

Features

- ESD Protection of 4 Lines
- 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)

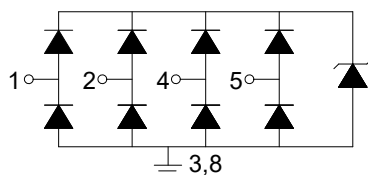
Maximum Ratings

IEC61000-4-2 (ESD)	Air	±25KV
	Contact	±20KV
Peak Pulse Current (8/20µs)	I _{PP}	3A
Peak Pulse Power (8/20µs) ^(Note2)	P _{PK}	40W
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

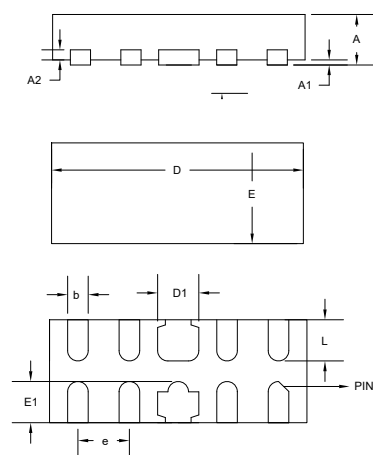


Marking Code



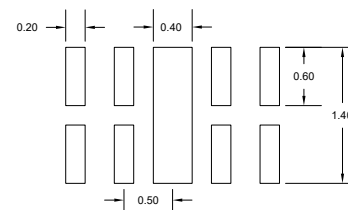
ESD Protection Device

DFN2510-10

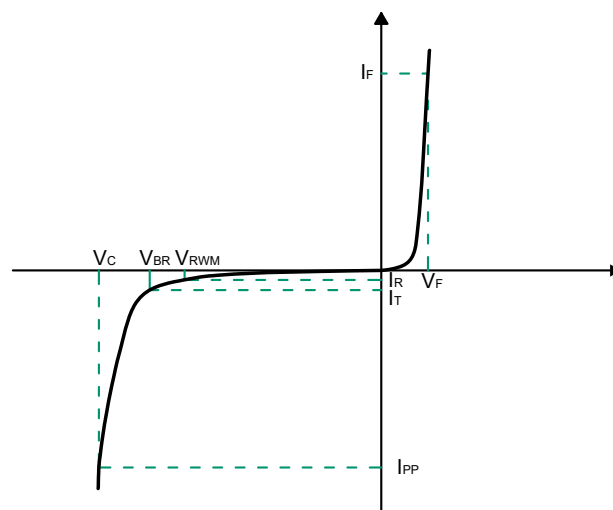


DIMENSIONS					
DIM	INCH		MM		NOTE
	MIN	MAX	MIN	MAX	
D	0.094	0.102	2.40	2.60	
E	0.035	0.043	0.90	1.10	
A	0.020	0.025	0.50	0.65	
A1	0.000	0.020	0.00	0.05	
A2	0.006 Ref.		0.15 Ref.		TYP
D1	0.012	0.020	0.30	0.50	
E1	0.012	0.024	0.30	0.61	
b	0.005	0.010	0.13	0.25	
e	0.020 BSC		0.50 BSC		TYP
L	0.011	0.020	0.28	0.50	

SUGGESTED SOLDER PAD LAYOUT (mm)



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)

Any I/O Pin to GND						
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Working Voltage	V_{RWM}				3.3	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	5.5		7.5	V
Reverse Leakage Current	I_R	$V_{RWM}=3.3V$			0.5	μA
Clamping Voltage ^{Note1}	V_C	$I_{PP}=1A, t_p=8/20\mu s$			9	V
Clamping Voltage ^{Note1}	V_C	$I_{PP}=3A, t_p=8/20\mu s$			13	V
Junction Capacitance	C_J	$V_R=0V, f=1MHz$		0.28	0.34	pF
Dynamic Resistance ^{Note2}	R_{DYN}	TLP, $t_p=100ns$		0.32		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

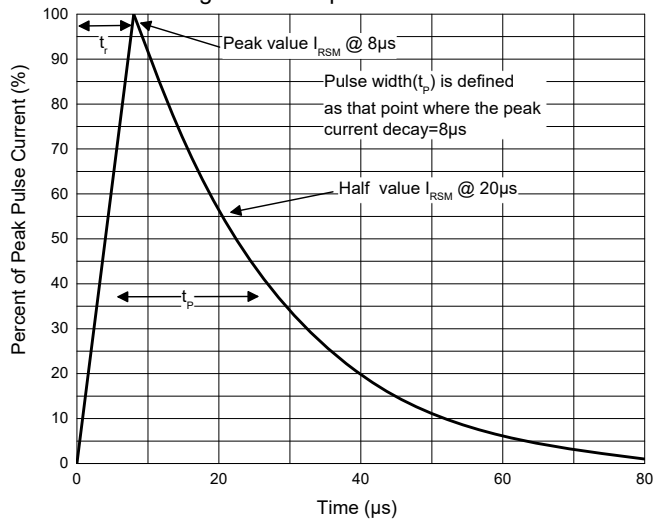


Fig. 2 - Non-Repetitive Peak Pulse Power

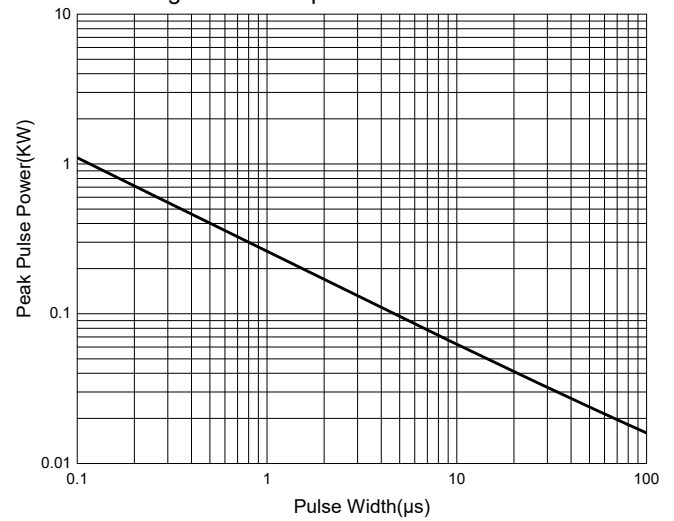


Fig. 3 - Capacitance Characteristics

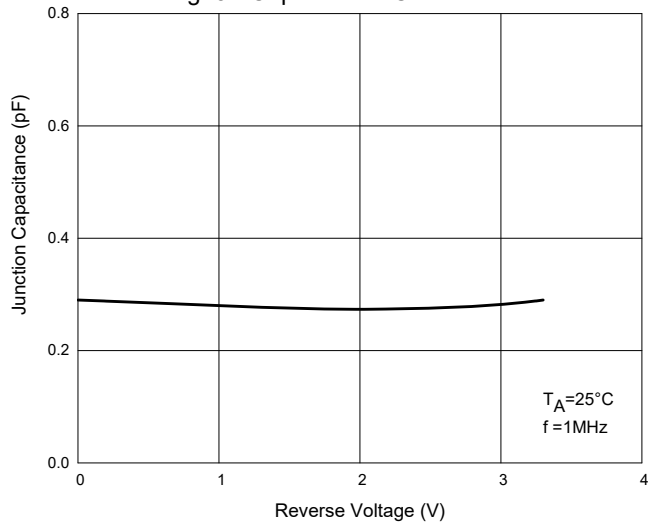


Fig. 4 - Clamping Voltage Characteristics

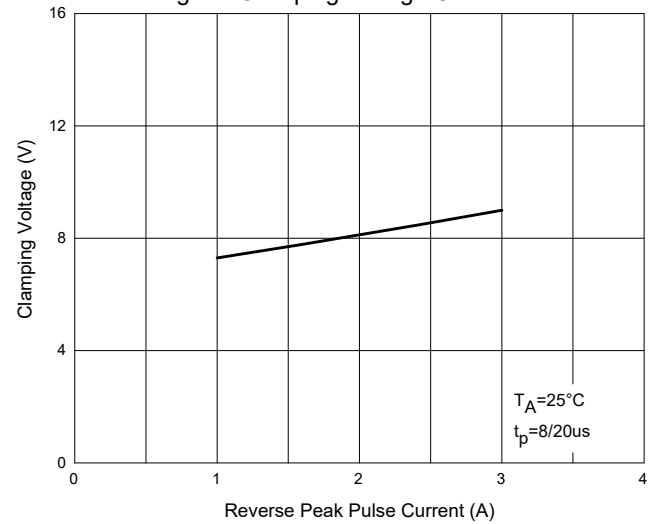


Fig. 5 - TLP Curve

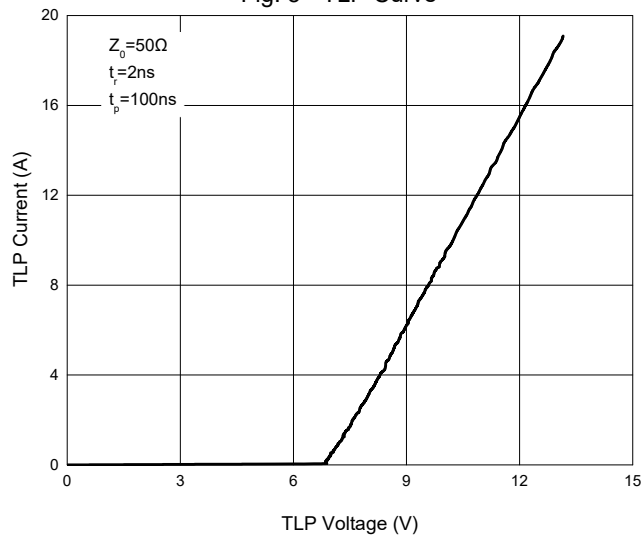
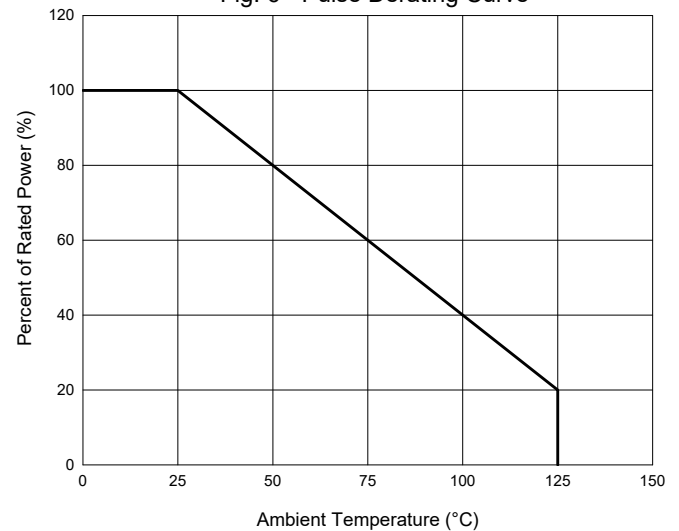


Fig. 6 - Pulse Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

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