Micro Commercial Components

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ESD12VP4

ESD Protection Device

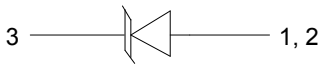
Features

- Low operating voltage: 12V
- 4000W Peak pulse power(8/20us)
- Ultra low clamping voltage
- IEC61000−4−4 (EFT) 80A (5/50ns)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"

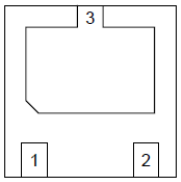
Maximum Ratings

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	4000	W
Peak Pulse Current (8/20μs)	IPP	130	A
ESD per IEC 61000−4−2 (Air) ESD per IEC 61000−4−2 (Contact)	VESD	±30 ±30	kV
Operating Temperature Range	TJ	−55 to +125	°C
Storage Temperature Range	Tstg	−55 to +150	°C

Dimensions and Pin Configuration



Circuit Diagram

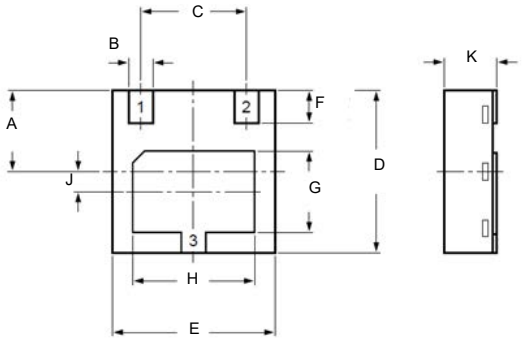


Transparent top view

Pin Schematic

MARKING: 12P

DFN2020-3L

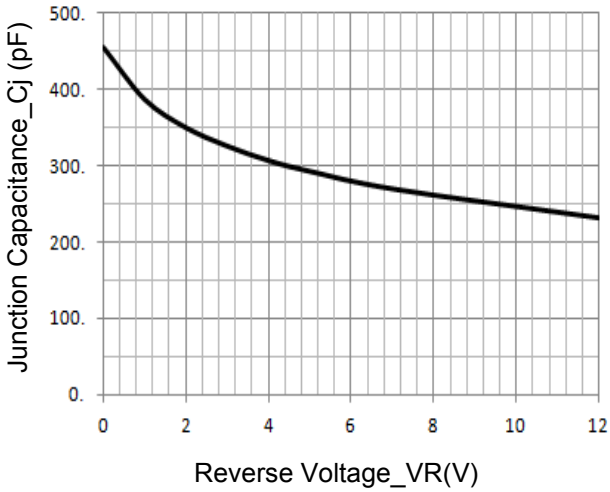


DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.037	0.041	0.95	1.05	
B	0.010	0.014	0.25	0.35	
C	0.051(typ.)		1.30(typ.)		
D	0.075	0.083	1.90	2.10	
E	0.075	0.083	1.90	2.10	
F	0.014	0.018	0.35	0.45	
G	0.035	0.043	0.90	1.10	
H	0.055	0.063	1.40	1.60	
J	0.008	0.012	0.20	0.30	
K	---	0.026	---	0.65	

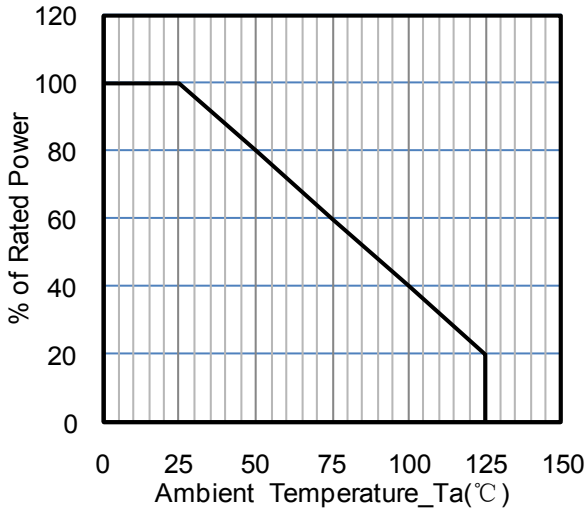
Electrical Characteristics (T_A=25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V_{RWM}		12		V	
Breakdown Voltage	V_{BR}	14			V	I_T = 1mA
Reverse Leakage Current	I_R			1.0	μA	V_{RWM} = 12V
Clamping Voltage	V_C			18	V	I_{PP} = 20A (8 x 20μs pulse)
Clamping Voltage	V_C			30	V	I_{PP} = 130A (8 x 20μs pulse)
Junction Capacitance	C_J		450		pF	VR = 0V, f = 1MHz

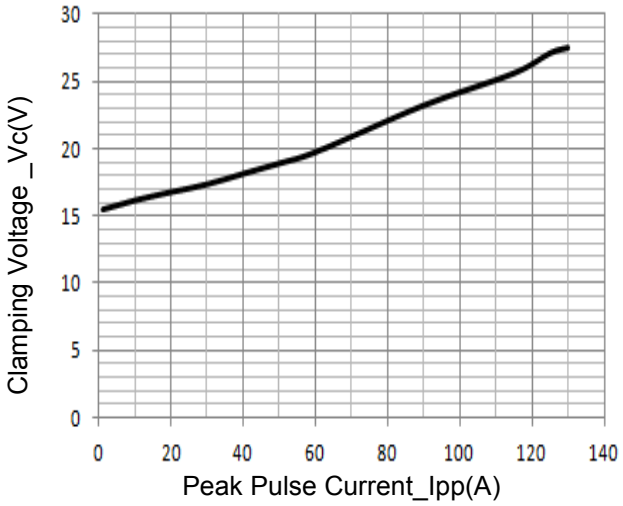
Typical Performance Characteristics (T_A=25°C unless otherwise Specified)



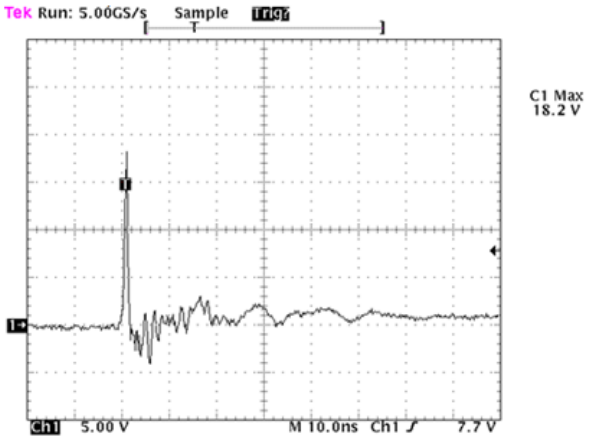
Novction Capacitance vs. Reverse Voltage



Power Derating Curve

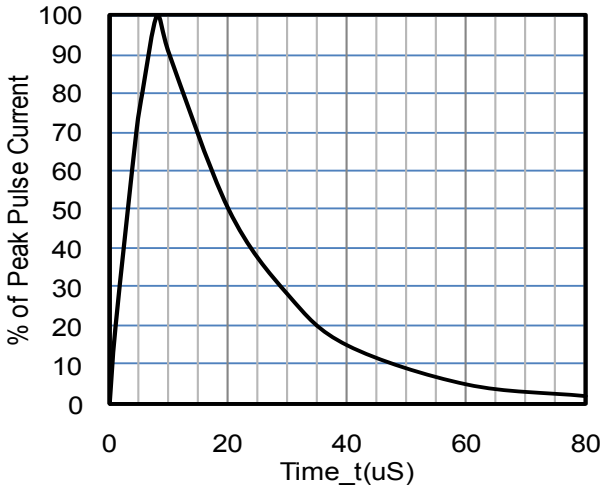


Clamping Voltage vs. Peak Pulse Current



ESD Clamping Voltage

8 kV Contact per IEC61000−4−2



8 X 20us Pulse Waveform

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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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