

Features

- AEC-Q101 Qualified With Wettable Flank
- Protects One Data or Power Line
- Ultra Low Leakage
- Ultra Low Capacitance
- Ultra 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

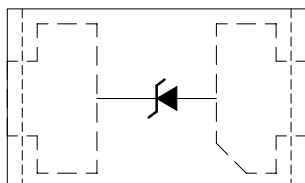
IEC61000-4-2 (ESD)	Air	±20KV
	Contact	±20KV
Peak Pulse Current (8/20μs)	I _{PP}	4A
Peak Pulse Power (8/20μs) ^(Note2)	P _{PK}	60W
Operating Junction Temperature Range	T _J	-55°C to +150°C
Storage Temperature Range	T _{STG}	-55°C to +150°C

Note :

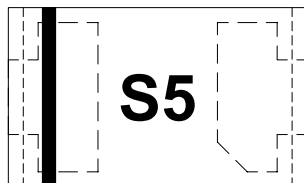
1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

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

Internal Structure

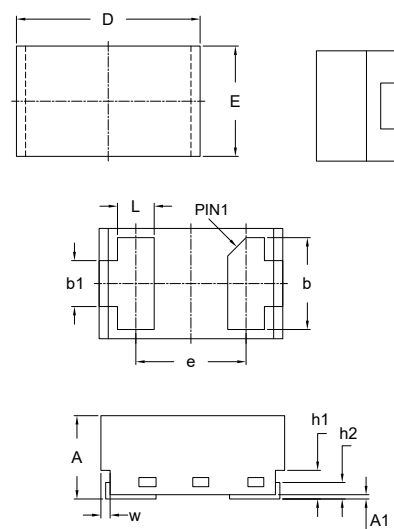


Device Marking



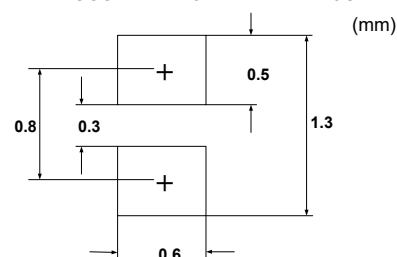
ESD Protection Device

DFN1006-2L(SWF)

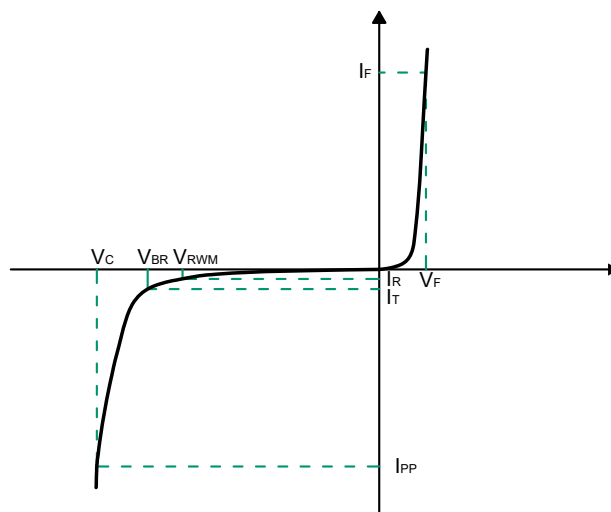


DIMENSIONS				
	INCH		MM	
	MIN	MAX	MIN	MAX
A	0.016	0.022	0.400	0.550
A1	0.000	0.002	0.000	0.050
b	0.018	0.022	0.450	0.550
b1	0.008	0.012	0.200	0.300
D	0.037	0.041	0.950	1.050
E	0.022	0.026	0.550	0.650
e	0.024		0.600	
L	0.006	0.010	0.150	0.250
w	0.001	0.003	0.020	0.080
h1	0.005	-	0.125	-
h2	0.004	-	0.100	-
				TYP

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
I_F	Forward Current
V_F	Forward Voltage @ I_F



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		8.5	V
Reverse Leakage Current	I_R	$V_{RWM}=5V$			0.2	μA
Forward Voltage	V_F	$I_F=15mA$			1.2	V
Clamping Voltage ^{Note1}	V_C	$I_{PP}=1A, t_p=8/20\mu s$			9	V
Clamping Voltage ^{Note1}	V_C	$I_{PP}=4A, t_p=8/20\mu s$			20	V
Junction Capacitance	C_J	$V_R=0V, f=1MHz$		0.6	1	pF
Dynamic Resistance ^{Note2}	R_{DYN}	TLP, $t_p=100ns$		0.23		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

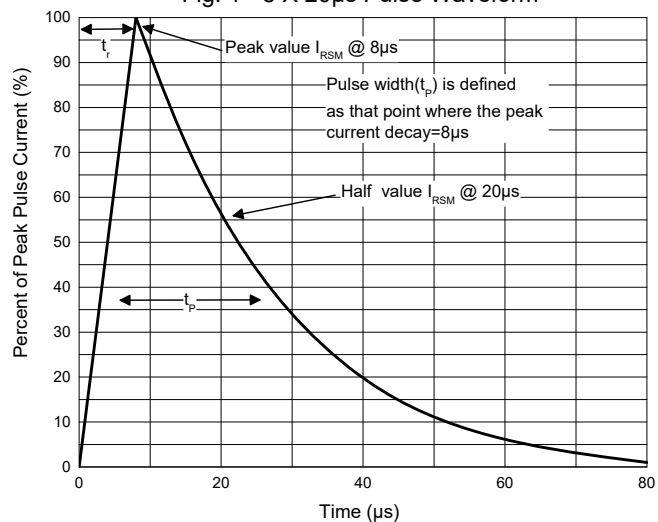


Fig. 2 - Pulse Derating Curve

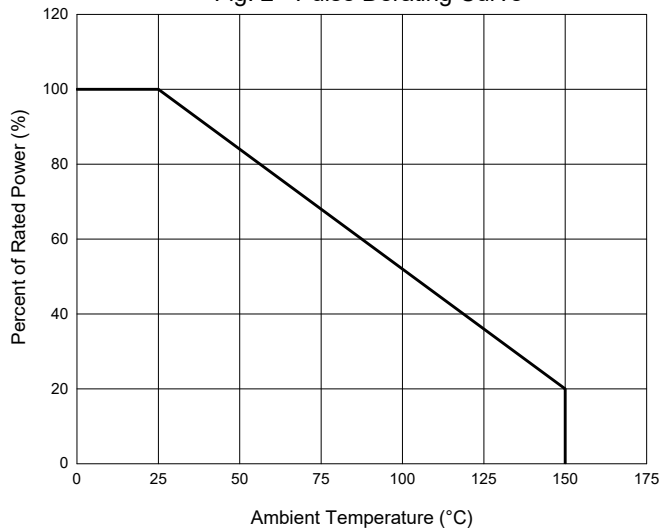


Fig. 3 - Capacitance Characteristics

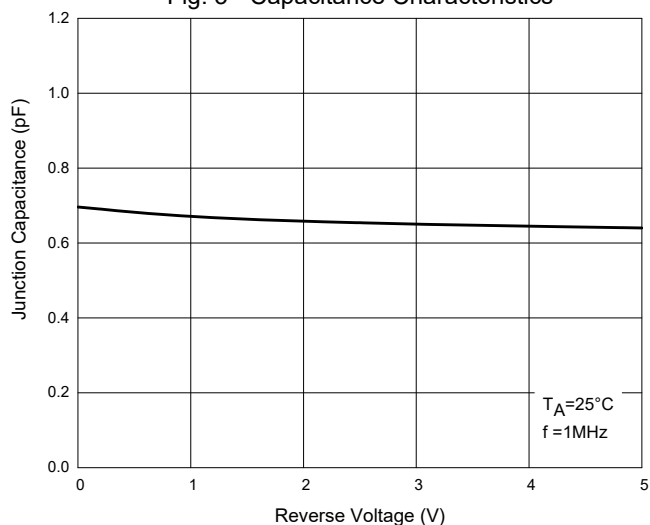


Fig. 4 - Clamping Voltage Characteristics

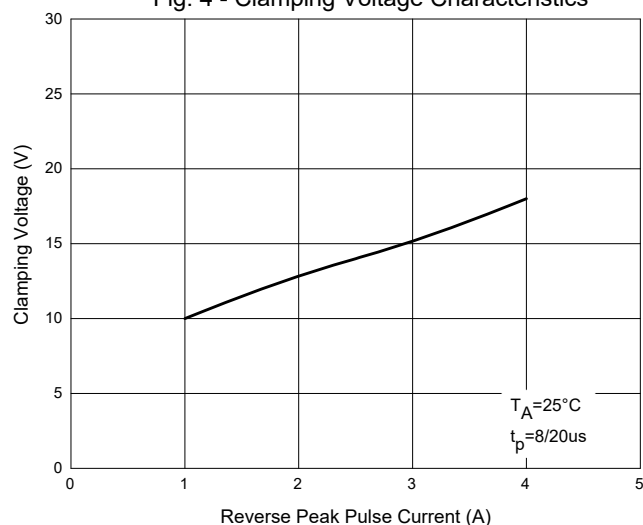
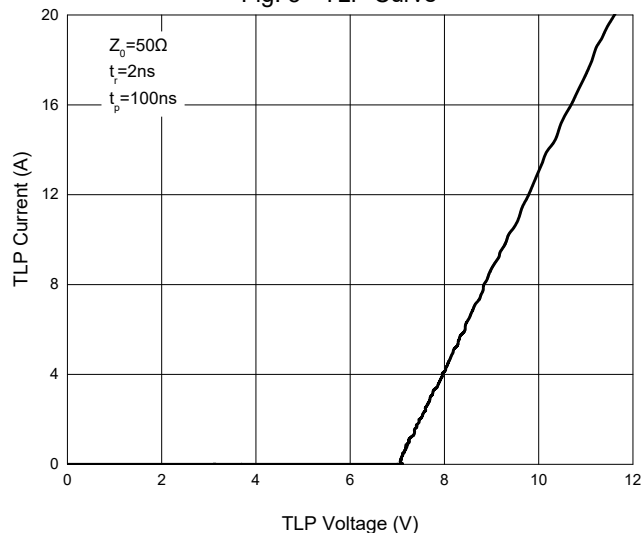


Fig. 5 - TLP Curve



Ordering Information

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

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