

Features

- AEC-Q101 Qualified
- Protects One Data or Power Line
- Ultra Low Leakage
- 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)

Maximum Ratings

IEC61000-4-2 (ESD)	Air	±30KV
	Contact	±30KV
Peak Pulse Current (8/20μs)	I _{PP}	5A
Peak Pulse Power (8/20μs) ^(Note2)	P _{PK}	150W
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.

Internal Structure

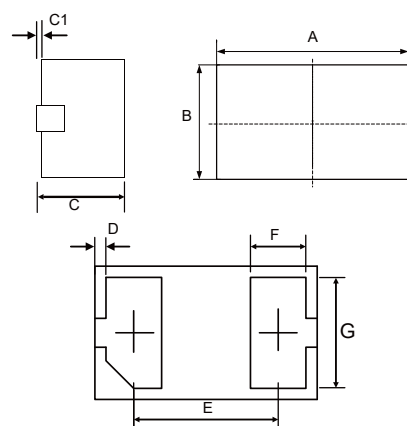


Marking Code

12B

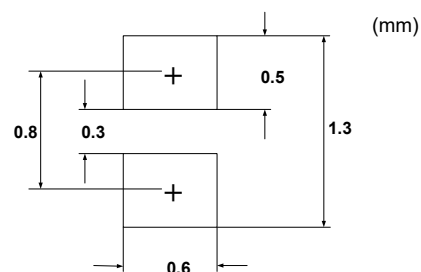
ESD Protection Device

DFN1006-2L

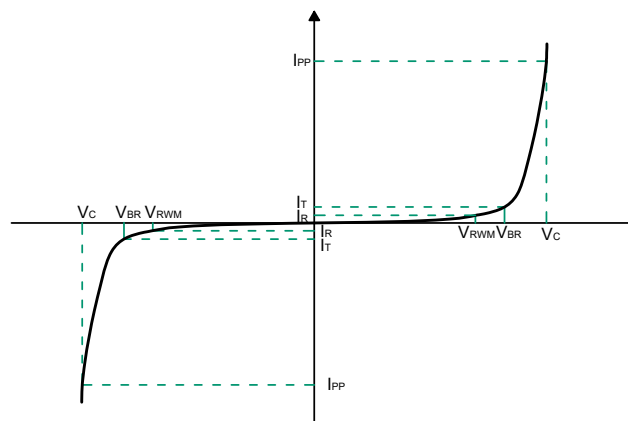


DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.037	0.041	0.95	1.05	
B	0.022	0.026	0.55	0.65	
C	0.016	0.022	0.40	0.50	
C1	-----	0.004	-----	0.05	
D	0.001	0.003	0.02	0.08	
E	0.026		0.65		TYP.
F	0.008	0.012	0.20	0.30	
G	0.018	0.022	0.45	0.55	

SUGGESTED SOLDER PAD LAYOUT



Symbol	Parameter
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
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}				12	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	13.5		16.5	V
Reverse Leakage Current	I_R	$V_{RWM}=12V$			0.5	μA
Clamping Voltage ^{Note1}	V_C	$I_{PP}=1A, t_p=8/20\mu s$		18	20	V
Clamping Voltage ^{Note1}	V_C	$I_{PP}=5A, t_p=8/20\mu s$		27	30	V
Junction Capacitance	C_J	$V_R=0V, f=1MHz$		12		pF
Dynamic Resistance ^{Note2}	R_{DYN}	TLP, $t_p=100ns$		0.8		Ω

Note :

1.Non-repetitive current pulse 8/20 μs exponential decay waveform according to IEC61000-4-5.

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

Curve Characteristics

Fig. 1 - 8 X 20 μ s Pulse Waveform

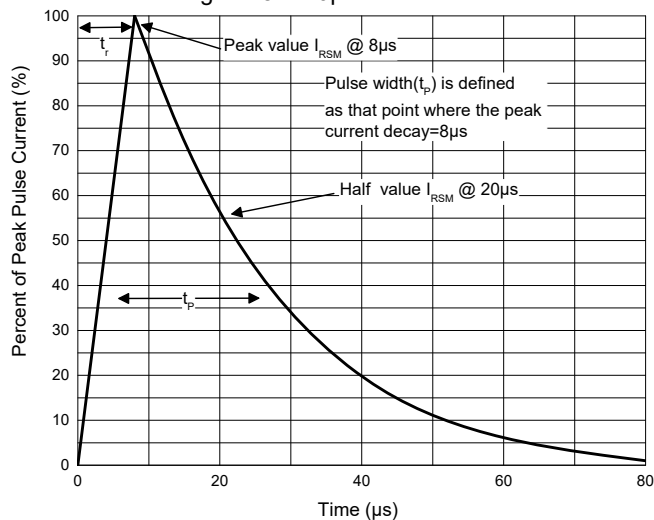


Fig. 2 - Pulse Derating Curve

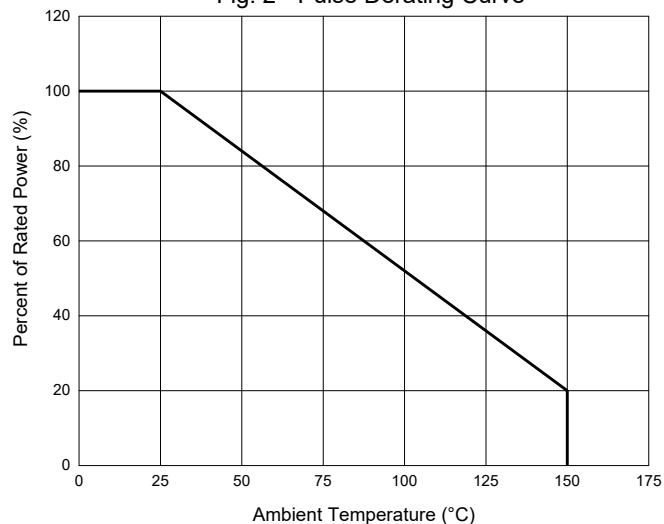


Fig. 3 - Capacitance Characteristics

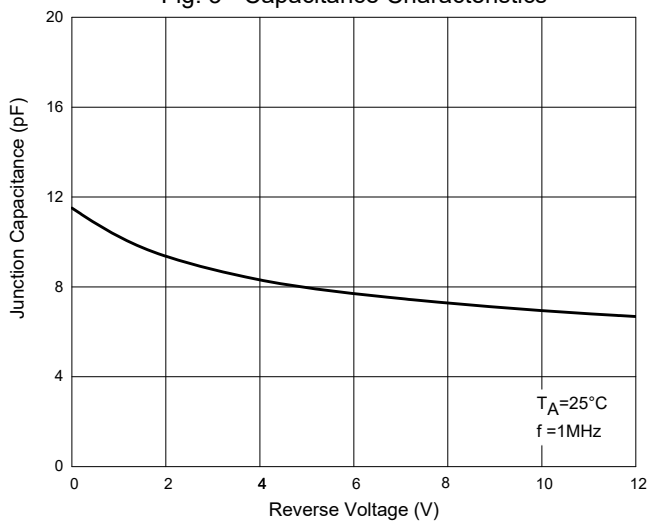


Fig. 4 - Clamping Voltage Characteristics

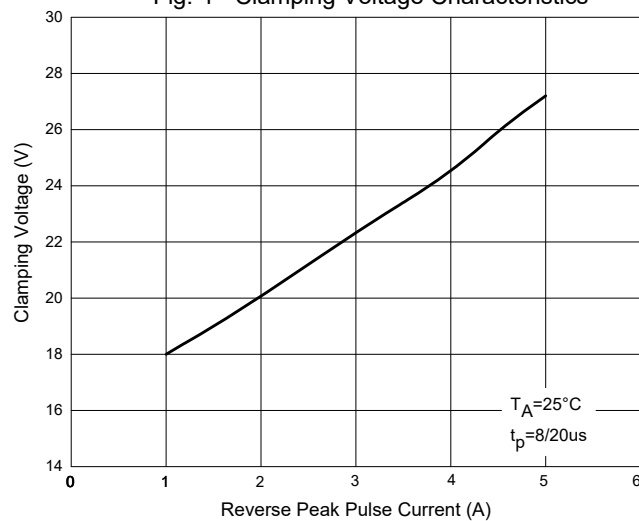
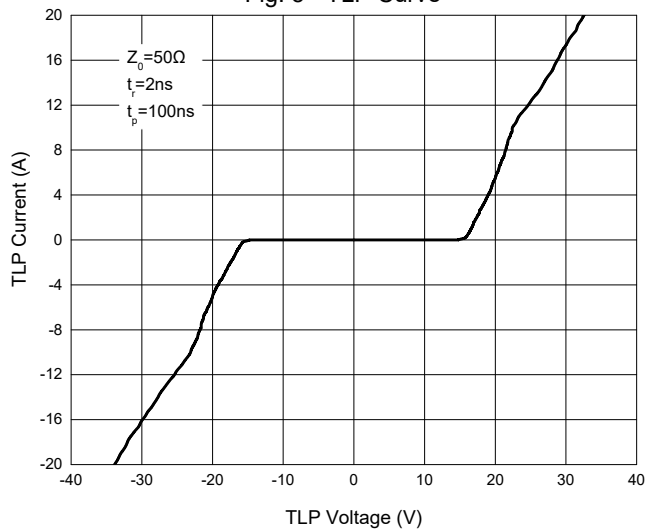


Fig. 5 - TLP Curve



Ordering Information

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

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