



Micro Commercial Components



Micro Commercial Components  
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# ESDLC5V0PB8

## ESD Protection Device

### Features

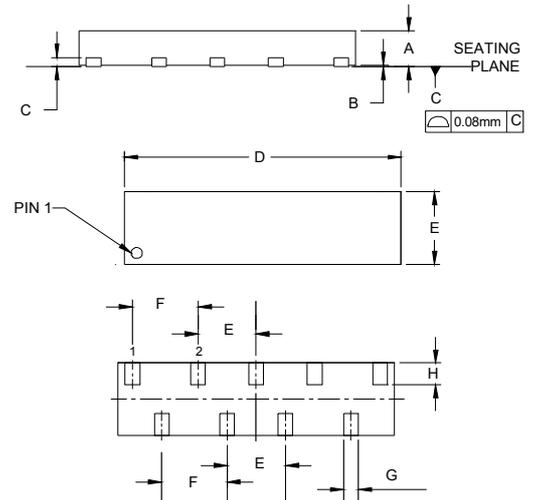
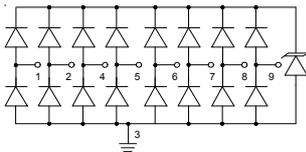
- Ultra Low Capacitance 0.29pF typical
- Low operating Voltage: 5.0 V
- Low clamping voltage
- IEC61000-4-4 (EFT) 40A (5/50ns)
- IEC61000-4-5(Lightning) 5A (8/20us)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"
- Marking:0508P

### 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	$V_{ESD}$	$\pm 8$ $\pm 15$	KV
Peak Pulse Power (8/20us)	$P_{pk}$	100	W
Peak Pulse Current (8/20us)	$I_{pp}$	5	A

#### Internal Structure



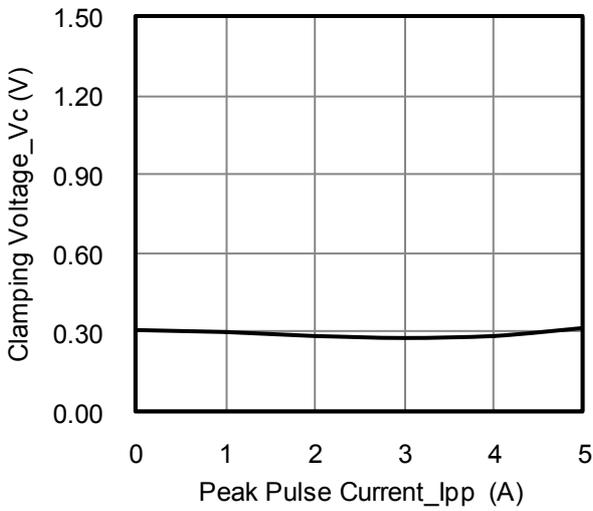
DIM	DIMENSIONS				NOTE
	INCHES		MM		
A	0.018	0.022	0.45	0.55	
B	0.000	0.002	0.00	0.05	
C	0.005		0.130		
D	0.146	0.154	3.70	3.90	
E	0.031 BSC		0.800 BSC		
F	0.035 BSC		0.900 BSC		
G	0.006	0.010	0.15	0.25	
H	0.010	0.014	0.25	0.35	

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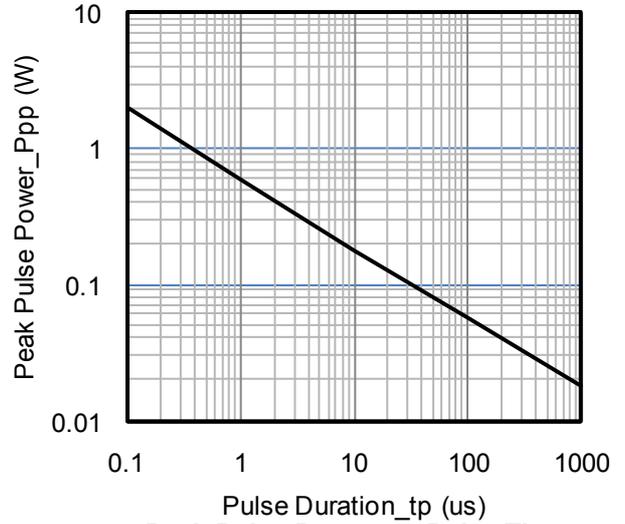
**Electrical Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise specified)**

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	$V_{RWM}$			5	V	Any I/O pin to ground
Breakdown Voltage	$V_{BR}$	6			V	$I_T = 1\text{mA}$ , any I/O pin to ground
Reverse Leakage Current	$I_R$			0.5	$\mu\text{A}$	$V_{RWM} = 5\text{V}$ , any I/O pin to ground
Clamping Voltage	$V_C$			15	V	$I_{PP} = 1\text{A}$ (8 x 20 $\mu\text{s}$ pulse), any I/O pin to ground
Clamping Voltage	$V_C$			20	V	$I_{PP} = 5\text{A}$ (8 x 20 $\mu\text{s}$ pulse), any I/O pin to ground
Junction Capacitance	$C_J$		0.29	0.35	pF	$V_R = 0\text{V}$ , $f = 1\text{MHz}$ , any I/O pin to ground

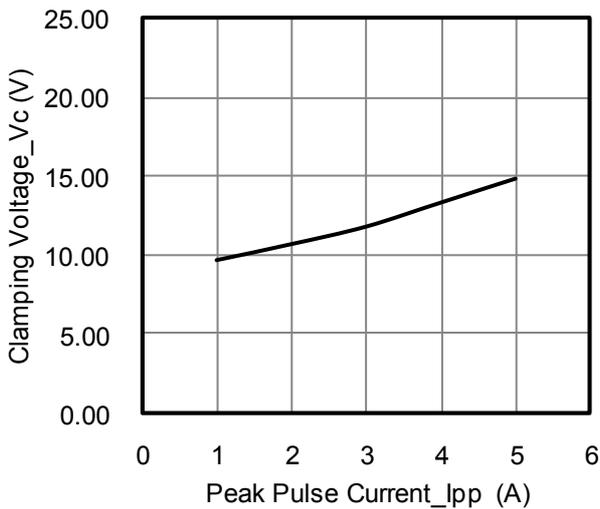
**Typical Performance Characteristics (T<sub>A</sub>=25°C unless otherwise Specified)**



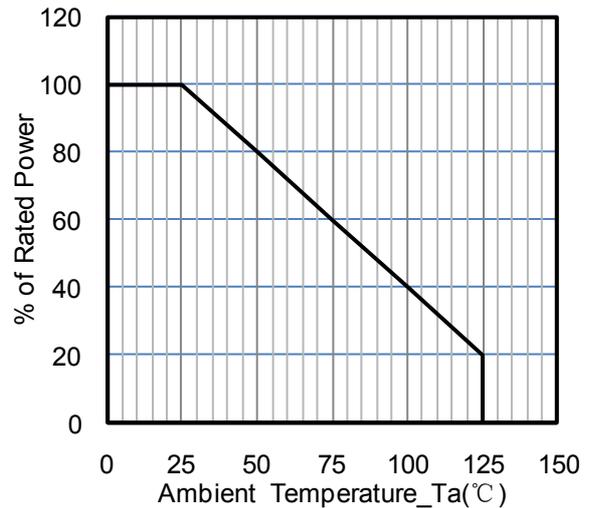
**Junction Capacitance vs. Reverse Voltage**



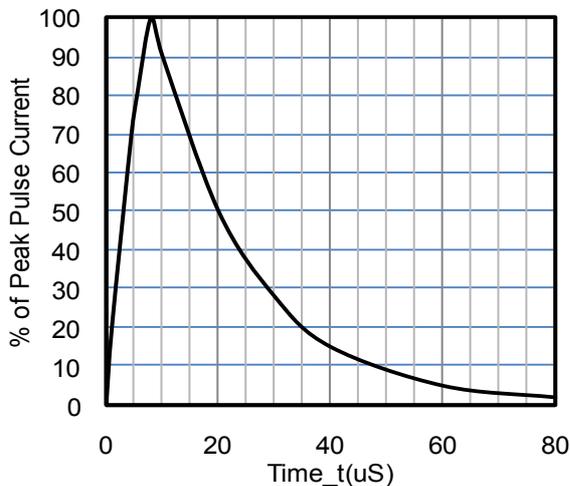
**Peak Pulse Power vs. Pulse Time**



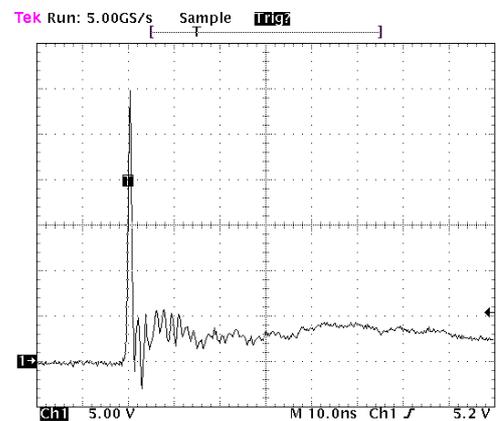
**Clamping Voltage vs. Peak Pulse Current**



**Power Derating Curve**



**8 X 20uS Pulse Waveform**



**ESD Clamping Voltage**

**8 kV Contact per IEC61000-4-2**



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### Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

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

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