

## Features

- Chip Scale Package
- Protects one Data or Power Line
- Ultra Low Leakage
- Low Clamping Voltage
- Halogen Free
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

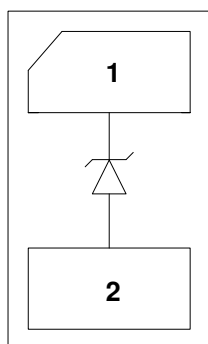
## Maximum Ratings

- Operating Junction Temperature Range: -55°C to +125°C
- Storage Temperature Range: -55°C to +150°C

MCC Part Number	Device Marking
CSP3V3L	3V

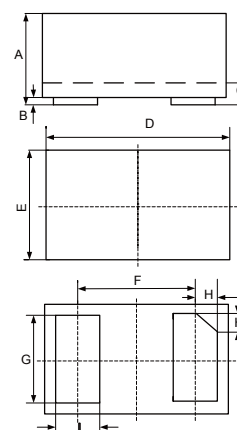
IEC61000-4-2(ESD)	Air Contact	±30KV ±30KV
Peak Pulse Current(8/20µs)	I <sub>PP</sub>	65A
Peak Pulse Power (8/20µs)	P <sub>PK</sub>	600W

## Circuit and Pin Schematic



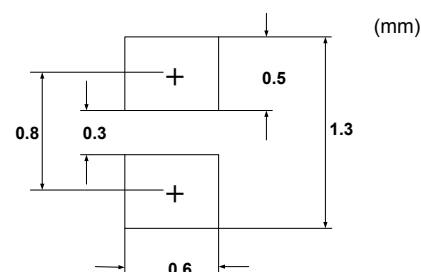
# ESD Protection Device

## CSP1006-2



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.018	0.022	0.45	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



**Electrical Characteristics @ 25°C (Unless Otherwise Specified)**

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Working Voltage	$V_{RWM}$				3.3	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	3.6	4.2	5.5	V
Reverse Leakage Current	$I_R$	$V_{RWM}=3.3V$			0.5	$\mu A$
Forward Voltage	$V_F$	$I_F=10mA$	0.6	1.0	1.5	V
Clamping Voltage	$V_C$	$I_{PP}=30A, t_p=8/20\mu s$		7.5	8.5	V
Clamping Voltage	$V_C$	$I_{PP}=65A, t_p=8/20\mu s$		9	10.5	V
Junction Capacitance	$C_J$	$V_R=0V, f=1MHz$		120	150	pF

## Curve Characteristics

Fig. 1 - 8 X 20 $\mu$ s Pulse Waveform

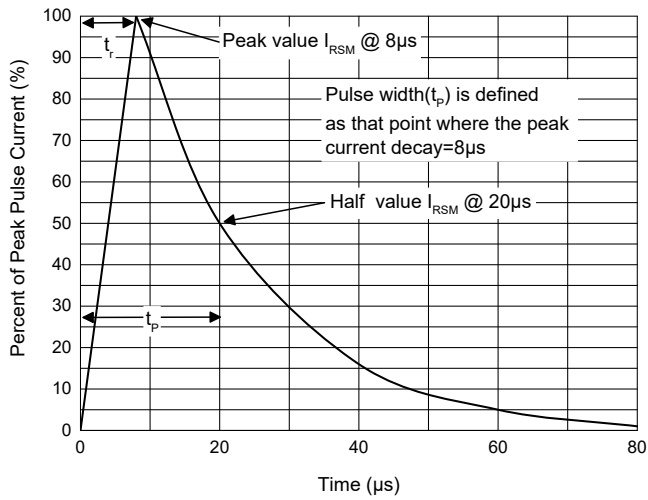


Fig. 2 - Non-Repetitive Peak Pulse Power

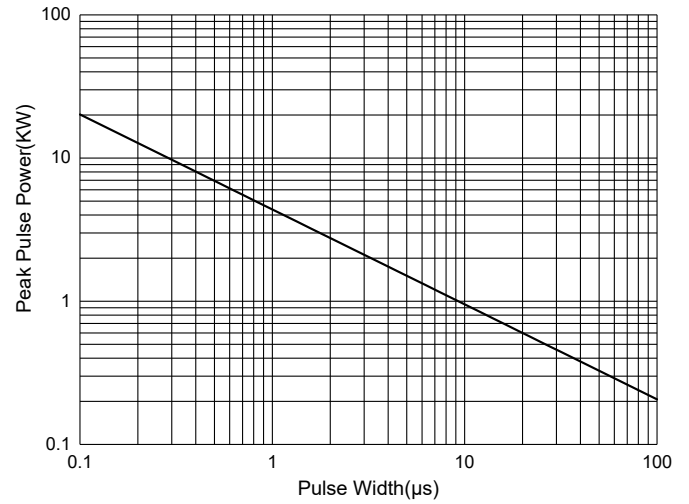


Fig. 3 - Capacitance Characteristics

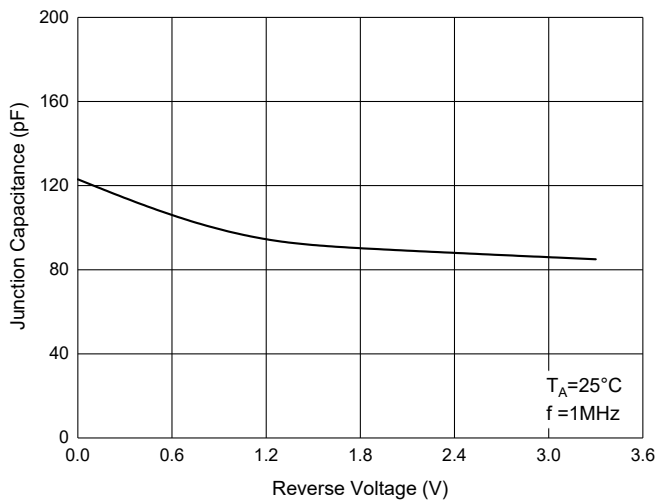


Fig. 4 - Clamping Voltage Characteristics

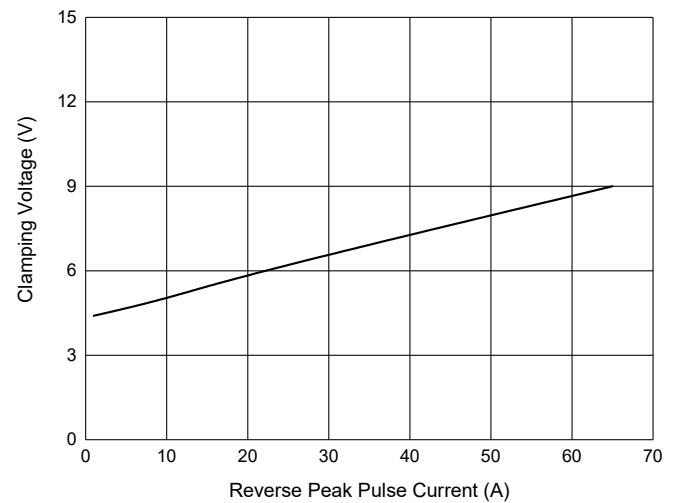
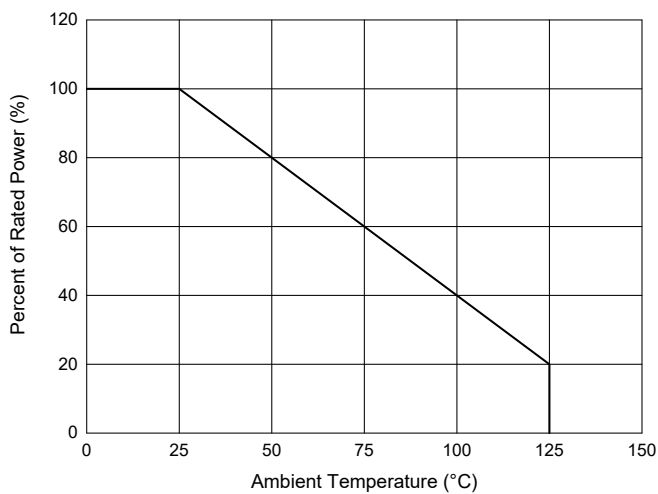


Fig. 5 - Pulse Derating Curve



## Ordering Information

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

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