

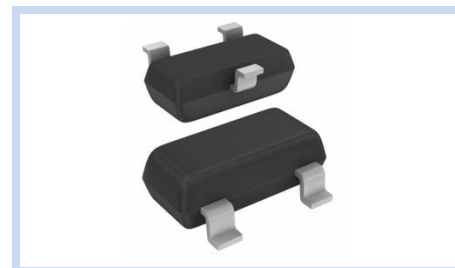
ESD Suppressor AEC-Q101 12V/7V 2-Bidirectional SOT-23

ME1272B2010S23A

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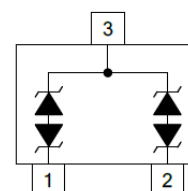
FEATURE

- IEC 61000-4-2 ESD: $\pm 30\text{KV}$ (Air) $\pm 30\text{KV}$ (Contact)
- ESD Protection for two Bidirectional Channels
- Low Clamping Voltage
- Solid-State Silicon-Avalanche Technology
- AEC-Q101 Qualified



APPLICATION

- RS-485 Transceiver Interfaces
- Security Systems
- Automatic Teller Machines
- HFC Systems
- Networks



MAXIMUM RATINGS AND CHARACTERISTICS

Parameter	Symbol	Value	Unit
ESD Voltage (Contact discharge)	V_{ESD}	± 30	KV
ESD Voltage (Air discharge)		± 30	
Peak Pulse Power ($t_p=8/20\mu s$)	P_{PP}	400	W
Operating & Storage Temperature Range	T_J, T_{STG}	-55~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS

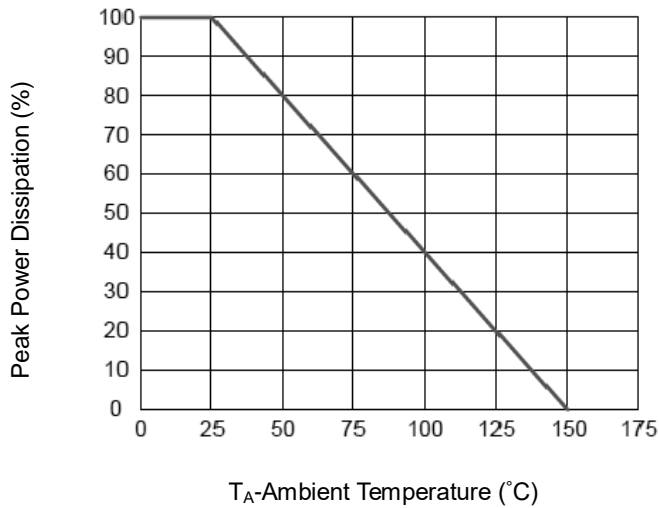
Parameter	Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	pin 1 to pin 3 and pin 2 to pin 3	V_{RWM}	--	--	12	V
	pin 3 to pin 1 and pin 3 to pin 2		--	--	7	
Reverse Breakdown Voltage	$I_{BR}=1\text{mA}$, pin 1 to pin 3 and pin 2 to pin 3	V_{BR}	13.3	--	--	V
	$I_{BR}=1\text{mA}$, pin 3 to pin 1 and pin 3 to pin 2		7.5	--	--	V
Reverse Leakage Current	$V_{RM1}=12\text{V}$, pin 1 to pin 3 and pin 2 to pin 3	I_R	--	--	1	μA
	$V_{RM2}=7\text{V}$, pin 3 to pin 1 and pin 3 to pin 2		--	--	20	μA
Clamping Voltage	$I_{PP}=5\text{A}$, $t_p=8/20\mu s$ pin 1 to pin 3 and pin 2 to pin 3	V_C	--	--	20	V
	$I_{PP}=5\text{A}$, $t_p=8/20\mu s$ pin 3 to pin 1 and pin 3 to pin 2		--	--	10	
Off State Junction Capacitance	$V_{dc}=0$, $f=1\text{MHz}$, Between I/O pins and GND	C_J	--	--	75	pF

Notes:

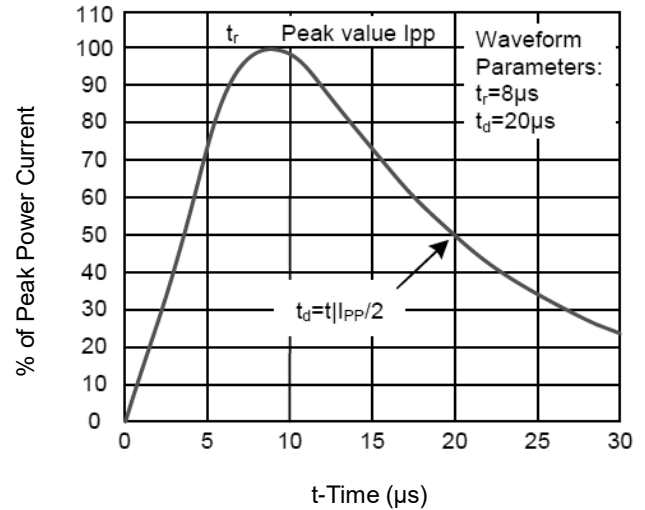
1. $T_A=25^{\circ}\text{C}$ unless otherwise specified

CHARACTERISTIC CURVES

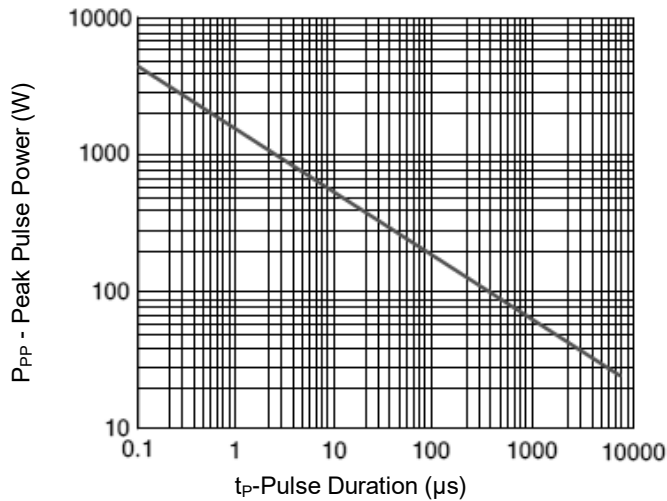
Power Derating Curve



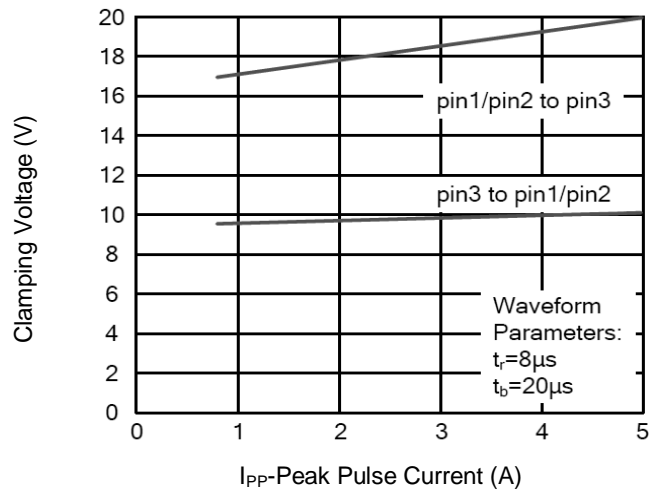
Pulse Waveforms



Non-Repetitive Peak Pulse vs. Pulse Time



Clamping Voltage vs. Peak Pulse Current



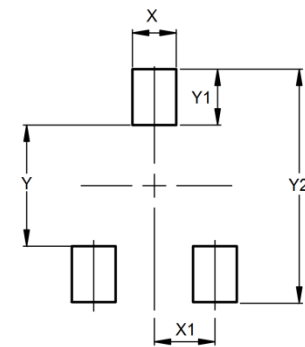
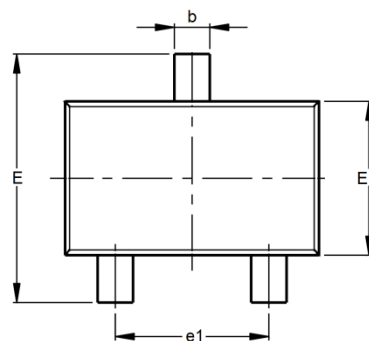
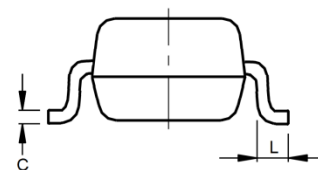
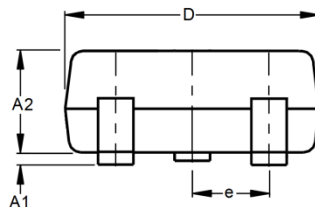
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DIMENSIONS AND RECOMMENDED LAND PATTERN

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.