Features

- Designed For Signal Line Protection Only, Not Intended To Be Used Under Bias, Not For Application With A Power Line
- Low Leakage Current
- Low Clamping Voltage
- Moisture Sensitivity Level 1
- Halogen Free. “Green” Device (Note 1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Snap Back ESD Protection Device

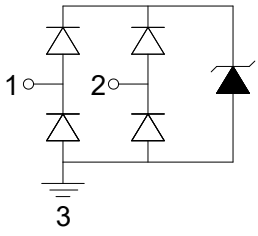
Maximum Ratings

IEC61000-4-2 (ESD)	Air	±30KV
	Contact	±30KV
Peak Pulse Current (8/20μs)	I_{PP}	13A
Peak Pulse Power (8/20μs)(Note2)	P_{PK}	65W
Operating Junction Temperature Range	T_J	-55°C to +125°C
Storage Temperature Range	T_{STG}	-55°C to +150°C

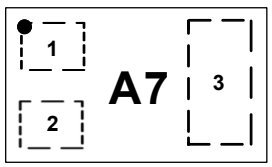
Note :

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

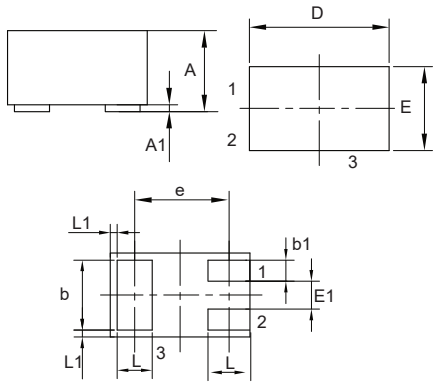


Marking Code



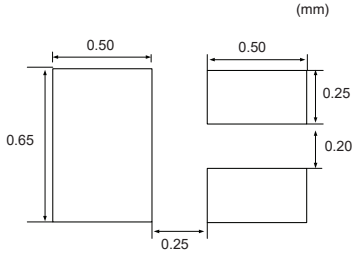
Transparent top view

DFN1006-3B

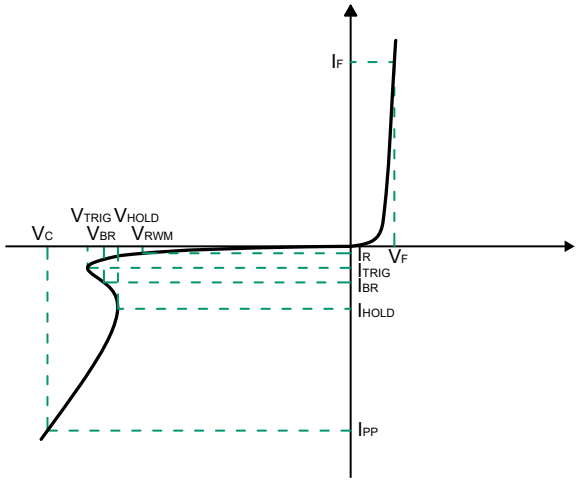


DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.018	0.022	0.45	0.55	
A1	0.000	0.002	0.00	0.05	
b	0.018	0.022	0.45	0.55	
b1	0.004	0.008	0.10	0.20	
D	0.037	0.041	0.95	1.05	
E	0.022	0.026	0.55	0.65	
E1	0.006	0.010	0.15	0.25	
e	0.026		0.675		TYP.
L	0.008	0.012	0.25	0.35	
L1	0.0002		0.05		TYP.

SUGGESTED SOLDER PAD LAYOUT



Symbol	Parameter
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ VRWM
V_{BR}	Breakdown Voltage @ IT
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ IPP
V_{TRIG}	Reverse Trigger Voltage
I_{TRIG}	Reverse Trigger Current
V_{HOLD}	Reverse Holding Voltage
I_{HOLD}	Reverse Holding Current
C_J	Junction Capacitance



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			V
Reverse Leakage Current	I_R	V_{RWM}=5V			0.2	μA
Clamping Voltage[Note1]	V_C	I_{PP}=1A, t_P=8/20μs			2	V
Clamping Voltage[Note1]	V_C	I_{PP}=13A, t_P=8/20μs			5	V
Clamping Voltage[Note2]	V_C	IPP = 4A(TLP)		2.1		V
Clamping Voltage[Note2]	V_C	IPP =16A(TLP)		3.9		V
Junction Capacitance	C_J	Vpin3=0V,V_R=1.5V, f=1MHz, IO to GND		0.65	1	pF
Junction Capacitance	C_J	Vpin3=0V,V_R=1.5V, f=1MHz, IO to IO		0.2	0.5	pF
Dynamic Resistance [Note2]	R_{DYN}	TLP, t_P=100ns		0.15		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

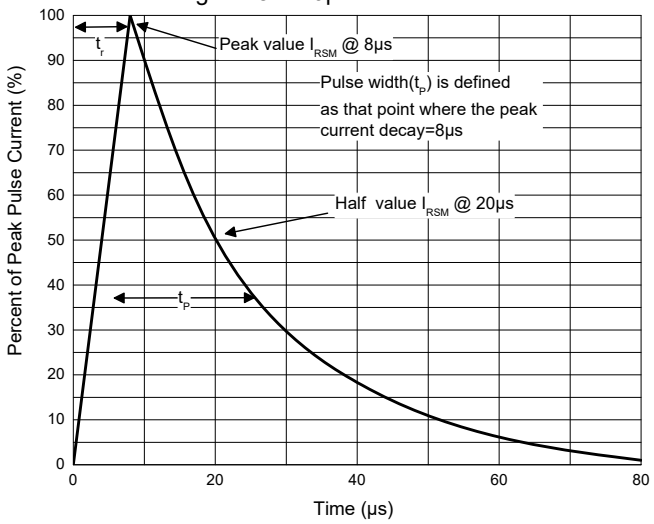


Fig. 2 - Non-Repetitive Peak Pulse Power

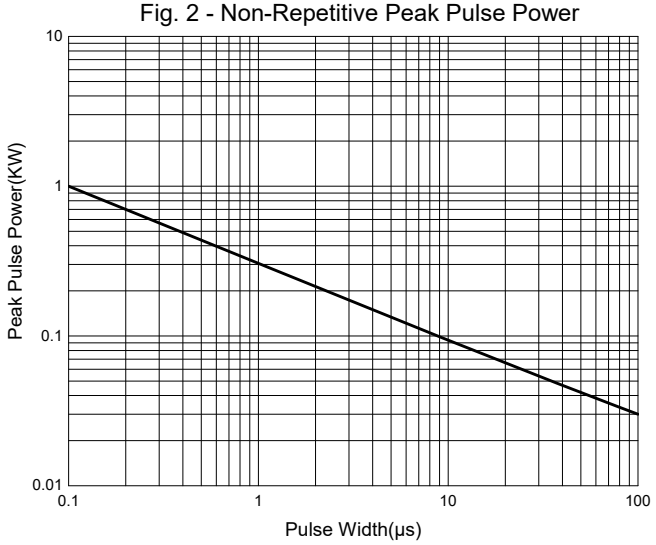


Fig. 3 - Capacitance Characteristics

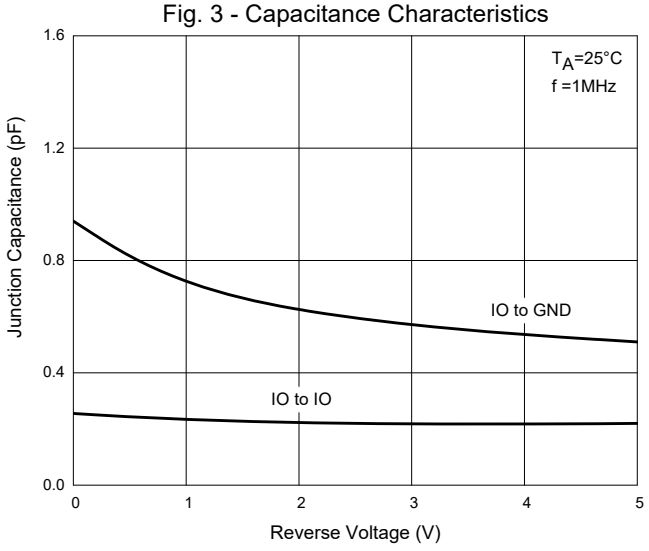


Fig. 4 - Clamping Voltage Characteristics

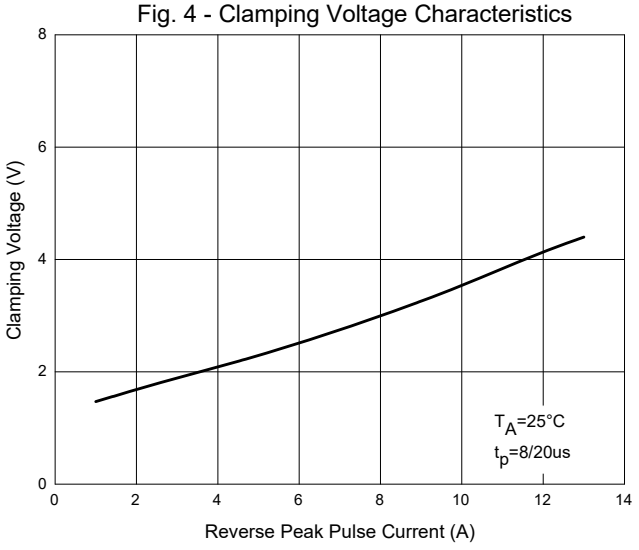


Fig. 5 - TLP Curve

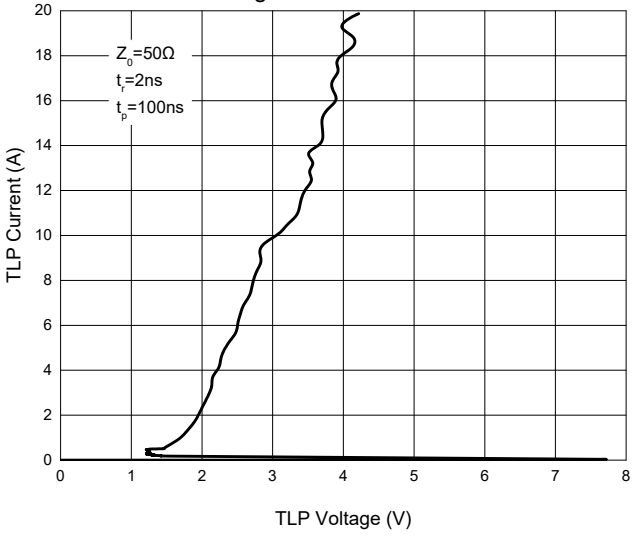
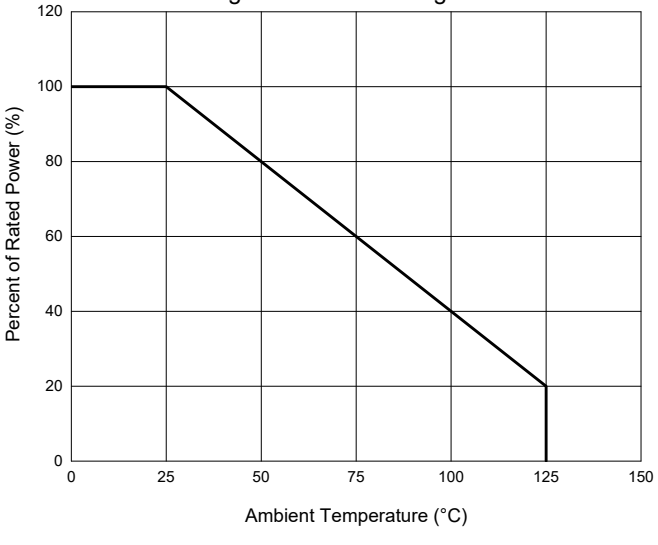


Fig. 6 - Pulse Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 10Kpcs/Reel