Micro Commercial Components

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ESD12VL

ESD Protection Device

Features

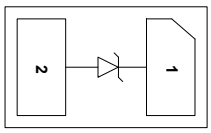
- Protects one data or power line
- Low clamping voltage
- Ultra low leakage: nA level
- IEC61000−4−4 (EFT) 40A (5/50ns)
- IEC61000-4-5(Lightning) 20A (8/20us)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"

Maximum Ratings

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

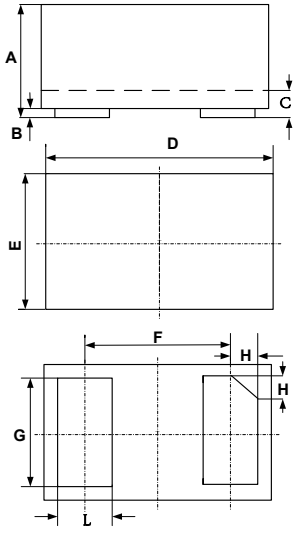
Parameter		Symbol	Limits	unit
IEC61000-4-2(ESD)	Contact Air	V_{ESD}	±30 ±30	KV
Peak Pulse Power (8/20us)		P_{pk}	300	W
Peak Pulse Current (8/20us)		I_{pp}	12	A

Circuit and Pin Schematic



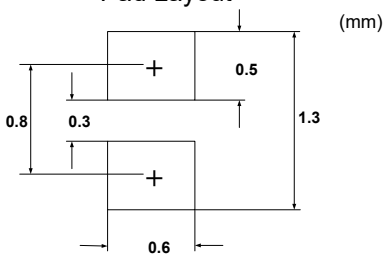
Marking Code: 2P / 12

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	

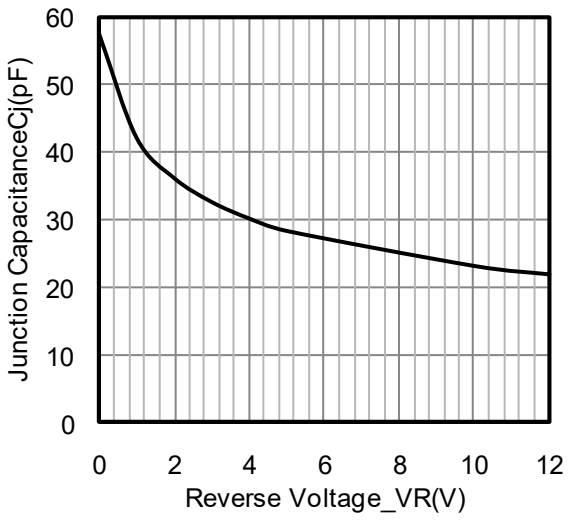
Suggested Solder Pad Layout

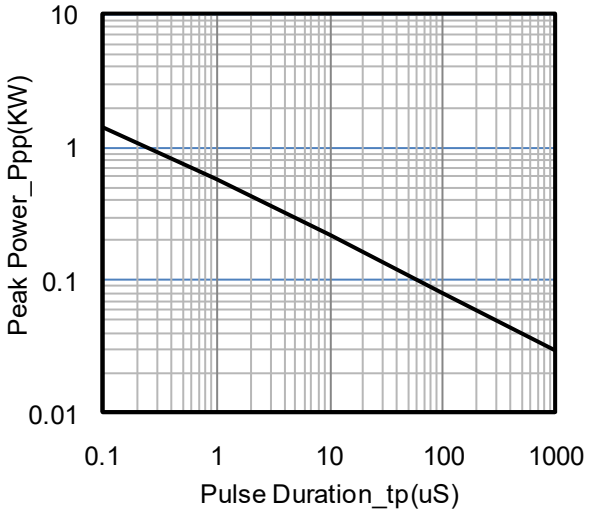


Electrical Characteristics (T_A=25°C unless otherwise specified)

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 = 1mA, Pin 1 to Pin 2
Reverse Leakage Current	I_R			0.1	μA	V_{RWM} = 12V, Pin 1 to Pin 2
Forward Voltage	V_F		1.0	1.2	V	I_F = 10mA, Pin 2 to Pin 1
Clamping Voltage	V_C			15	V	I_{PP} = 1A (8 x 20μs pulse), Pin 1 to Pin 2
Clamping Voltage	V_C			25	V	I_{PP} = 12A (8 x 20μs pulse), Pin 1 to Pin 2
Junction Capacitance	C_J		60		pF	VR = 0V, f = 1MHz

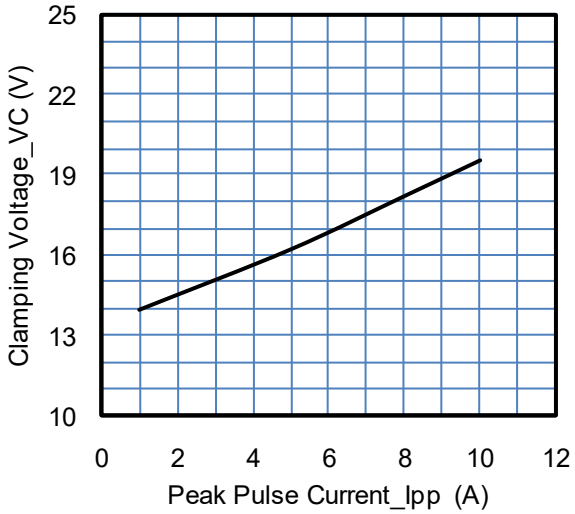
Typical Performance Characteristics (T_A=25°C unless otherwise Specified)



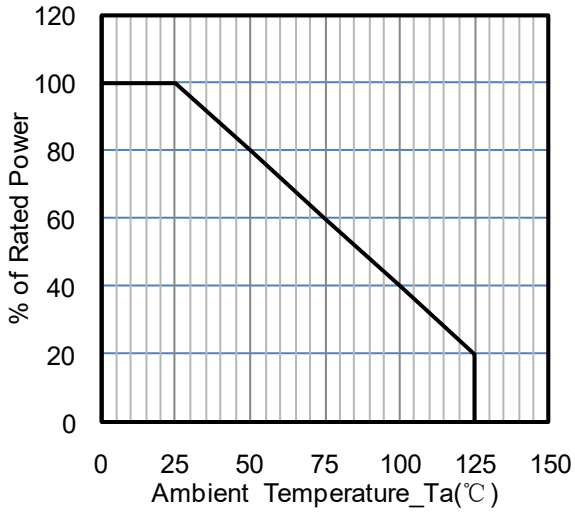


Typical Performance Characteristics (T_A=25°C unless otherwise Specified)

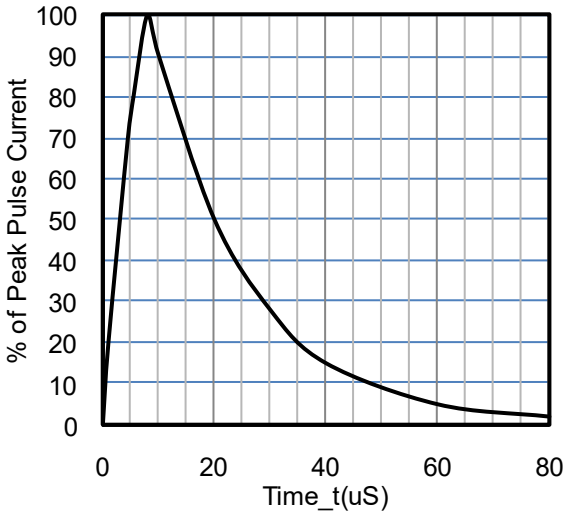
Junction Capacitance vs. Reverse Voltage



Peak Pulse Power vs. Pulse Time

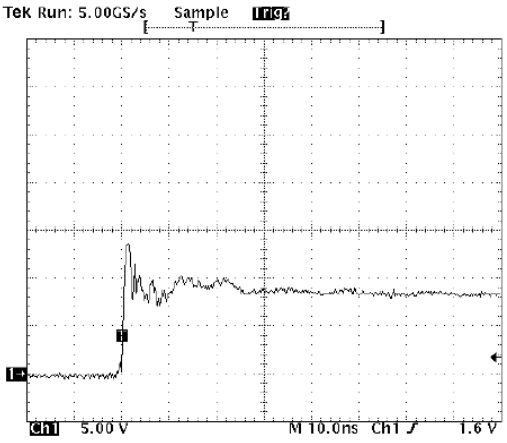


Clamping Voltage vs. Peak Pulse Current



8 X 20uS Pulse Waveform

Power Derating Curve



ESD Clamping Voltage

8 kV Contact per IEC61000−4−2

Micro Commercial Components

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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