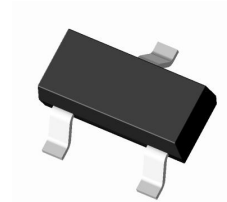


ESD/Surge Protection Diode Array

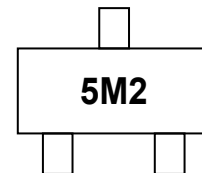
Features

- SOT-23 package
- Low leakage current
- Excellent clamping voltage
- Fast response time, typically < 1 ns
- 320 Watts peak pulse power (tP = 8/20μs)
- IEC 61000-4-2 ±30kV (Air) ESD protection
- IEC 61000-4-4 40A (5/50ns) EFT protection
- IEC 61000-4-2 ±30kV (Contact) ESD protection
- Protects one bidirectional or two unidirectional lines
- RoHS compliant

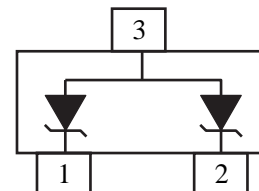


Marking: 5M2

SOT-23



Schematic Diagram



Applications

- Set-Top Box
- Portable Electronics
- Communication Systems
- Control & Monitoring Systems
- Cellular Handsets and Accessories
- Servers, Notebooks, and Desktop PCs

Absolute Maximum Ratings (TA=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Pulse Power (TP=8/20μS)	PP	320	W
Peak Pulse Current (tp=8/20μS)	IPP	20	A
Operating temperature	TJ	-55 to +125	°C
Storage temperature	TSTG	-50 to +150	°C

Electrical Specifications (TA=25°C unless otherwise noted)						
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reversestand-off Voltage	V_{RWM}				5	V
ReverseBreakdown Voltage	V_{BR}	$I_T=1mA$	6		7.4	V
ReverseLeakage Current	I_R	$V_{RWM}=5V, T=25^\circ C$			1	μA
Clamping Voltage	V_C	$I_{PP}=10A, T_P=8/20\mu S$			12	V
	V_C	$I_{PP}=20A, T_P=8/20\mu S$			16	V
Junction Capacitance	C_J	$V_R=0V, f=1MHz$		70		pF

Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

Fig.1 Peak Pulse Power vs Pulse Time

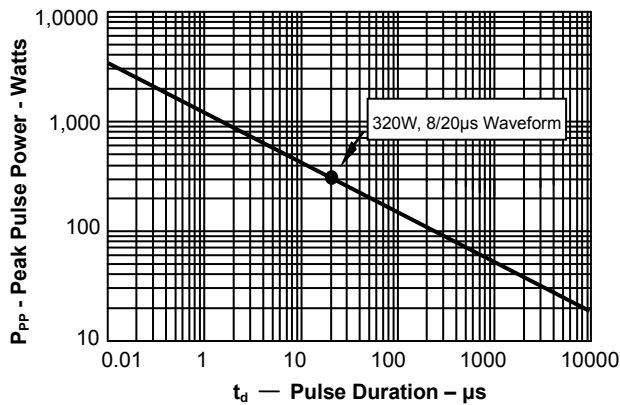


Fig.2 Pulse WaveForm-8/20μs

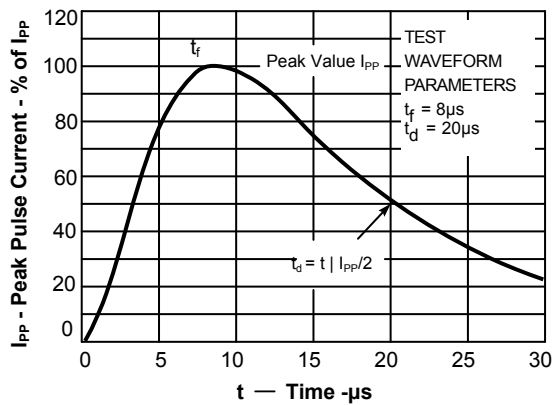


Fig.3 Power Derating Curve

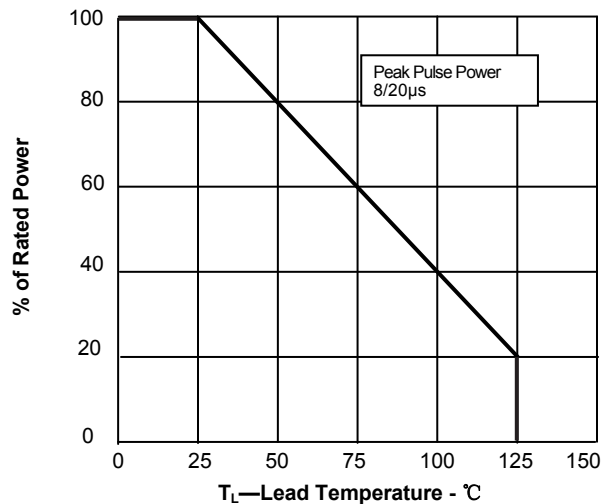
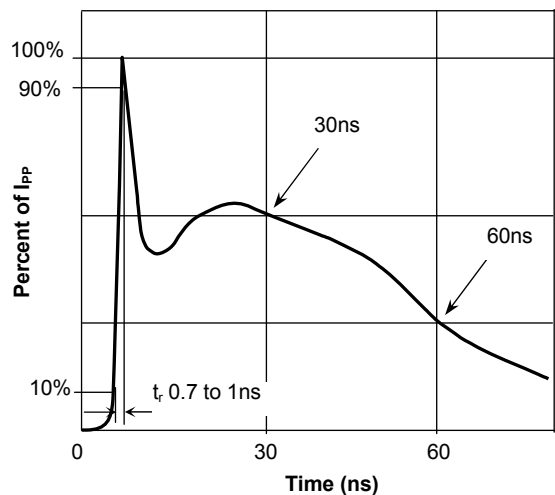
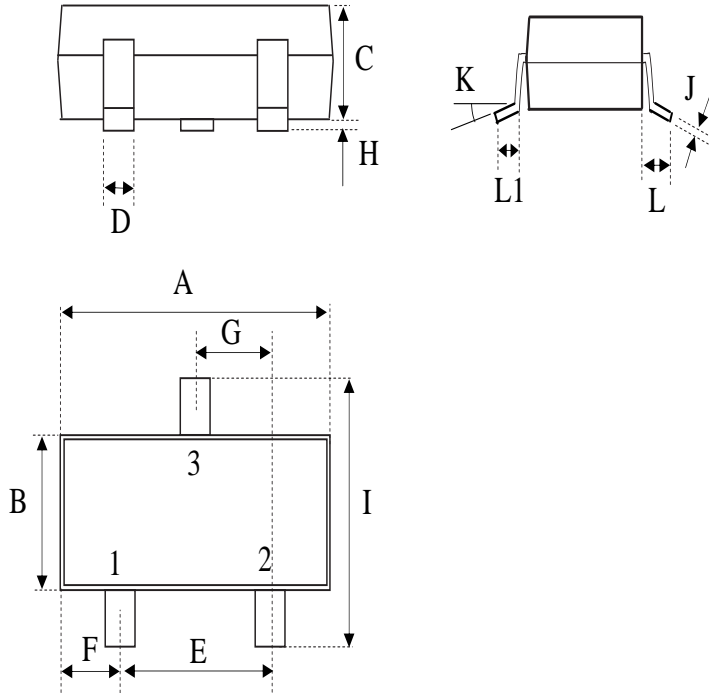


Fig.4 Pulse Waveform-ESD(IEC61000-4-2)



Package Outline Dimensions

millimeters



Dim	millimeters	
	min	max
A	2.80	3.04
B	1.20	1.40
C	0.89	1.11
D	0.37	0.50
E	1.78	2.04
F	0.45	0.60
G	0.89	1.02
H	0.013	0.100
I	2.10	2.50
J	0.085	0.177
K	0°	10°
L	0.45	0.60
L1	0.30	0.60

Revision History

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

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