

# 片式防静电用压敏电阻器—SDV 系列

## Chip Varistor for ESD – SDV Series



### 工作温度

Operating Temp

◆ -55°C ~ +125°C

### 特征

Features

- ◆ SMD 结构适合高密度安装
- ◆ 优异的限压比, 响应时间短 (<0.5ns)
- ◆ 良好的焊接性能 (镍、锡电镀)
- ◆ SMD type suitable for high density mounting
- ◆ Excellent clamping ratio and quick response time (<0.5ns)
- ◆ Excellent solderability (Ni, Sn plating)

### 用途

Applications

- ◆ IC 和晶体管的过电压保护
- ◆ USB、MIPI 等接口 ESD 防护
- ◆ MOSFET 保护
- ◆ 手机、TV 等便携式设备保护
- ◆ Transient voltage protection for IC and transistor
- ◆ ESD protection such as USB2.0, MIPI etc.
- ◆ MOSFET protection
- ◆ Portable equipment protection, such as mobile phone, TV, etc.

### 产品型号

Product Identification

|     |      |   |     |      |   |   |   |   |
|-----|------|---|-----|------|---|---|---|---|
| 1   | 2    | 3 | 4   | 5    | 6 | 7 | 8 | 9 |
| SDV | 1608 | A | 180 | C121 | N | P | T | F |

|     |                                  |
|-----|----------------------------------|
| 1   | 分类 Type                          |
| SDV | 片式压敏电阻器<br>Chip Varistor for ESD |

|             |                                                   |
|-------------|---------------------------------------------------|
| 2           | 外形尺寸 (L×W) (mm)<br>External Dimensions (L×W) (mm) |
| 1005 [0402] | 1.0×0.5                                           |
| 1608 [0603] | 1.6×0.8                                           |
| 2012 [0805] | 2.0×1.25                                          |

|   |                     |
|---|---------------------|
| 3 | 特征代号 Feature Code   |
| A | For General Use     |
| E | For ESD             |
| H | For High Speed      |
| S | For Special Request |

|         |                                              |
|---------|----------------------------------------------|
| 4       | 直流工作电压<br>Maximum Continuous Working Voltage |
| Example | Nominal Value                                |
| 5R5     | 5.5V                                         |
| 180     | 18V                                          |

|         |                      |
|---------|----------------------|
| 5       | 电容 Capacitance @1MHz |
| Example | Nominal Value        |
| C121    | 120pF                |

|   |                                  |
|---|----------------------------------|
| 6 | 电容公差<br>Tolerance of Capacitance |
| N | ±30%                             |
| Y | -50% ~ +100%                     |
| G | Maximum                          |

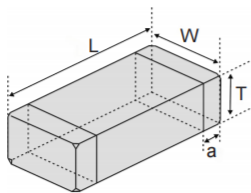
|   |                    |
|---|--------------------|
| 7 | 端头代号 Terminal Code |
| P | Ni, Sn Plating     |

|   |                |
|---|----------------|
| 8 | 包装 Packing     |
| T | 编带 Tape & Reel |

|   |                                              |
|---|----------------------------------------------|
| 9 | 无有害物质产品<br>Hazardous Substance Free Products |
| F |                                              |

### 外观尺寸

Shape and Dimensions



| Type              | L                       | W                       | T                       | a                       |
|-------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| SDV1005<br>[0402] | 1.0±0.15<br>[.039±.006] | 0.5±0.15<br>[.020±.006] | 0.5±0.15<br>[.020±.006] | 0.25±0.1<br>[.010±.004] |
| SDV1608<br>[0603] | 1.6±0.15<br>[.063±.006] | 0.8±0.15<br>[.031±.006] | 0.8±0.15<br>[.031±.006] | 0.3±0.2<br>[.012±.008]  |
| SDV2012<br>[0805] | 2.0±0.2<br>[.079±.008]  | 1.25±0.2<br>[.049±.008] | 0.85±0.2<br>[.033±.008] | 0.5±0.3<br>[.020±.012]  |

Unit: mm [inch]

## 规格特性 Specifications

### SDV1608A TYPE

| 型号<br>Part Number      | 最大工作电压<br>Max. Working Voltage |                   | 压敏电压<br>Varistor Voltage | 限制电压<br>Max. Clamping Voltage |                              | 额定脉冲耐量<br>Rated Single Pulse Transient |                        | 电容<br>Typical Capacitance |
|------------------------|--------------------------------|-------------------|--------------------------|-------------------------------|------------------------------|----------------------------------------|------------------------|---------------------------|
| 测试条件<br>Test Condition | <20μA                          |                   | @1mA DC                  | 8/20μs                        | ESD                          | Energy<br>10/1000μs                    | Peak Current<br>8/20μs | @0.5Vrms,<br>1MHz         |
|                        | DC                             | AC RMS            |                          |                               |                              |                                        |                        |                           |
| 单位 Units               | Volts                          | Volts             | Volts                    | Volts                         | Volts                        | Joules                                 | Amps                   | pF                        |
| 符号 Symbol              | V <sub>WDC</sub>               | V <sub>WRMS</sub> | V <sub>B</sub>           | V <sub>C</sub> <sup>-1</sup>  | V <sub>C</sub> <sup>-2</sup> | E <sub>T</sub>                         | I <sub>P</sub>         | C                         |
| SDV1608A090C121 □ PTF  | 9.0                            | 6.4               | 11.0-16.0                | 20                            | 26                           | 0.05                                   | 20                     | 120                       |
| SDV1608A090C141 □ PTF  | 9.0                            | 6.4               | 11.0-16.0                | 20                            | 26                           | 0.05                                   | 20                     | 140                       |
| SDV1608A090C201 □ PTF  | 9.0                            | 6.4               | 11.0-16.0                | 20                            | 26                           | 0.1                                    | 30                     | 200                       |
| SDV1608A090C231 □ PTF  | 9.0                            | 6.4               | 11.0-16.0                | 20                            | 26                           | 0.1                                    | 30                     | 230                       |
| SDV1608A090C361 □ PTF  | 9.0                            | 6.4               | 11.0-16.0                | 20                            | 26                           | 0.1                                    | 30                     | 360                       |
| SDV1608A140C121 □ PTF  | 14.0                           | 10.0              | 16.0-22.0                | 30                            | 39                           | 0.05                                   | 20                     | 120                       |
| SDV1608A140C141 □ PTF  | 14.0                           | 10.0              | 16.0-22.0                | 30                            | 39                           | 0.05                                   | 20                     | 140                       |
| SDV1608A140C251 □ PTF  | 14.0                           | 10.0              | 16.0-22.0                | 30                            | 39                           | 0.1                                    | 30                     | 250                       |
| SDV1608A140C361 □ PTF  | 14.0                           | 10.0              | 16.0-22.0                | 30                            | 39                           | 0.1                                    | 30                     | 360                       |
| SDV1608A180C121 □ PTF  | 18.0                           | 12.7              | 22.0-28.0                | 40                            | 48                           | 0.05                                   | 20                     | 120                       |
| SDV1608A180C141 □ PTF  | 18.0                           | 12.7              | 22.0-28.0                | 40                            | 48                           | 0.05                                   | 20                     | 140                       |
| SDV1608A180C231 □ PTF  | 18.0                           | 12.7              | 22.0-28.0                | 40                            | 48                           | 0.1                                    | 30                     | 230                       |
| SDV1608A180C361 □ PTF  | 18.0                           | 12.7              | 22.0-28.0                | 40                            | 48                           | 0.1                                    | 30                     | 360                       |
| SDV1608A220C121 □ PTF  | 22.0                           | 15.6              | 26.0-34.0                | 45                            | 54                           | 0.05                                   | 20                     | 120                       |
| SDV1608A220C141 □ PTF  | 22.0                           | 15.6              | 26.0-34.0                | 45                            | 54                           | 0.05                                   | 20                     | 140                       |
| SDV1608A220C161 □ PTF  | 22.0                           | 15.6              | 26.0-34.0                | 45                            | 54                           | 0.1                                    | 30                     | 160                       |
| SDV1608A220C231 □ PTF  | 22.0                           | 15.6              | 26.0-34.0                | 45                            | 54                           | 0.1                                    | 30                     | 230                       |
| SDV1608A260C121 □ PTF  | 26.0                           | 18.4              | 31.0-38.0                | 58                            | 70                           | 0.1                                    | 30                     | 120                       |
| SDV1608A260C161 □ PTF  | 26.0                           | 18.4              | 31.0-38.0                | 58                            | 70                           | 0.1                                    | 30                     | 160                       |
| SDV1608A300C121 □ PTF  | 30.0                           | 21.3              | 37.0-46.0                | 65                            | 78                           | 0.1                                    | 30                     | 120                       |
| SDV1608A300C141 □ PTF  | 30.0                           | 21.3              | 37.0-46.0                | 65                            | 78                           | 0.1                                    | 30                     | 140                       |

### SDV2012A TYPE

| 型号<br>Part Number      | 最大工作电压<br>Max. Working Voltage |                   | 压敏电压<br>Varistor Voltage | 限制电压<br>Max. Clamping Voltage | 额定脉冲耐量<br>Rated Single Pulse Transient |                        | 电容<br>Typical Capacitance |
|------------------------|--------------------------------|-------------------|--------------------------|-------------------------------|----------------------------------------|------------------------|---------------------------|
| 测试条件<br>Test Condition | <20μA                          |                   | @1mA DC                  | 8/20μs                        | Energy<br>10/1000μs                    | Peak Current<br>8/20μs | @0.5Vrms,<br>1MHz         |
|                        | DC                             | AC RMS            |                          |                               |                                        |                        |                           |
| 单位 Units               | Volts                          | Volts             | Volts                    | Volts                         | Joules                                 | Amps                   | pF                        |
| 符号 Symbol              | V <sub>WDC</sub>               | V <sub>WRMS</sub> | V <sub>B</sub>           | V <sub>C</sub> <sup>-1</sup>  | E <sub>T</sub>                         | I <sub>P</sub>         | C                         |
| SDV2012A090C701 □ PTF  | 9.0                            | 6.4               | 11.0-16.0                | 20                            | 0.2                                    | 60                     | 700                       |
| SDV2012A090C102 □ PTF  | 9.0                            | 6.4               | 11.0-16.0                | 20                            | 0.3                                    | 120                    | 1000                      |
| SDV2012A140C401 □ PTF  | 14.0                           | 10.0              | 16.0-22.0                | 30                            | 0.2                                    | 60                     | 400                       |
| SDV2012A140C701 □ PTF  | 14.0                           | 10.0              | 16.0-22.0                | 30                            | 0.3                                    | 120                    | 700                       |
| SDV2012A140C901 □ PTF  | 14.0                           | 10.0              | 16.0-22.0                | 30                            | 0.4                                    | 150                    | 900                       |
| SDV2012A180C301 □ PTF  | 18.0                           | 12.7              | 22.0-28.0                | 40                            | 0.2                                    | 60                     | 300                       |
| SDV2012A180C501 □ PTF  | 18.0                           | 12.7              | 22.0-28.0                | 40                            | 0.3                                    | 120                    | 500                       |
| SDV2012A180C701 □ PTF  | 18.0                           | 12.7              | 22.0-28.0                | 40                            | 0.4                                    | 150                    | 700                       |
| SDV2012A220C251 □ PTF  | 22.0                           | 15.6              | 26.0-34.0                | 45                            | 0.2                                    | 60                     | 250                       |
| SDV2012A220C401 □ PTF  | 22.0                           | 15.6              | 26.0-34.0                | 45                            | 0.3                                    | 120                    | 400                       |
| SDV2012A220C501 □ PTF  | 22.0                           | 15.6              | 26.0-34.0                | 45                            | 0.3                                    | 120                    | 500                       |
| SDV2012A260C251 □ PTF  | 26.0                           | 18.4              | 31.0-38.0                | 58                            | 0.2                                    | 60                     | 250                       |
| SDV2012A260C401 □ PTF  | 26.0                           | 18.4              | 31.0-38.0                | 58                            | 0.3                                    | 120                    | 400                       |
| SDV2012A300C181 □ PTF  | 30.0                           | 21.3              | 37.0-46.0                | 65                            | 0.2                                    | 60                     | 180                       |
| SDV2012A300C301 □ PTF  | 30.0                           | 21.3              | 37.0-46.0                | 65                            | 0.3                                    | 120                    | 300                       |

## 规格特性 Specifications

### SDV1005E TYPE

| 型号<br>Part Number      | 最大工作电压<br>Max. Working Voltage |                  | 压敏电压<br>Varistor Voltage | 限制电压<br>Max. Clamping Voltage |                              | 额定脉冲耐量<br>Rated Single Pulse Transient |                           | 电容<br>Typical Capacitance |
|------------------------|--------------------------------|------------------|--------------------------|-------------------------------|------------------------------|----------------------------------------|---------------------------|---------------------------|
| 测试条件<br>Test Condition | <20μA                          |                  | @1mA DC                  | 8/20μs                        | ESD                          | Energy<br>10/1000μs                    | Peak<br>Current<br>8/20μs | @0.5Vrms,<br>1MHz         |
|                        | DC                             | AC<br>RMS        |                          |                               |                              |                                        |                           |                           |
| 单位 Units               | Volts                          | Volts            | Volts                    | Volts                         | Volts                        | Joules                                 | Amps                      | pF                        |
| 符号 Symbol              | V <sub>WDC</sub>               | V <sub>WAC</sub> | V <sub>B</sub>           | V <sub>C</sub> <sup>*1</sup>  | V <sub>C</sub> <sup>*2</sup> | E <sub>T</sub>                         | I <sub>P</sub>            | C                         |
| SDV1005E090C180 □ PTF  | 9.0                            | 6.4              | 11.0-16.0                | 20                            | 26                           | 0.005                                  | 3                         | 18                        |
| SDV1005E090C300 □ PTF  | 9.0                            | 6.4              | 11.0-16.0                | 20                            | 26                           | 0.005                                  | 5                         | 30                        |
| SDV1005E090C500 □ PTF  | 9.0                            | 6.4              | 11.0-16.0                | 20                            | 26                           | 0.01                                   | 10                        | 50                        |
| SDV1005E090C800 □ PTF  | 9.0                            | 6.4              | 11.0-16.0                | 20                            | 26                           | 0.02                                   | 15                        | 80                        |
| SDV1005E140C180 □ PTF  | 14.0                           | 10.0             | 16.0-22.0                | 30                            | 39                           | 0.005                                  | 3                         | 18                        |
| SDV1005E140C300 □ PTF  | 14.0                           | 10.0             | 16.0-22.0                | 30                            | 39                           | 0.01                                   | 5                         | 30                        |
| SDV1005E140C500 □ PTF  | 14.0                           | 10.0             | 16.0-22.0                | 30                            | 39                           | 0.02                                   | 10                        | 50                        |
| SDV1005E140C800 □ PTF  | 14.0                           | 10.0             | 16.0-22.0                | 30                            | 39                           | 0.03                                   | 15                        | 80                        |
| SDV1005E180C150 □ PTF  | 18.0                           | 12.7             | 22.0-28.0                | 40                            | 48                           | 0.005                                  | 2                         | 15                        |
| SDV1005E180C180 □ PTF  | 18.0                           | 12.7             | 22.0-28.0                | 40                            | 48                           | 0.01                                   | 5                         | 18                        |
| SDV1005E180C300 □ PTF  | 18.0                           | 12.7             | 22.0-28.0                | 40                            | 48                           | 0.02                                   | 10                        | 30                        |
| SDV1005E180C500 □ PTF  | 18.0                           | 12.7             | 22.0-28.0                | 40                            | 48                           | 0.02                                   | 10                        | 50                        |
| SDV1005E220C150 □ PTF  | 22.0                           | 15.6             | 26.0-34.0                | 45                            | 54                           | 0.005                                  | 2                         | 15                        |
| SDV1005E220C180 □ PTF  | 22.0                           | 15.6             | 26.0-34.0                | 45                            | 54                           | 0.01                                   | 5                         | 18                        |
| SDV1005E220C300 □ PTF  | 22.0                           | 15.6             | 26.0-34.0                | 45                            | 54                           | 0.02                                   | 10                        | 30                        |
| SDV1005E220C500 □ PTF  | 22.0                           | 15.6             | 26.0-34.0                | 45                            | 54                           | 0.02                                   | 10                        | 50                        |

### SDV1608E TYPE

| 型号<br>Part Number      | 最大工作电压<br>Max. Working Voltage |                  | 压敏电压<br>Varistor Voltage | 限制电压<br>Max. Clamping Voltage |                              | 额定脉冲耐量<br>Rated Single Pulse Transient |                           | 电容<br>Typical Capacitance |
|------------------------|--------------------------------|------------------|--------------------------|-------------------------------|------------------------------|----------------------------------------|---------------------------|---------------------------|
| 测试条件<br>Test Condition | <20μA                          |                  | @1mA DC                  | 8/20μs                        | ESD                          | Energy<br>10/1000μs                    | Peak<br>Current<br>8/20μs | @0.5Vrms,<br>1MHz         |
|                        | DC                             | AC<br>RMS        |                          |                               |                              |                                        |                           |                           |
| 单位 Units               | Volts                          | Volts            | Volts                    | Volts                         | Volts                        | Joules                                 | Amps                      | pF                        |
| 符号 Symbol              | V <sub>WDC</sub>               | V <sub>WAC</sub> | V <sub>B</sub>           | V <sub>C</sub> <sup>*1</sup>  | V <sub>C</sub> <sup>*2</sup> | E <sub>T</sub>                         | I <sub>P</sub>            | C                         |
| SDV1608E090C180 □ PTF  | 9.0                            | 6.4              | 11.0-16.0                | 20                            | 26                           | 0.005                                  | 3                         | 18                        |
| SDV1608E090C300 □ PTF  | 9.0                            | 6.4              | 11.0-16.0                | 20                            | 26                           | 0.005                                  | 5                         | 30                        |
| SDV1608E090C500 □ PTF  | 9.0                            | 6.4              | 11.0-16.0                | 20                            | 26                           | 0.01                                   | 10                        | 50                        |
| SDV1608E090C800 □ PTF  | 9.0                            | 6.4              | 11.0-16.0                | 20                            | 26                           | 0.02                                   | 15                        | 80                        |
| SDV1608E090C101 □ PTF  | 9.0                            | 6.4              | 11.0-16.0                | 20                            | 26                           | 0.05                                   | 20                        | 100                       |
| SDV1608E140C180 □ PTF  | 14.0                           | 10.0             | 16.0-22.0                | 30                            | 39                           | 0.005                                  | 3                         | 18                        |
| SDV1608E140C300 □ PTF  | 14.0                           | 10.0             | 16.0-22.0                | 30                            | 39                           | 0.01                                   | 5                         | 30                        |
| SDV1608E140C500 □ PTF  | 14.0                           | 10.0             | 16.0-22.0                | 30                            | 39                           | 0.02                                   | 10                        | 50                        |
| SDV1608E140C800 □ PTF  | 14.0                           | 10.0             | 16.0-22.0                | 30                            | 39                           | 0.03                                   | 15                        | 80                        |
| SDV1608E140C101 □ PTF  | 14.0                           | 10.0             | 16.0-22.0                | 30                            | 39                           | 0.05                                   | 20                        | 100                       |
| SDV1608E180C180 □ PTF  | 18.0                           | 12.7             | 22.0-28.0                | 40                            | 48                           | 0.005                                  | 5                         | 18                        |
| SDV1608E180C300 □ PTF  | 18.0                           | 12.7             | 22.0-28.0                | 40                            | 48                           | 0.02                                   | 10                        | 30                        |
| SDV1608E180C600 □ PTF  | 18.0                           | 12.7             | 22.0-28.0                | 40                            | 48                           | 0.02                                   | 10                        | 60                        |
| SDV1608E180C800 □ PTF  | 18.0                           | 12.7             | 22.0-28.0                | 40                            | 48                           | 0.03                                   | 15                        | 80                        |
| SDV1608E180C101 □ PTF  | 18.0                           | 12.7             | 22.0-28.0                | 40                            | 48                           | 0.05                                   | 20                        | 100                       |
| SDV1608E220C180 □ PTF  | 22.0                           | 15.6             | 26.0-34.0                | 45                            | 54                           | 0.005                                  | 5                         | 18                        |
| SDV1608E220C300 □ PTF  | 22.0                           | 15.6             | 26.0-34.0                | 45                            | 54                           | 0.02                                   | 10                        | 30                        |
| SDV1608E220C500 □ PTF  | 22.0                           | 15.6             | 26.0-34.0                | 45                            | 54                           | 0.02                                   | 10                        | 50                        |
| SDV1608E220C800 □ PTF  | 22.0                           | 15.6             | 26.0-34.0                | 45                            | 54                           | 0.03                                   | 15                        | 80                        |
| SDV1608E220C101 □ PTF  | 22.0                           | 15.6             | 26.0-34.0                | 45                            | 54                           | 0.05                                   | 20                        | 100                       |
| SDV1608E260C180 □ PTF  | 26.0                           | 18.4             | 31.0-38.0                | 58                            | 70                           | 0.02                                   | 5                         | 18                        |
| SDV1608E260C300 □ PTF  | 26.0                           | 18.4             | 31.0-38.0                | 58                            | 70                           | 0.03                                   | 10                        | 30                        |
| SDV1608E260C500 □ PTF  | 26.0                           | 18.4             | 31.0-38.0                | 58                            | 70                           | 0.03                                   | 10                        | 50                        |

## 规格特性 Specifications

### SDV2012E TYPE

| 型号<br>Part Number      | 最大工作电压<br>Max. Working Voltage |                  | 压敏电压<br>Varistor Voltage | 限制电压<br>Max. Clamping Voltage |                              | 额定脉冲耐量<br>Rated Single Pulse Transient |                        | 电容<br>Typical Capacitance |
|------------------------|--------------------------------|------------------|--------------------------|-------------------------------|------------------------------|----------------------------------------|------------------------|---------------------------|
| 测试条件<br>Test Condition | <20μA                          |                  | @1mA DC                  | 8/20μs                        | ESD                          | Energy<br>10/1000μs                    | Peak Current<br>8/20μs | @0.5Vrms,<br>1MHz         |
|                        | DC                             | AC RMS           |                          |                               |                              |                                        |                        |                           |
| 单位 Units               | Volts                          | Volts            | Volts                    | Volts                         | Volts                        | Joules                                 | Amps                   | pF                        |
| 符号 Symbol              | V <sub>WDC</sub>               | V <sub>WAC</sub> | V <sub>B</sub>           | V <sub>C</sub> <sup>-1</sup>  | V <sub>C</sub> <sup>-2</sup> | E <sub>T</sub>                         | I <sub>P</sub>         | C                         |
| SDV2012E180C101 □ PTF  | 18.0                           | 12.7             | 22.0-28.0                | 40                            | 48                           | 0.05                                   | 20                     | 100                       |
| SDV2012E260C800 □ PTF  | 26.0                           | 18.4             | 31.0-38.0                | 58                            | 70                           | 0.05                                   | 20                     | 80                        |
| SDV2012E220C101 □ PTF  | 22.0                           | 15.6             | 26.0-34.0                | 45                            | 54                           | 0.05                                   | 20                     | 100                       |
| SDV2012E300C500 □ PTF  | 30.0                           | 21.3             | 37.0-46.0                | 65                            | 78                           | 0.05                                   | 15                     | 50                        |

### SDV1005H TYPE

| 型号<br>Part Number      | 最大工作电压<br>Max. Working Voltage |                  | 压敏电压<br>Varistor Voltage | 限制电压<br>Max. Clamping Voltage |                              | 额定脉冲耐量<br>Rated Single Pulse Transient |                        | 电容<br>Typical Capacitance |
|------------------------|--------------------------------|------------------|--------------------------|-------------------------------|------------------------------|----------------------------------------|------------------------|---------------------------|
| 测试条件<br>Test Condition | <20μA                          |                  | @1mA DC                  | 8/20μs                        | ESD                          | Energy<br>10/1000μs                    | Peak Current<br>8/20μs | @0.5Vrms,<br>1MHz         |
|                        | DC                             | AC RMS           |                          |                               |                              |                                        |                        |                           |
| 单位 Units               | Volts                          | Volts            | Volts                    | Volts                         | Volts                        | Joules                                 | Amps                   | pF                        |
| 符号 Symbol              | V <sub>WDC</sub>               | V <sub>WAC</sub> | V <sub>B</sub>           | V <sub>C</sub> <sup>-1</sup>  | V <sub>C</sub> <sup>-2</sup> | E <sub>T</sub>                         | I <sub>P</sub>         | C                         |
| SDV1005H140C100 □ PTF  | 14.0                           | 10.0             | 16.0-22.0                | 30                            | 39                           | 0.005                                  | 2                      | 10                        |
| SDV1005H140C120 □ PTF  | 14.0                           | 10.0             | 16.0-22.0                | 30                            | 39                           | 0.005                                  | 2                      | 12                        |
| SDV1005H180C050YPTF    | 18.0                           | 12.7             | 22.0-28.0                | 40                            | 48                           | 0.005                                  | 2                      | 5                         |
| SDV1005H180C100 □ PTF  | 18.0                           | 12.7             | 22.0-28.0                | 40                            | 48                           | 0.005                                  | 2                      | 10                        |
| SDV1005H220C030YPTF    | 22.0                           | 15.6             | 26.0-34.0                | 45                            | 54                           | 0.003                                  | 1                      | 3                         |
| SDV1005H220C050YPTF    | 22.0                           | 15.6             | 26.0-34.0                | 45                            | 54                           | 0.005                                  | 2                      | 5                         |
| SDV1005H220C100 □ PTF  | 22.0                           | 15.6             | 26.0-34.0                | 45                            | 54                           | 0.005                                  | 2                      | 10                        |
| SDV1005H220C120 □ PTF  | 22.0                           | 15.6             | 26.0-34.0                | 45                            | 54                           | 0.005                                  | 2                      | 12                        |
| SDV1005H260C030YPTF    | 26.0                           | 18.4             | 31.0-38.0                | 58                            | 70                           | 0.003                                  | 1                      | 3                         |
| SDV1005H260C100 □ PTF  | 26.0                           | 18.4             | 31.0-38.0                | 58                            | 70                           | 0.005                                  | 2                      | 10                        |
| SDV1005H260C120 □ PTF  | 26.0                           | 18.4             | 31.0-38.0                | 58                            | 70                           | 0.005                                  | 2                      | 12                        |

### SDV1608H TYPE

| 型号<br>Part Number      | 最大工作电压<br>Max. Working Voltage |                  | 压敏电压<br>Varistor Voltage | 限制电压<br>Max. Clamping Voltage |                              | 额定脉冲耐量<br>Rated Single Pulse Transient |                        | 电容<br>Typical Capacitance |
|------------------------|--------------------------------|------------------|--------------------------|-------------------------------|------------------------------|----------------------------------------|------------------------|---------------------------|
| 测试条件<br>Test Condition | <20μA                          |                  | @1mA DC                  | 8/20μs                        | ESD                          | Energy<br>10/1000μs                    | Peak Current<br>8/20μs | @0.5Vrms,<br>1MHz         |
|                        | DC                             | AC RMS           |                          |                               |                              |                                        |                        |                           |
| 单位 Units               | Volts                          | Volts            | Volts                    | Volts                         | Volts                        | Joules                                 | Amps                   | pF                        |
| 符号 Symbol              | V <sub>WDC</sub>               | V <sub>WAC</sub> | V <sub>B</sub>           | V <sub>C</sub> <sup>-1</sup>  | V <sub>C</sub> <sup>-2</sup> | E <sub>T</sub>                         | I <sub>P</sub>         | C                         |
| SDV1608H140C100 □ PTF  | 14.0                           | 10.0             | 16.0-22.0                | 30                            | 39                           | 0.005                                  | 2                      | 10                        |
| SDV1608H140C120 □ PTF  | 14.0                           | 10.0             | 16.0-22.0                | 30                            | 39                           | 0.005                                  | 2                      | 12                        |
| SDV1608H180C050YPTF    | 18.0                           | 12.7             | 22.0-28.0                | 40                            | 48                           | 0.003                                  | 1                      | 5                         |
| SDV1608H180C100 □ PTF  | 18.0                           | 12.7             | 22.0-28.0                | 40                            | 48                           | 0.005                                  | 2                      | 10                        |
| SDV1608H180C120 □ PTF  | 18.0                           | 12.7             | 22.0-28.0                | 40                            | 48                           | 0.005                                  | 2                      | 12                        |
| SDV1608H220C030YPTF    | 22.0                           | 15.6             | 26.0-34.0                | 45                            | 54                           | 0.003                                  | 1                      | 3                         |
| SDV1608H220C050YPTF    | 22.0                           | 15.6             | 26.0-34.0                | 45                            | 54                           | 0.003                                  | 1                      | 5                         |
| SDV1608H220C100 □ PTF  | 22.0                           | 15.6             | 26.0-34.0                | 45                            | 54                           | 0.005                                  | 2                      | 10                        |
| SDV1608H220C120 □ PTF  | 22.0                           | 15.6             | 26.0-34.0                | 45                            | 54                           | 0.005                                  | 2                      | 12                        |
| SDV1608H260C030YPTF    | 26.0                           | 18.4             | 31.0-38.0                | 58                            | 70                           | 0.003                                  | 1                      | 3                         |
| SDV1608H260C100 □ PTF  | 26.0                           | 18.4             | 31.0-38.0                | 58                            | 70                           | 0.005                                  | 2                      | 10                        |
| SDV1608H260C120 □ PTF  | 26.0                           | 18.4             | 31.0-38.0                | 58                            | 70                           | 0.005                                  | 2                      | 12                        |
| SDV1608H300C100 □ PTF  | 30.0                           | 21.3             | 37.0-46.0                | 65                            | 78                           | 0.005                                  | 2                      | 10                        |



## 规格特性 Specifications

SDV1005S TYPE

| 型号<br>Part Number      | 最大工作电压<br>Max. Working Voltage |                  | 压敏电压<br>Varistor Voltage | 限制电压<br>Max. Clamping Voltage |                              | 额定脉冲耐量<br>Rated Single Pulse Transient |                        | 电容<br>Typical Capacitance |
|------------------------|--------------------------------|------------------|--------------------------|-------------------------------|------------------------------|----------------------------------------|------------------------|---------------------------|
| 测试条件<br>Test Condition | <20μA                          |                  | @1mA DC                  | 8/20μs                        | ESD                          | Energy<br>10/1000μs                    | Peak Current<br>8/20μs | @0.5Vrms,<br>1MHz         |
|                        | DC                             | AC RMS           |                          |                               |                              |                                        |                        |                           |
| 单位 Units               | Volts                          | Volts            | Volts                    | Volts                         | Volts                        | Joules                                 | Amps                   | pF                        |
| 符号 Symbol              | V <sub>WDC</sub>               | V <sub>WAC</sub> | V <sub>B</sub>           | V <sub>C</sub> <sup>*1</sup>  | V <sub>C</sub> <sup>*2</sup> | E <sub>T</sub>                         | I <sub>P</sub>         | C                         |
| SDV1005S5R5C030YPTF    | 5.5                            | 4.0              | 31.0-38.0                | 58                            | 70                           | 0.003                                  | 1                      | 3                         |
| SDV1005S5R5C050YPTF    | 5.5                            | 4.0              | 22.0-28.0                | 40                            | 48                           | 0.003                                  | 1                      | 5                         |
| SDV1005S5R5C100 □ PTF  | 5.5                            | 4.0              | 22.0-28.0                | 40                            | 48                           | 0.005                                  | 2                      | 10                        |
| SDV1005S5R5C120 □ PTF  | 5.5                            | 4.0              | 22.0-28.0                | 40                            | 48                           | 0.005                                  | 2                      | 12                        |
| SDV1005S090C030YPTF    | 9.0                            | 6.4              | 31.0-38.0                | 58                            | 70                           | 0.003                                  | 1                      | 3                         |
| SDV1005S090C050YPTF    | 9.0                            | 6.4              | 22.0-28.0                | 40                            | 48                           | 0.003                                  | 1                      | 5                         |
| SDV1005S090C100 □ PTF  | 9.0                            | 6.4              | 22.0-28.0                | 40                            | 48                           | 0.005                                  | 2                      | 10                        |
| SDV1005S090C120 □ PTF  | 9.0                            | 6.4              | 22.0-28.0                | 40                            | 48                           | 0.005                                  | 2                      | 12                        |
| SDV1005S140C030YPTF    | 14.0                           | 10.0             | 31.0-38.0                | 58                            | 70                           | 0.003                                  | 1                      | 3                         |
| SDV1005S140C050YPTF    | 14.0                           | 10.0             | 22.0-28.0                | 40                            | 48                           | 0.003                                  | 1                      | 5                         |
| SDV1005S180C030YPTF    | 18.0                           | 12.7             | 31.0-38.0                | 58                            | 70                           | 0.003                                  | 1                      | 3                         |
| SDV1005S360C050YPTF    | 36.0                           | 25.4             | 46.0-60.0                | 130                           | 155                          | 0.003                                  | 1                      | 5                         |
| SDV1005S420C050YPTF    | 42.0                           | 29.7             | 51.0-81.0                | 135                           | 160                          | 0.005                                  | 2                      | 5                         |

SDV1608S TYPE

| 型号<br>Part Number      | 最大工作电压<br>Max. Working Voltage |                  | 压敏电压<br>Varistor Voltage | 限制电压<br>Max. Clamping Voltage |                              | 额定脉冲耐量<br>Rated Single Pulse Transient |                        | 电容<br>Typical Capacitance |
|------------------------|--------------------------------|------------------|--------------------------|-------------------------------|------------------------------|----------------------------------------|------------------------|---------------------------|
| 测试条件<br>Test Condition | <20μA                          |                  | @1mA DC                  | 8/20μs                        | ESD                          | Energy<br>10/1000μs                    | Peak Current<br>8/20μs | @0.5Vrms,<br>1MHz         |
|                        | DC                             | AC RMS           |                          |                               |                              |                                        |                        |                           |
| 单位 Units               | Volts                          | Volts            | Volts                    | Volts                         | Volts                        | Joules                                 | Amps                   | pF                        |
| 符号 Symbol              | V <sub>WDC</sub>               | V <sub>WAC</sub> | V <sub>B</sub>           | V <sub>C</sub> <sup>*1</sup>  | V <sub>C</sub> <sup>*2</sup> | E <sub>T</sub>                         | I <sub>P</sub>         | C                         |
| SDV1608S5R5C030YPTF    | 5.5                            | 4.0              | 31.0-38.0                | 58                            | 70                           | 0.003                                  | 1                      | 3                         |
| SDV1608S5R5C050YPTF    | 5.5                            | 4.0              | 22.0-28.0                | 40                            | 48                           | 0.003                                  | 1                      | 5                         |
| SDV1608S5R5C100 □ PTF  | 5.5                            | 4.0              | 22.0-28.0                | 40                            | 48                           | 0.005                                  | 2                      | 10                        |
| SDV1608S5R5C120 □ PTF  | 5.5                            | 4.0              | 22.0-28.0                | 40                            | 48                           | 0.005                                  | 2                      | 12                        |
| SDV1608S090C030YPTF    | 9.0                            | 6.4              | 31.0-38.0                | 58                            | 70                           | 0.003                                  | 1                      | 3                         |
| SDV1608S090C050YPTF    | 9.0                            | 6.4              | 22.0-28.0                | 40                            | 48                           | 0.003                                  | 1                      | 5                         |
| SDV1608S090C100 □ PTF  | 9.0                            | 6.4              | 22.0-28.0                | 40                            | 48                           | 0.005                                  | 2                      | 10                        |
| SDV1608S090C120 □ PTF  | 9.0                            | 6.4              | 22.0-28.0                | 40                            | 48                           | 0.005                                  | 2                      | 12                        |
| SDV1608S140C030YPTF    | 14.0                           | 10.0             | 31.0-38.0                | 58                            | 70                           | 0.003                                  | 1                      | 3                         |
| SDV1608S140C050YPTF    | 14.0                           | 10.0             | 22.0-28.0                | 40                            | 48                           | 0.003                                  | 1                      | 5                         |
| SDV1608S180C030YPTF    | 18.0                           | 12.7             | 31.0-38.0                | 58                            | 70                           | 0.003                                  | 1                      | 3                         |

※V<sub>DC</sub>: 压敏电阻的最大直流工作电压必须大于或等于应用电路电压的 1.5 倍 V<sub>DC</sub> ≥ 1.5 V<sub>nom</sub>

※V<sub>DC</sub>: Max DC working voltage of varistor must exceed or equal to 1.5 times that of the application circuit voltage, V<sub>DC</sub> ≥ 1.5 V<sub>n</sub>.

※□: 请明确电容公差代码 (N=±30%, Y=-50%~+100%, G=Maximum)。

※□: Please specify the capacitance tolerance code (N=±30%, Y=-50%~+100%, G=Maximum).

※\*1: V<sub>C</sub>, 在指定脉冲电流和波形下测量的压敏电阻两端的最大峰值电压。

能量等级 脉冲和波形

0.00-0.05 Joule 1A, 8/20 μs

0.10 Joule 2A, 8/20 μs

0.20-0.50 Joule 5A, 8/20 μs

※\*1: V<sub>C</sub>, Maximum peak voltage across the varistor measured at a specified pulse current and waveform.

Energy Rating Pulse & Waveform

0.00-0.05 Joule 1A, 8/20 μs

0.10 Joule 2A, 8/20 μs

0.20-0.50 Joule 5A, 8/20 μs

※\*2: V<sub>C</sub>, 压敏电阻的最大峰值电压, 按照IEC61000-4-2 30A/8kV加上脉冲后30ns测量到。

※\*2: V<sub>C</sub>, Maximum peak voltage across the varistor measured at 30ns after initiation of pulse on IEC61000-4-2 30A/8kV.

## 规格特性 Specifications

Ultra low capacitance type (C=0.5pF, 1pF or 2pF)

| 型号<br>Part Number      | 最大工作电压<br>Max. Working Voltage |                  | 压敏电压<br>Varistor Voltage | 电容<br>Typical Capacitance | 截止频率<br>Min. Cut-off Frequency |
|------------------------|--------------------------------|------------------|--------------------------|---------------------------|--------------------------------|
| 测试条件<br>Test Condition | <20μA                          |                  | @1mA DC                  | @0.5Vrms, 1MHz            | @-3dB                          |
|                        | DC.5                           | AC RMS           |                          |                           |                                |
| Units 单位               | Volts                          | Volts            | Volts                    | pF                        | MHz                            |
| Symbol 符号              | V <sub>WDC</sub>               | V <sub>WAC</sub> | V <sub>B</sub>           | C                         | f <sub>0</sub>                 |
| SDV1005S5R5C0R5YPTF    | 5.5                            | 4.0              | 100-160                  | 0.5                       | 2000                           |
| SDV1005S5R5C010YPTF    | 5.5                            | 4.0              | 100-160                  | 1                         | 1250                           |
| SDV1005S5R5C020YPTF    | 5.5                            | 4.0              | 60-80                    | 2                         | 600                            |
| SDV1005S090C0R5YPTF    | 9.0                            | 6.4              | 100-160                  | 0.5                       | 2000                           |
| SDV1005S090C010YPTF    | 9.0                            | 6.4              | 100-160                  | 1                         | 1250                           |
| SDV1005S090C020YPTF    | 9.0                            | 6.4              | 60-80                    | 2                         | 600                            |
| SDV1005S140C0R5YPTF    | 14.0                           | 10.0             | 100-160                  | 0.5                       | 2000                           |
| SDV1005S140C010YPTF    | 14.0                           | 10.0             | 100-160                  | 1                         | 1250                           |
| SDV1005S140C020YPTF    | 14.0                           | 10.0             | 60-80                    | 2                         | 600                            |
| SDV1005S180C0R5YPTF    | 18.0                           | 12.7             | 100-160                  | 0.5                       | 2000                           |
| SDV1005S180C010YPTF    | 18.0                           | 12.7             | 100-160                  | 1                         | 1250                           |
| SDV1005S180C020YPTF    | 18.0                           | 12.7             | 60-80                    | 2                         | 600                            |
| SDV1005H260C0R5YPTF    | 26.0                           | 18.4             | 100-160                  | 0.5                       | 2000                           |
| SDV1005H260C010YPTF    | 26.0                           | 18.4             | 100-160                  | 1                         | 1250                           |
| SDV1005H260C020YPTF    | 26.0                           | 18.4             | 60-80                    | 2                         | 600                            |

Ultra low capacitance type (C=0.5pF, 1pF or 2pF)

| 型号<br>Part Number      | 最大工作电压<br>Max. Working Voltage |                  | 压敏电压<br>Varistor Voltage | 电容<br>Typical Capacitance | 截止频率<br>Min. Cut-off Frequency |
|------------------------|--------------------------------|------------------|--------------------------|---------------------------|--------------------------------|
| 测试条件<br>Test Condition | <20μA                          |                  | @1mA DC                  | @0.5Vrms, 1MHz            | @-3dB                          |
|                        | DC                             | AC RMS           |                          |                           |                                |
| 单位 Units               | Volts                          | Volts            | Volts                    | pF                        | MHz                            |
| 符号 Symbol              | V <sub>WDC</sub>               | V <sub>WAC</sub> | V <sub>B</sub>           | C                         | f <sub>0</sub>                 |
| SDV1608S5R5C0R5YPTF    | 5.5                            | 4.0              | 100-160                  | 0.5                       | 2000                           |
| SDV1608S5R5C010YPTF    | 5.5                            | 4.0              | 100-160                  | 1                         | 1250                           |
| SDV1608S5R5C020YPTF    | 5.5                            | 4.0              | 60-80                    | 2                         | 600                            |
| SDV1608S090C0R5YPTF    | 9.0                            | 6.4              | 100-160                  | 0.5                       | 2000                           |
| SDV1608S090C010YPTF    | 9.0                            | 6.4              | 100-160                  | 1                         | 1250                           |
| SDV1608S090C020YPTF    | 9.0                            | 6.4              | 60-80                    | 2                         | 600                            |
| SDV1608S140C0R5YPTF    | 14.0                           | 10.0             | 100-160                  | 0.5                       | 2000                           |
| SDV1608S140C010YPTF    | 14.0                           | 10.0             | 100-160                  | 1                         | 1250                           |
| SDV1608S140C020YPTF    | 14.0                           | 10.0             | 60-80                    | 2                         | 600                            |
| SDV1608S180C0R5YPTF    | 18.0                           | 12.7             | 100-160                  | 0.5                       | 2000                           |
| SDV1608S180C010YPTF    | 18.0                           | 12.7             | 100-160                  | 1                         | 1250                           |
| SDV1608S180C020YPTF    | 18.0                           | 12.7             | 60-80                    | 2                         | 600                            |
| SDV1608H260C0R5YPTF    | 26.0                           | 18.4             | 100-160                  | 0.5                       | 2000                           |
| SDV1608H260C010YPTF    | 26.0                           | 18.4             | 100-160                  | 1                         | 1250                           |
| SDV1608H260C020YPTF    | 26.0                           | 18.4             | 60-80                    | 2                         | 600                            |

※V<sub>DC</sub>: 压敏电阻的最大直流工作电压必须大于或等于应用电路电压的 1.5 倍 V<sub>DC</sub> ≥ 1.5 V<sub>n</sub>。

※V<sub>DC</sub>: Max DC working voltage of varistor must exceed or equal to 1.5 times that of the application circuit voltage, V<sub>DC</sub> ≥ 1.5 V<sub>n</sub>.

※ 可根据客户需求提供其他电气特性产品, 请联系您当地的销售人员。

※ Products with other electrical characteristics can be provided upon customer's request. Please contact your local sales.