

## SDT05D

**TVS Diode** 

#### **Features**

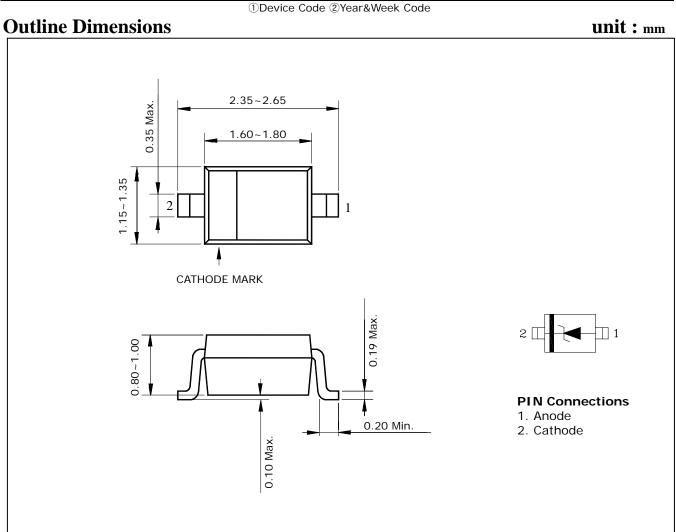
- Transient protection for data lines to IEC61000-4-2(ESD) 15KV(air), 8KV(contact)
- Small package for use in portable electronics
- Low operating and clamping voltage

### **Applications**

- Cellular Handsets and Accessories
- Microprocessor based equipment
- Notebooks, Desktops and Servers

### **Ordering Information**

| Type NO. | Marking            | Package Code |
|----------|--------------------|--------------|
| SDT05D   | <u>T9</u> □<br>① ② | SOD-323      |



KSD-D6C009-001

# SDT05D

**Absolute Maximum Ratings** 

(Ta=25°C)

| Characteristic                           | Symbol           | Rating       | Unit |
|--|------------------|--------------|------|
| Peak pulse power (tp = 8/20 \( \mu \s \) | P <sub>PK</sub>  | 200          | W    |
| Peak pulse current (tp = 8/20 \mus )     | I <sub>PP</sub>  | 24           | A    |
| Lead soldering temperature               | TL               | 260 (10sec.) | °C   |
| Junction temperature                     | T <sub>J</sub>   | 125          | °C   |
| Storage temperature range                | T <sub>stg</sub> | -55 ~ 150    | °C   |

## **Electrical Characteristics**

(Ta=25°C)

| Characteristic            | Symbol         | Test Condition                  | Min. | Тур. | Max. | Unit |
|---------------------------|----------------|---------------------------------|------|------|------|------|
| Reverse stand-off voltage | $V_{RWM}$      |                                 | -    | -    | 5    | V    |
| Reverse breakdown voltage | $V_R$          | I <sub>R</sub> =1mA             | 6.0  | -    | 7.5  | V    |
| Reverse leakage current   | I <sub>R</sub> | V <sub>RWM</sub> =5V            | -    | -    | 5    | μA   |
| Clamping voltage          | V <sub>C</sub> | I <sub>pp</sub> =1A, tp=8/20 μs | -    | -    | 9.5  | V    |
| Tatal capacitance         | $C_{T}$        | V <sub>R</sub> =0V, f=1MHz      | -    | _    | 350  | рF   |

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#### **Electrical Characteristics Curves**

Fig. 1 P<sub>PP</sub> vs t<sub>d</sub>

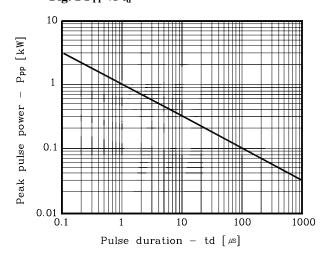


Fig. 3 Current of  $I_P$ 

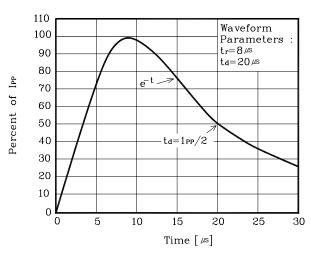


Fig. 5  $C_T$  vs  $V_R$ 

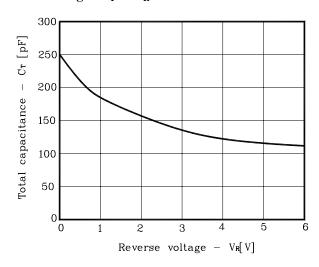


Fig. 2 Power derating curve

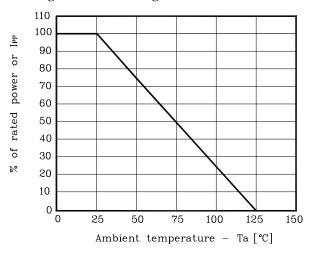
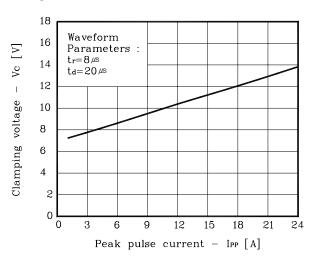


Fig. 4  $V_C$  vs  $I_{PP}$ 



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