

# ESD Suppressor

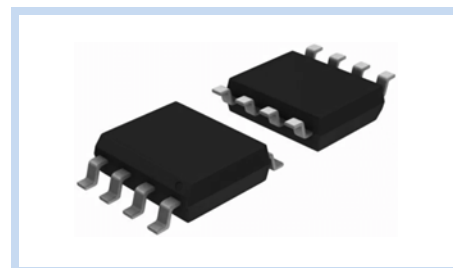
## 3.3V 2-Unidirectional SOIC-08

ME3V32U15SO8

MERITEK

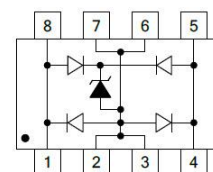
### FEATURE

- IEC 61000-4-2 ESD:  $\pm 30\text{KV}$  (Air)  $\pm 30\text{KV}$  (Contact)
- IEC 61000-4-4 EFT: 40A (5/50ns)
- IEC 61000-4-5 Lightning: 100A (8/20 $\mu\text{s}$ )
- Bellcore 1089 (intra-building) 100A (2/20 $\mu\text{s}$ )
- ITU K.20 IPP=40A (5/310 $\mu\text{s}$ )
- ESD Protection for two Unidirectional Channels
- Low Clamping Voltage
- Solid-State Silicon-Avalanche Technology



### APPLICATION

- 10/100/1000 BaseT Ethernet
- STS-1 Interfaces
- T1/E1 Line Cards
- T3/E3 and DS3 Interfaces



### MAXIMUM RATINGS AND CHARACTERISTICS

Parameter	Symbol	Value	Unit
ESD Voltage (Contact discharge)	$V_{ESD}$	$\pm 30$	KV
ESD Voltage (Air discharge)		$\pm 30$	
Peak Pulse Power (tp=8/20 $\mu\text{s}$ )	$P_{PP}$	2000	W
Peak Pulse Current (tp=8/20 $\mu\text{s}$ )	$I_{PP}$	100	A
Operating & Storage Temperature Range	$T_J, T_{STG}$	-55~+150	$^{\circ}\text{C}$

### ELECTRICAL CHARACTERISTICS

Parameter	Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	--	$V_{RWM}$	--	--	3.3	V
Punch-Through Voltage	$I_{PT}=1\text{mA}$	$V_{PT}$	3.5	--	--	V
Snap-Back Voltage	$I_{SB}=50\text{mA}$	$V_{SB}$	2.8	--	--	V
Reverse Leakage Current	$V_R=3.3\text{V}$	$I_R$	--	--	15	$\mu\text{A}$
Clamping Voltage	$I_{PP}=50\text{A}$ , tp=8/20 $\mu\text{s}$ , Line to GND	$V_C$	--	--	15	V
	$I_{PP}=50\text{A}$ , tp=8/20 $\mu\text{s}$ , Line to Line		--	--	20	
	$I_{PP}=100\text{A}$ , tp=8/20 $\mu\text{s}$ , Line to GND		--	--	20	
	$I_{PP}=100\text{A}$ , tp=8/20 $\mu\text{s}$ , Line to Line		--	--	25	

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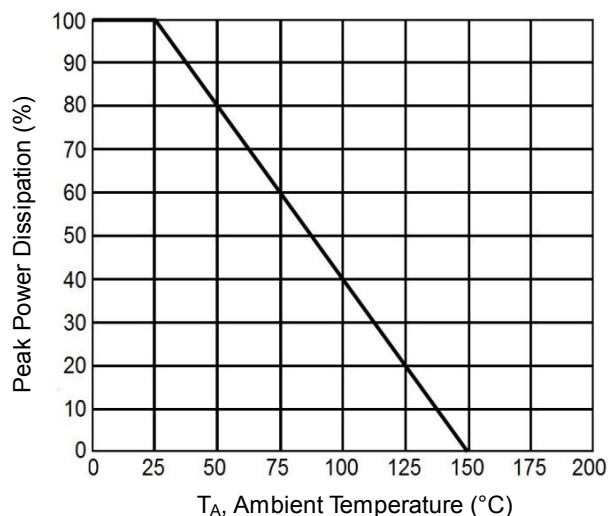
### ELECTRICAL CHARACTERISTICS

Parameter	Condition	Symbol	Min.	Typ.	Max.	Unit
Off State Junction Capacitance	Vdc=0, f=1MHz, Between I/O pins and GND	C <sub>J</sub>	--	15	30	pF
	Vdc=0, f=1MHz, Between I/O pins		--	12	30	

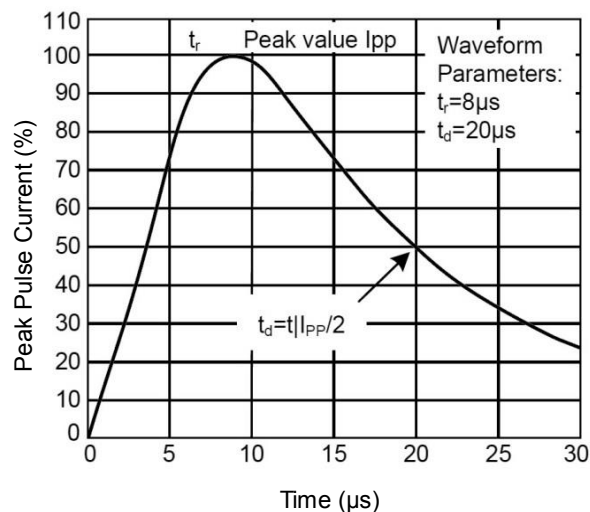
Notes: T<sub>A</sub>= 25°C unless otherwise specified.

### CHARACTERISTIC CURVES

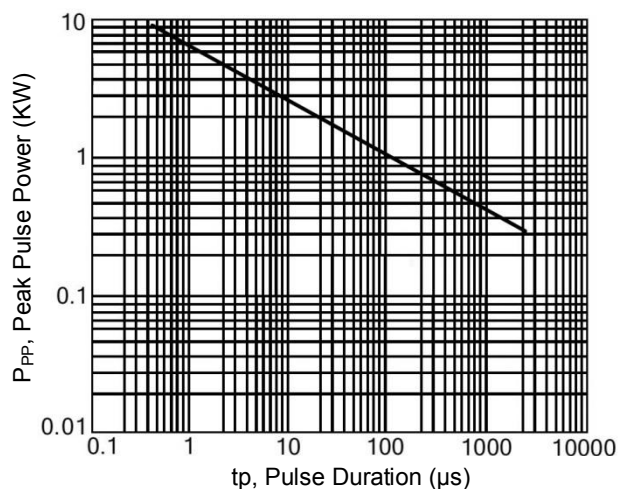
Derating Curve



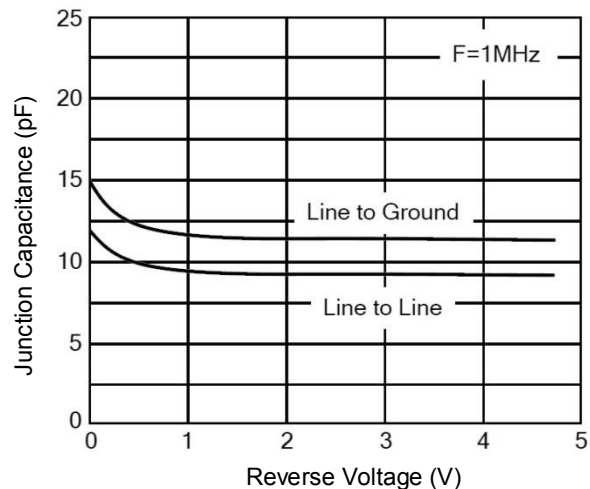
Pulse Waveforms



Non-Repetitive Peak Pulse vs. Pulse Time



Capacitance vs. Reverse Voltage



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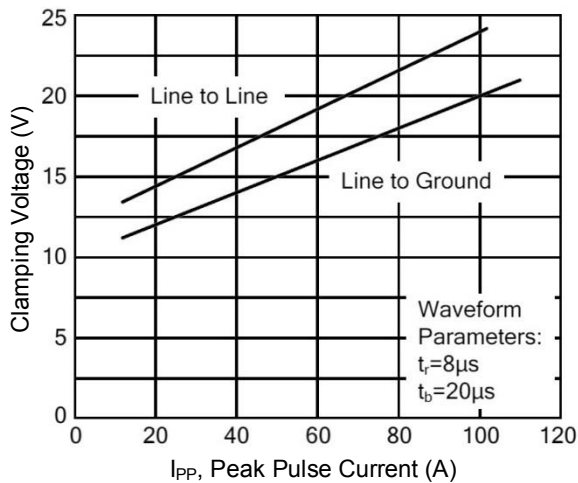
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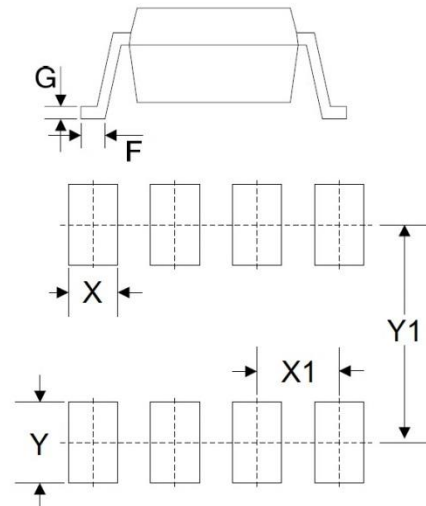
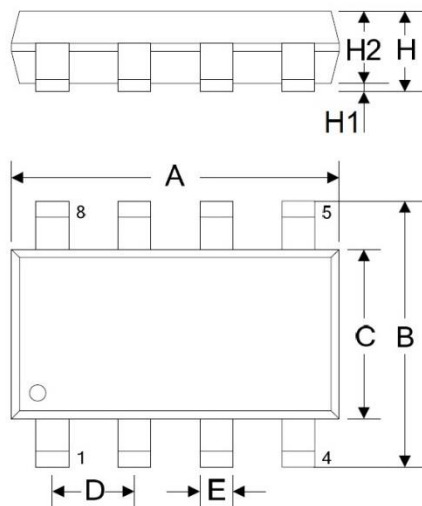
### CHARACTERISTIC CURVES

Clamping Voltage vs. Peak Pulse Current



### DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A	4.80	5.00
B	5.80	6.20
C	3.80	4.00
D	1.27	1.27
E	0.33	0.51
F	0.40	1.27
G	0.19	0.25
H	1.35	1.75
H1	0.10	0.25
H2	1.45	1.45
X	0.73	0.73
X1	1.27	1.27
Y	1.20	1.20
Y1	6.60	6.60



\*Specifications subject to change without notice.