

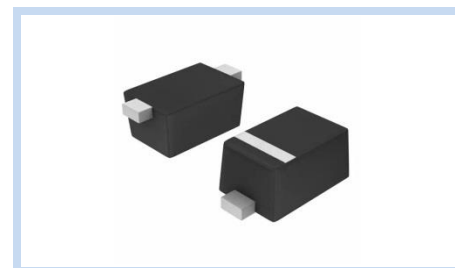
# ESD Suppressor AEC-Q101 12V Bidirectional SOD-323G

ME121B19S323GA

MERITEK

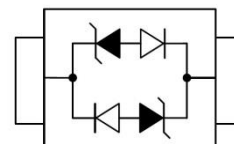
## FEATURE

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



## APPLICATION

- USB 2.0/USB 3.0 Interface
- 10/100/1000 Ethernet
- Personal Digital Assistants (PDA)
- Serial ATA Protection
- Digital Visual Interface (DVI)



## MAXIMUM RATINGS AND CHARACTERISTICS

Parameter	Symbol	Value	Unit
ESD Voltage (Contact discharge)	$V_{ESD}$	$\pm 30$	KV
ESD Voltage (Air discharge)		$\pm 30$	
Peak Pulse Power ( $t_p=8/20\mu\text{s}$ )	$P_{PP}$	350	W
Peak Pulse Current ( $t_p=8/20\mu\text{s}$ )	$I_{PP}$	7	A
Operating & Storage Temperature Range	$T_J, T_{STG}$	-55~+150	$^{\circ}\text{C}$

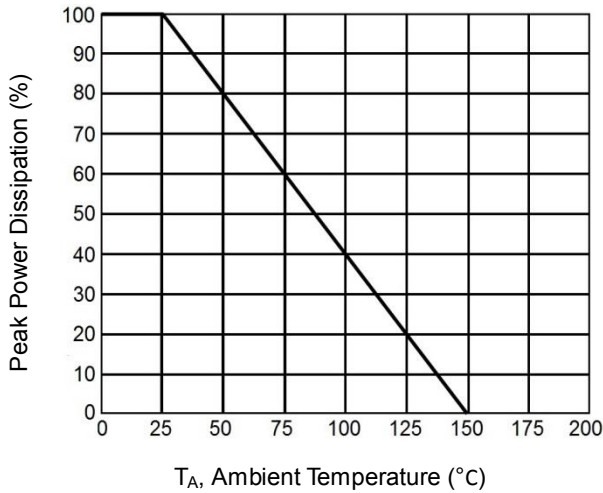
## ELECTRICAL CHARACTERISTICS

Parameter	Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	--	$V_{RWM}$	--	--	12	V
Reverse Breakdown Voltage	$I_{BR}=1\text{mA}$	$V_{BR}$	13.3	--	--	V
Reverse Leakage Current	$V_R=12\text{V}$	$I_R$	--	--	1	$\mu\text{A}$
Clamping Voltage	$I_{PP}=1\text{A}, t_p=8/20\mu\text{s}$	$V_C$	--	--	19	V
	$I_{PP}=5\text{A}, t_p=8/20\mu\text{s}$		--	--	28.6	
Off State Junction Capacitance	$V_{dc}=0, f=1\text{MHz}$	$C_J$	--	0.8	--	pF

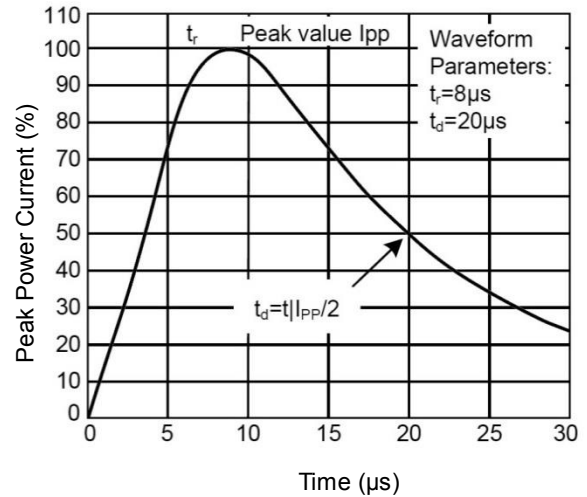
Notes:  $T_J=25^{\circ}\text{C}$  unless otherwise specified

## CHARACTERISTIC CURVES

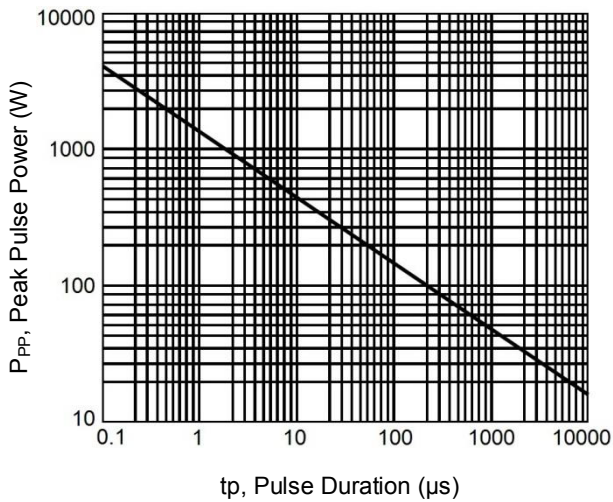
Derating Curve



Pulse Waveforms

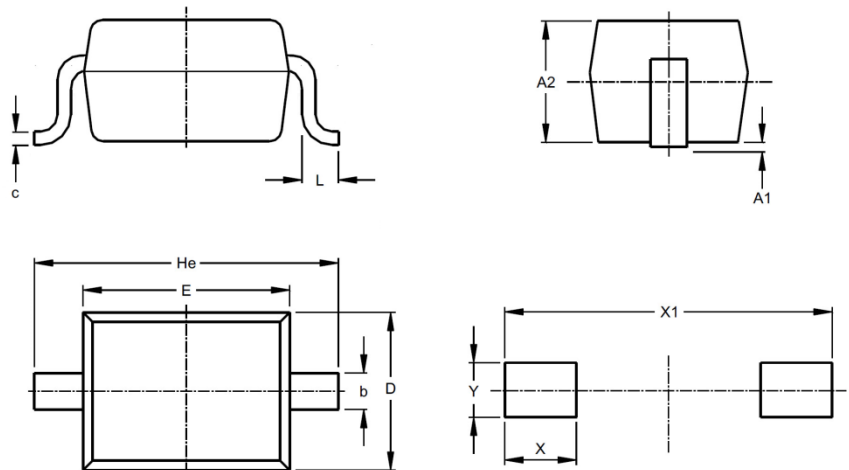


Non-Repetitive Peak Pulse vs Pulse Time



## DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A	0.80	1.10
A1	-	0.10
b	-	0.35
C	0.11	0.20
D	1.15	1.35
E	1.60	1.80
He	2.40	2.60
L	0.20	-
X	0.50	0.50
X1	2.80	2.80
Y	0.60	0.60



\*Specifications subject to change without notice.