

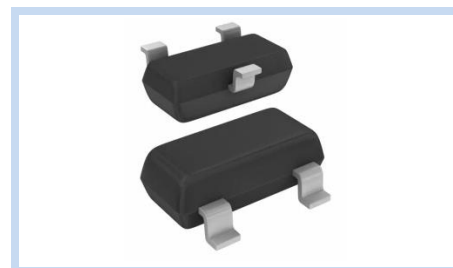
ESD Suppressor AEC-Q101 24V 2-Bidirectional SOT-23

ME242B60S23A

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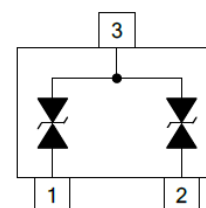
FEATURE

- IEC 61000-4-2 ESD: $\pm 20\text{KV}$ (Air) $\pm 18\text{KV}$ (Contact)
- IEC 61000-4-4 EFT: 40A (5/50ns)
- IEC 61000-4-5 Lightning: 3A (8/20 μs)
- ESD Protection for two Bidirectional Channels
- Low Leakage Current, Maximum of 0.05 μA at rated Voltage
- AEC-Q101 Qualified



APPLICATION

- CAN Bus Protection
- Automotive Applications
- Electronic Control Units
- PowerTrain Control Units
- Lightning Control (DALI)



MAXIMUM RATINGS AND CHARACTERISTICS

Parameter	Symbol	Value	Unit
ESD Voltage (Contact discharge)	V_{ESD}	± 18	KV
ESD Voltage (Air discharge)		± 20	
Operating and Storage Temperature Range	T_J, T_{STG}	-55~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS

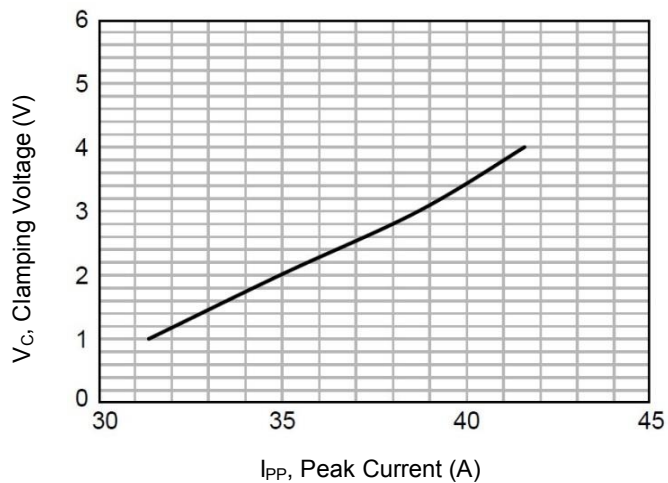
Parameter	Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	--	V_{RWM}	--	--	24.00	V
Reverse Breakdown Voltage	$I_{BR}=5\text{mA}$	V_{BR}	25.40	--	30.30	V
Reverse Leakage Current	$V_R=24.00\text{V}$	I_R	--	--	50	nA
Clamping Voltage	$I_{PP}=1\text{A}, t_p=8/20\mu\text{s}$	V_C	--	--	40.00	V
	$I_{PP}=3\text{A}, t_p=8/20\mu\text{s}$		--	--	60.00	
Clamping Voltage TLP	$I_{PP}=4\text{A}, t_p=100\text{ns}$	V_C	--	34.50	--	V
	$I_{PP}=8\text{A}, t_p=100\text{ns}$		--	38.00	--	
Dynamic Resistance	$t_p=100\text{ns}$	R_{DYN}	--	0.88	--	Ω
Off State Junction Capacitance	$V_{dc}=0, \text{Bias}, f=1\text{MHz}$	C_J	--	11	15	pF

Notes:

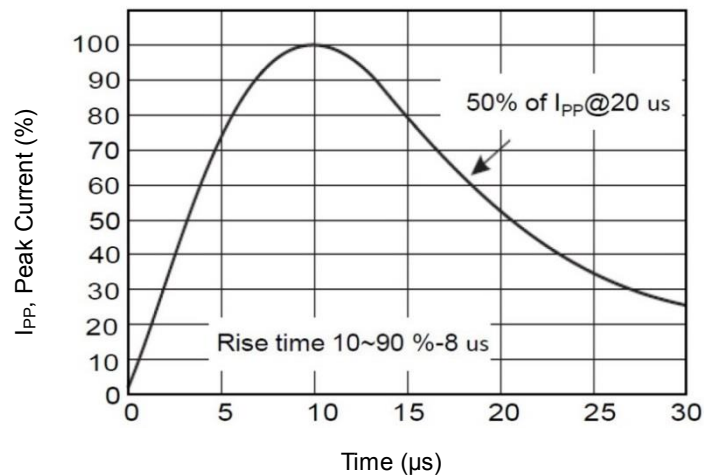
1. $T_J=25^{\circ}\text{C}$ unless otherwise specified
2. Testing using Transmission Line Pulse (TLP) conditions: $Z_0 = 50\Omega, t_p = 100\text{ns}$

CHARACTERISTIC CURVES

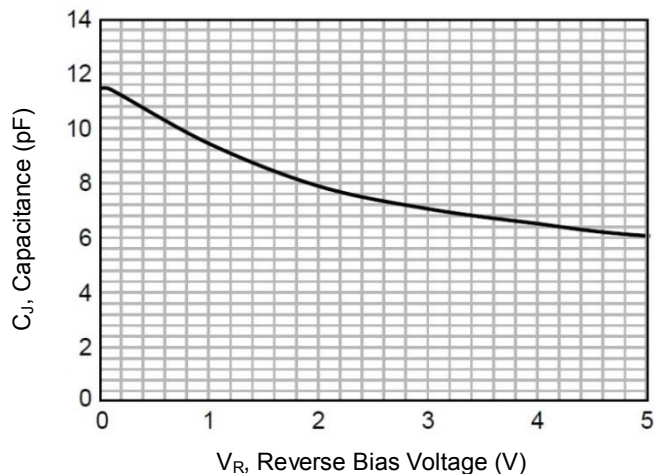
Typical Peak Clamping Voltage



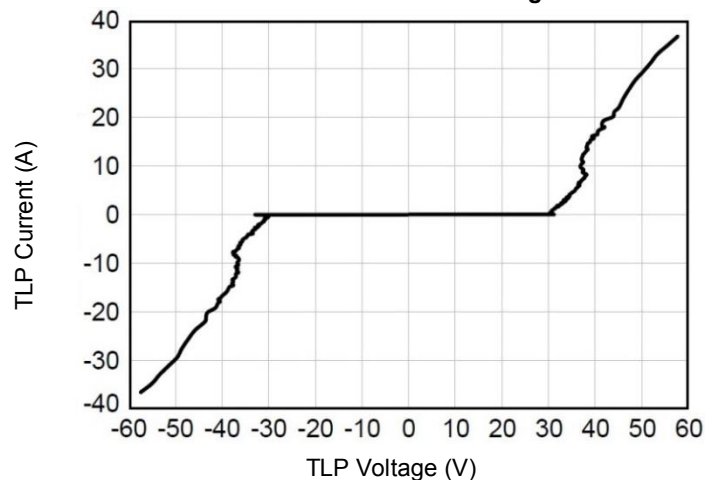
Pulse Waveform



Typical Junction Capacitance



Transmission Line Pulsing



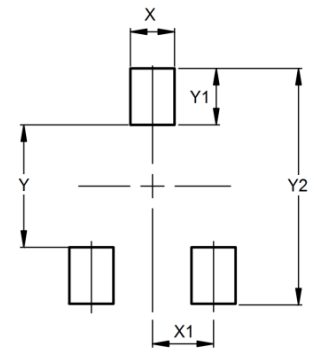
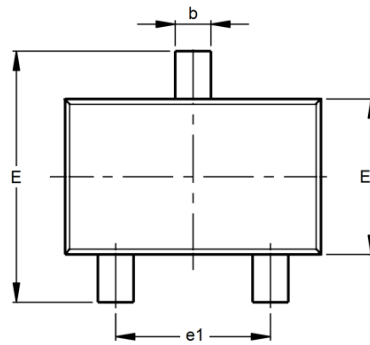
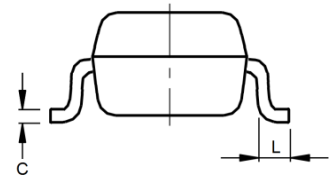
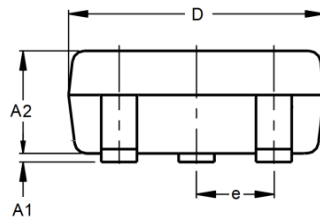
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DIMENSIONS AND RECOMMENDED LAND PATTERN

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.