Features

- Uni-Directional ESD Protection of One Line
- 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)

ESD Protection Device

Maximum Ratings

IEC61000-4-2 (ESD)	Air	±30KV
	Contact	±30KV
Peak Pulse Current (8/20μs)	I_{PP}	6A
Peak Pulse Power (8/20μs)(Note2)	P_{PK}	90W
Junction Temperature Range	T_J	-55°C to +150°C
Storage Temperature Range	T_{STG}	-55°C to +150°C

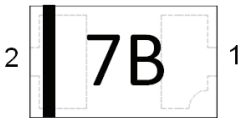
Note :

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.

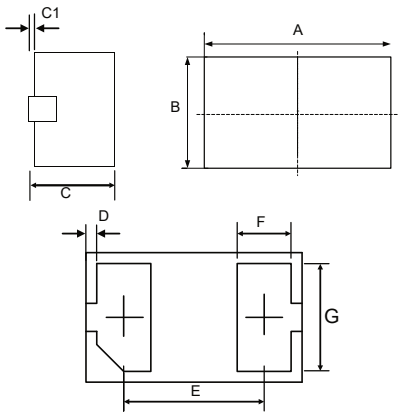
Internal Structure



Marking Code

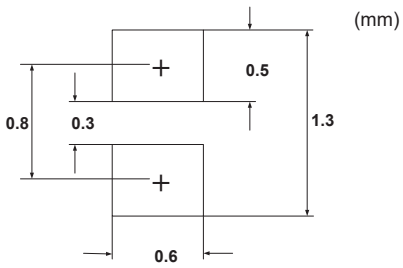


DFN1006-2L

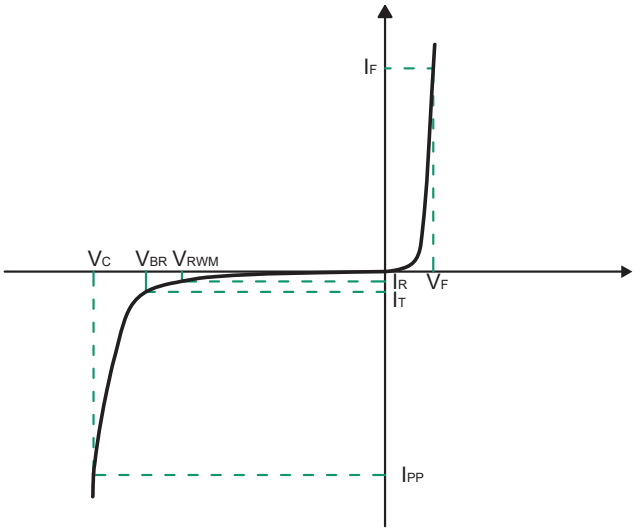


DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.037	0.041	0.95	1.05	
B	0.022	0.026	0.55	0.65	
C	0.016	0.022	0.40	0.50	
C1	-----	0.004	-----	0.05	
D	0.001	0.003	0.02	0.08	
E	0.026		0.65		TYP.
F	0.008	0.012	0.20	0.30	
G	0.018	0.022	0.45	0.55	

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
I_F	Forward Current
V_F	Forward Voltage @ IF



Electrical Characteristics @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Working Voltage	V_{RWM}				7	V
Reverse Breakdown Voltage	V_{BR}	I_{BR}=1mA	7.5		10.5	V
Reverse Leakage Current	I_R	V_{RWM}=7V			0.5	μA
Forward Voltage	V_F	I_F=10mA			1.1	V
Clamping Voltage Note1	V_C	I_{PP}=1A, t_P=8/20μs		10	13	V
Clamping Voltage Note1	V_C	I_{PP}=6A, t_P=8/20μs		13	15	V
Junction Capacitance	C_J	V_R=0V, f=1MHz		46		pF
Dynamic Resistance Note2	R_{DYN}	TLP, t_P=100ns		0.5		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

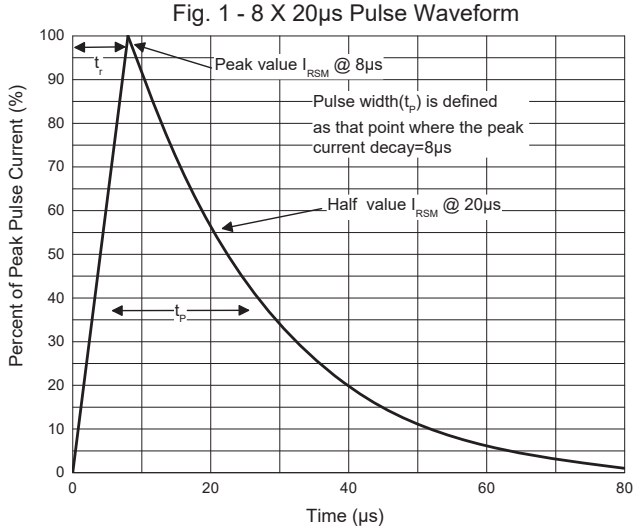


Fig. 2 - Pulse Derating Curve

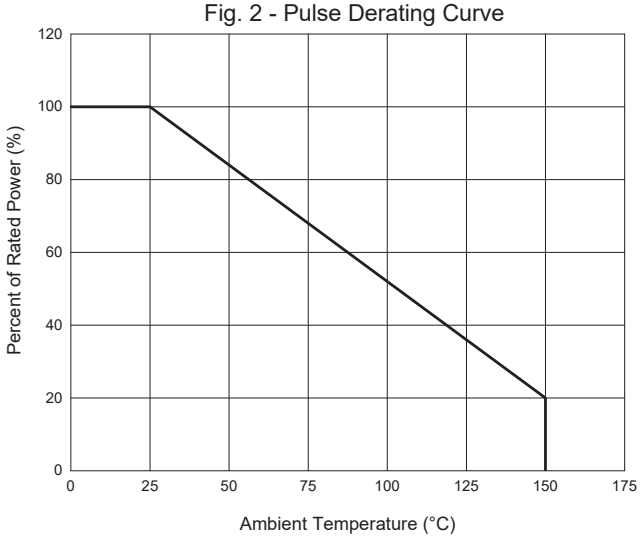


Fig. 3 - Capacitance Characteristics

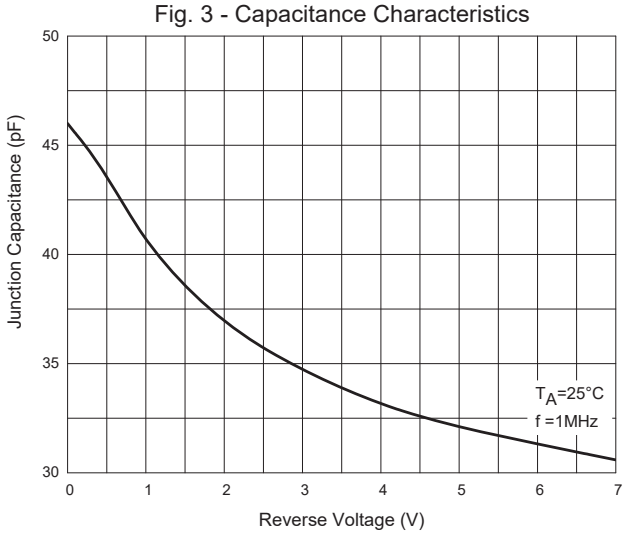


Fig. 4 - Clamping Voltage Characteristics

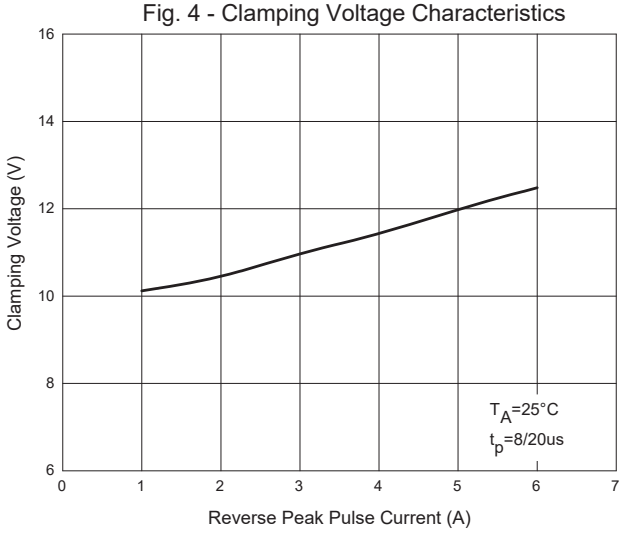
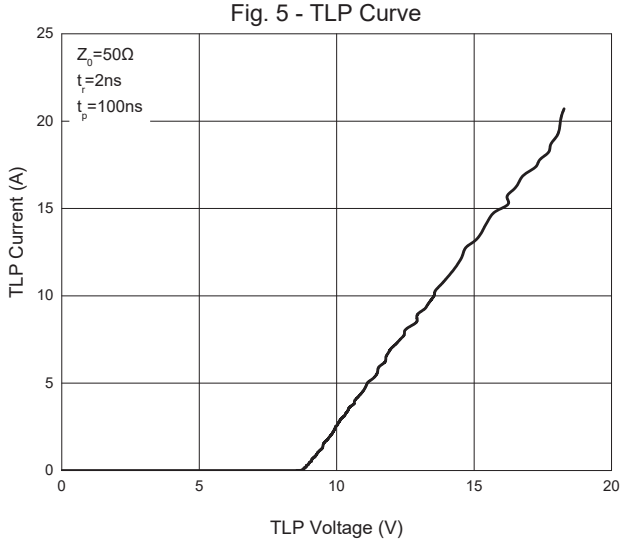


Fig. 5 - TLP Curve



Ordering Information

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

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