Features

- AEC-Q101 Qualified
- Low Leakage
- Ultra Low Clamping Voltage
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. “Green” Device (Note 1)
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

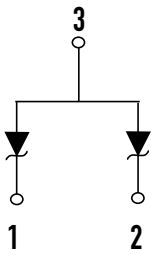
ESD Protection Device

Maximum Ratings

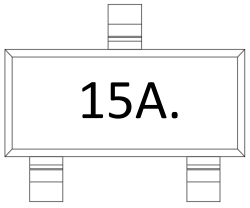
IEC61000-4-2(ESD)	Air	±30KV
	Contact	±30KV
Peak Pulse Power (8/20μs)	P_{PK}	280W
Peak Pulse Current (8/20μs)(Note 2)	I_{PP}	8A
Operating Junction Temperature Range	T_J	-55°C to +150°C
Storage Temperature Range	T_{STG}	-55°C to +150°C

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.

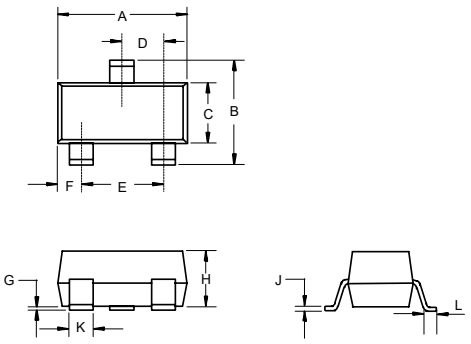
Internal Structure



Marking Code

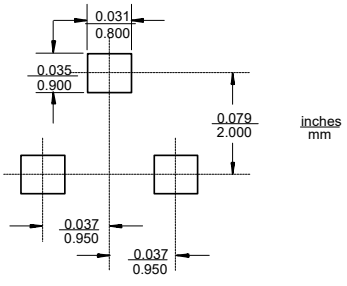


SOT-23

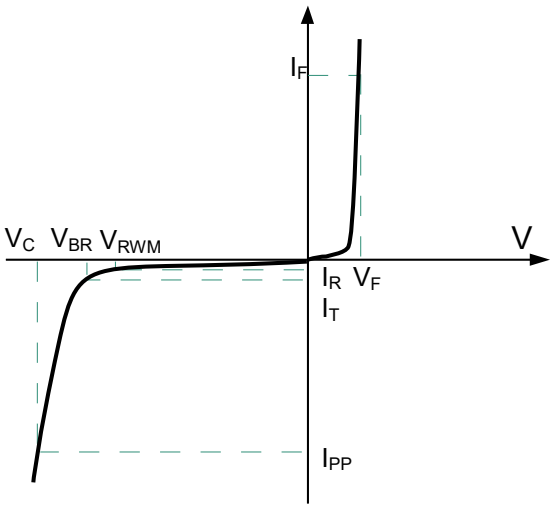


DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.110	0.120	2.80	3.04	
B	0.083	0.104	2.10	2.64	
C	0.047	0.055	1.20	1.40	
D	0.034	0.041	0.85	1.05	
E	0.067	0.083	1.70	2.10	
F	0.018	0.024	0.45	0.60	
G	0.0004	0.006	0.01	0.15	
H	0.035	0.043	0.90	1.10	
J	0.003	0.007	0.08	0.18	
K	0.012	0.020	0.30	0.51	
L	0.007	0.020	0.20	0.50	

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_{PP}	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}				15	V
Reverse Breakdown Voltage	V_{BR}	I_T =1mA	16.1		19	V
Reverse Leakage Current	I_R	V_{RWM}=15V			1.0	μA
Forward Voltage	V_F	I_F=10mA			1.1	V
Clamping Voltage[Note1]	V_C	I_{PP}=1A, t_P=8/20μs			24	V
Clamping Voltage[Note1]	V_C	I_{PP}=5A, t_P=8/20μs			30	V
Clamping Voltage[Note1]	V_C	I_{PP}=8A, t_P=8/20μs			35	V
Dynamic Resistance [Note2]	R_{DYN}	TLP, t_P=100ns		0.19		Ω
Junction Capacitance	C_J	V_R=0V, f=1MHz		45	55	pF

Note:
1.Non-repetitive current pulse, according to IEC61000-4-5.
2.TLP parameter: Z_0=50Ω, t_p=100ns, t_r=2ns, averaging window from 60ns to 80ns. R_{DYN} is calculated from 4A to 16A.
3.Measured from Pin1 to Pin3 or Pin 2 to Pin3.

Curve Characteristics

Fig. 1 - 8 X 20μs Pulse Waveform

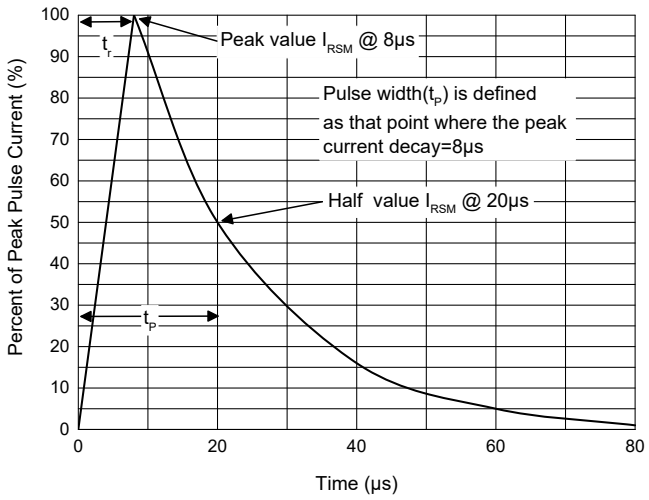


Fig. 2 - Non-Repetitive Peak Pulse Power

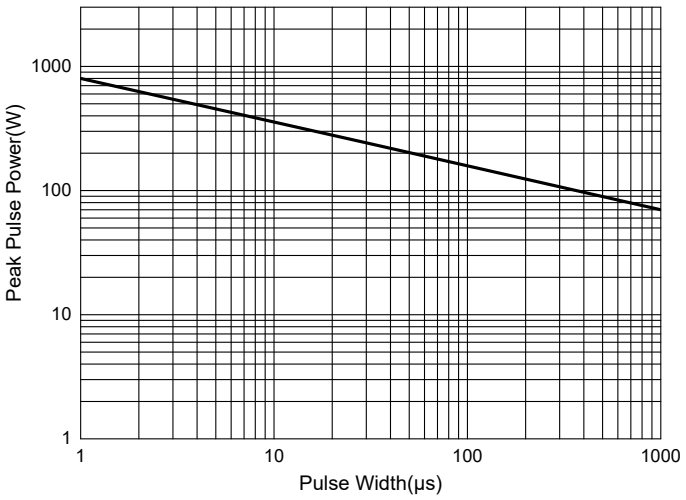


Fig. 3 - Capacitance Characteristics

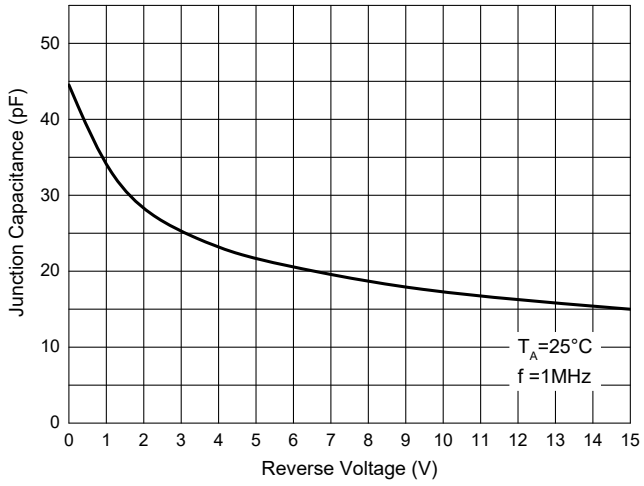


Fig. 4 - Clamping Voltage Characteristics

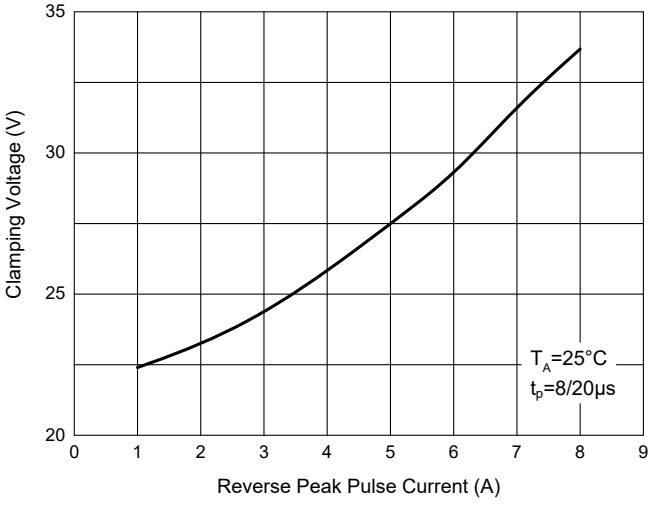


Fig. 5 - TLP Measurement

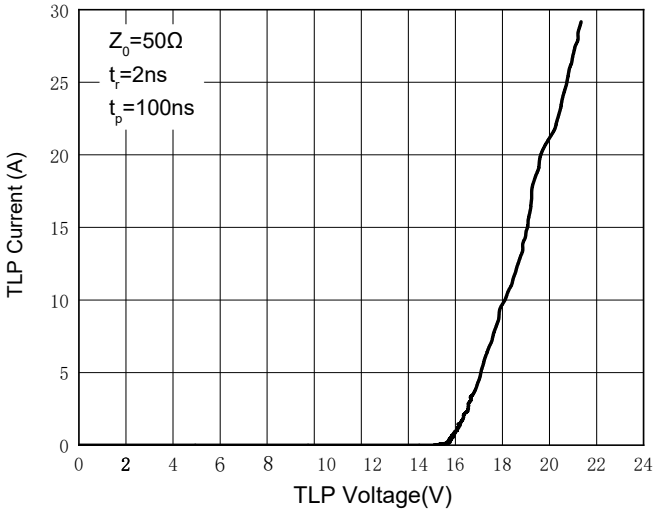
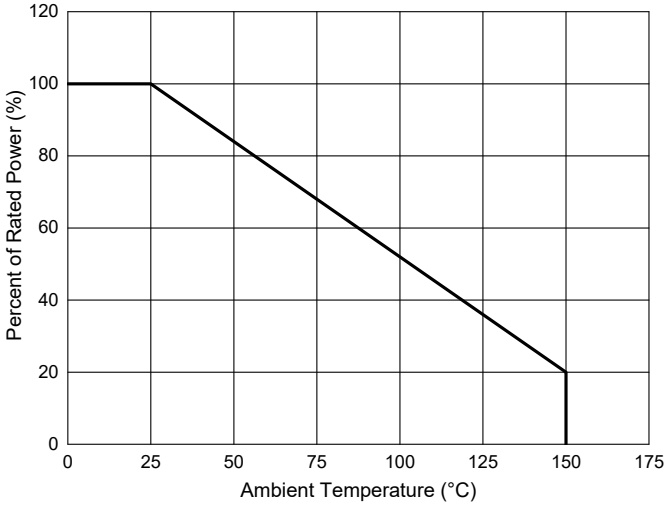


Fig. 6 - Pulse Derating Curve



Ordering Information

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