



Micro Commercial Components
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ESD12VL

ESD Protection Device

Features

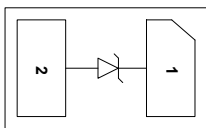
- Protects one data or power line
- Low clamping voltage
- Ultra low leakage: nA level
- IEC61000-4-4 (EFT) 40A (5/50ns)
- IEC61000-4-5(Lightning) 20A (8/20us)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"

Maximum Ratings

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

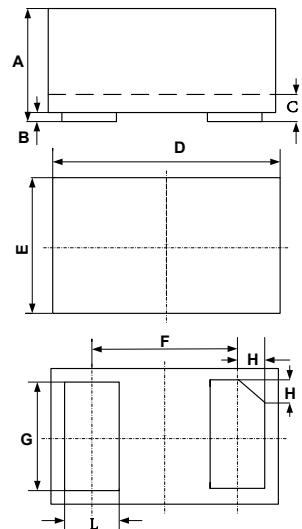
Parameter	Symbol	Limits	unit
IEC61000-4-2(ESD) Contact Air	V_{ESD}	± 30 ± 30	KV
Peak Pulse Power (8/20us)	P_{pk}	300	W
Peak Pulse Current (8/20us)	I_{pp}	12	A

Circuit and Pin Schematic



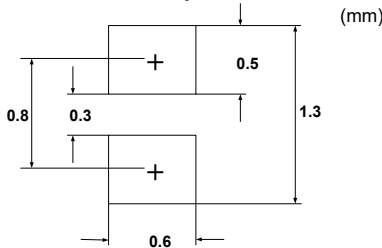
Marking Code: 2P / 12

DFN1006-2



DIMENSIONS					
DIM	INCHES		MM		NOTE
	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 REF.		0.650 REF.		
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	

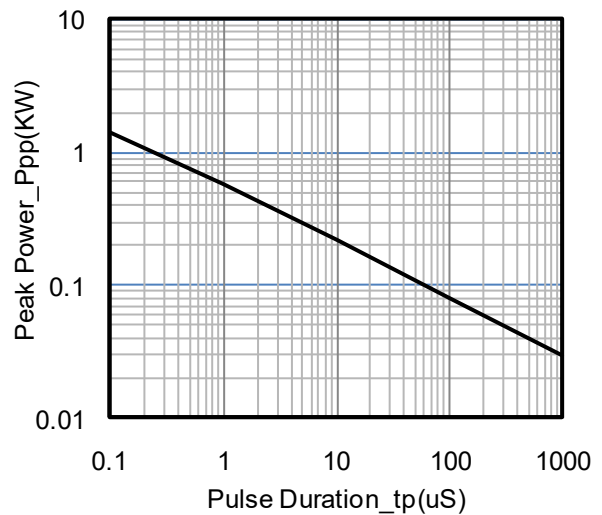
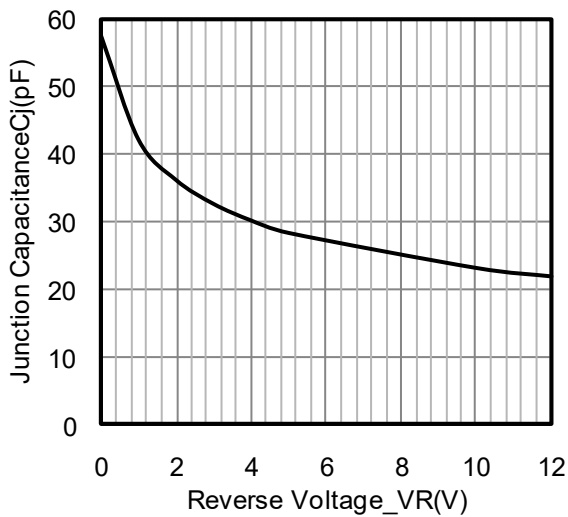
Suggested Solder Pad Layout



Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise specified)

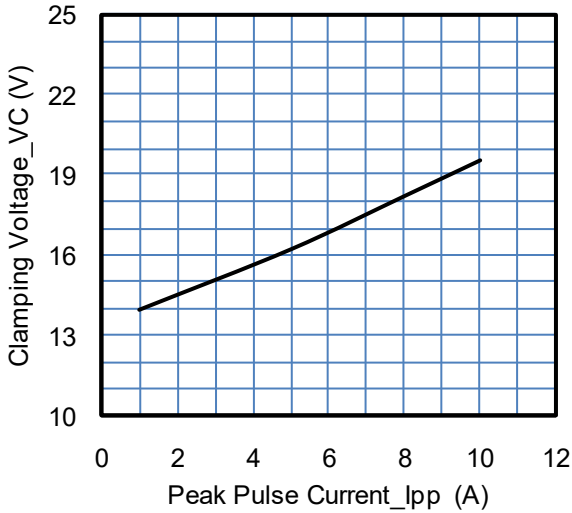
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V_{RWM}			12	V	Pin 1 to Pin 2
Breakdown Voltage	V_{BR}	13.3			V	$I_T = 1\text{mA}$, Pin 1 to Pin 2
Reverse Leakage Current	I_R			0.1	μA	$V_{RWM} = 12\text{V}$, Pin 1 to Pin 2
Forward Voltage	V_F		1.0	1.2	V	$I_F = 10\text{mA}$, Pin 2 to Pin 1
Clamping Voltage	V_C			15	V	$I_{PP} = 1\text{A}$ (8 x 20 μs pulse), Pin 1 to Pin 2
Clamping Voltage	V_C			25	V	$I_{PP} = 12\text{A}$ (8 x 20 μs pulse), Pin 1 to Pin 2
Junction Capacitance	C_J		60		pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$

Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)

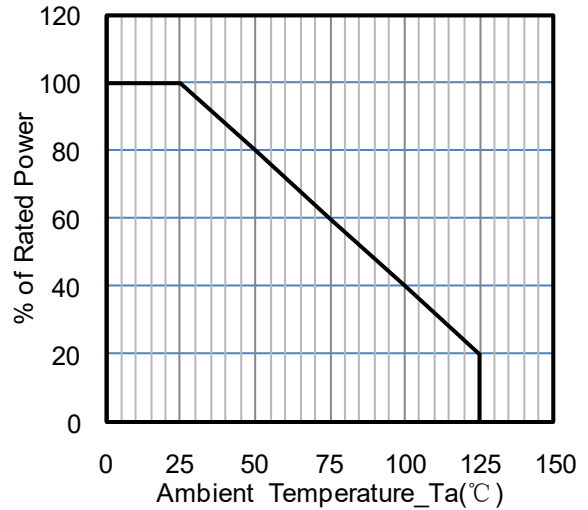


Typical Performance Characteristics (T_A=25°C unless otherwise Specified)

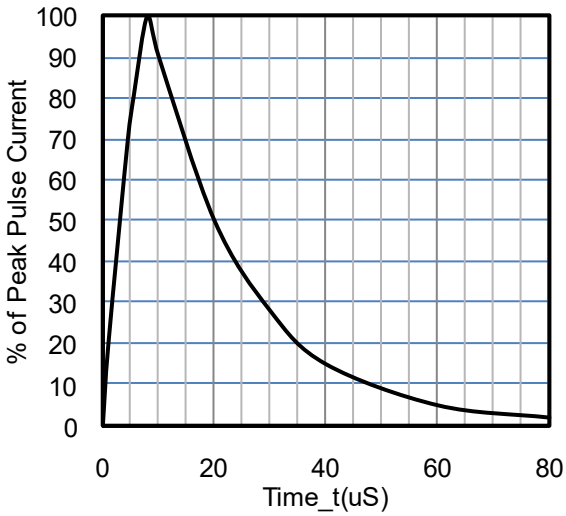
Junction Capacitance vs. Reverse Voltage



Peak Pulse Power vs. Pulse Time

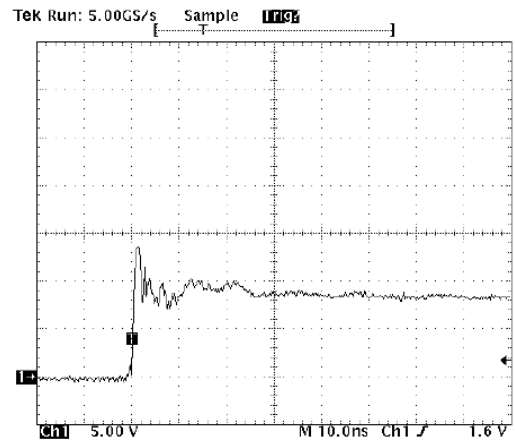


Clamping Voltage vs. Peak Pulse Current



8 X 20uS Pulse Waveform

Power Derating Curve



ESD Clamping Voltage

8 kV Contact per IEC61000-4-2



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Ordering Information :

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

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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