

ESD Protection Diode

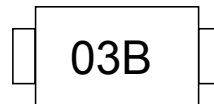
Features

- 520W peak pulse power ($t_p=8/20\mu s$)
- SOD-323 package
- Fast response time, typically $< 1\text{ ns}$
- Excellent clamping voltage
- Low leakage current
- IEC 61000-4-2 $\pm 30\text{kV}$ (Air) ESD protection
- IEC 61000-4-2 $\pm 30\text{kV}$ (Contact) ESD protection
- IEC 61000-4-4 40A (5/50ns) EFT protection
- RoHS compliant



Marking: 03B

SOD-323



Schematic Diagram



Applications

- Laptop computers
- Cellular phones
- Digital cameras
- PDAs

Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Pulse Power ($T_P=8/20\mu s$)	P_{pp}	520	W
Peak Pulse Current ($T_P=8/20\mu s$)	I_{pp}	40	A
Operating Temperature	T_J	-55-+125	$^\circ\text{C}$
Storage temperature	T_S	-65-+150	$^\circ\text{C}$

Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse stand-off voltage	V_{RWM}				3.3	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	4			V
Reverse Leakage Current	I_R	$V_{RWM}=3.3\text{V}$			1	μA
Clamping Voltage	V_C	$I_{PP}=40\text{A}, T_P=8/20\mu s$			13	V
Junction Capacitance	C_J	$V_R=0\text{V}, f=1\text{MHz}$		90		pF

Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

Fig.1 Peak Pulse Power vs Pulse Time

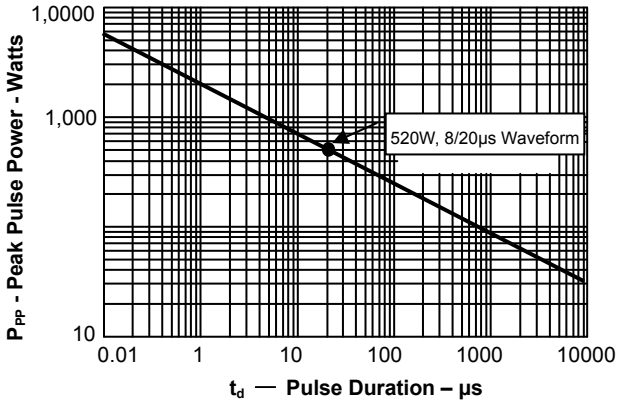


Fig.2 Pulse WaveForm-8/20μs

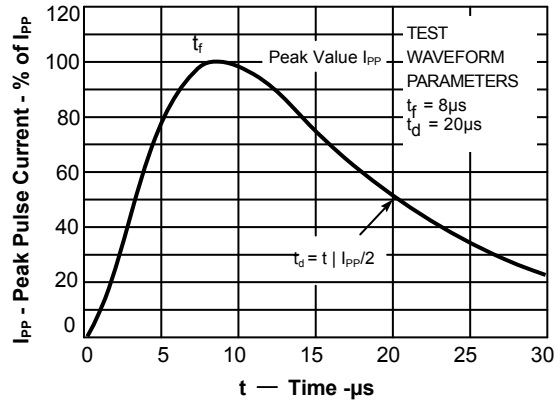


Fig.3 Power Derating Curve

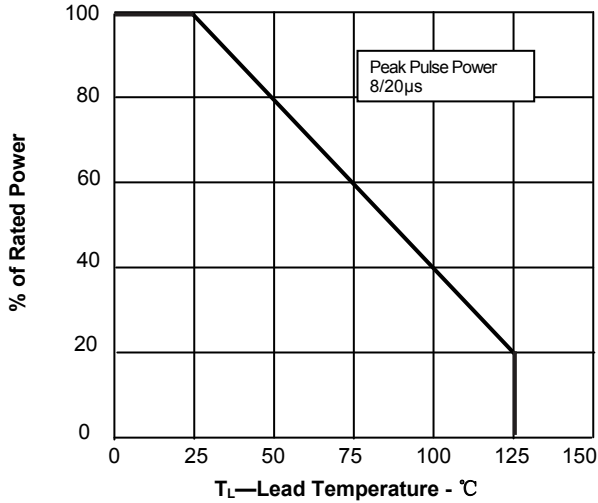
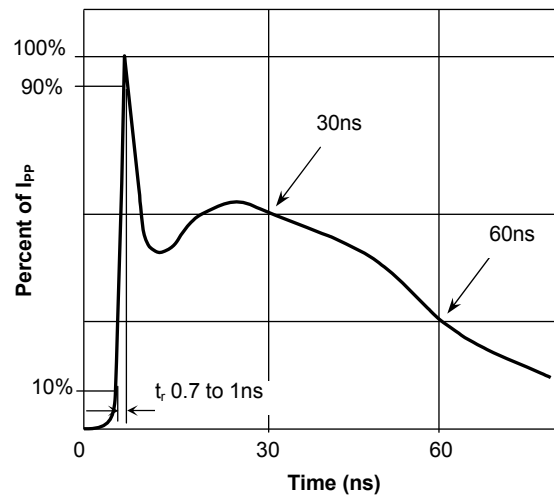
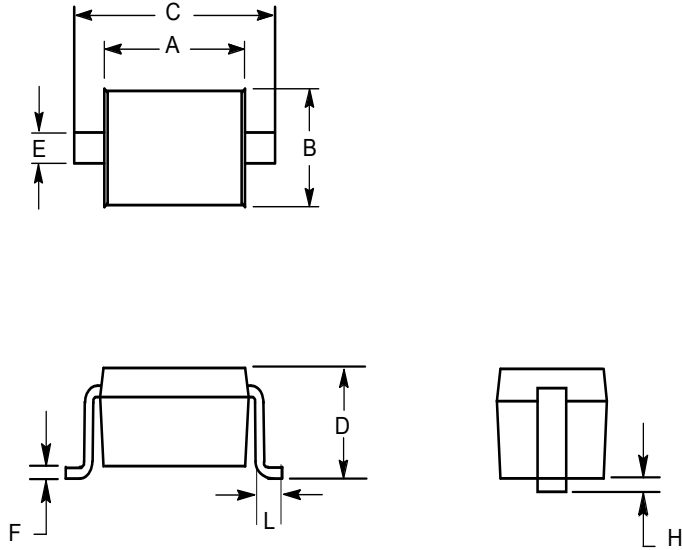


Fig.4 Pulse Waveform-ESD(IEC61000-4-2)



Package Outline Dimensions

millimeters



Dim	millimeters	
	min	max
A	1.60	1.90
B	1.15	1.45
C	2.39	2.70
D	0.80	1.10
E	0.25	0.40
F	0.10	0.20
H		0.10
L	0.20	-

Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.01.01	First issue

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