ESD5V0D5B

Semiconductor TVS Diode

Features

- Ultra low leakage: nA level
- Low clamping voltage
- RoHS Compliant
- REACH & SVHC Compliant
- Halogen Compliant
- SOD-523 Package

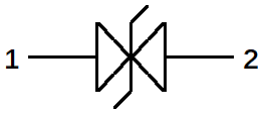


SOD-523

Ordering Information

Part Number	Packaging	Reel Size
ESD5V0D5B	5000/Tape & Reel	7 inch

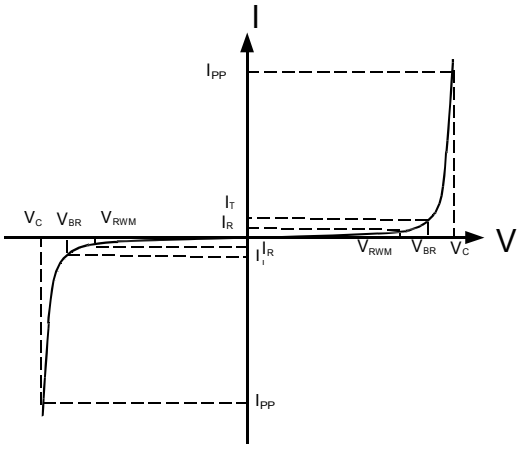
Circuit Diagram



Marking Diagram :5C

Portion Electronics Parameter

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}



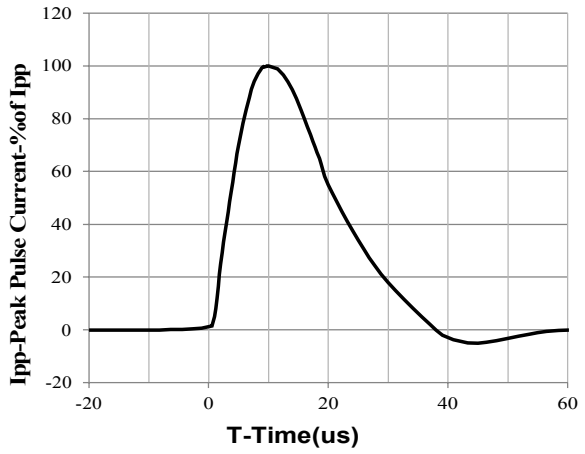
Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs pulse)	P_{pk}	120	W
Peak Pulse Current (8/20μs pulse)	I_{PP}	10	A
ESD per IEC 61000−4−2 (Air) ESD per IEC 61000−4−2 (Contact)	V_{ESD}	±30 ±30	kV
Operating Temperature Range	T_J	−40 to +125	°C
Storage Temperature Range	T_{stg}	−55 to +150	°C

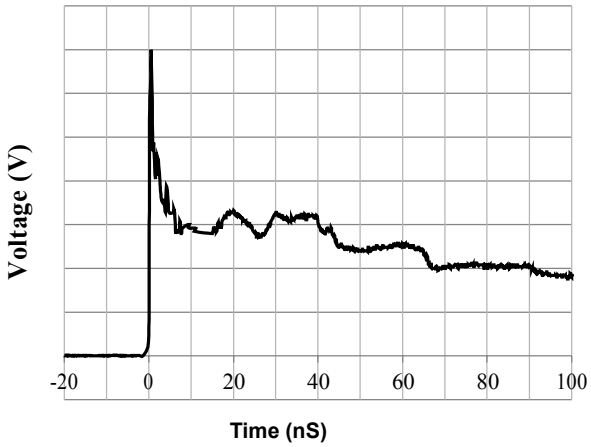
Electrical Characteristics (T_A=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				5	V
Breakdown Voltage	V_{BR}	I_T = 1mA	6			V
Reverse Leakage Current	I_R	V_{RWM} = 5V			200	nA
Clamping Voltage	V_C	I_{PP} = 1A (8 / 20μs pulse)		7.1	9	V
Clamping Voltage	V_C	I_{PP} = 10A (8 / 20μs pulse)		8.3	12	V
Junction Capacitance	C_J	V_R = 0V, f = 1MHz，		17	25	pF

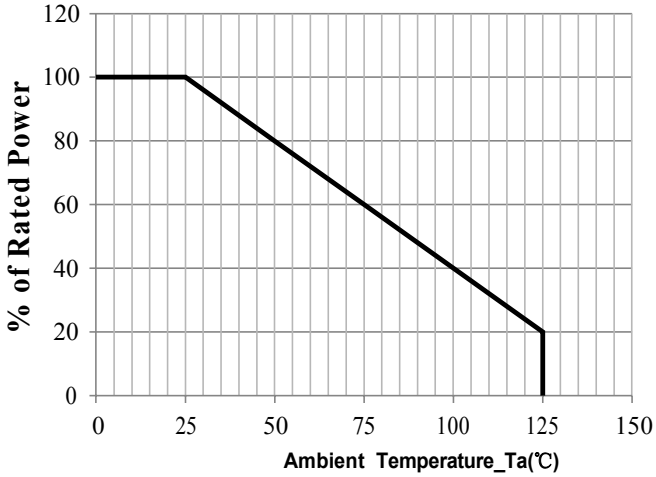
Typical Performance Characteristics (T_A=25°C unless otherwise Specified)



8 / 20us Pulse Waveform

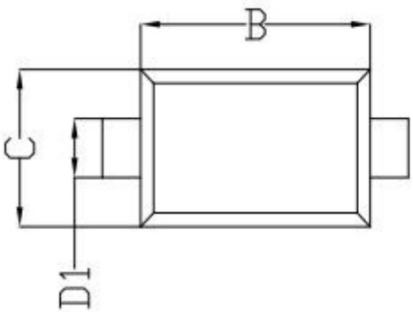


IEC61000−4−2 Pulse Waveform

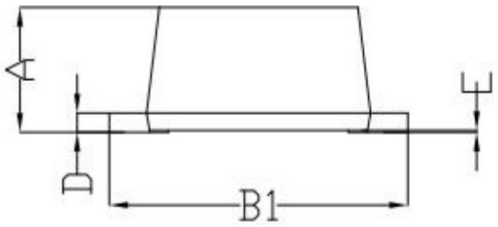


Power Derating Curve

SOD-523 Package Outline Drawing



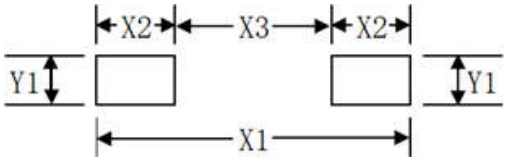
TOP VIEW



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