



Micro Commercial Components



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ESD5V0LB

Features

- Ultra low leakage: nA level
- Low operating Voltage: 5.0 V
- Low clamping voltage
- IEC61000-4-4 (EFT) 40A (5/50ns)
- IEC61000-4-5(Lightning) 25A (8/20us)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"
- Marking:B8

Maximum Ratings

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

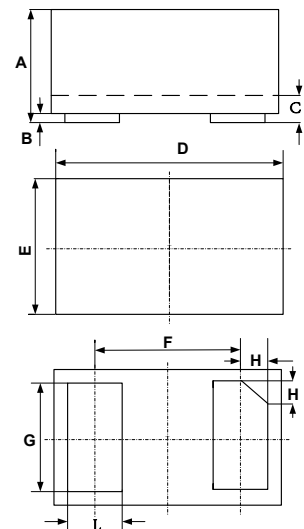
Parameter	Symbol	Limits	unit
IEC61000-4-2(ESD) Contact Air	V_{ESD}	± 25 ± 30	KV
Peak Pulse Power (8/20us)	P_{pk}	400	W
Peak Pulse Current (8/20us)	I_{pp}	25	A

Internal Structure



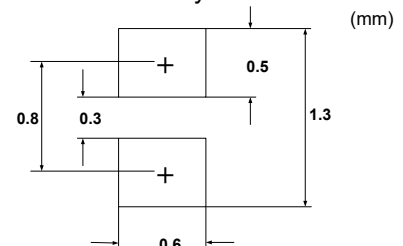
ESD Protection Device

DFN1006-2



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

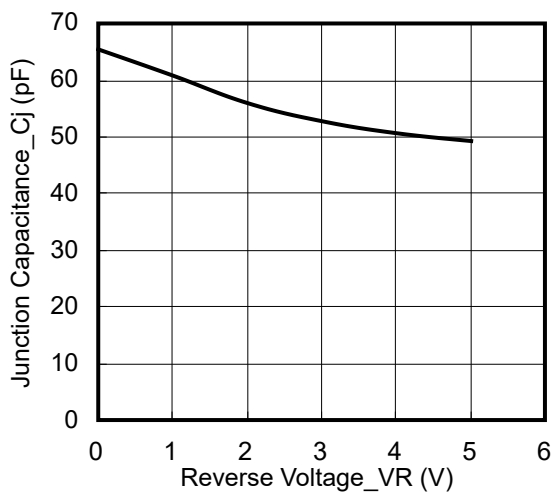


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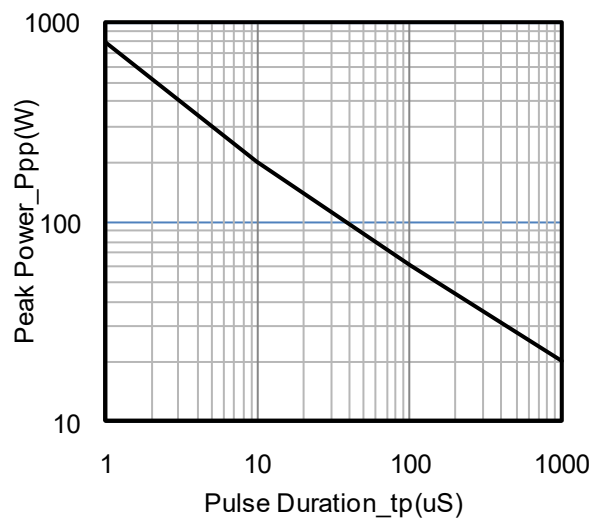
ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse stand off voltage	V_{RWM}				5.0	V
Reverse leakage current	I_R	$V_{RWM}=5.0\text{V}$			0.5	μA
Breakdown voltage	$V_{(BR)}$	$I_T=1\text{mA}$	6.0	8.0	9.0	V
Clamping voltage	V_C	$I_{PP}=1\text{A}$			7	V
Clamping voltage	V_C	$I_{PP}=25\text{A}$			16	V
Junction capacitance	C_J	$V_R=0\text{V}, f=1\text{MHz}$		80	100	pF

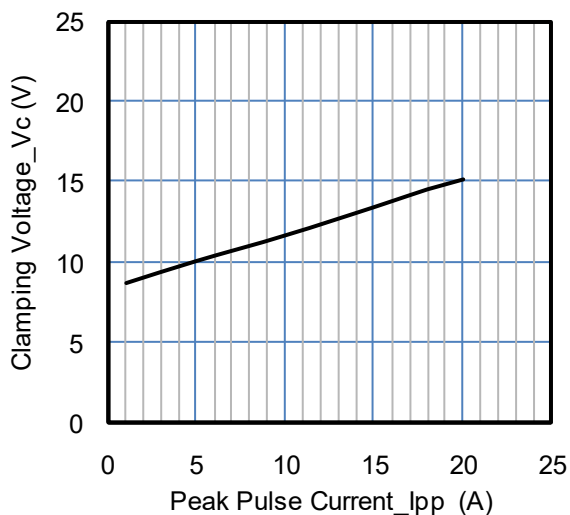
Typical Performance Characteristics (TA=25°C unless otherwise Specified)



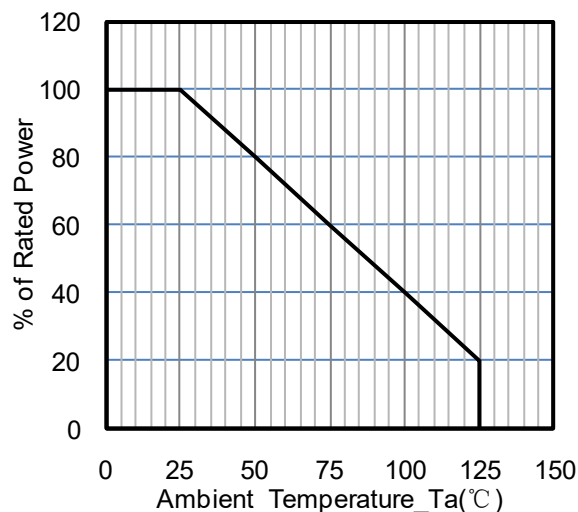
Junction Capacitance vs. Reverse Voltage



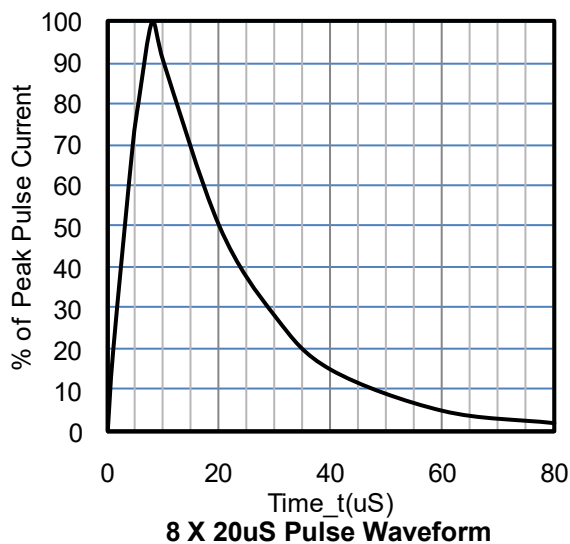
Peak Pulse Power vs. Pulse Time



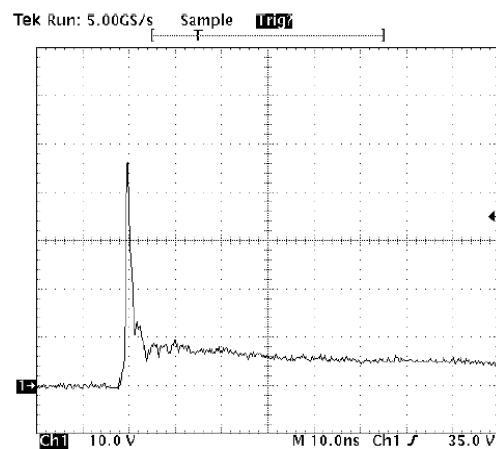
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



8 X 20uS Pulse Waveform



ESD Clamping Voltage

8 kV Contact per IEC61000-4-2

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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