

Features

- AEC-Q101 Qualified
- Ultra Low Leakage
- Ultra Low Capacitance
- 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	±25KV
	Contact	±20KV
Peak Pulse Power (8/20μs)	PPK	90W
Peak Pulse Current (8/20μs)(Note 2)	I _{PP}	3.5A
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

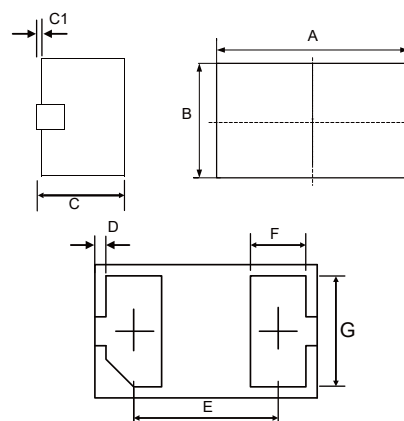


Marking Code

81

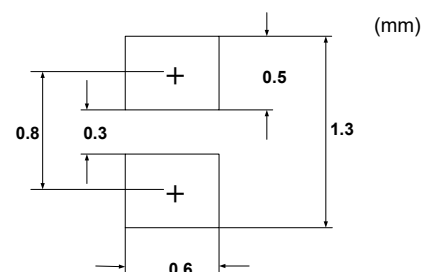
ESD Protection Device

DFN1006-2L

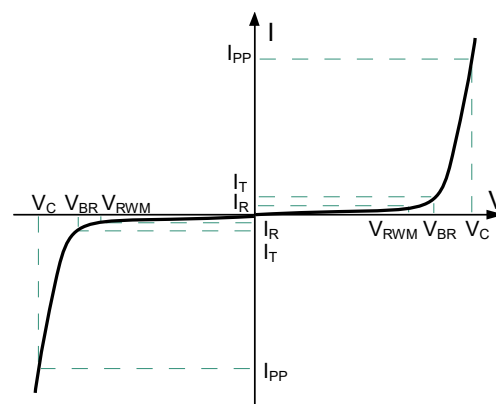


DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.037	0.041	0.95	1.05	
B	0.022	0.026	0.55	0.65	
C	0.016	0.022	0.40	0.55	
C1	-----	0.004	-----	0.10	
D	0.001	0.003	0.02	0.08	
E	0.026		0.65		TYP.
F	0.008	0.012	0.20	0.30	
G	0.018	0.022	0.45	0.55	

SUGGESTED SOLDER PAD LAYOUT



Symbol	Parameter
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}				8	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	9.5		11.5	V
Reverse Leakage Current	I_R	$V_{RWM}=8\text{V}$			0.2	μA
Clamping Voltage ^{Note1}	V_C	$I_{PP}=1\text{A}$, $t_p=8/20\mu\text{s}$			18	V
Clamping Voltage ^{Note1}	V_C	$I_{PP}=3.5\text{A}$, $t_p=8/20\mu\text{s}$			26	V
Junction Capacitance	C_J	$V_R=0\text{V}$, $f=1\text{MHz}$		0.3	0.5	pF
Dynamic Resistance ^{Note2}	R_{DYN}	TLP, $t_p=100\text{ns}$		1.65		Ω

Note:

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

Curve Characteristics

Fig. 1 - 8 X 20 μ s Pulse Waveform

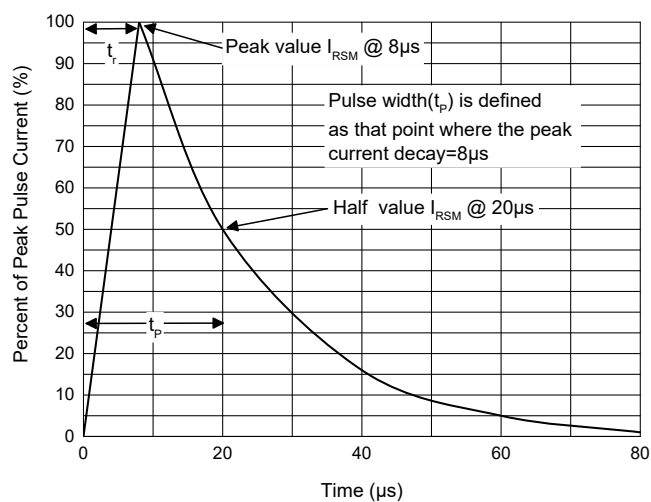


Fig. 2 - Non-Repetitive Peak Pulse Power

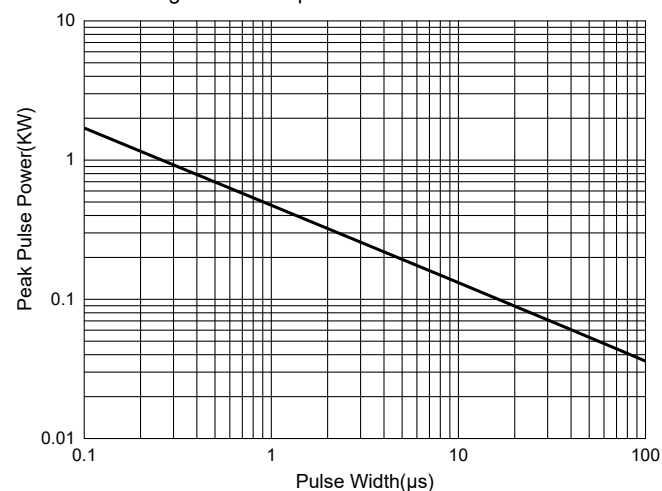


Fig. 3 - Capacitance Characteristics

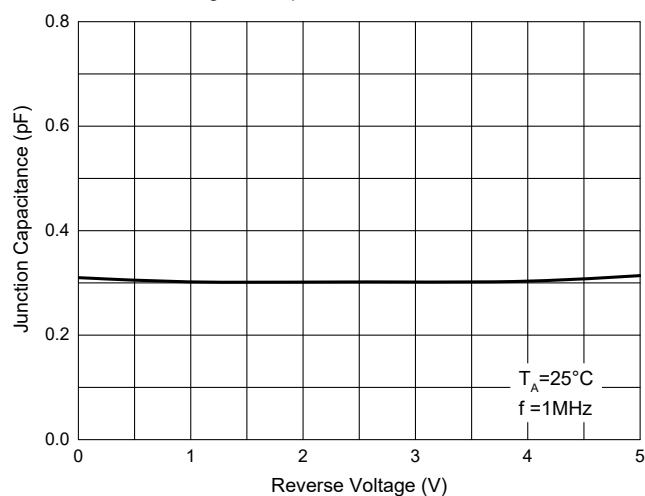


Fig. 4 - Clamping Voltage Characteristics

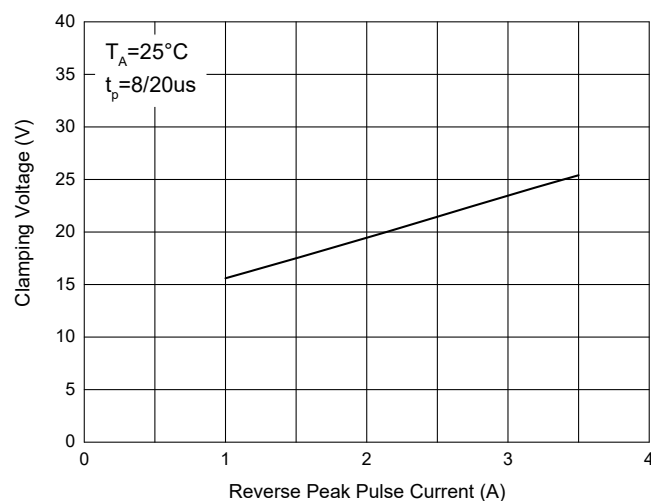


Fig. 5 - TLP Measurement

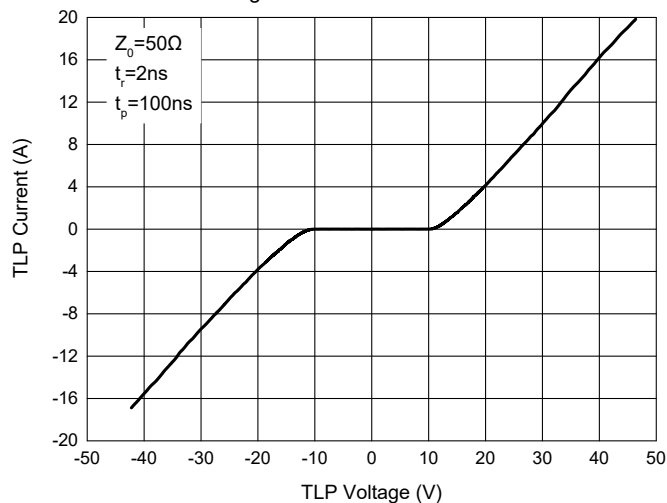
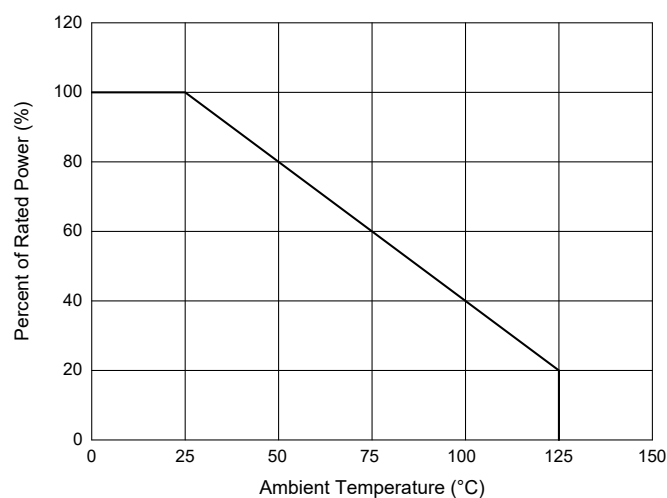


Fig. 6 - Pulse Derating Curve



Ordering Information

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

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