Features

- Solid-state silicon technology
- Ultra-low Capacitance
- Ultra Low Leakage Current
- 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)

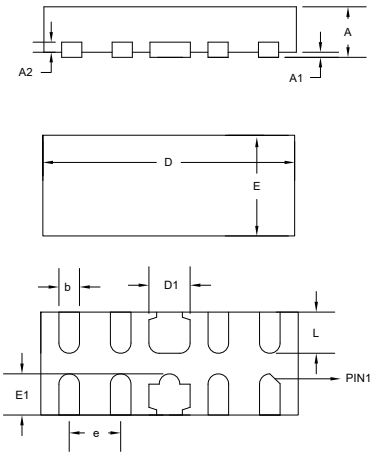
ESD Protection Device

Maximum Ratings

IEC61000-4-2(ESD)	Air	±20KV
	Contact	±20KV
Peak Pulse Power (8/20μs)	P_{PK}	54W
Peak Pulse Current (8/20μs)(Note 2)	I_{PP}	4.5A
Operating Junction Temperature Range	T_J	-40°C to +125°C
Storage Temperature Range	T_{STG}	-55°C to +150°C

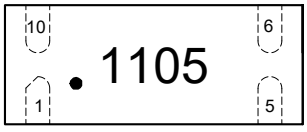
Note:
1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2.Non-repetitive current pulse 8/20 μs exponential decay waveform according to IEC61000-4-5.

DFN2510-10

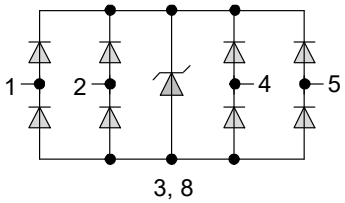


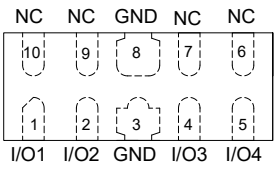
DIMENSIONS					
DIM	INCH		MM		NOTE
	MIN	MAX	MIN	MAX	
D	0.094	0.102	2.40	2.60	
E	0.035	0.043	0.90	1.10	
A	0.020	0.025	0.50	0.65	
A1	0.000	0.020	0.00	0.05	
A2	0.006 Ref.		0.15 Ref.		TYP
D1	0.012	0.020	0.30	0.50	
E1	0.012	0.024	0.30	0.61	
b	0.005	0.010	**0.13**	0.25	
e	0.020 BSC		0.50 BSC		TYP
L	0.011	0.020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

Marking Information



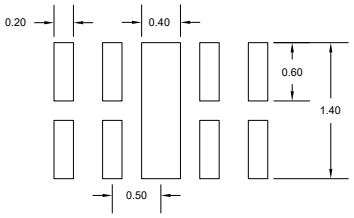
Internal Structure



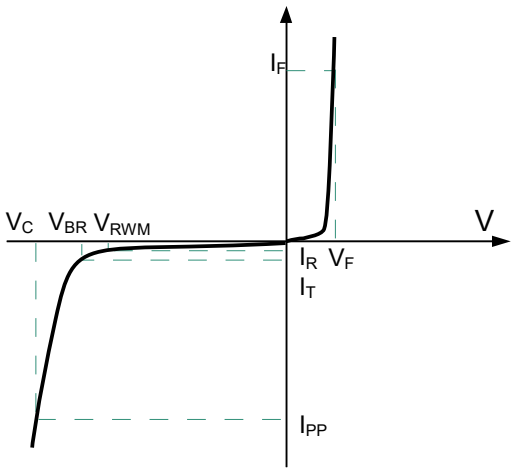


Transparent top view

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_{PP}	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	7			V
Reverse Leakage Current	I_R	V_{RWM}=5V			100	nA
Forward Voltage	V_F	I_T = 10mA	0.6	0.9	1.2	V
Clamping Voltage(Note 1)	V_C	I_{PP}=16A, t_P=100ns		14		V
Dynamic Resistance(Note 1)	R_{DYN}	t_P=100ns		0.33		Ω
Clamping Voltage(Note 2)	V_C	V_{ESD}=+8KV		14		V
Clamping Voltage(Note 3)	V_C	I_{PP}=1A, t_P=8/20μs		8	9.5	V
Clamping Voltage(Note 3)	V_C	I_{PP}=4.5A, t_P=8/20μs		10.5	12	V
Junction Capacitance	C_J	V_R=0V, f=1MHz, Any I/O pin to GND		0.45	0.6	pF
Junction Capacitance	C_J	V_R=0V, f=1MHz, Between any I/O pins		0.25	0.4	pF

Notes:

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

Curve Characteristics

Fig. 1 - 8 X 20μs Pulse Waveform

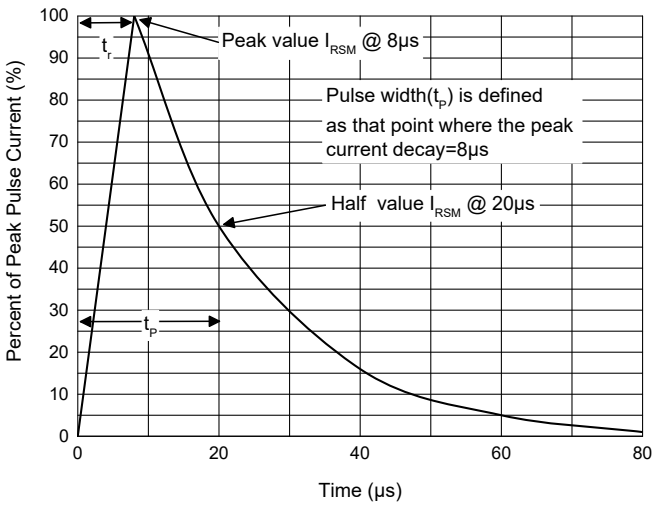


Fig. 2 - Non-Repetitive Peak Pulse Power

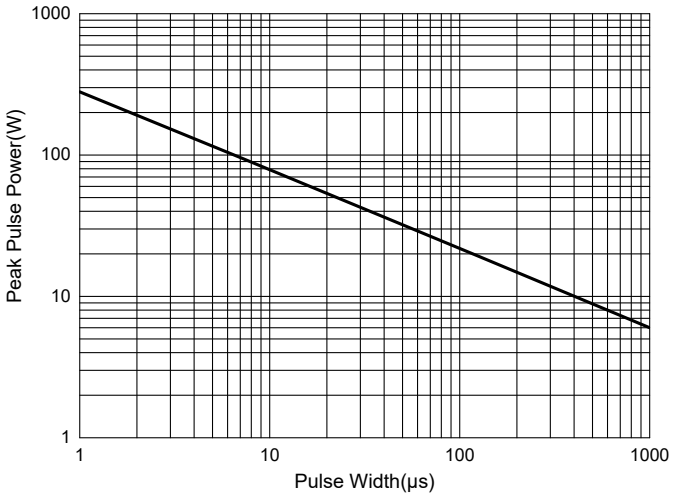


Fig. 3 - Capacitance Characteristics

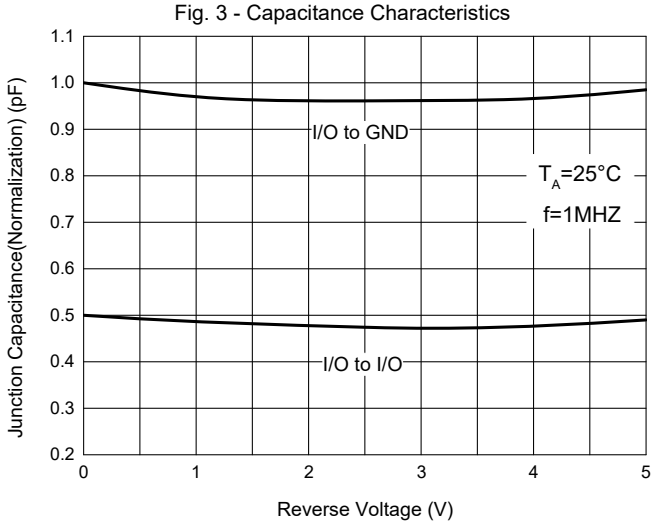


Fig. 4 - Clamping Voltage Characteristics

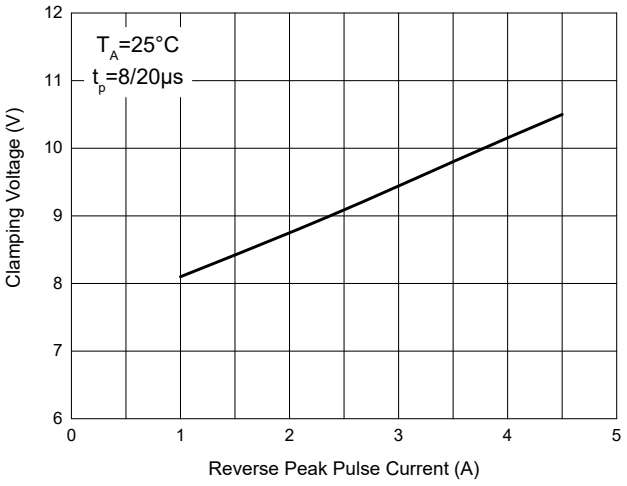


Fig. 5 - TLP Measurement

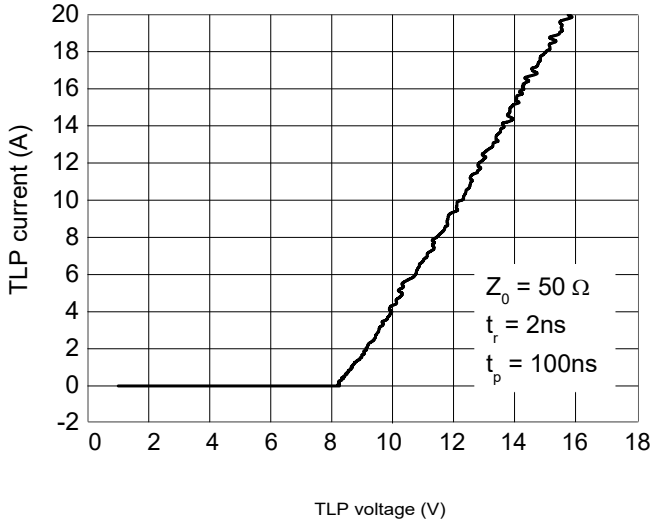
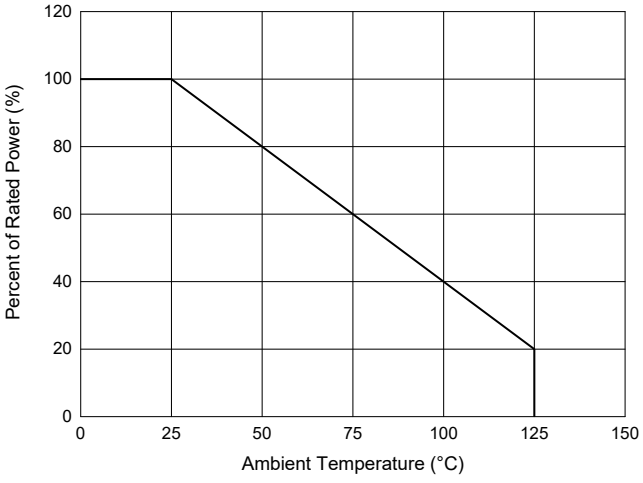


Fig.6 - Pulse Derating Curve



Ordering Information

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