

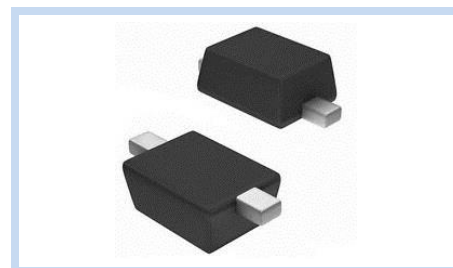
# ESD Suppressor AEC-Q101 24V Bidirectional SOD-323

ME241B50S323FA

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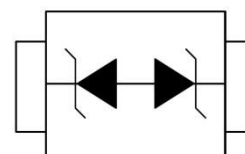
## FEATURE

- 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 $\mu\text{s}$ )
- ESD Protection for One Bidirectional Channel
- Low Leakage Current, Maximum of 0.05 $\mu\text{A}$  at Rated Voltage
- AEC-Q101 Qualified



## APPLICATION

- Personal Digital Assistants (PDAs)
- Serial ATA Protection
- USB 2.0 and USB 3.0 Interface
- Digital Visual Interface (DVI)
- RF Interface
- 10/100/1000 Ethernet



## 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 ( $t_p=8/20\mu\text{s}$ )	$P_{PP}$	160	W
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	--	$V_{RWM}$	--	--	24	V
	--		--	--	15	
Reverse Breakdown Voltage	$I_{BR}=5\text{mA}, V_R=24\text{V}$	$V_{BR}$	25.4	--	30.3	V
	$I_{BR}=5\text{mA}, V_R=15\text{V}$		17.1	--	20.3	
Reverse Leakage Current	$V_R=24\text{V}$	$I_R$	--	1	50	nA
	$V_R=15\text{V}$		--	1	50	
Clamping Voltage	$I_{PP}=1\text{A}, t_p=8/20\mu\text{s}, V_R=24\text{V}$	$V_C$	--	--	40	V
	$I_{PP}=3\text{A}, t_p=8/20\mu\text{s}, V_R=24\text{V}$		--	--	50	
Calmping Voltage	$I_{PP}=1\text{A}, t_p=8/20\mu\text{s}, V_R=15\text{V}$	$V_C$	--	--	25	V
	$I_{PP}=5\text{A}, t_p=8/20\mu\text{s}, V_R=15\text{V}$		--	--	35	
Off State Junction Capacitance	$V_{dc}=0, \text{Bias}, f=1\text{MHz}$	$C_J$	--	13	17	pF

Notes:  $T_A=25^{\circ}\text{C}$  unless otherwise specified

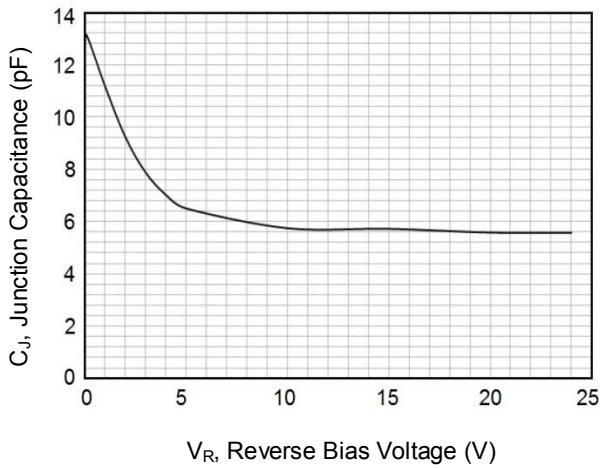
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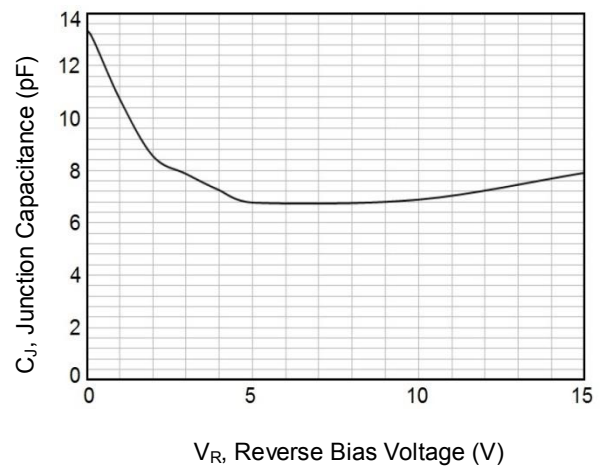
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## CHARACTERISTIC CURVES

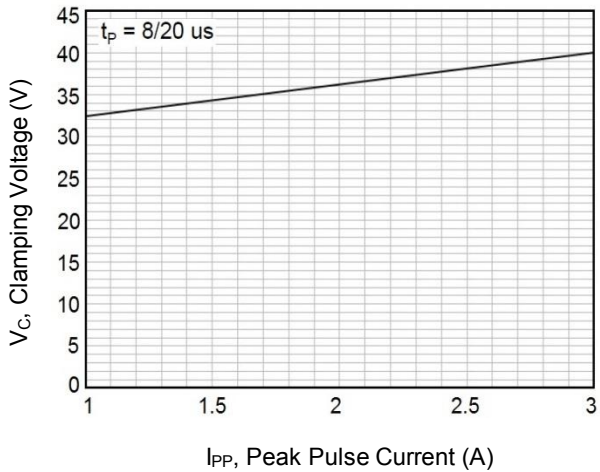
Typical Junction Capacitance(24V)



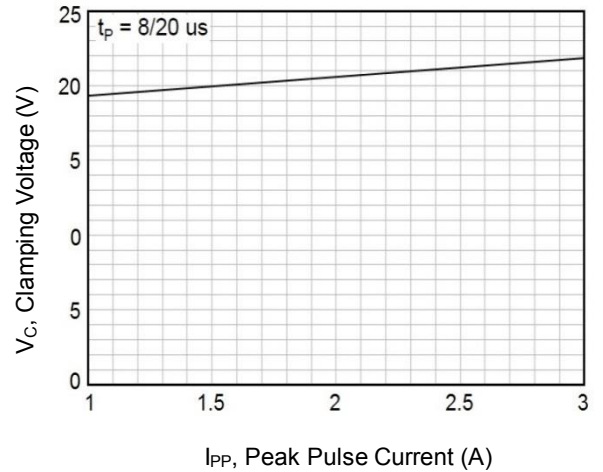
Typical Junction Capacitance(15V)



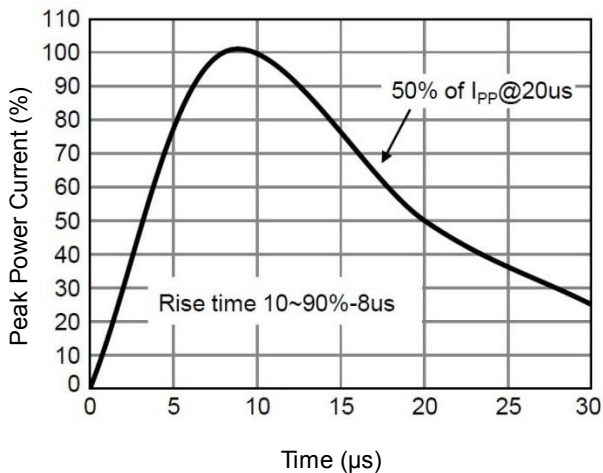
Typical Peak Clamping Voltage(8/20 $\mu$ s)(24V)



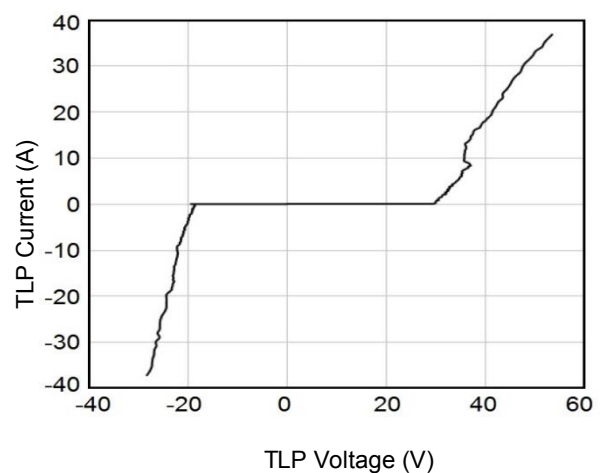
Typical Peak Clamping Voltage(8/20 $\mu$ s)(15V)



Pulse Waveforms



Transmission Line Pulsing (TLP) Measurement



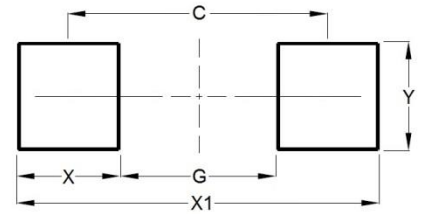
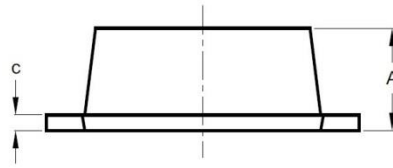
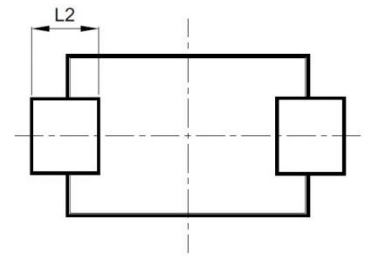
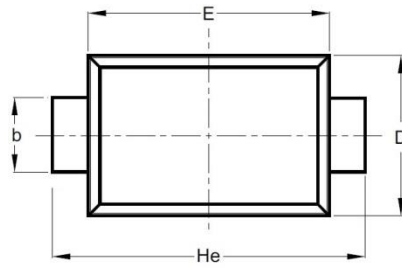
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## DIMENSIONS AND RECOMMENDED LAND PATTERN

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.