

Features

- Uni-Directional ESD Protection of Two Line
- Low Capacitance
- Low Clamping Voltage
- Moisture Sensitivity Level 1
- Halogen Free. "Green" Device (Note 1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

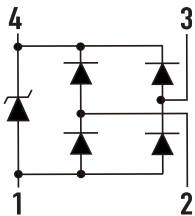
Maximum Ratings

IEC61000-4-2 (ESD)	Air	±25KV
	Contact	±20KV
Peak Pulse Current (8/20µs)	I _{PP} I/O to GND	4A
Peak Pulse Current (8/20µs)	I _{PP} VCC to GND	15A
Peak Pulse Power (8/20µs) ^(Note2)	P _{PK} I/O to GND	50W
Peak Pulse Power (8/20µs) ^(Note2)	P _{PK} VCC to GND	240W
Operating Junction Temperature Range	T _J	-55°C to +150°C
Storage Temperature Range	T _{STG}	-55°C to +150°C

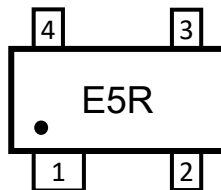
Note :

1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. Non-repetitive current pulse 8/20 µs exponential decay waveform according to IEC61000-4-5.

Internal Structure

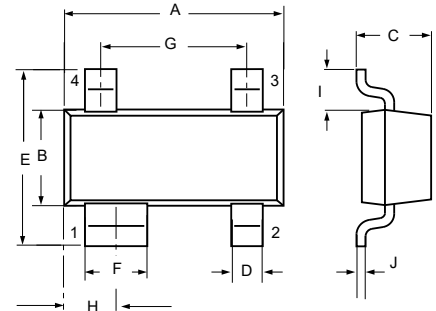


Marking Code



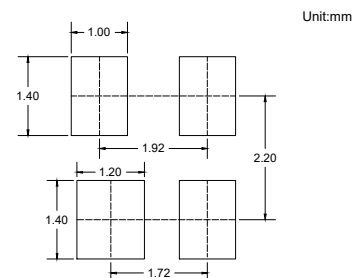
ESD Protection Device

SOT-143

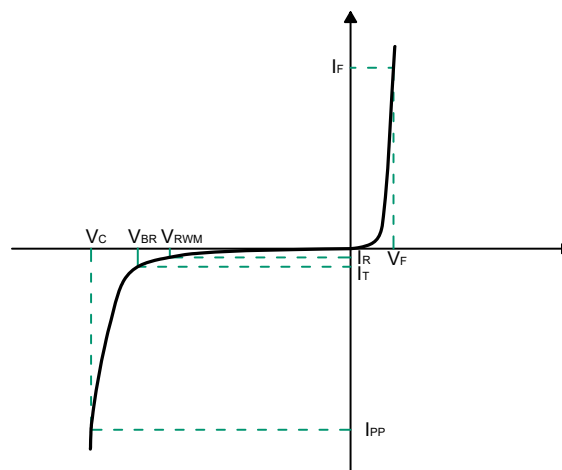


DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.110	0.120	2.80	3.04	
B	0.047	0.055	1.20	1.39	
C	0.031	0.048	0.80	1.22	
D	0.011	0.020	0.30	0.51	
E	0.082	0.104	2.10	2.64	
F	0.029	0.037	0.76	0.94	
G	0.070	0.080	1.78	2.03	
H	0.028	0.033	0.72	0.83	
I	0.015	0.024	0.40	0.60	
J	0.003	0.008	0.08	0.20	

Suggested Solder Pad Layout



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}
P_{PK}	Peak Pulse Power
C_J	Junction Capacitance
I_F	Forward Current
V_F	Forward Voltage @ I_F



Electrical Characteristics @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Working Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA, I/O$ to GND	6		9	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA, VCC$ to GND	6		9	V
Reverse Leakage Current	I_R	$V_{RWM}=5V$			1	μA
Clamping Voltage ^{Note1}	V_C	$I_{PP}=4A, t_p=8/20\mu s$ I/O to GND		14	16	V
Clamping Voltage ^{Note1}	V_C	$I_{PP}=15A, t_p=8/20\mu s$ VCC to GND		15	17	V
Junction Capacitance	C_J	$V_R=0V, f=1MHz$ I/O to I/O		0.3		pF
Junction Capacitance	C_J	$V_R=0V, f=1MHz$ I/O to GND		0.6		pF

Note :

1. Non-repetitive current pulse 8/20 μs exponential decay waveform according to IEC61000-4-5.

Curve Characteristics

Fig. 1 - 8 X 20 μ s Pulse Waveform

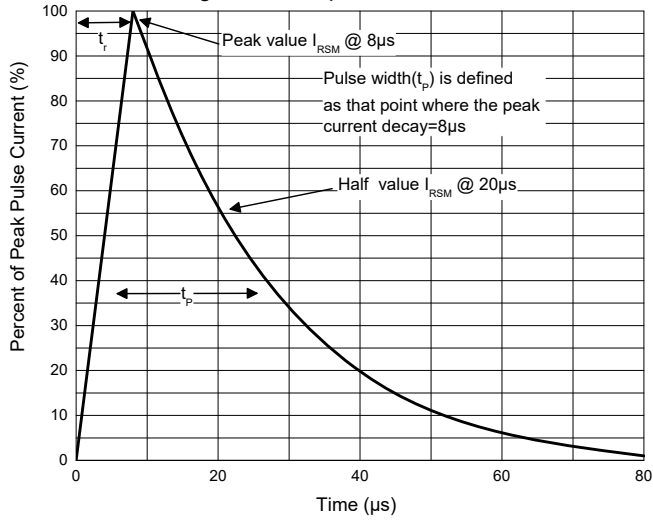


Fig. 2 - Pulse Derating Curve

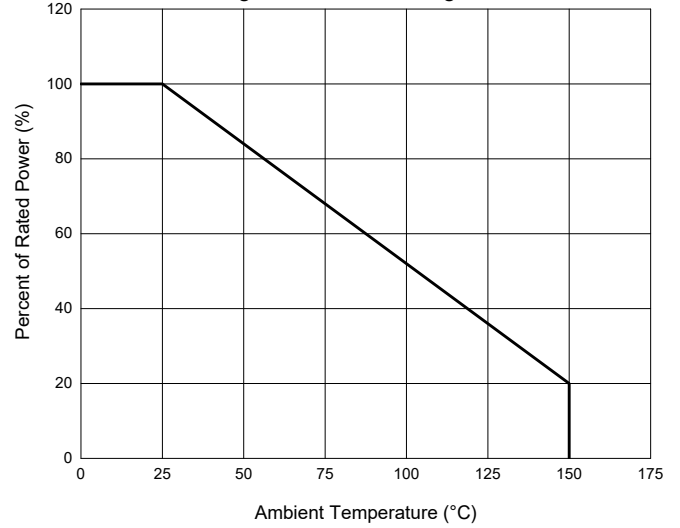


Fig. 3 - Capacitance Characteristics

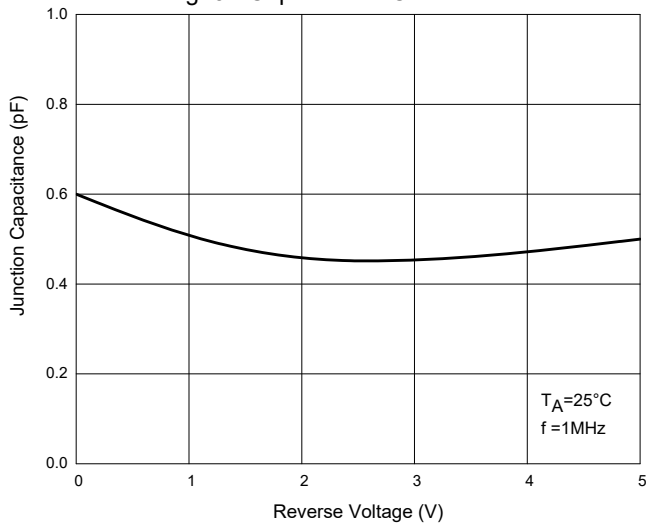
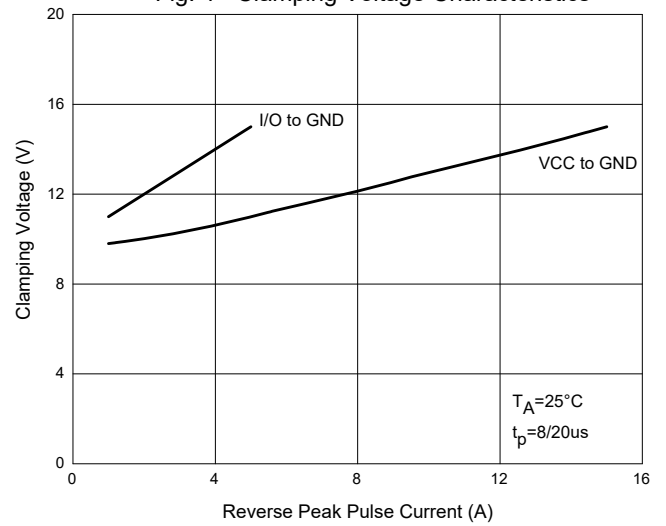


Fig. 4 - Clamping Voltage Characteristics



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

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