

Features

- Ultra small package
- Low Leakage current
- 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)

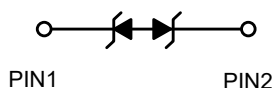
Maximum Ratings

IEC61000-4-2(ESD)	Air	±30KV
	Contact	±30KV
Peak Pulse Power (8/20µs)	P _{PK}	115W
Peak Pulse Current (8/20µs)(Note 2)	I _{PP}	14A
Operating Junction Temperature Range	T _J	-55°C to +125°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

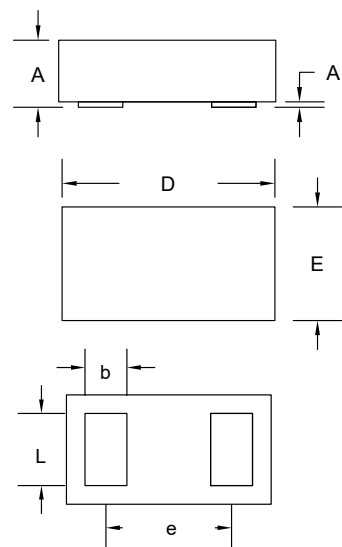


Marking Code



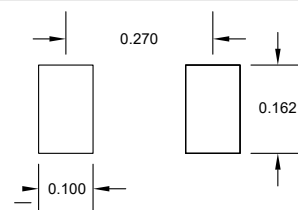
ESD Protection Device

CSP01005

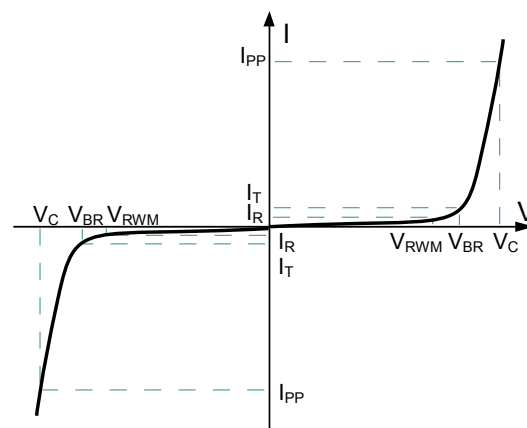


DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
D	0.0163	0.0183	0.415	0.465	
E	0.0083	0.0102	0.210	0.260	
A	0.0043	0.0055	0.110	0.140	
A1	0.0003	0.0006	0.008	0.014	
b	0.0033	0.0038	0.084	0.096	
e	0.0106		0.270		TYP.
L	0.0059	0.0063	0.149	0.161	

SUGGESTED SOLDER PAD LAYOUT



Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
C	Capacitance @ $V_R=0$ and $f=1\text{MHz}$



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}	$I_T=1\text{mA}$	5.5	6.2	8.0	V
Reverse Leakage Current	I_R	$V_{RWM}=5\text{V}$			0.2	μA
Clamping Voltage ^{Note1}	V_C	$I_{PP}=1\text{A}$, $t_p=8/20\mu\text{s}$		7.0	8.5	V
Clamping Voltage ^{Note1}	V_C	$I_{PP}=14\text{A}$, $t_p=8/20\mu\text{s}$		7.5	9.0	V
Junction Capacitance	C_J	$V_R=0\text{V}$, $f=1\text{MHz}$		18	25	pF
Dynamic Resistance ^{Note2}	R_{DYN}	TLP, $t_p=100\text{ns}$		0.05		Ω

Note:

1. Non-repetitive current pulse, according to IEC61000-4-5.

2. TLP parameter: $Z_0=50\Omega$, $t_p=100\text{ns}$, $t_r=2\text{ns}$, averaging window from 60ns to 80ns. R_{DYN} is calculated from 4A to 16A.

Curve Characteristics

Fig. 1 - 8 X 20µs Pulse Waveform

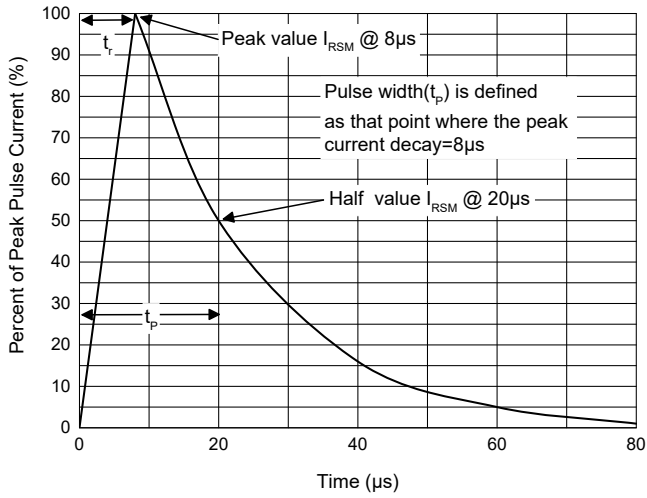


Fig. 2 - Non-Repetitive Peak Pulse Power

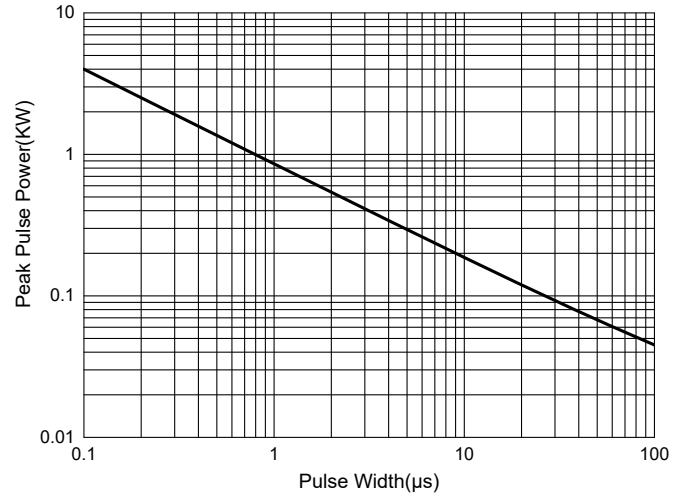


Fig. 3 - Capacitance Characteristics

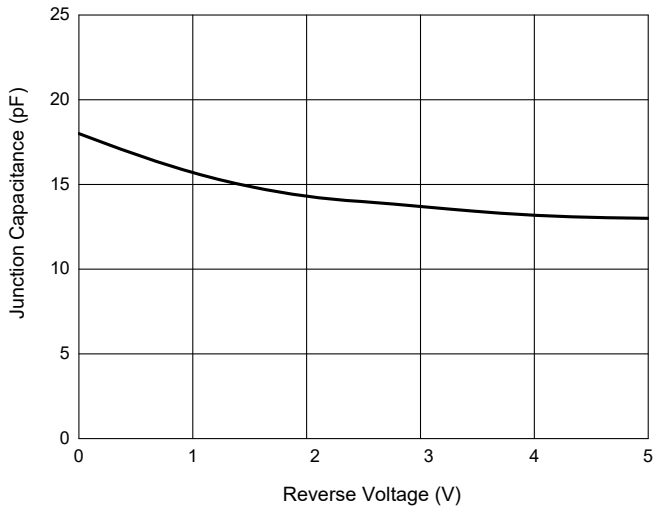


Fig. 4 - Clamping Voltage Characteristics

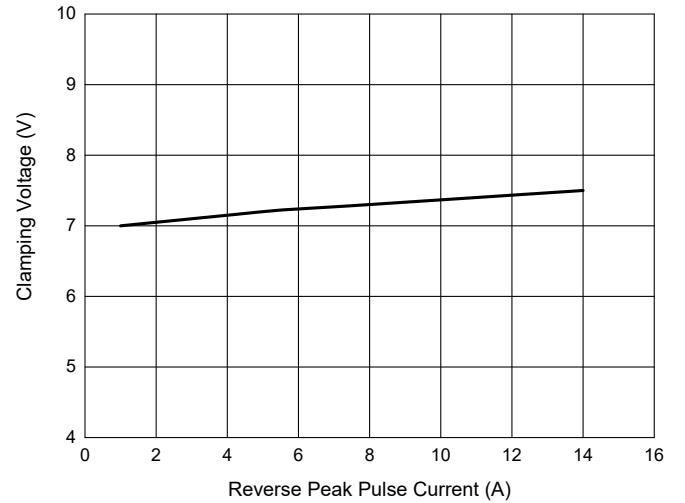
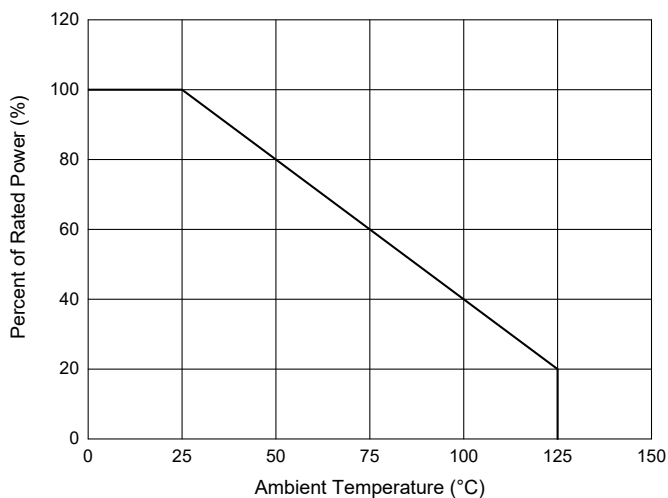


Fig. 5 - Pulse Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 15Kpcs/Reel

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