1-Line Uni-directional TVS Diode

Features

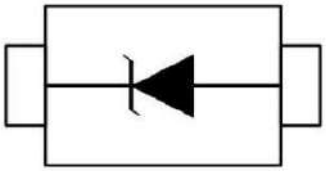
- Ultra low leakage: nA level
- Operating voltage: 36V
- Low clamping voltage
- Complies with following standards:
  – IEC 61000-4-2 (ESD) immunity test
    Air discharge: ±30kV
    Contact discharge: ±30kV
  – IEC61000-4-4 (EFT) 40A (5/50ns)
  – IEC61000-4-5 (Lightning) 6A (8/20μs)
- RoHS Compliant

Applications

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

Dimensions SOD-523

Pin Configuration



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

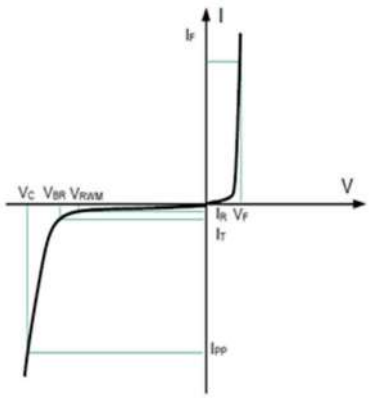
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppp	400	W
ESD per IEC 61000−4−2 (Air)	V_{ESD}	± 30	kV
ESD per IEC 61000−4−2 (Contact)		± 30	
Operating Temperature Range	T_J	-40 to +125	℃
Storage Temperature Range	T_{STJ}	-55 to +150	℃

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

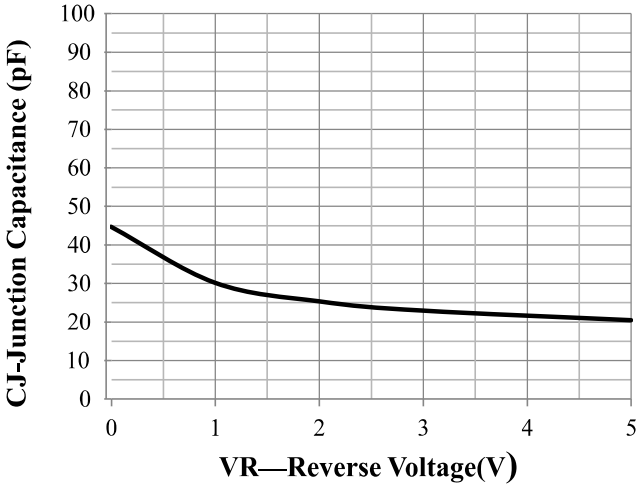
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				36	V
Breakdown Voltage	V_{BR}	I_T = 1mA	40	42	47	V
Reverse Leakage Current	I_R	V_{RWM} = 36V			0.1	μA
Clamping Voltage	V_C	I_{PP} = 1A (8 x 20 μs pulse)		45	50	V
Clamping Voltage	V_C	I_{PP} = 6A (8 x 20 μs pulse)		60	65	V
Junction Capacitance	C_J	V_R = 0V, f = 1MHz		28	45	pF

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

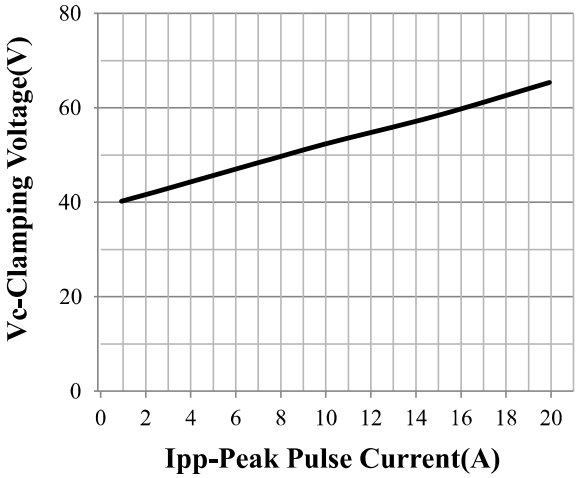
Symbol	Parameter
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @I_T
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @I_{PP}



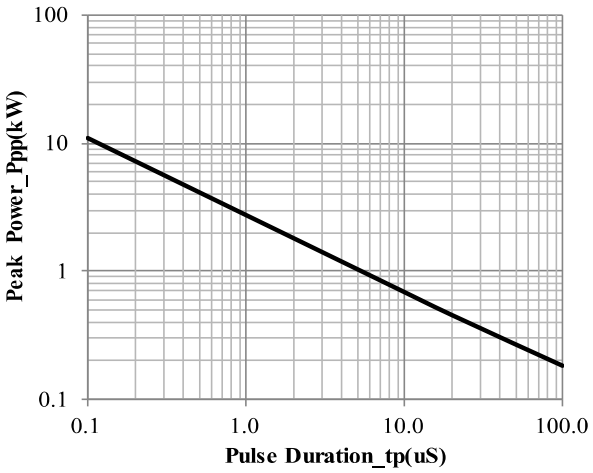
Typical Performance Characteristics(TA=25°C unless otherwise specified)



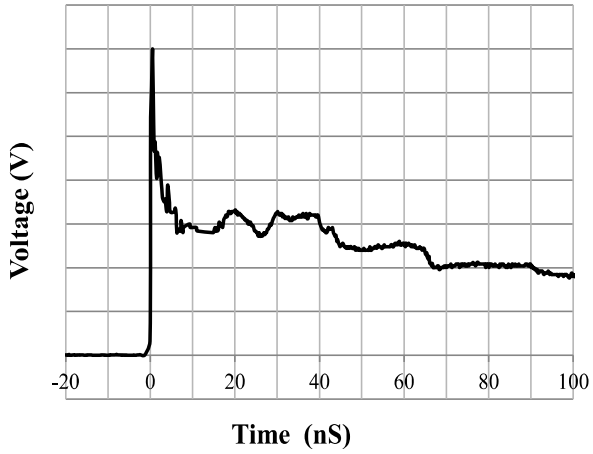
Junction Capacitance vs. Reverse Voltage



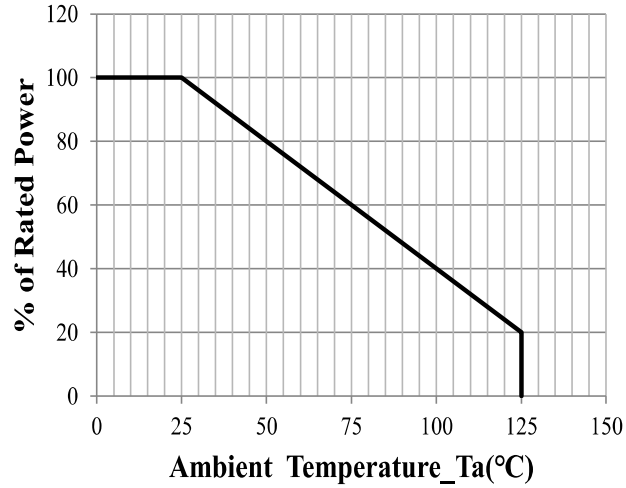
Clamping Voltage vs. Peak Pulse Current



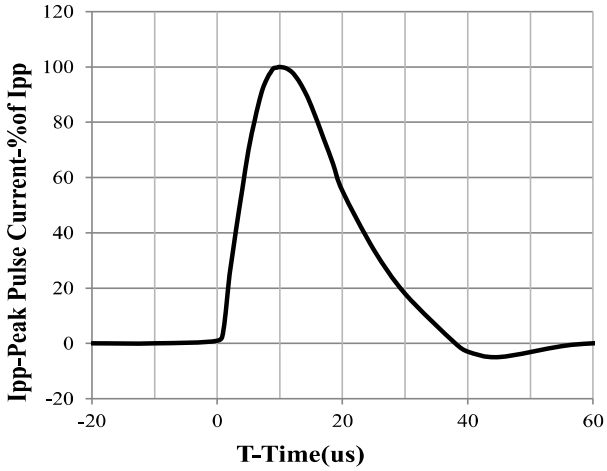
Peak Pulse Power vs. Pulse Time



IEC61000−4−2 Pulse Waveform

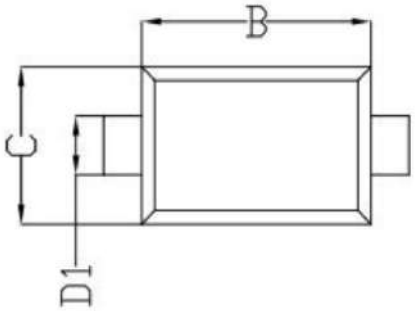


Power Derating Curve

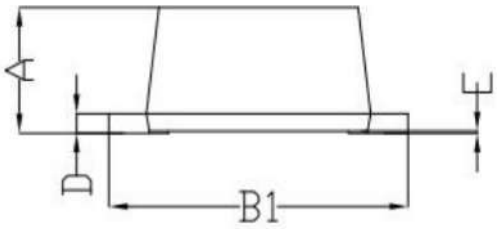


8 X 20us Pulse Waveform

SOD-523 Package Outline Drawing



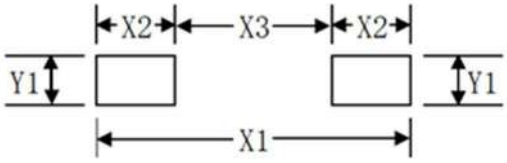
TOP VIEW



SIDE VIEW

SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	Min	Typ	Max	Min	Typ	Max
A	0.60	0.65	0.70	0.0236	0.0256	0.0276
B	1.15	1.20	1.25	0.0453	0.0472	0.0492
B1	1.55	1.60	1.65	0.0610	0.0630	0.0650
C	0.75	0.80	0.85	0.0295	0.0315	0.0335
D	0.10	0.11	0.12	0.0039	0.0043	0.0047
D1	0.28	0.30	0.32	0.0110	0.0118	0.0126
E	0.00	-	0.02	0.0000	-	0.0008

Suggested Land Pattern



SYM	DIMENSIONS	
	MILLIMETER	INCHES
X1	2.00	0.079
X2	0.60	0.024
X3	0.80	0.031
Y1	0.50	0.020