

Features

- Fully Automotive Qualified to AEC-Q101
- SOT-23 Package Allows Either Two Separate Unidirectional Configurations or a Single Bidirectional Configuration
- Peak Power-40W@1.0ms(Unidirectional)
- Low Leakage
- 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)

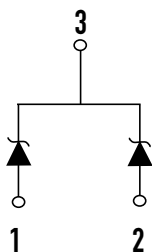
Maximum Ratings

IEC61000-4-2(ESD)	Air	±30KV
	Contact	±30KV
Peak Pulse Power (10/1000µs)	PPK	40W
Power Dissipation	PD	225mW
Thermal Resistance Junction to Ambient	RthJA	556°C/W
Operating Junction Temperature Range	TJ	-55°C to +150°C
Storage Temperature Range	TSTG	-55°C to +150°C

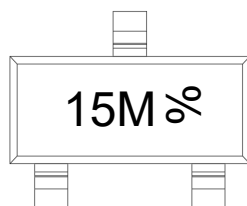
Note:

1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure



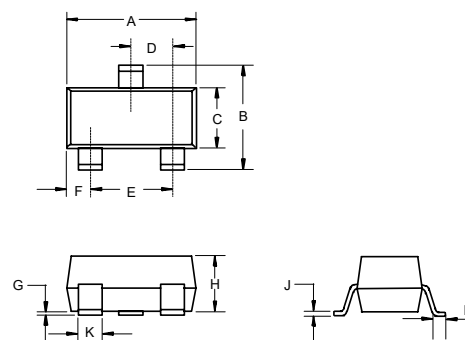
Marking Code



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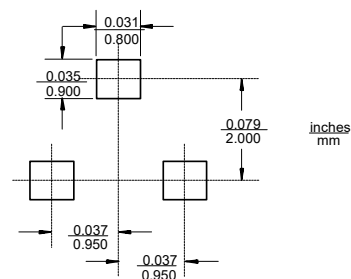
ESD Protection Device

SOT-23

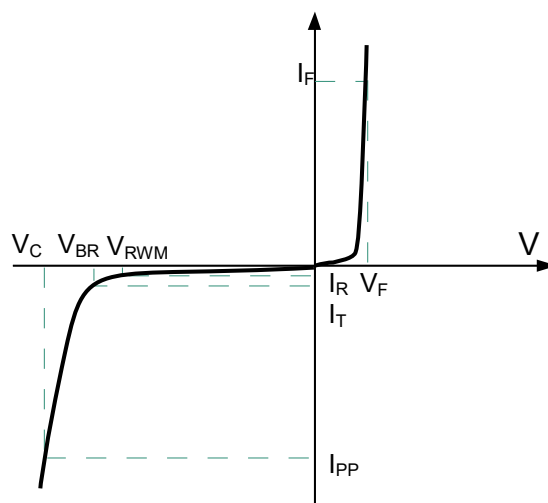


DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.110	0.120	2.80	3.04	
B	0.083	0.104	2.10	2.64	
C	0.047	0.055	1.20	1.40	
D	0.034	0.041	0.85	1.05	
E	0.067	0.083	1.70	2.10	
F	0.018	0.024	0.45	0.60	
G	0.0004	0.006	0.01	0.15	
H	0.035	0.043	0.90	1.10	
J	0.003	0.007	0.08	0.18	
K	0.012	0.020	0.30	0.51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

Suggested Solder Pad Layout



Symbol	Parameter
VRWM	Peak Reverse Working Voltage
IR	Reverse Leakage Current @ VRWM
VBR	Breakdown Voltage @ IT
IT	Test Current
IPP	Maximum Reverse Peak Pulse Current
VC	Clamping Voltage @ IPP
PPP	Peak Pulse Power
CJ	Junction Capacitance
IF	Forward Current
VF	Forward Voltage @ IF



Electrical Characteristics @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Working Voltage	V_{RWM}				12	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	14.25	15	15.75	V
Reverse Leakage Current	I_R	$V_{RWM} = 12\text{V}$			50	nA
Forward Voltage	V_F	$I_F = 10\text{mA}$			0.9	V
Clamping Voltage	V_C	$I_{PP} = 1.9\text{A}$, $t_p = 10/1000\mu\text{s}$			21	V
Junction Capacitance	C_J	$V_R = 0\text{V}$, $f = 1\text{MHz}$		95		pF

Curve Characteristics

Fig.1: P_D-T_A

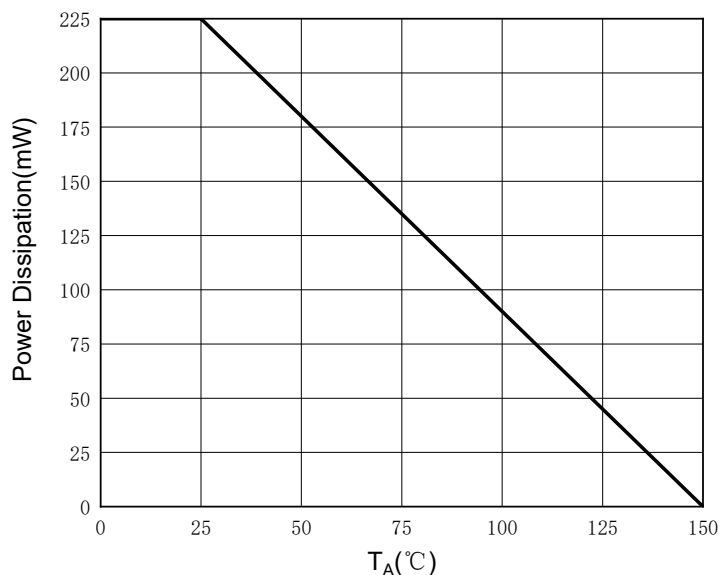


Fig.2: Typical Breakdown Voltage VS Temperature

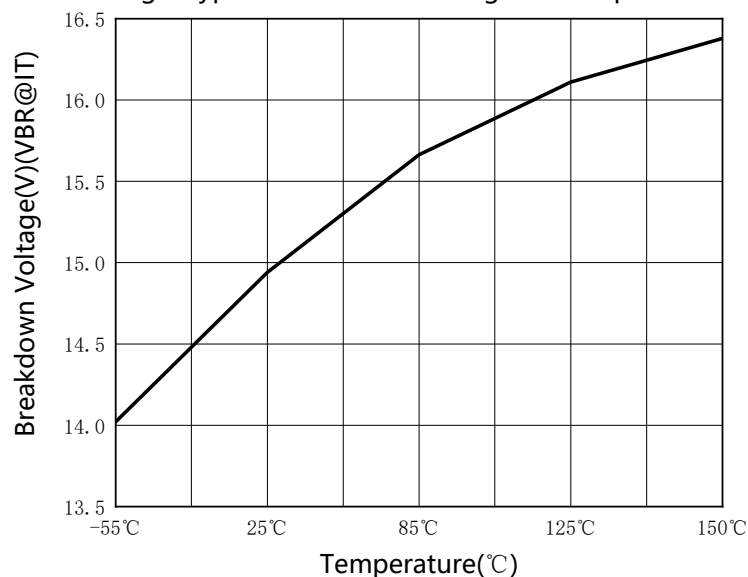


Fig.3: Reverse Characteristics

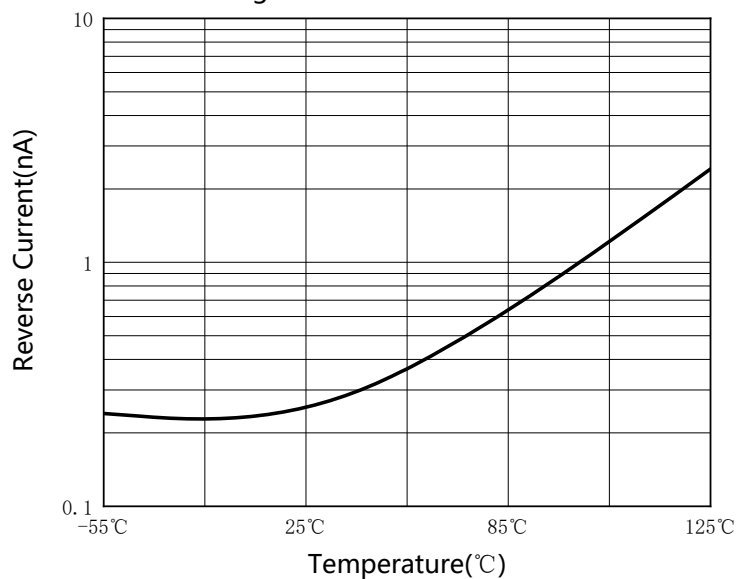


Fig.4 Pulse Waveform

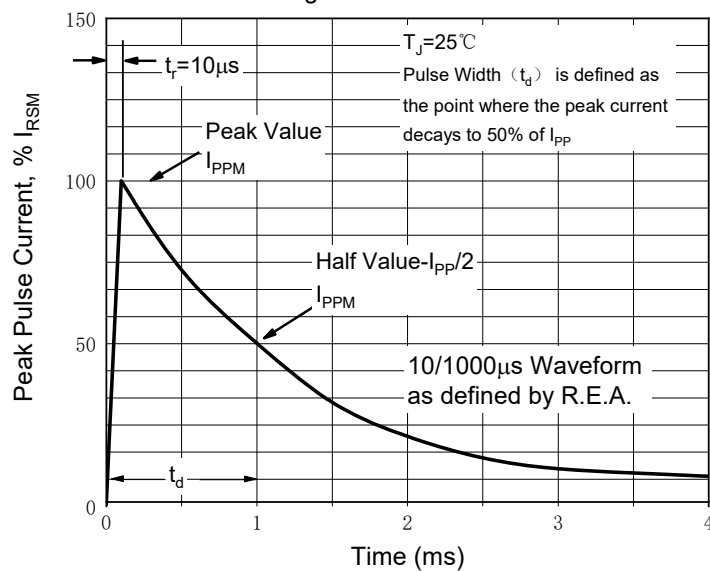


Fig.5: Power Derating Curve

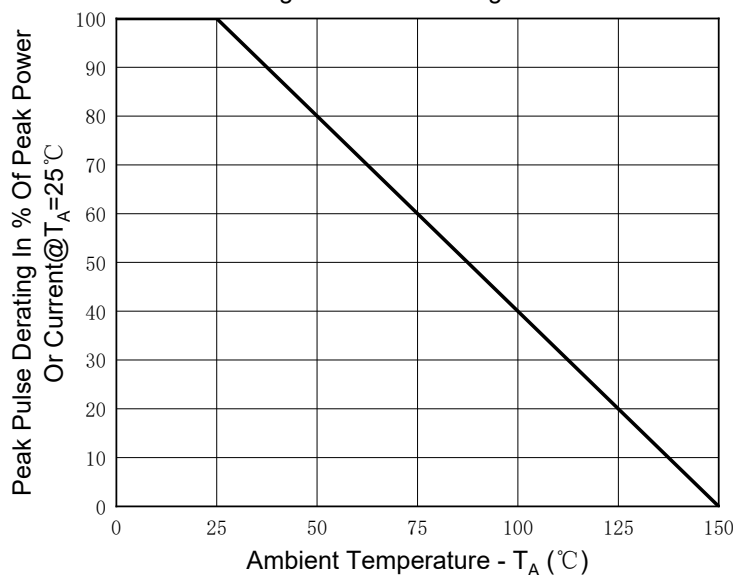
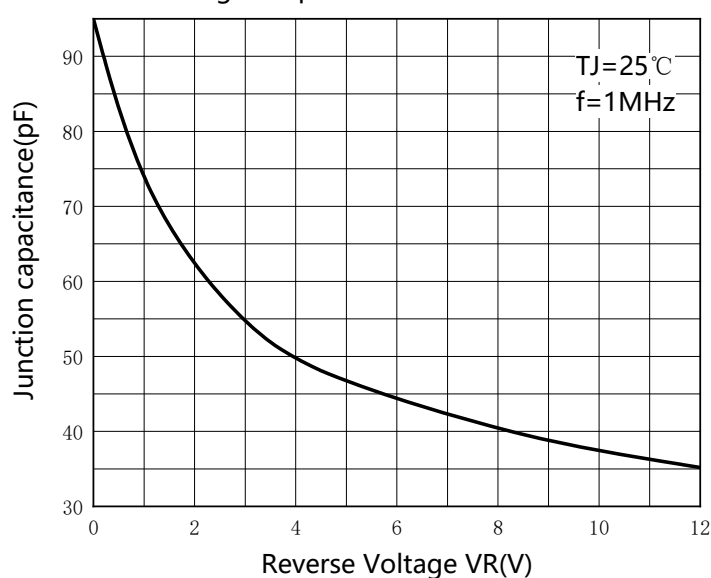


Fig.6: Capacitance Characteristics



Ordering Information

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

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