

Features

- AEC-Q101 Qualified
- Protects One Data or Power Line
- 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)

Maximum Ratings

IEC61000-4-2(ESD)	Air	±30KV
	Contact	±30KV
Peak Pulse Power (8/20µs)	PPK	600W
Peak Pulse Current (8/20µs)(Note 2)	I _{PP}	30A
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.

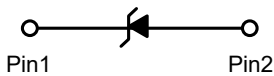
**ESD
Protection
Device**

SOD-323

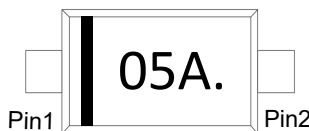
DIMENSIONS					NOTE
DIM	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.090	0.107	2.30	2.70	
B	0.063	0.071	1.60	1.80	
C	0.045	0.053	1.15	1.35	
D	0.031	0.045	0.80	1.15	
E	0.010	0.016	0.25	0.40	
G	0.004	0.018	0.10	0.45	
H	0.004	0.010	0.10	0.25	
J	----	0.006	----	0.15	

Suggested Solder Pad Layout

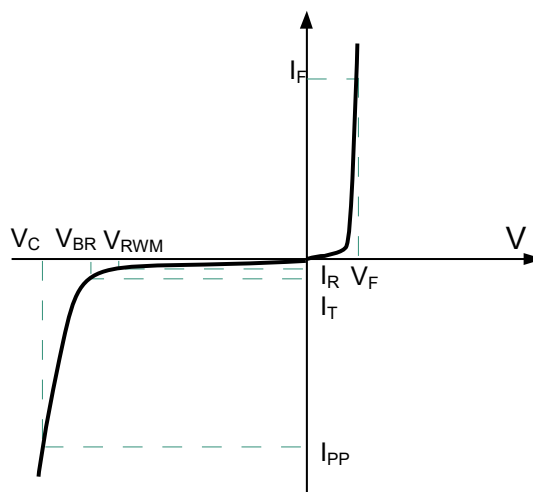
Internal Structure



Marking Code



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}				5	V
Reverse Breakdown Voltage	V _{BR}	I _T = 1mA	6.2		7.5	V
Reverse Leakage Current	I _R	V _{RWM} = 5V			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			9.5	V
Clamping Voltage ^{Note1}	V _C	I _{PP} = 30A, t _p = 8/20μs			20	V
Dynamic Resistance ^{Note2}	R _{DYN}	TLP, t _p = 100ns		0.7		Ω
Junction Capacitance	C _J	V _R = 0V, f = 1MHz		220		pF

Note:

1. Non-repetitive current pulse, according to IEC61000-4-5.
2. I/O to Ground, TLP parameter: Z₀ = 50Ω, t_p = 100ns, t_r = 2ns, averaging window from 60ns to 80ns. R_{DYN} is calculated from 4A to 16A.

Curve Characteristics

Fig. 1 - 8 X 20µs Pulse Waveform

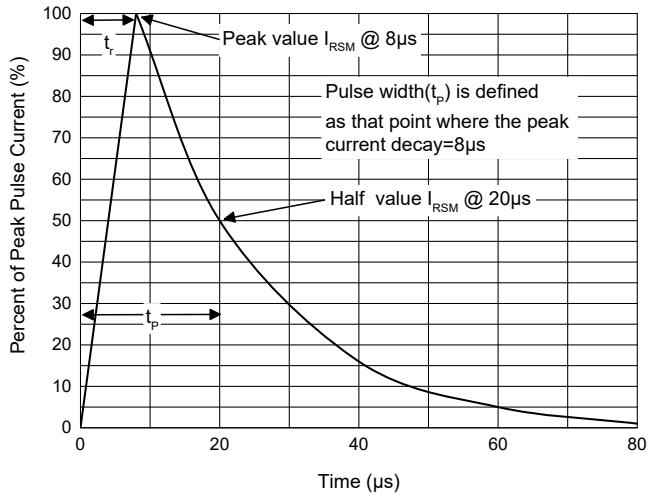


Fig. 2 - Non-Repetitive Peak Pulse Power

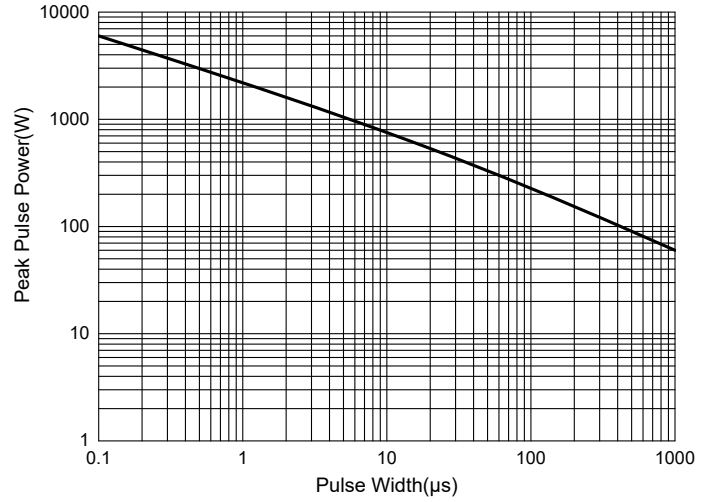


Fig. 3 - Capacitance Characteristics

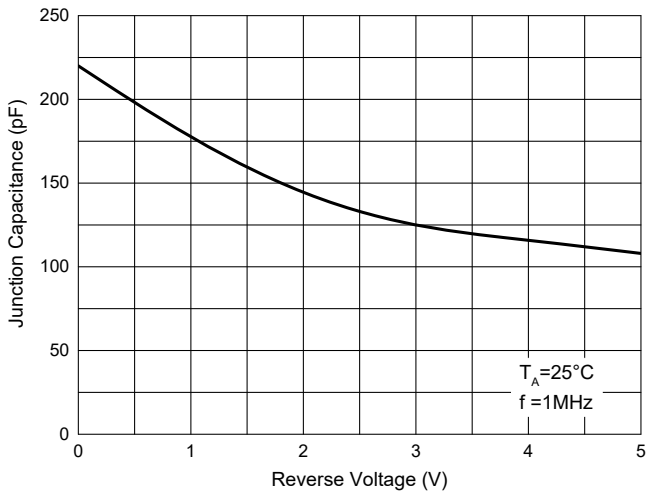


Fig. 4 - Clamping Voltage Characteristics

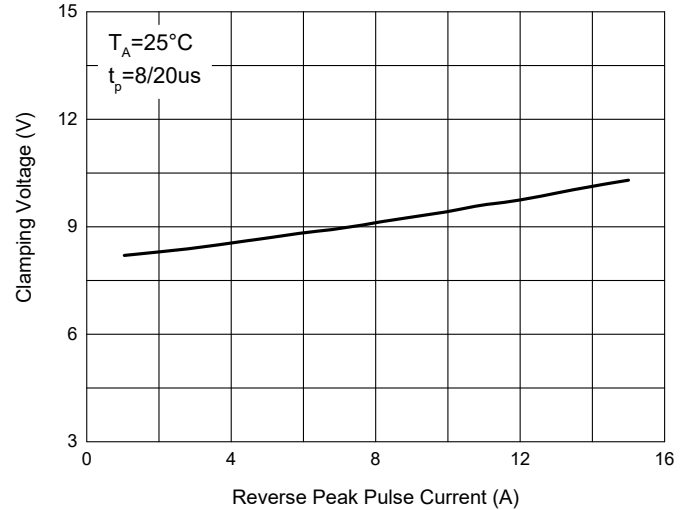


Fig. 5 - TLP Measurement

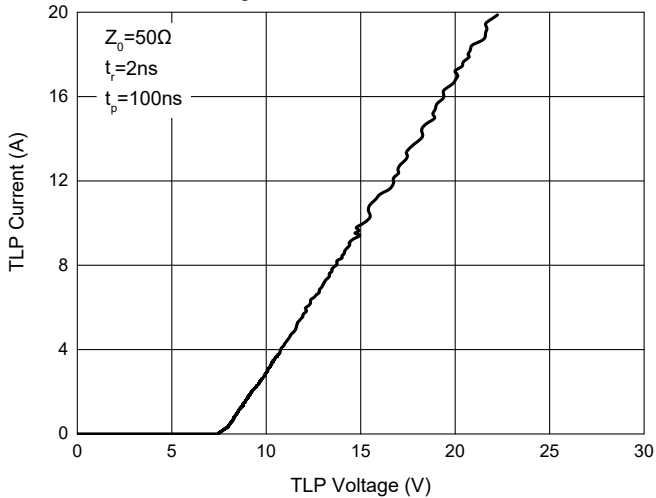
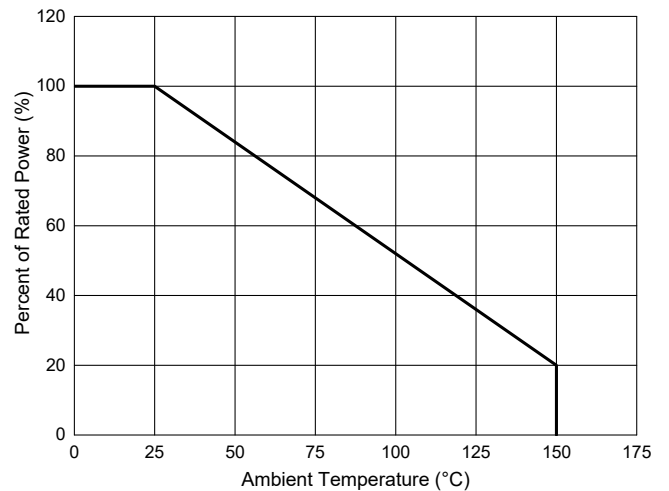


Fig. 6 - Pulse Derating Curve



Ordering Information

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

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