

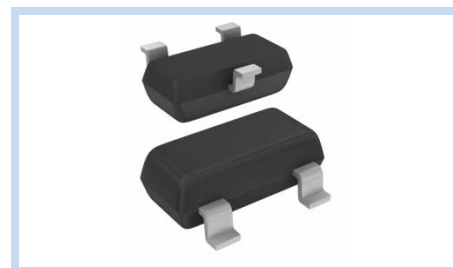
# ESD Suppressor AEC-Q101 24V 2-Bidirectional SOT-23

ME242B34S23A

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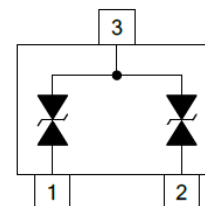
## FEATURE

- IEC 61000-4-2 ESD:  $\pm 30\text{KV}$  (Air)  $\pm 30\text{KV}$  (Contact)
- IEC 61000-4-5 Lightning: 7A (8/20 $\mu\text{s}$ )
- ESD Protection for two Bidirectional Channels
- ISO7637-3:  $V_S = -150\text{V}$  (Pulse 3a)  $V_S = +100\text{V}$  (Pulse 3b)
- ISO10605 (C= 330pF, R= 330 $\Omega$ ) :  $\pm 30\text{KV}$  (Air)  $\pm 30\text{KV}$  (Contact)
- Low Clamping Voltage
- AEC-Q101 Qualified



## APPLICATION

- RS-485
- Smart Distributions Systems (SDS)
- Automated Teller Machines (ATMs)
- Lighting Control
- Communication Systems



## MAXIMUM RATINGS AND CHARACTERISTICS

Parameter	Symbol	Value	Unit
ESD Voltage (Contact discharge)	$V_{ESD}$	$\pm 30$	KV
ESD Voltage (Air discharge)		$\pm 30$	
Typical Thermal Resistance	$R_{\theta JA}$	350	$^{\circ}\text{C/W}$
Operating and 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	--	$V_{RWM}$	--	--	24.00	V
Reverse Breakdown Voltage	$I_{BR} = 1\text{mA}$ , Any I/O pins to GND	$V_{BR}$	26.20	--	30.30	V
Reverse Leakage Current	$V_R = 24.00\text{V}$	$I_R$	--	--	50	nA
Clamping Voltage	$I_{PP} = 1\text{A}$ , $t_p = 8/20\mu\text{s}$ , Any I/O pins to GND	$V_C$	--	--	34.00	V
	$I_{PP} = 7\text{A}$ , $t_p = 8/20\mu\text{s}$ , Any I/O pins to GND		--	--	43.00	
Off State Junction Capacitance	$V_{dc} = 0$ , Bias, $f = 1\text{MHz}$ , Any I/O pins to GND	$C_J$	--	25.00	30.00	pF

Notes:

1.  $T_J = 25^{\circ}\text{C}$  unless otherwise specified
2. Mounted on a FR4 PCB, Signal-Sided Copper, Mini Pad

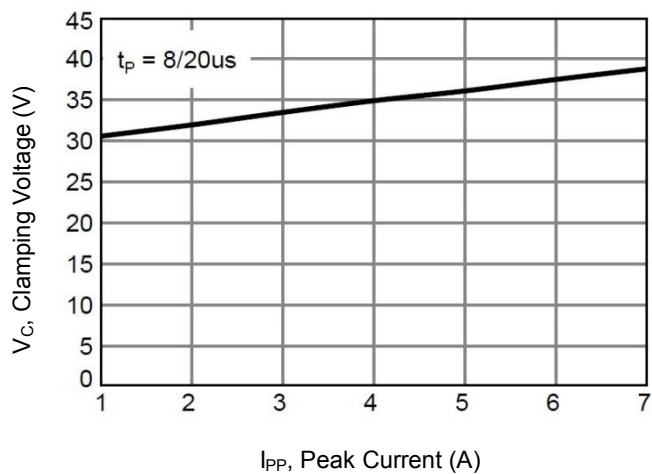
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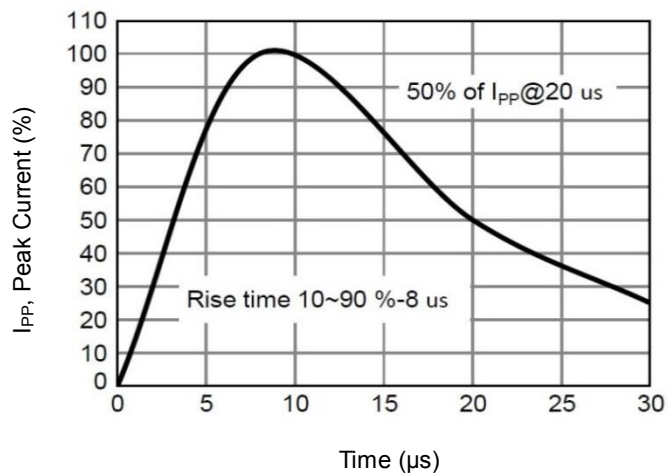
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## CHARACTERISTIC CURVES

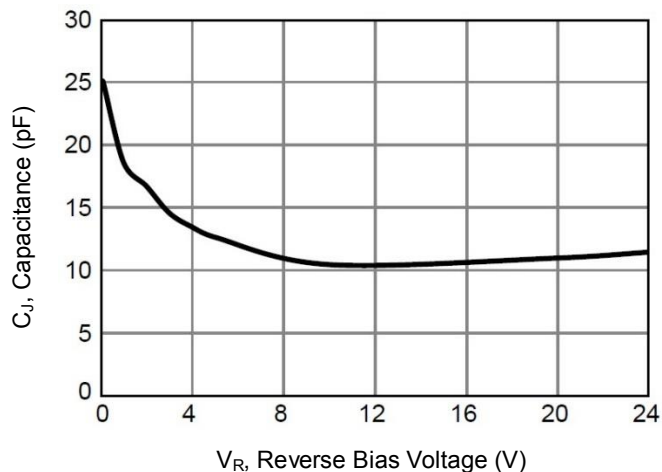
Typical Peak Clamping Voltage



Pulse Waveform



Typical Junction Capacitance



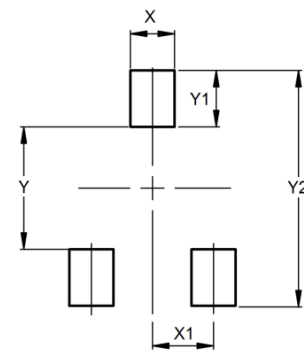
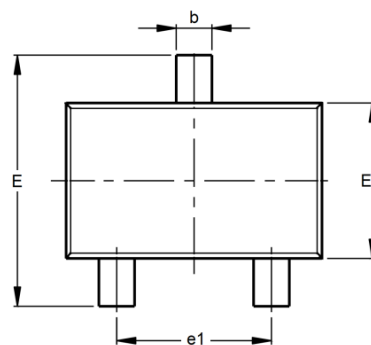
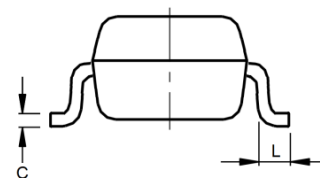
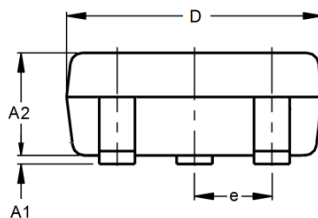
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## DIMENSIONS AND RECOMMENDED LAND PATTERN

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.