

Features

- ESD Protection of One Line
- Low Clamping Voltage
- Ultra Low Capacitance
- 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)

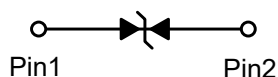
Maximum Ratings

IEC61000-4-2 (ESD)	Air	±15KV
	Contact	±12KV
Peak Pulse Current (8/20μs)	I _{PP}	4A
Peak Pulse Power (8/20μs) ^(Note2)	P _{PK}	13W
Operating Junction Temperature Range	T _J	-55°C to +125°C
Storage Temperature Range	T _{STG}	-55°C to +150°C

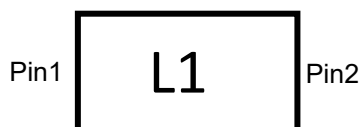
Note :

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

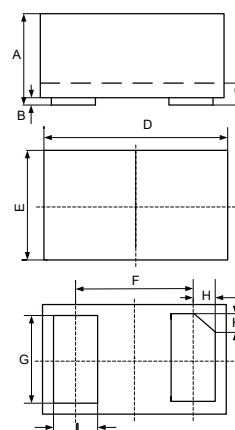


Marking Code



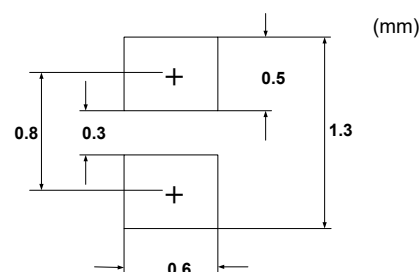
Snap Back ESD Protection Device

CSP1006-2

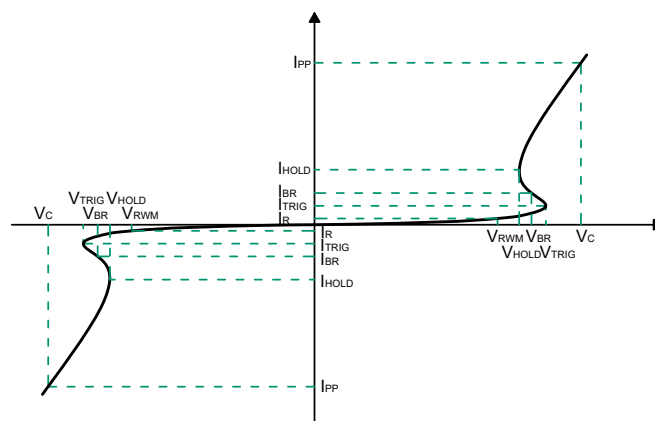


DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.016	0.022	0.40	0.55	
B	0.000	0.002	0.00	0.05	
C	0.005	0.007	0.12	0.18	
D	0.037	0.041	0.95	1.05	
E	0.022	0.026	0.55	0.65	
F	0.026		0.650		TYP.
G	0.018	0.022	0.45	0.55	
H	0.003	0.007	0.07	0.17	
L	0.008	0.012	0.20	0.30	

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_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{TRIG}	Reverse Trigger Voltage
I_{TRIG}	Reverse Trigger Current
V_{HOLD}	Reverse Holding Voltage
I_{HOLD}	Reverse Holding Current
C_J	Junction Capacitance



Electrical Characteristics @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Working Voltage	V_{RWM}				1.5	V
Reverse Breakdown Voltage	V_{BR}	$I_T=0.1mA$	4.5	6.5	8	V
Reverse Leakage Current	I_R	$V_{RWM}=1.5V$			0.1	μA
Clamping Voltage ^{Note1}	V_C	$I_{PP}=1A, t_p=8/20\mu s$		1.75		V
Clamping Voltage ^{Note1}	V_C	$I_{PP}=4A, t_p=8/20\mu s$		2.9		V
Junction Capacitance	C_J	$V_R=1V, f=1MHz$		0.2		pF
Dynamic Resistance ^{Note2}	R_{DYN}	TLP, $t_p=100ns$		0.19		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

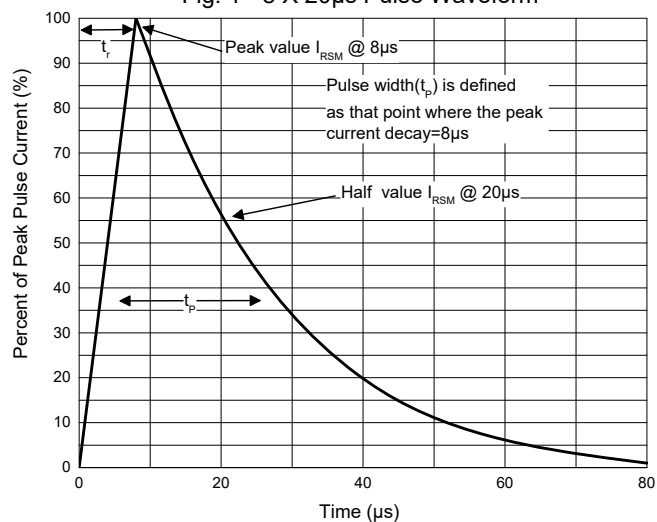


Fig. 2 - Pulse Derating Curve

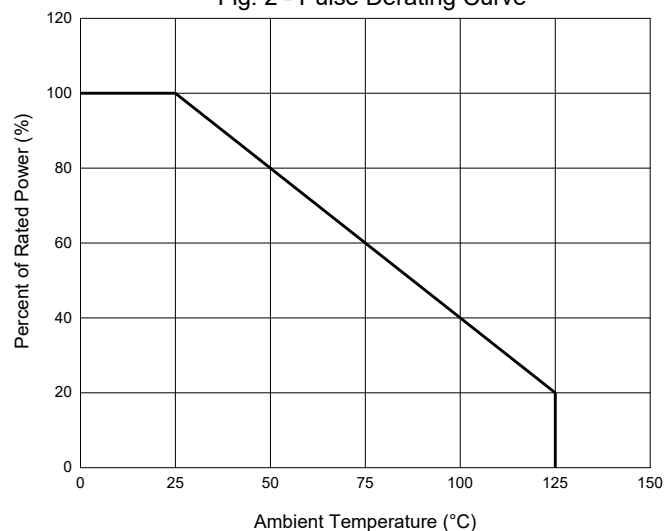


Fig. 3 - Capacitance Characteristics

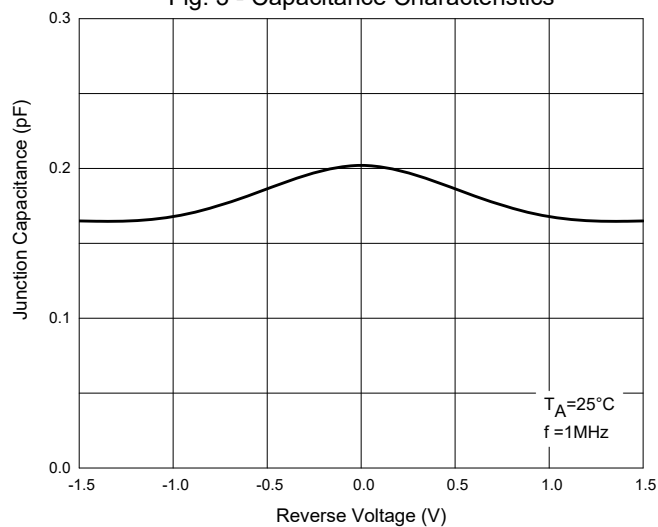


Fig. 4 - Clamping Voltage Characteristics

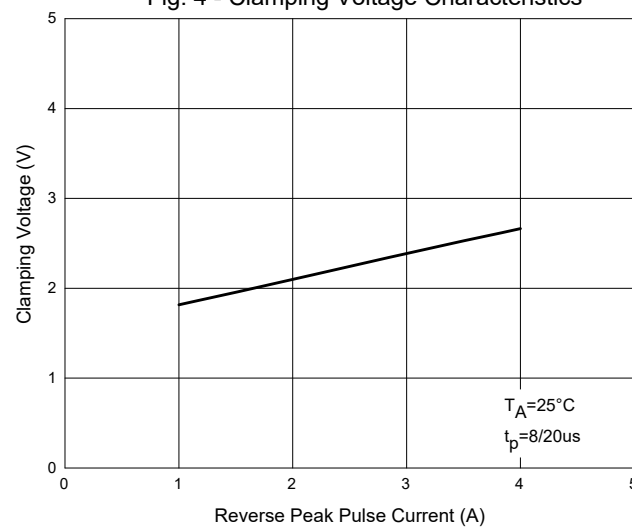


Fig. 5 - TLP Curve

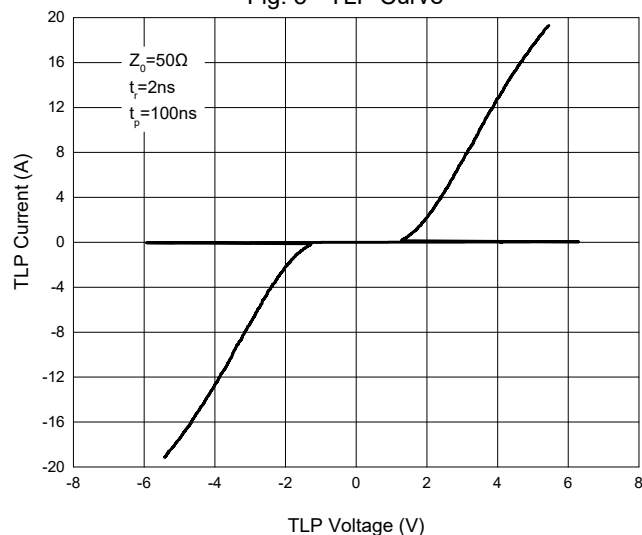


Fig. 6 - Insertion Loss VS. Frequency

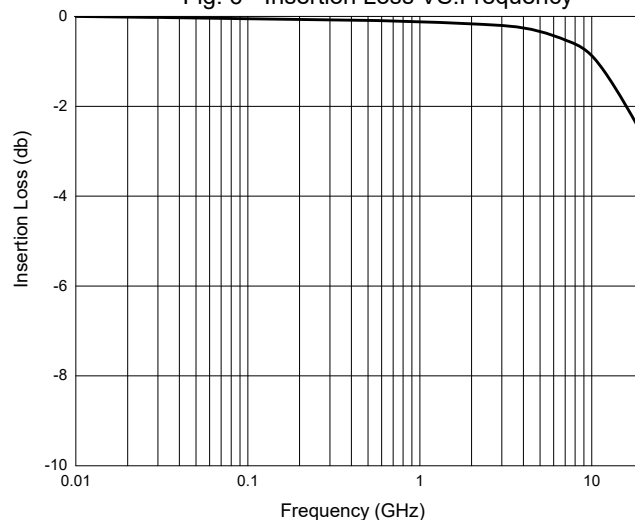


Fig. 7 - Return Loss VS.Frequency

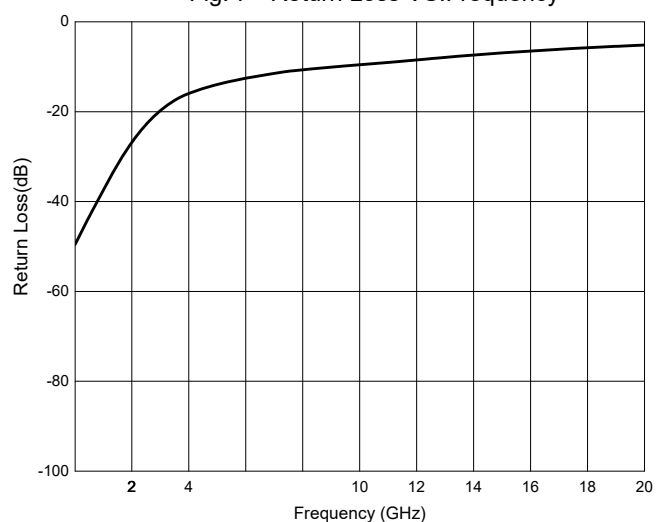
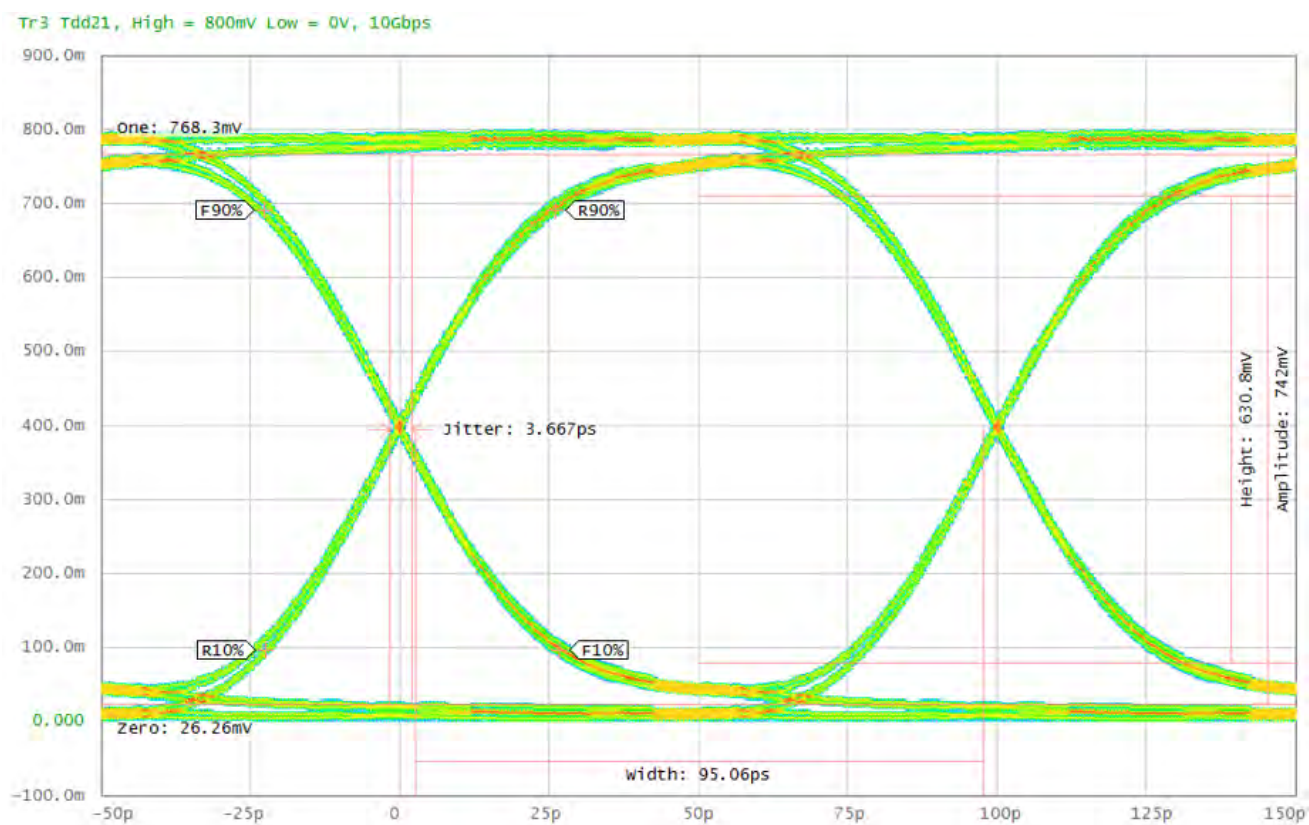


Fig. 8 - Eye Diagram (10 Gbps)



Ordering Information

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

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