

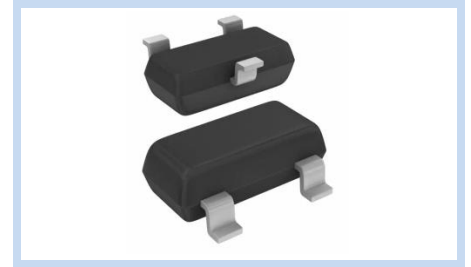
ESD Suppressor AEC-Q101 15V 2-Bidirectional SOT-23

ME152B24S23A20

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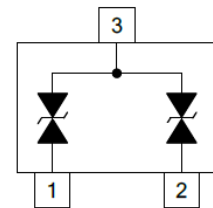
FEATURE

- IEC 61000-4-2 ESD: $\pm 30\text{KV}$ (Air) $\pm 30\text{KV}$ (Contact)
- IEC 61000-4-5 Lightning: 5A (8/20 μs)
- ISO7637-3: $V_S = -150\text{V}$ (Pulse 3a) $V_S = +100\text{V}$ (Pulse 3b)
- ISO10605 (C= 330pF, R= 330 Ω) : $\pm 30\text{KV}$ (Air) $\pm 30\text{KV}$ (Contact)
- ESD Protection for two Bidirectional Channels
- 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}	± 30	KV
ESD Voltage (Air discharge)		± 30	
Typical Thermal Resistance	$R_{\theta JA}$	350	$^{\circ}\text{C/W}$
Operating & Storage Temperature Range	T_J, T_{STG}	-55~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS

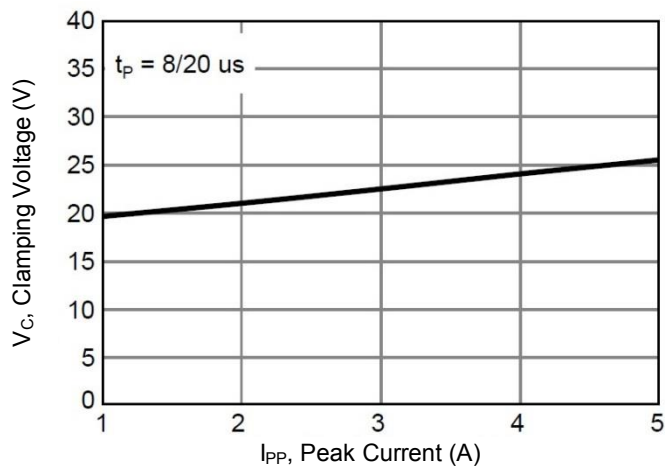
Parameter	Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	--	V_{RWM}	--	--	15.00	V
Reverse Breakdown Voltage	$I_{BR}=1\text{mA}$, Any I/O pins to GND	V_{BR}	17.00	--	20.00	V
Reverse Leakage Current	$V_R=15.00\text{V}$	I_R	--	--	1.00	μA
Clamping Voltage	$I_{PP}=1\text{A}$, $t_p=8/20\mu\text{s}$, Any I/O pins to GND	V_C	--	--	24.00	V
	$I_{PP}=5\text{A}$, $t_p=8/20\mu\text{s}$, Any I/O pins to GND		--	--	30.00	
Off State Junction Capacitance	$V_{dc}=0$, Bias, $f=1\text{MHz}$, Any I/O pins to GND	C_J	--	17.00	20.00	pF

Notes:

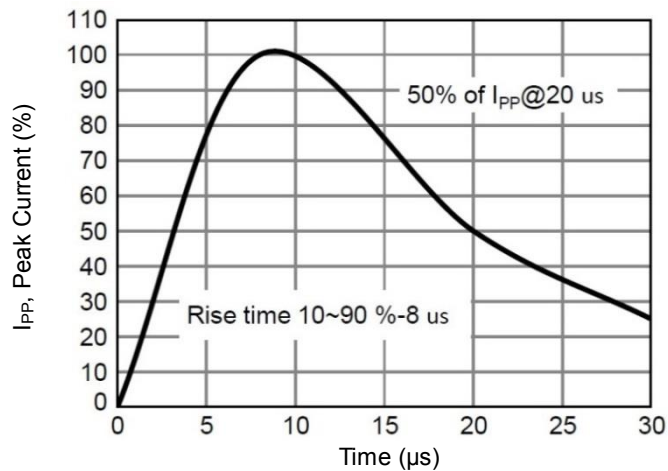
1. $T_J = 25^{\circ}\text{C}$ unless otherwise specified
2. Mounted on a FR4 PCB, Signal-Sided Copper, Mini Pad

CHARACTERISTIC CURVES

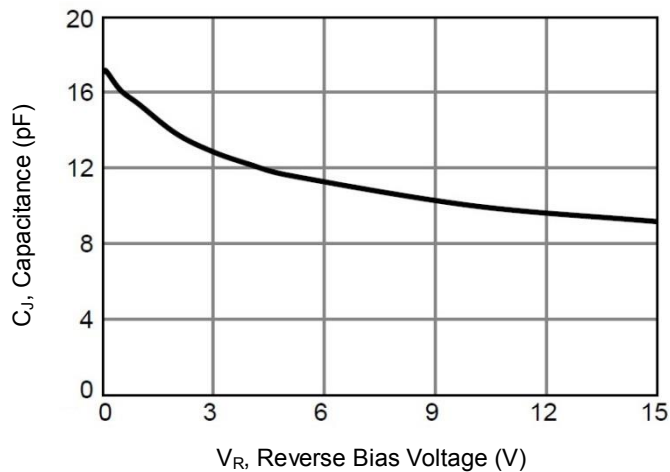
Typical Peak Clamping Voltage



Pulse Waveform



Typical Junction Capacitance



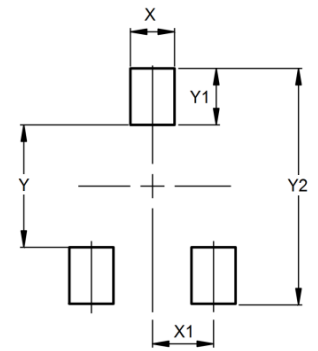
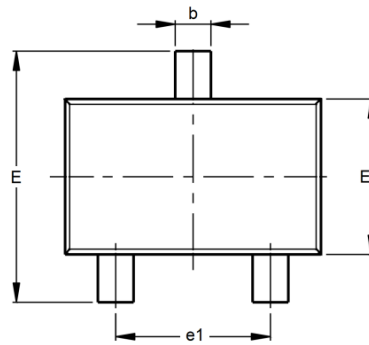
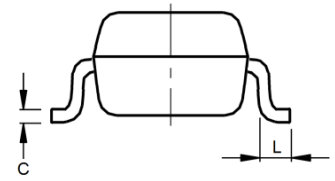
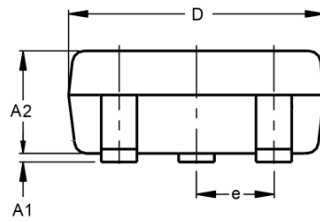
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DIMENSIONS AND RECOMMENDED LAND PATTERN

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.