.0                                              | 17.80                                    | 19.70               | 5.0                                    | 26.0                                                            | 196.2                                             |
| 5KP17V          | 5KP17B        | 17.0                                              | 18.90                                    | 20.90               | 5.0                                    | 27.6                                                            | 184.8                                             |
| 5KP18V          | 5KP18B        | 18.0                                              | 20.00                                    | 22.10               | 5.0                                    | 29.2                                                            | 174.7                                             |
| 5KP20V          | 5KP20B        | 20.0                                              | 22.20                                    | 24.50               | 5.0                                    | 32.4                                                            | 157.4                                             |
| 5KP22V          | 5KP22B        | 22.0                                              | 24.00                                    | 26.90               | 5.0                                    | 35.5                                                            | 143.7                                             |
| 5KP24V          | 5KP24B        | 24.0                                              | 26.70                                    | 29.50               | 5.0                                    | 38.9                                                            | 131.1                                             |
| 5KP26V          | 5KP26B        | 26.0                                              | 28.90                                    | 31.90               | 5.0                                    | 42.1                                                            | 121.1                                             |
| 5KP28V          | 5KP28B        | 28.0                                              | 31.10                                    | 34.40               | 5.0                                    | 45.4                                                            | 112.3                                             |
| 5KP30V          | 5KP30B        | 30.0                                              | 33.30                                    | 36.80               | 5.0                                    | 48.4                                                            | 105.4                                             |
| 5KP33V          | 5KP33B        | 33.0                                              | 36.70                                    | 40.60               | 5.0                                    | 53.3                                                            | 95.7                                              |
| 5KP36V          | 5KP36B        | 36.0                                              | 40.00                                    | 44.20               | 5.0                                    | 58.1                                                            | 87.8                                              |
| 5KP40V          | 5KP40B        | 40.0                                              | 44.40                                    | 49.10               | 5.0                                    | 64.5                                                            | 79.1                                              |
| 5KP43V          | 5KP43B        | 43.0                                              | 47.80                                    | 52.80               | 5.0                                    | 69.4                                                            | 73.5                                              |
| 5KP45V          | 5KP45B        | 45.0                                              | 50.00                                    | 55.30               | 5.0                                    | 72.7                                                            | 70.2                                              |
| 5KP48V          | 5KP48B        | 48.0                                              | 53.30                                    | 58.90               | 5.0                                    | 77.4                                                            | 65.9                                              |
| 5KP51V          | 5KP51B        | 51.0                                              | 56.70                                    | 62.70               | 5.0                                    | 82.4                                                            | 61.9                                              |
| 5KP54V          | 5KP54B        | 54.0                                              | 60.00                                    | 66.30               | 5.0                                    | 87.1                                                            | 58.6                                              |
| * 5KP58V        | 5KP58B        | 58.0                                              | 64.40                                    | 71.20               | 5.0                                    | 93.6                                                            | 54.5                                              |
| * 5KP60V        | 5KP60B        | 60.0                                              | 66.70                                    | 73.70               | 5.0                                    | 96.8                                                            | 52.7                                              |
| 5KP64V          | 5KP64B        | 64.0                                              | 71.10                                    | 78.60               | 5.0                                    | 103.0                                                           | 49.5                                              |
| * 5KP70V        | 5KP70B        | 70.0                                              | 77.80                                    | 86.00               | 5.0                                    | 113.0                                                           | 45.1                                              |
| * 5KP75V        | 5KP75B        | 75.0                                              | 83.30                                    | 92.10               | 5.0                                    | 121.0                                                           | 42.1                                              |
| * 5KP78V        | 5KP78B        | 78.0                                              | 86.70                                    | 95.80               | 5.0                                    | 126.0                                                           | 40.5                                              |
| 5KP85V          | 5KP85B        | 85.0                                              | 94.40                                    | 104.00              | 5.0                                    | 137.0                                                           | 37.2                                              |
| 5KP90V          | 5KP90B        | 90.0                                              | 100.00                                   | 111.00              | 5.0                                    | 146.0                                                           | 34.9                                              |
| 5KP100V         | 5KP100B       | 100.0                                             | 110.00                                   | 123.00              | 5.0                                    | 162.0                                                           | 31.5                                              |
| 5KP110V         | 5KP110B       | 110.0                                             | 122.00                                   | 135.00              | 5.0                                    | 177.0                                                           | 28.8                                              |
| 5KP120V         | 5KP120B       | 120.0                                             | 133.00                                   | 147.00              | 5.0                                    | 193.0                                                           | 26.4                                              |
| 5KP130V         | 5KP130B       | 130.0                                             | 144.00                                   | 159.00              | 5.0                                    | 209.0                                                           | 24.4                                              |
| 5KP150V         | 5KP150B       | 150.0                                             | 167.00                                   | 185.00              | 5.0                                    | 243.0                                                           | 21.0                                              |
| 5KP160V         | 5KP160B       | 160.0                                             | 178.00                                   | 197.00              | 5.0                                    | 259.0                                                           | 19.7                                              |
| 5KP170V         | 5KP170B       | 170.0                                             | 189.00                                   | 209.00              | 5.0                                    | 275.0                                                           | 18.5                                              |
| 5KP180V         | 5KP180B       | 180.0                                             | 200.00                                   | 221.00              | 5.0                                    | 292.0                                                           | 17.5                                              |
| 5KP190V         | 5KP190B       | 190.0                                             | 211.00                                   | 233.00              | 5.0                                    | 310.0                                                           | 16.5                                              |
| 5KP200V         | 5KP200B       | 200.0                                             | 222.00                                   | 246.00              | 5.0                                    | 329.0                                                           | 15.5                                              |
| 5KP210V         | 5KP210B       | 210.0                                             | 233.00                                   | 258.00              | 5.0                                    | 349.0                                                           | 14.6                                              |
| 5KP220V         | 5KP220B       | 220.0                                             | 244.00                                   | 270.00              | 5.0                                    | 371.1                                                           | 13.7                                              |
| 5KP250V         | 5KP250B       | 250.0                                             | 277.00                                   | 306.00              | 5.0                                    | 425.0                                                           | 12.0                                              |

## MOSEFET Series



## Specification of Electrical Characteristics

| Part Number. | Type | V <sub>DS</sub><br>(V) | V <sub>GS</sub><br>(V) | I <sub>D</sub><br>(A) | R <sub>DS(ON)</sub><br>(mΩ)<br>TYP@10V | C <sub>iss</sub><br>(pF) | Package    |
|--------------|------|------------------------|------------------------|-----------------------|----------------------------------------|--------------------------|------------|
| AM20NN2T     | N    | 20.0                   | ±8                     | 2.0                   | 200.0                                  | 35.0                     | DFN1006-3L |

| Part Number. | Type | V <sub>DS</sub><br>(V) | V <sub>GS</sub><br>(V) | I <sub>D</sub><br>(A) | R <sub>DS(ON)</sub><br>(mΩ)<br>TYP@10V | C <sub>iss</sub><br>(pF) | Package  |
|--------------|------|------------------------|------------------------|-----------------------|----------------------------------------|--------------------------|----------|
| AM20DP020T   | P    | -20.0                  | ±8.0                   | 2.30                  | 0.89                                   | 405.0                    | SOT23-3L |
| AM20DP041T   | P    | -20.0                  | ±12.0                  | 4.10                  | 0.04                                   | 740.0                    | SOT23-3L |
| AM30DP041T   | P    | -30.0                  | ±12.0                  | 4.10                  | 0.065                                  | 954.0                    | SOT23-3L |
| AM20DP070T   | P    | -20.0                  | ±8.0                   | 7.0                   | 0.025                                  | 1450.0                   | SOT23-3L |
| AM20DP071T   | P    | -20.0                  | ±10.0                  | 7.10                  | 0.018                                  | 2000.0                   | SOT23-3L |
| AM30DN026T   | N    | 30.0                   | ±8.0                   | 2.60                  | 0.04                                   | 300.0                    | SOT23-3L |
| AM30DN058T   | N    | 30.0                   | ±12.0                  | 5.70                  | 0.035                                  | 1050.0                   | SOT23-3L |
| AM30DN040T   | N    | 30.0                   | ±12.0                  | 4.0                   | 0.055                                  | 390.0                    | SOT23-3L |
| AM20DN050T   | N    | 20.0                   | ±12.0                  | 5.0                   | 0.02                                   | 574.0                    | SOT23-3L |
| AM60DN030T   | N    | 60.0                   | ±20.0                  | 3.0                   | 0.09                                   | 247.0                    | SOT23-3L |

| Part Number. | Type | V <sub>DS</sub><br>(V) | V <sub>GS</sub><br>(V) | I <sub>D</sub><br>(A) | R <sub>DS(ON)</sub><br>(mΩ)<br>TYP@10V | C <sub>iss</sub><br>(pF) | Package |
|--------------|------|------------------------|------------------------|-----------------------|----------------------------------------|--------------------------|---------|
| AM18PP6T     | P    | -18.0                  | ±8                     | -8.0                  | 26.0                                   | 1025.0                   | DFN2*2  |
| AM30RN12T    | N    | 30.0                   | ±20                    | 12.0                  | 9.60                                   | 552.0                    | DFN2*2  |

| Part Number. | Type | V <sub>DS</sub><br>(V) | V <sub>GS</sub><br>(V) | I <sub>D</sub><br>(A) | R <sub>DS(ON)</sub><br>(mΩ)<br>TYP@10V | C <sub>iss</sub><br>(pF) | Package   |
|--------------|------|------------------------|------------------------|-----------------------|----------------------------------------|--------------------------|-----------|
| AM30QP34T    | P    | -30.0                  | ±20                    | -34                   | 6.30                                   | 2830.0                   | DFN3*3-8L |
| AM30QP39T    | P    | -30.0                  | ±25                    | -29                   | 8.0                                    | 1130.0                   | DFN3*3-8L |
| AM30QN24T    | N    | 30.0                   | ±20                    | 24                    | 16.0                                   | 550.0                    | DFN3*3-8L |

## MOSFET Series

| Part Number. | Type | V <sub>DS</sub><br>(V) | V <sub>GS</sub><br>(V) | I <sub>D</sub><br>(A) | R <sub>DS(ON)</sub><br>(mΩ)<br>TYP@10V | C <sub>iss</sub><br>(pF) | Package  |
|--------------|------|------------------------|------------------------|-----------------------|----------------------------------------|--------------------------|----------|
| AM30GP5T     | P    | -30.0                  | ±12                    | -5.0                  | 42.0                                   | 943.0                    | SOT23-6L |
| AM30GP5T-2   | P    | -30.0                  | ±20                    | -5.0                  | 39.0                                   | 700.0                    | SOT23-6L |
| AM30GP4T     | P    | -30.0                  | ±20                    | -4.0                  | 50.0                                   | 260.0                    | SOT23-6L |
| AM20GN8T     | N    | 20.0                   | ±12                    | 8.6                   | 13.40                                  | 1810.0                   | SOT23-6L |
| AM30GN5T     | N    | 30.0                   | ±20                    | 5.0                   | 25.50                                  | 255.0                    | SOT23-6L |
| AM60GN4T     | N    | 60.0                   | ±20                    | 4.0                   | 50.0                                   | 450.0                    | SOT23-6L |

| Part Number. | Type | V <sub>DS</sub><br>(V) | V <sub>GS</sub><br>(V) | I <sub>D</sub><br>(A) | R <sub>DS(ON)</sub><br>(mΩ)<br>TYP@10V | C <sub>iss</sub><br>(pF) | Package |
|--------------|------|------------------------|------------------------|-----------------------|----------------------------------------|--------------------------|---------|
| AM20MP12T    | P    | -20.0                  | ±20                    | -12.0                 | 23.0                                   | 1400.0                   | SOP-8L  |
| AM20MP8T     | P    | -20.0                  | ±20                    | -8.0                  | 28.0                                   | 525.0                    | SOP-8L  |
| AM30MP7T     | P    | -30.0                  | ±20                    | -7.0                  | 45.50                                  | 525.0                    | SOP-8L  |
| AM30MP12T    | P    | -30.0                  | ±20                    | -12.0                 | 8.50                                   | 2060.0                   | SOP-8L  |
| AM30MN18T    | N    | 30.0                   | ±12                    | 18.0                  | 4.70                                   | 9130.0                   | SOP-8L  |
| AM30MN15T    | N    | 30.0                   | ±20                    | 15.0                  | 8.0                                    | 1080.0                   | SOP-8L  |

| Part Number. | Type | V <sub>DS</sub><br>(V) | V <sub>GS</sub><br>(V) | I <sub>D</sub><br>(A) | R <sub>DS(ON)</sub><br>(mΩ)<br>TYP@10V | C <sub>iss</sub><br>(pF) | Package |
|--------------|------|------------------------|------------------------|-----------------------|----------------------------------------|--------------------------|---------|
| AM35LP50T    | P    | -35.0                  | ±20                    | -50.0                 | 11.0                                   | 2400.0                   | TO-252  |
| AM120LP29T   | P    | -120.0                 | ±20                    | -29.0                 | 50.0                                   | 2407.0                   | TO-252  |
| AM30LN40T    | N    | 30.0                   | ±20                    | 40.0                  | 14.0                                   | 800.0                    | TO-252  |
| AM40LN70T    | N    | 40.0                   | ±20                    | 70.0                  | 5.80                                   | 1500.0                   | TO-252  |
| AM60L50T     | N    | 60.                    | ±20                    | 50.0                  | 18.0                                   | 900.0                    | TO-252  |
| AM100LN12T   | N    | 100.0                  | ±20                    | 12.0                  | 150.0                                  | 430.0                    | TO-252  |
| AM100LN15T   | N    | 100.0                  | ±20                    | 15.0                  | 100.0                                  | 430.0                    | TO-252  |

| Part Number. | Type | V <sub>DS</sub><br>(V) | V <sub>GS</sub><br>(V) | I <sub>D</sub><br>(A) | R <sub>DS(ON)</sub><br>(mΩ)<br>TYP@10V | C <sub>iss</sub><br>(pF) | Package |
|--------------|------|------------------------|------------------------|-----------------------|----------------------------------------|--------------------------|---------|
| AM30JN85T    | N    | 30.0                   | ±20                    | 85.0                  | 1.750                                  | 2719.0                   | DFN5*6  |

—— 专业 EMC 保护器件 ——

· ESD防静电器件

· TVS防浪涌器件

电磁兼容设计及解决方案

10年专注EMC器件  
为100万款电子产品保驾护航

