

## Features

- Uni-Directional ESD Protection of One Line
- High Peak Pulse Current Capability
- Low Clamping Voltage
- 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

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

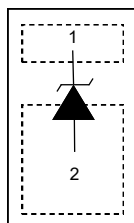
MCC Part Number	Device Marking
ESD1531P1	H6

IEC61000-4-2 (ESD)	Air Contact	±30KV ±30KV
Peak Pulse Current (8/20µs)	I <sub>PP</sub>	20
Peak Pulse Power (8/20µs)	P <sub>PK</sub>	700W

Note :

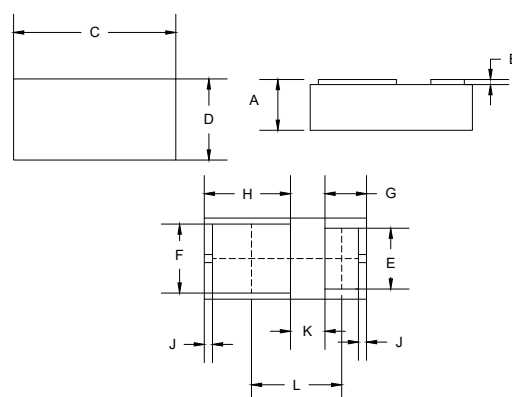
1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

## Internal Structure



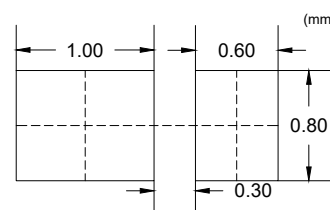
# ESD Protection Device

## DFN1608-2



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.018	0.022	0.45	0.55	
B	0.000	0.004	0.01	0.09	
C	0.061	0.065	1.55	1.65	
D	0.030	0.033	0.75	0.85	
E	0.020	0.027	0.52	0.68	
F	0.024	0.030	0.60	0.76	
G	0.016		0.41		REF.
H	0.033		0.85		REF.
J	0.003		0.08		REF.
K	0.013		0.34		REF.
L	0.035	0.039	0.90	1.00	

## Suggested Solder Pad Layout



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

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Working Voltage	$V_{RWM}$				15	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	16.5			V
Reverse Leakage Current	$I_R$	$V_{RWM}=15V$			0.5	$\mu A$
Forward Voltage	$V_F$	$I_F=10mA$			1.2	V
Clamping Voltage	$V_C$	$I_{PP}=1A, t_p=8/20\mu s$			22	V
Clamping Voltage	$V_C$	$I_{PP}=20A, t_p=8/20\mu s$			35	V
Junction Capacitance	$C_J$	$V_R=0V, f=1MHz$		100		pF

## Curve Characteristics

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

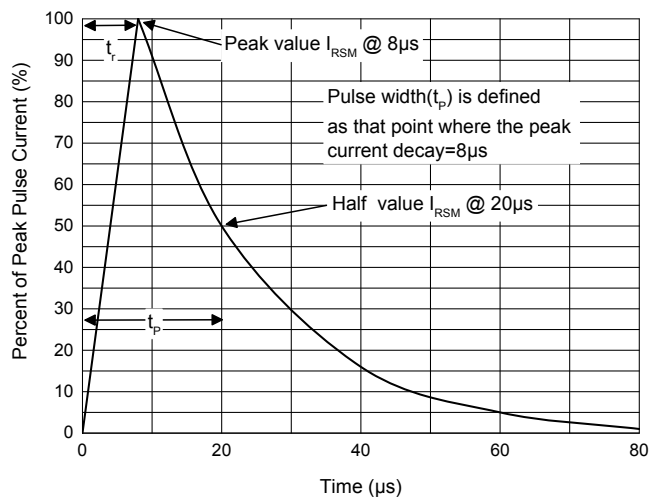


Fig. 2 - Peak Pulse Power Rating Curve

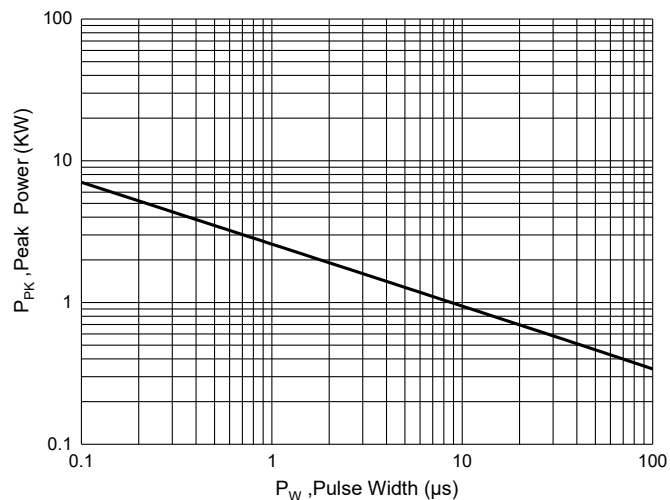


Fig. 3 - Clamping Voltage Characteristics

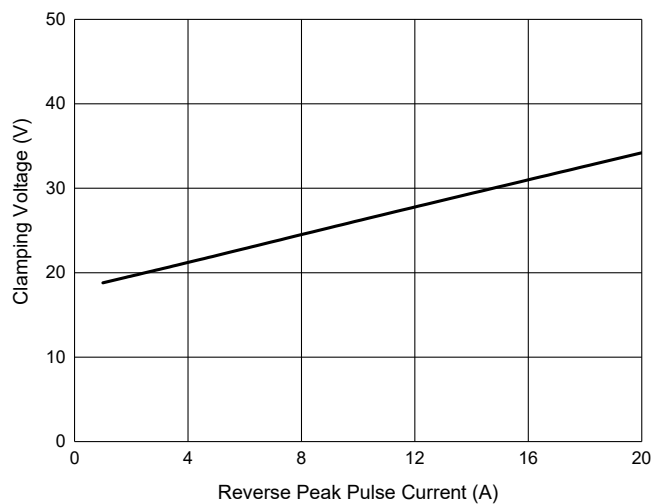


Fig. 4 - Capacitance Characteristics

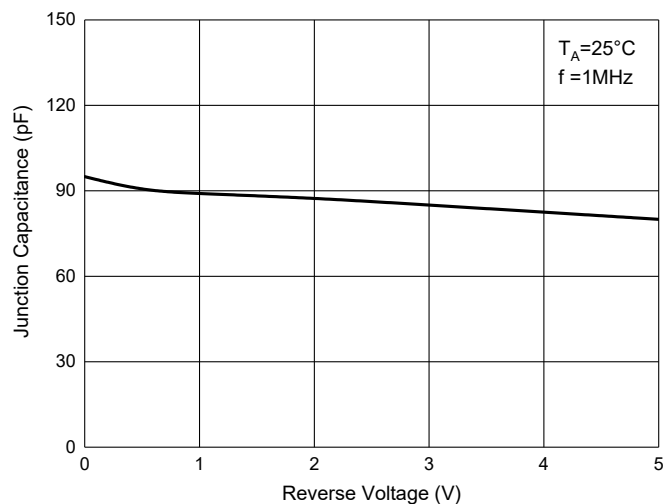
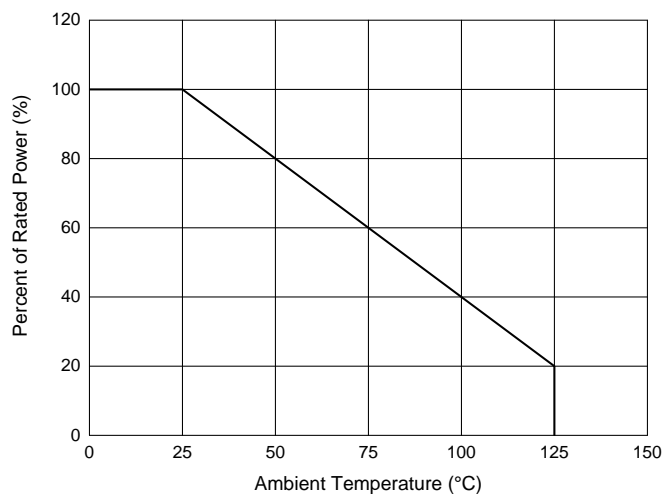


Fig. 5 - Pulse Derating Curve



## Ordering Information

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

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