Features

- AEC-Q101 Qualified
- Low Leakage current
- 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

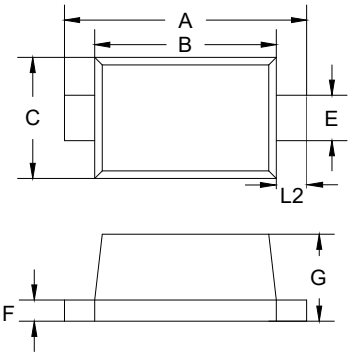
Maximum Ratings

IEC61000-4-2 (ESD)	Air	±30KV
	Contact	±30KV
Peak Pulse Current (8/20μs)	I_{PP}	9A
Peak Pulse Power (8/20μs)(Note2)	P_{PK}	90W
Operating Junction Temperature Range	T_J	-55°C to +150°C
Storage Temperature Range	T_{STG}	-55°C to +150°C

Note :

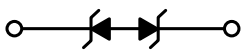
1. Halogen free "Green” products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. Non-repetitive current pulse 8/20 μs exponential decay waveform according to IEC61000-4-5.

SOD-523



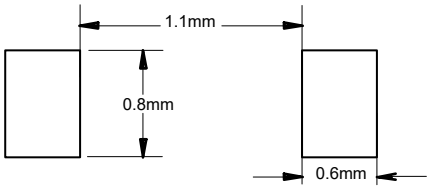
DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.059	0.067	1.50	1.70	
B	0.043	0.051	1.10	1.30	
C	0.030	0.033	0.75	0.85	
E	0.010	0.014	0.25	0.35	
F	0.003	0.008	0.08	0.20	
G	0.020	0.026	0.50	0.65	
L2	0.004	0.012	0.01	0.03	

Internal Structure

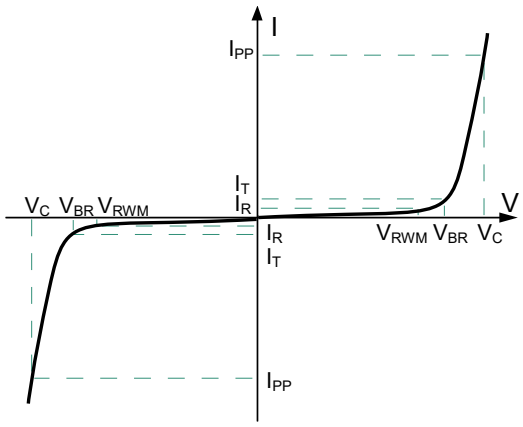


Marking Code

Suggested Solder Pad Layout



Symbol	Parameter
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ VRWM
V_{BR}	Breakdown Voltage @ IT
IT	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ IPP
P_{PK}	Peak Pulse Power
C_J	Junction Capacitance



Electrical Characteristics @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Working Voltage	V_{RWM}				3.3	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	3.5		6	V
Reverse Leakage Current	I_R	V_{RWM}=3.3V			1	μA
Clamping Voltage Note1	V_C	I_{PP}=1A, t_P=8/20μs			6	V
Clamping Voltage Note1	V_C	I_{PP}=9A, t_P=8/20μs			10	V
Junction Capacitance	C_J	V_R=0V, f=1MHz		14	25	pF
Dynamic Resistance Note2	R_{DYN}	TLP, t_P=100ns		0.26		Ω

Note :
1.Non-repetitive current pulse 8/20μs exponential decay waveform according to IEC61000-4-5.
2.TLP parameter: Z_0=50Ω, tp=100ns, tr=2ns, averaging window from 60ns to 80ns. R_{DYN} is calculated from 4A to 16A.

Curve Characteristics

Fig. 1 - 8 X 20μs Pulse Waveform

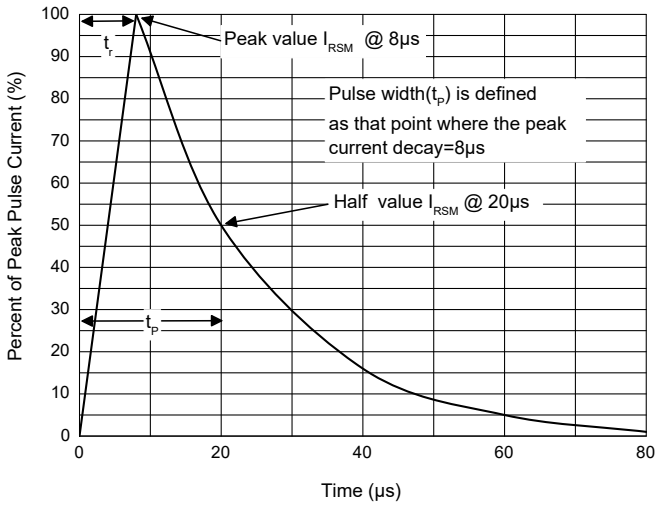


Fig. 2 - Non-Repetitive Peak Pulse Power

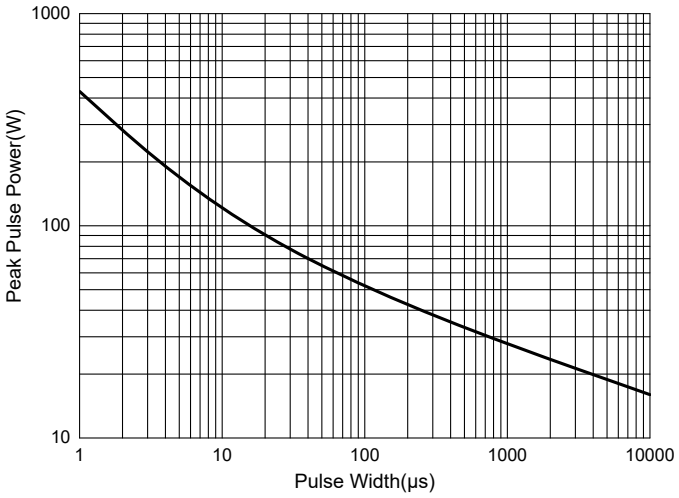


Fig. 3 - Capacitance Characteristics

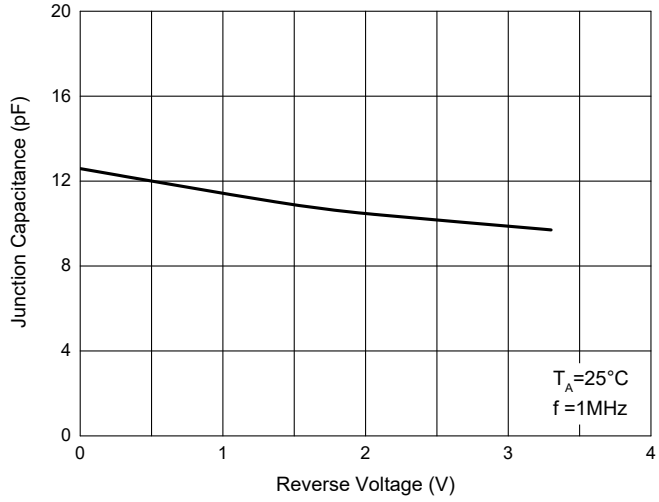


Fig. 4 - Clamping Voltage Characteristics

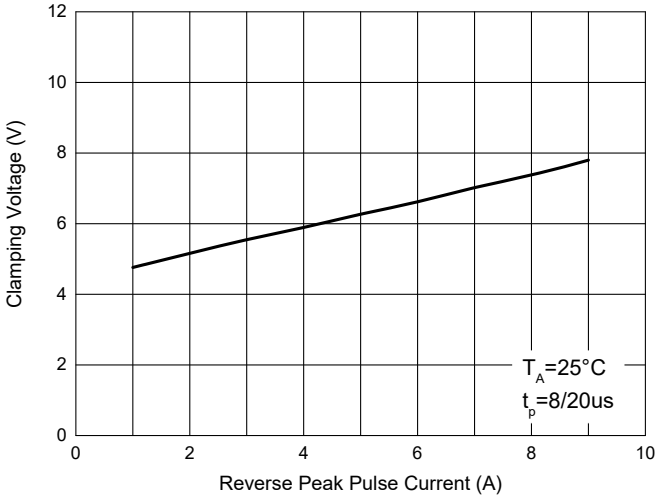


Fig. 5 - TLP Measurement

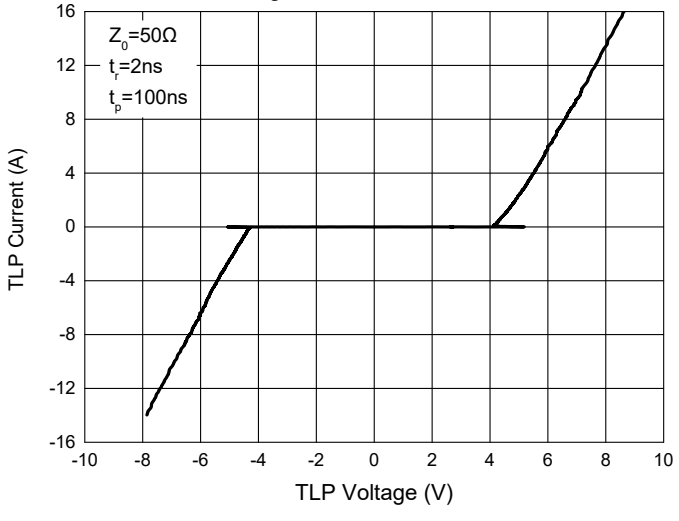
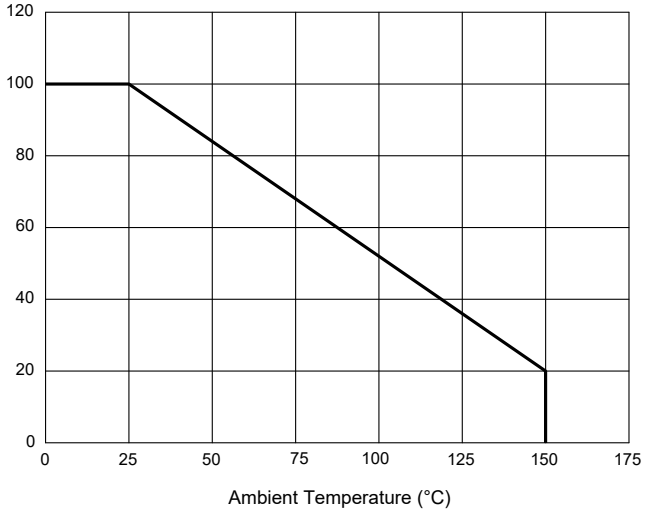


Fig. 6 - Pulse Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 8Kpcs/Reel

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Micro Commercial Components (MCC):

ESDL3V3D5BHE3-TP