

# SDT05U

**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	<b>)</b>	
SDT05U	U5	SOT-323		

# **Outline Dimensions** unit: mm 1.95~2.25 1.15~1.35 1 3 1.90~2.10 1.30 Typ. 3 0.40 Max. 2 0.85~0.95 **PIN Connections** 1. Cathode 2. Cathode 3. Anode 0.10 Min.

KSD-D5D002-000

# SDT05U

**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 = $8/20 \mu$ s )	$I_{PP}$	12	Α
Lead soldering temperature	T <sub>L</sub>	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.	Typ.	Max.	Unit
Reverse breakdown voltage	$V_{BR}$	I <sub>R</sub> =1mA	6.0	-	7.5	V
Reverse leakage current	$I_{R}$	V <sub>R</sub> =5V	-	-	5	μA
Clamping voltage	$V_{C(1)}$	I <sub>PP</sub> =1A, tp=8/20 μs	-	-	9.5	V
	V <sub>C(2)</sub>	I <sub>pp</sub> =12A, tp=8/20 μs	5.0	-	12.5	V
Tatal capacitance	C <sub>T</sub>	Between I/O pins and GND $V_R$ =0V, f=1MHz	_	-	150	pF

KSD-D5D002-000 2

### **Electrical Characteristics Curves**

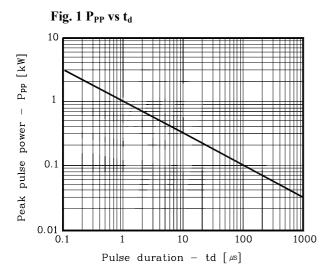


Fig. 3 Current of  $I_P$ 

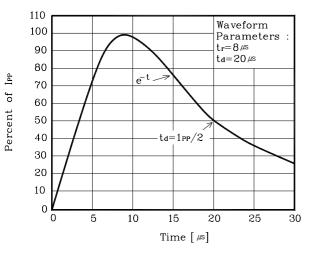


Fig. 5 C<sub>T</sub> vs V<sub>R</sub>

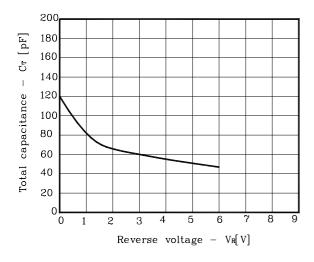


Fig. 2 Power derating curve

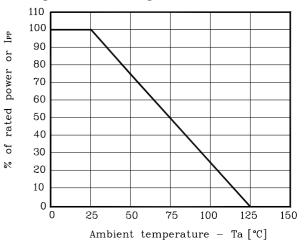
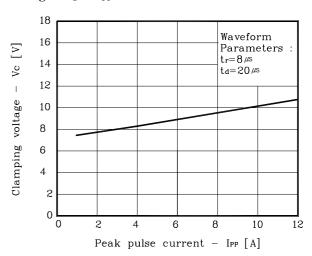


Fig. 4 V<sub>C</sub> vs I<sub>PP</sub>



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