

TVS Diode Array

Features:

- Protects one bidirectional line or two unidirectional lines
- Low clamping voltage
- Working voltages : 5V
- Low leakage current
- 300 Watts Peak Pulse Power per (tp=8/20μs)
 IEC61000-4-2 (ESD) ±25kV (air),±25kV(contact)
 IEC61000-4-4 (EFT) 40A (5/50ns)

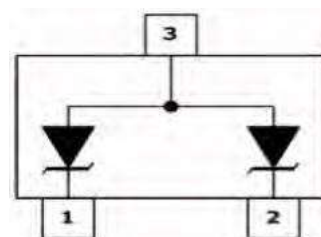
Applications:

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Networking and Telecom
- Serial and Parallel Ports.
- Peripherals

SOT-23



Pin Configuration



Mechanical Characteristics

- package: SOT-23
- Material: Halogen free
- Flammability Rating: UL 94V-0
- High temperature soldering guaranteed:260°C/10s
- Quantity per reel: 3,000pcs
- Packaging: Tape and Reel
- Reel size: 7 inch
- Device: 05C

Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppp	300	W
ESD per IEC 61000-4-2 (Air)	V _{ESD}	±25	KV
ESD per IEC 61000-4-2 (Contact)		±25	
Operating Temperature Range	T _J	-55 to +150	°C
Storage Temperature Range	T _{STJ}	-55 to +150	°C

Electrical Characteristics(TA=25°C unless otherwise specified)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
VRWM	Reverse Working Peak Voltage				5	V
VBR	Reverse Breakdown Voltage	IT = 1mA	6			V
IR	Reverse Leakage Current	VRWM = 5V			1	μA
VC	Clamping Voltage	IPP = 10 A (8/20μs)			15	V
VC	Clamping Voltage	IPP = 15 A (8/20μs)			20	V
CJ	Capacitance	VR = 0V, f = 1MHz		63		pF

Characteristic Curves

Fig1. Clamping voltage vs. Peak pulse current

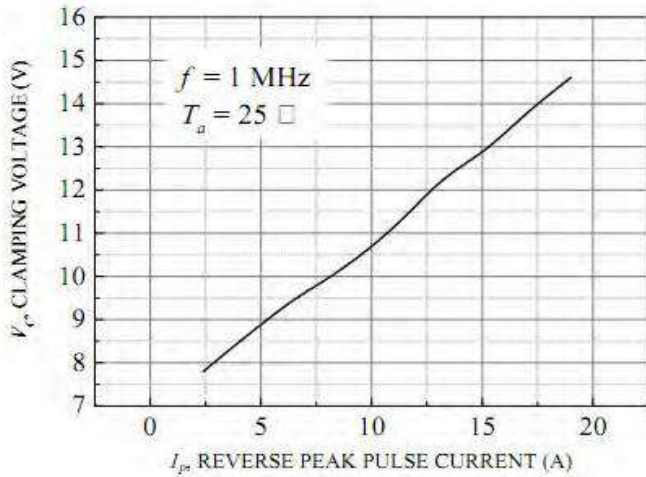


Fig2. Junction Capacitance vs VR

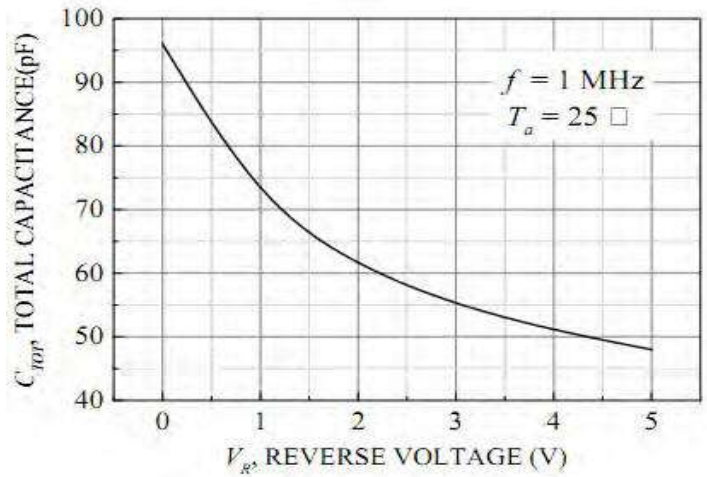


Fig3. 8/20 μ s Pulse Waveform

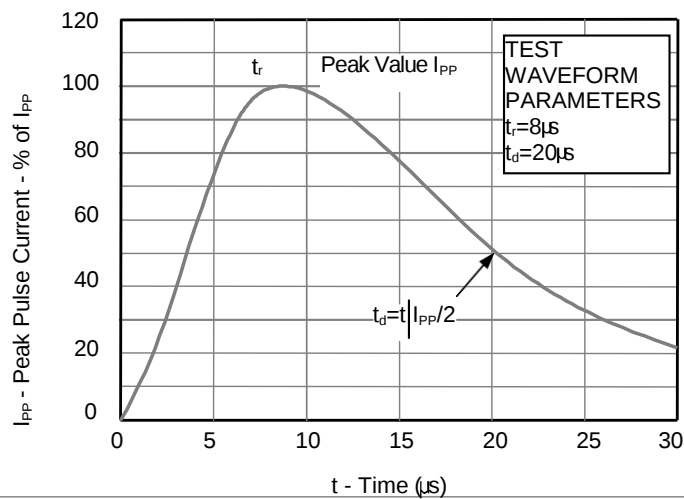


Fig4. ESD Pulse Waveform (according to IEC 61000-4-2)

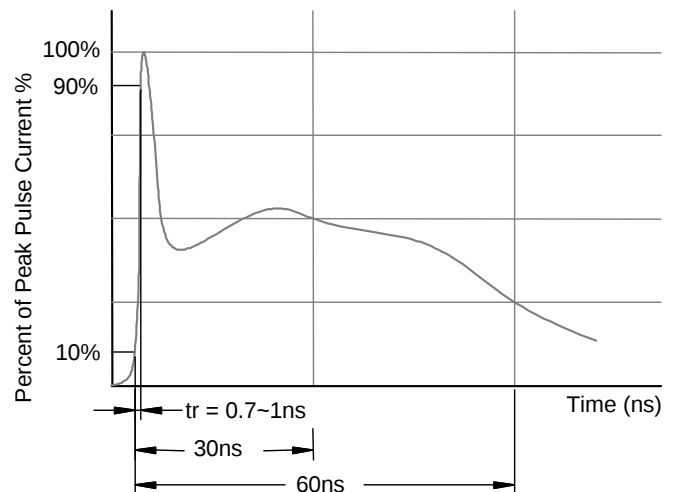
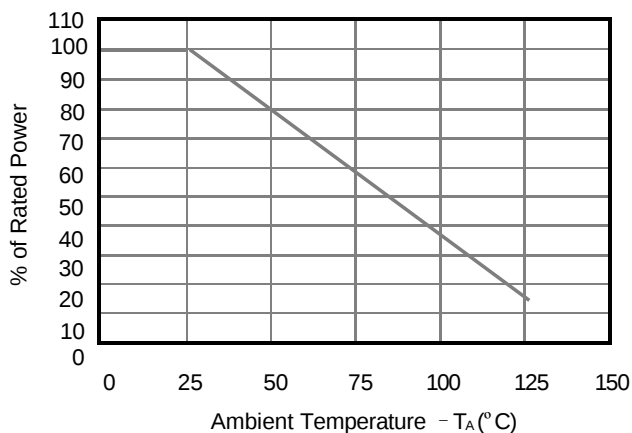
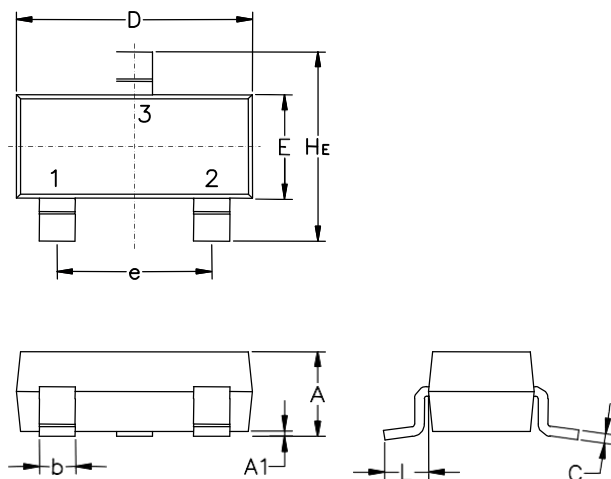


Fig5. Power Derating Curve

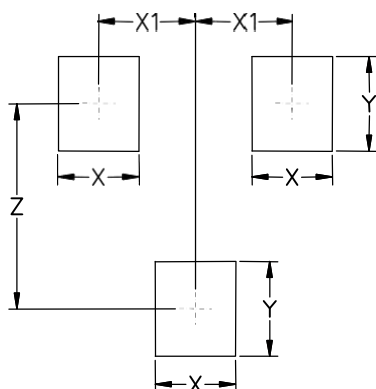


SOT-23 Package Outline & Dimensions



Symbol	Millimeters			Inches		
	Min.	Nom.	Max.	Min.	Nom.	Max.
A	0.89	1.00	1.11	0.035	0.040	0.044
A1	0.01	0.06	0.10	0.001	0.002	0.004
b	0.37	0.44	0.50	0.15	0.18	0.020
c	0.09	0.13	0.18	0.003	0.005	0.007
D	2.80	2.90	3.04	0.110	0.114	0.120
E	1.20	1.30	1.40	0.047	0.051	0.055
e	1.78	1.90	2.04	0.070	0.075	0.081
L	0.35	0.54	0.69	0.014	0.021	0.029
H _E	2.10	2.40	2.64	0.083	0.094	0.104

Soldering Footprint



Symbol	Millimeters	Inches
X	0.80	0.031
X1	0.95	0.037
Y	0.90	0.035
Z	2.00	0.079