

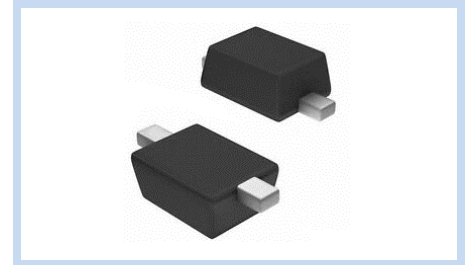
ESD Suppressor 3.3V Bidirectional SOD-323F

ME3V31B13S323F

MERITEK

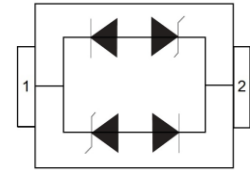
FEATURE

- 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: 15A (8/20 μs)
- ESD Protection for one Bidirectional Channel
- Very Low Capacitance: 1.2pF Max



APPLICATION

- Digital Cameras
- Desktops, Notebooks and Servers
- Portable Devices
- Control Signal Lines Protection
- Serial and Parallel Ports Protection



MAXIMUM RATINGS AND CHARACTERISTICS

Parameter	Symbol	Value	Unit
ESD Voltage (Contact discharge)	V_{ESD}	± 30	KV
ESD Voltage (Air discharge)		± 30	
Operating Temperature Range	T_J	-55~+125	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS

Parameter	Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	--	V_{RWM}	--	--	3	V
Reverse Breakdown Voltage	$I_{BR}=1\text{mA}$	V_{BR}	4.75	--	5.25	V
Reverse Leakage Current	$V_R=3\text{V}$	I_R	--	--	20	μA
Clamping Voltage	$I_{PP}=1\text{A}$, $t_p=8/20\mu\text{s}$	V_C	--	--	7.5	V
	$I_{PP}=5\text{A}$, $t_p=8/20\mu\text{s}$		--	10.5	--	
Clamping Voltage TLP	$I_{PP}=4\text{A}$, $t_p=100\text{ns}$	V_C	--	10	--	V
	$I_{PP}=8\text{A}$, $t_p=100\text{ns}$		--	13	--	
Dynamic Resitance	$t_p=100\text{ns}$	R_{DYN}	--	0.75	--	Ω
Off State Junction Capacitance	$V_{dc}=0$, Bias, $f=1\text{MHz}$	C_J	--	0.9	1.2	pF

Notes:

1. $T_A=25^{\circ}\text{C}$ unless otherwise specified
2. Testing using Transmission Line Pulse (TLP) conditions: $Z_0=50\Omega$, $t_p=100\text{ns}$

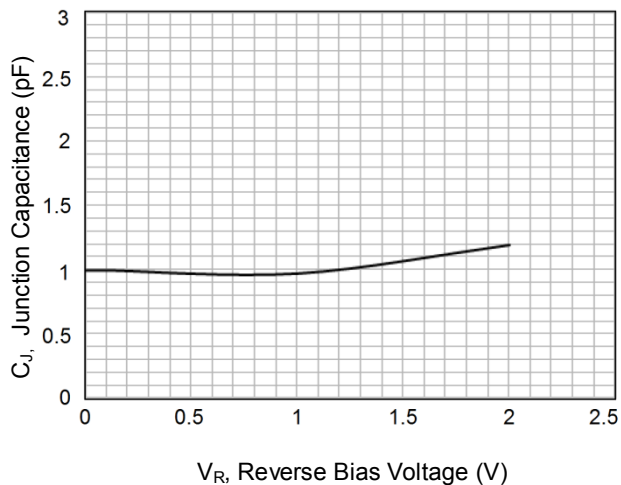
ESD Suppressor 3.3V Bidirectional SOD-323F

ME3V31B13S323F

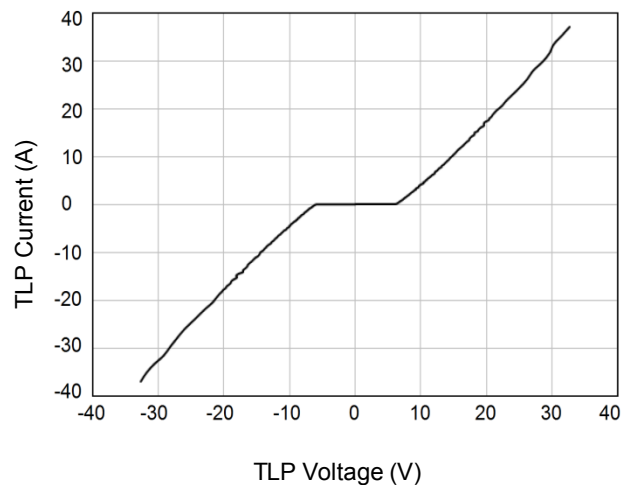
MERITEK

CHARACTERISTIC CURVES

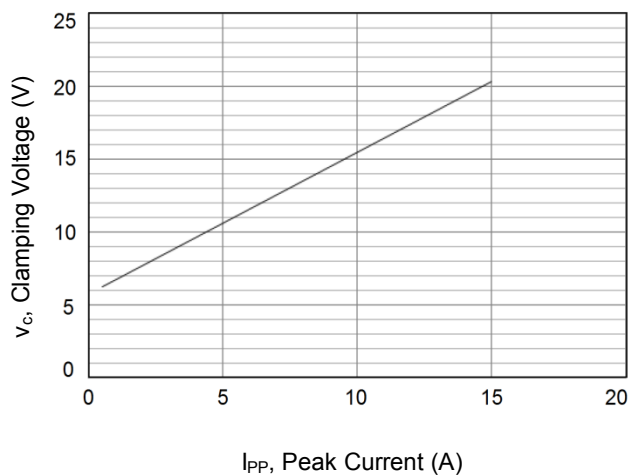
Typical Junction Capacitance



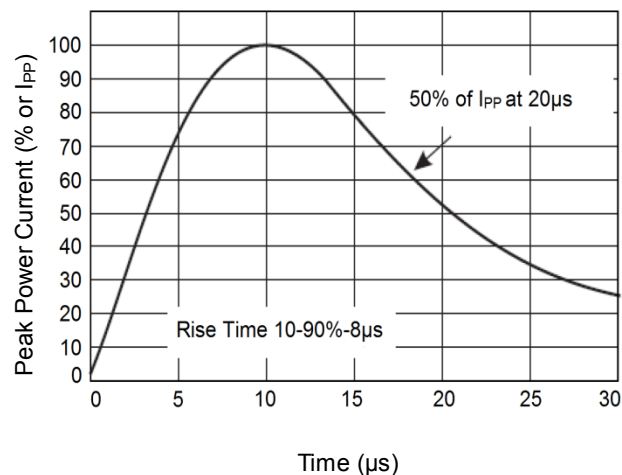
TLP Measurement



Typical Peak Clamping Voltage (8/20 μ s)



Pulse Waveforms (8/20 μ s)



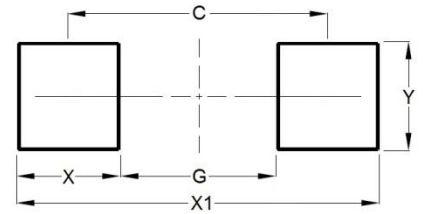
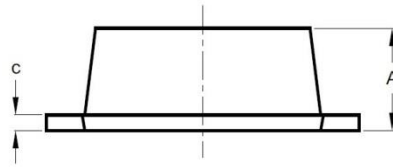
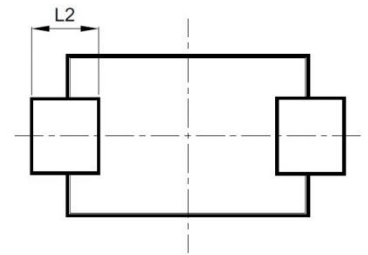
ESD Suppressor 3.3V Bidirectional SOD-323F

ME3V31B13S323F

MERITEK

DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A	0.70	0.90
b	0.25	0.35
C	0.05	0.15
D	1.15	1.35
E	1.75	1.95
He	2.30	2.70
L2	0.30	-
C	2.00	2.00
G	1.30	1.30
X	0.70	0.70
X1	2.70	2.70
Y	0.40	0.40



*Specifications subject to change without notice.