

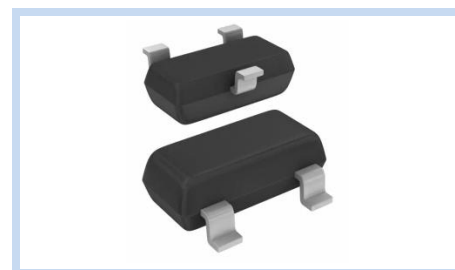
ESD Suppressor 12V 2-Bidirectional SOT-23

ME122B25S23

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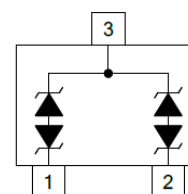
FEATURE

- IEC 61000-4-2 ESD: $\pm 15\text{KV}$ (Air) $\pm 8\text{KV}$ (Contact)
- IEC 61000-4-4 EFT: 40A (5/50ns)
- IEC 61000-4-5 Lightning: 3A (8/20 μs)
- Low Leakage Current, Maximum of 0.05 μA at rated Voltage
- ESD Protection for two Bidirectional Channels



APPLICATION

- Digital Cameras
- Audio and Video Equipment
- Control Signal Lines Protection
- Computers and Peripherals
- Communication Systems



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}	--	--	12	V
Reverse Breakdown Voltage	$I_{\text{BR}}=1\text{mA}$, Between any I/O pins to GND	V_{BR}	14	--	16.50	V
Reverse Leakage Current	$V_R=12.00\text{V}$	I_R	--	--	0.05	μA
Clamping Voltage	$I_{\text{PP}}=1\text{A}$, $t_p=8/20\mu\text{s}$	V_C	--	--	19	V
	$I_{\text{PP}}=3\text{A}$, $t_p=8/20\mu\text{s}$		--	--	25	
Clamping Voltage TLP	$I_{\text{PP}}=4\text{A}$, $t_p=100\text{ns}$	V_C	--	17.70	--	V
	$I_{\text{PP}}=8\text{A}$, $t_p=100\text{ns}$		--	19.50	--	
Dynamic Resistance	$t_p=100\text{ns}$	R_{DYN}	--	0.45	--	Ω
Off State Junction Capacitance	$V_{\text{dc}}=0$, Bias, $f=1\text{MHz}$	C_J	--	--	10	pF

Notes:

1. $T_J=25^{\circ}\text{C}$ unless otherwise specified

2. Testing using Transmission Line Pulse (TLP) conditions: $Z_0=50\Omega$, $t_p=100\text{ns}$

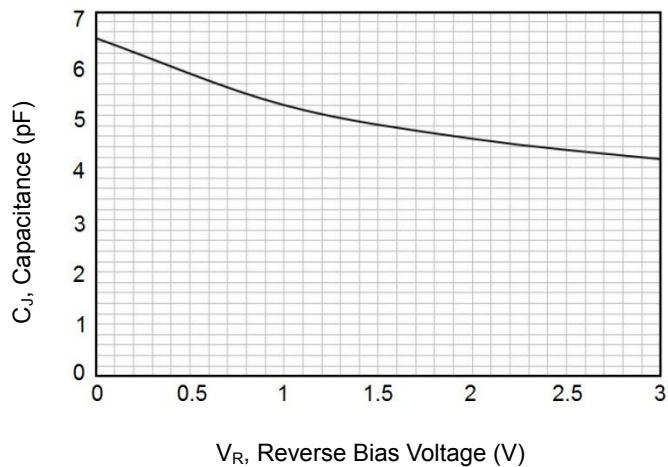
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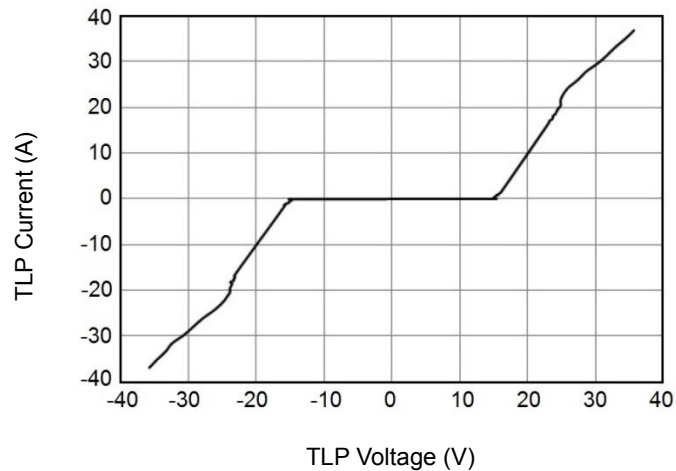
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CHARACTERISTIC CURVES

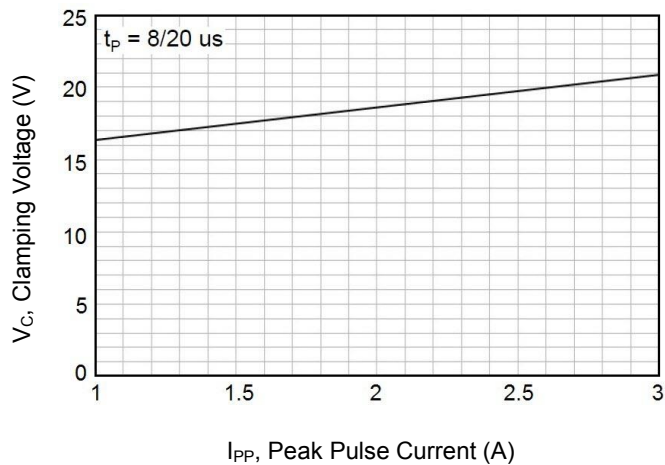
Typical Junction Capacitance



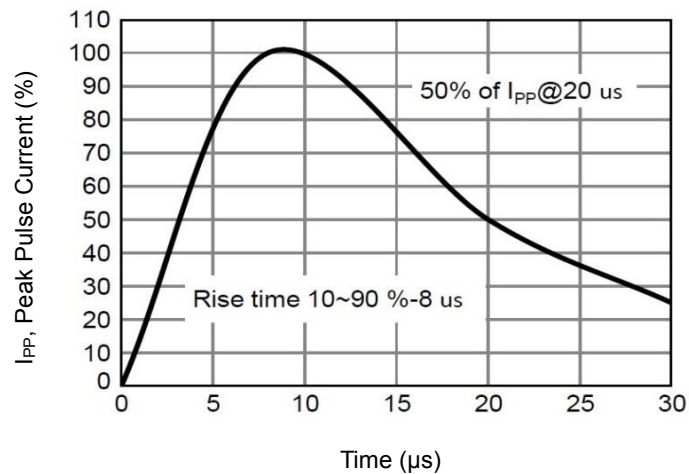
Transmission Line Pulsing



Typical Peak Clamping Voltage



Pulse Waveform



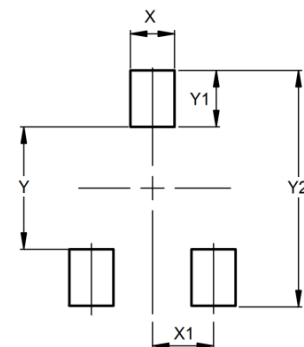
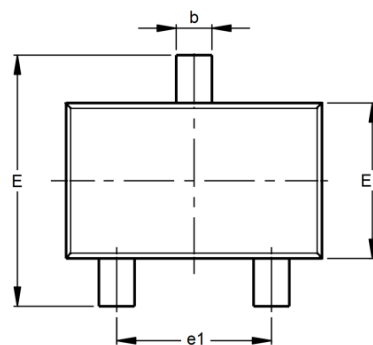
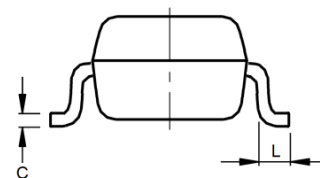
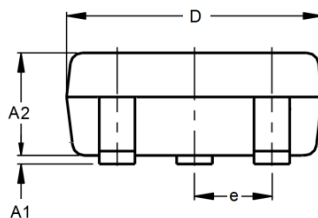
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DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A1	0.08	0.20
A2	0.82	0.90
b	0.35	0.50
C	0.00	0.10
D	2.80	3.04
e	--	--
e1	1.80	2.00
E	2.20	2.60
E1	1.20	1.40
L	0.15	--
X	0.80	0.80
X1	1.35	1.35
Y	2.90	2.90
Y1	0.90	0.90
Y2	2.00	2.00



*Specifications subject to change without notice.