

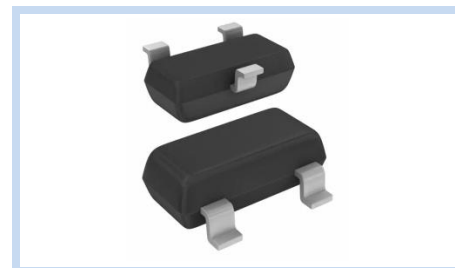
ESD Suppressor AEC-Q101 24V 2-Bidirectional SOT-23

ME242B40S23A

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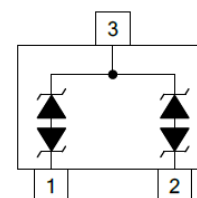
FEATURE

- IEC 61000-4-2 ESD: $\pm 15\text{KV}$ (Air) $\pm 8\text{KV}$ (Contact)
- ESD Protection for two Bidirectional Channel
- Low Clamping Voltage
- Solid-State Silicon-Avalanche Technology
- AEC-Q101 Qualified



APPLICATION

- RS-232, RS-422 Interface
- Notebooks, Desktops and Servers
- Can Bus Protection
- Automotive Applications



MAXIMUM RATINGS AND CHARACTERISTICS

Parameter	Symbol	Value	Unit
ESD Voltage (Contact discharge)	V_{ESD}	± 8	KV
ESD Voltage (Air discharge)		± 15	
Peak Pulse Current ($t_p=8/20\mu\text{s}$)	I_{PP}	3	A
Operating & Storage Temperature Range	T_J, T_{STG}	$-55\sim+150$	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS

Parameter	Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	--	V_{RWM}	--	--	24	V
Reverse Breakdown Voltage	$I_{\text{BR}}=1\text{mA}$	V_{BR}	26.7	--	--	V
Reverse Leakage Current	$V_R=24\text{V}$, Each I/O pin	I_{R}	--	--	1	μA
Clamping Voltage	$I_{\text{PP}}=1\text{A}$, $t_p=8/20\mu\text{s}$	V_{C}	--	--	40	V
	$I_{\text{PP}}=3\text{A}$, $t_p=8/20\mu\text{s}$		--	--	50	
Off State Junction Capacitance	$V_{\text{dc}}=0$, $f=1\text{MHz}$, Between I/O pins and GND	C_{J}	--	12	--	pF

Notes:

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

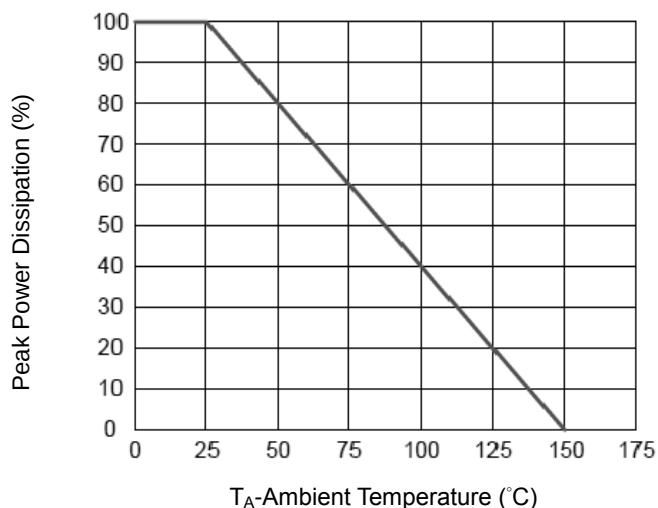
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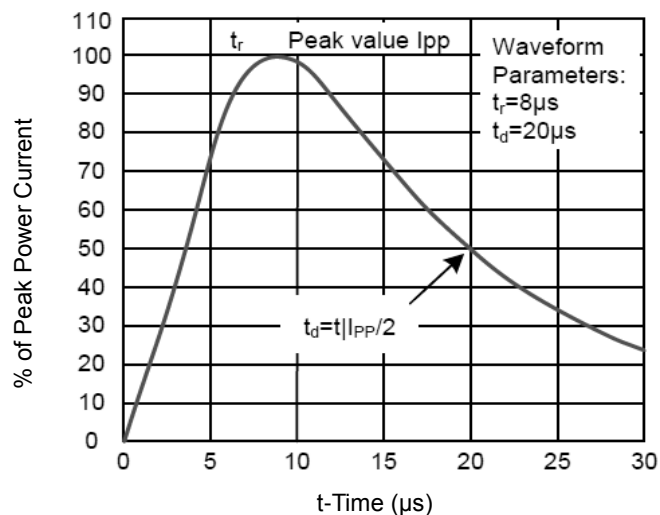
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CHARACTERISTIC CURVES

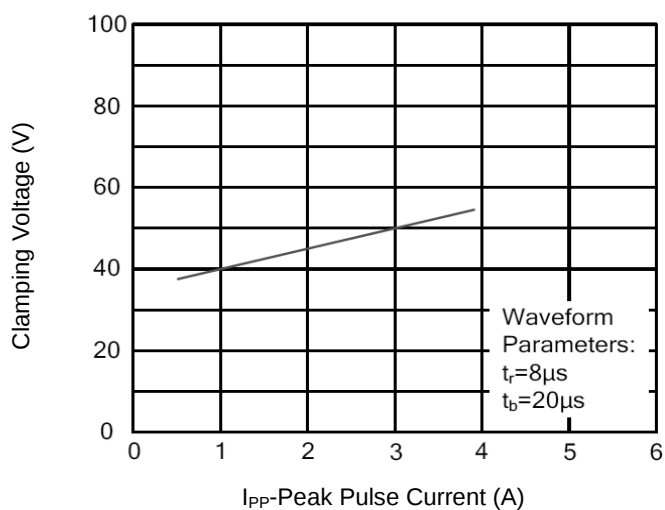
Power Derating Curve



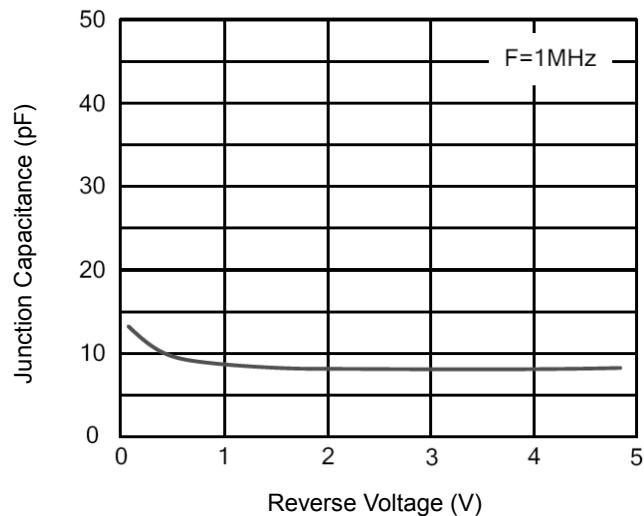
Pulse Waveforms



Clamping Voltage vs. Peak Pulse Current



Capacitance vs. Reverse Voltage



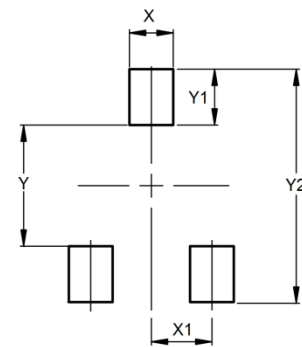
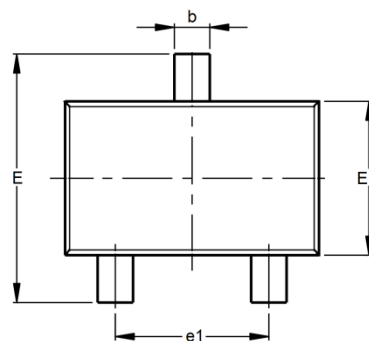
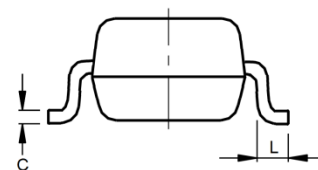
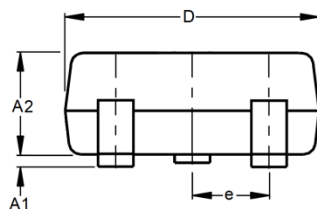
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DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A1	0.08	0.18
A2	0.81	0.91
b	0.35	0.50
C	--	0.13
D	2.80	3.05
e	0.95	0.95
e1	1.90	1.90
E	2.10	2.49
E1	1.19	1.40
L	0.15	--
X	0.80	0.80
X1	1.35	1.35
Y	2.00	2.00
Y1	0.90	0.90
Y2	2.90	2.90



*Specifications subject to change without notice.