

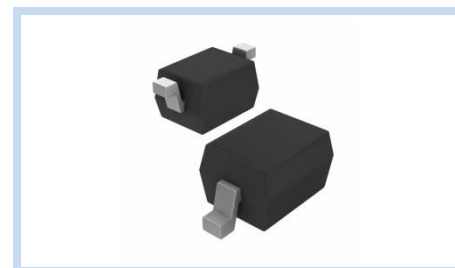
ESD Suppressor AEC-Q101 5V Bidirectional SOD-323G

ME51BS323GA2P

MERITEK

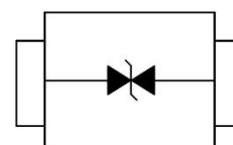
FEATURE

- 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 and Operating Voltage
- Solid-State Silicon Avalanche Technology
- AEC-Q101 Qualified



APPLICATION

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



MAXIMUM RATINGS AND CHARACTERISTICS

Parameter	Symbol	Value	Unit
ESD Voltage (Contact discharge)	V_{ESD}	± 30	KV
ESD Voltage (Air discharge)		± 30	
Peak Pulse Current ($t_p=8/20\mu s$)	I_{PP}	12	A
Operating & Storage Temperature Range	T_J, T_{STG}	-55~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS

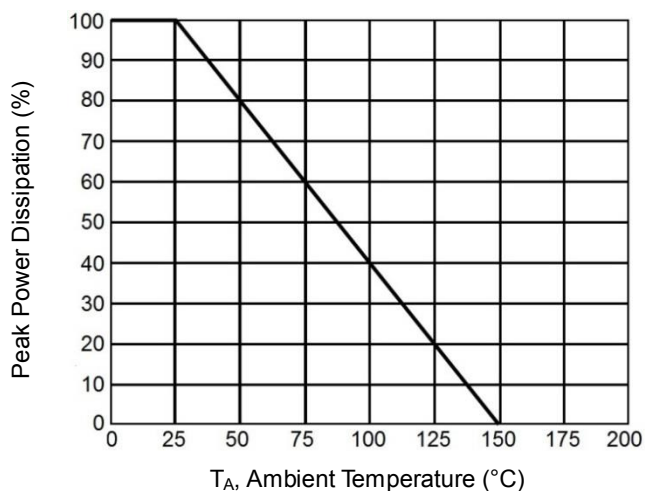
Parameter	Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	--	V_{RWM}	--	--	5	V
Reverse Breakdown Voltage	$I_{BR}=1\text{mA}$	V_{BR}	6	--	--	V
Reverse Leakage Current	$V_R=5\text{V}$	I_R	--	--	500	nA
Clamping Voltage	$I_{PP}=1\text{A}, t_p=8/20\mu s$	V_C	--	9.8	--	V
Clamping Voltage	$I_{PP}=12\text{A}, t_p=8/20\mu s$	V_C	--	15	--	V
Off State Junction Capacitance	$V_{dc}=0, f=1\text{MHz}$	C_J	--	1.5	2	pF

Notes:

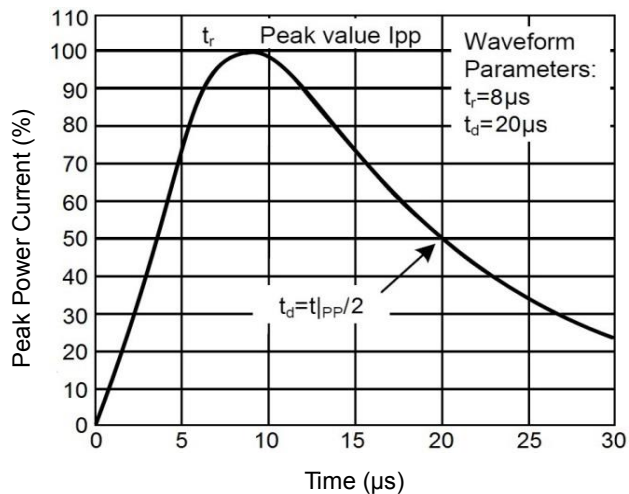
1. $T_A=25^{\circ}\text{C}$ unless otherwise specified

CHARACTERISTIC CURVES

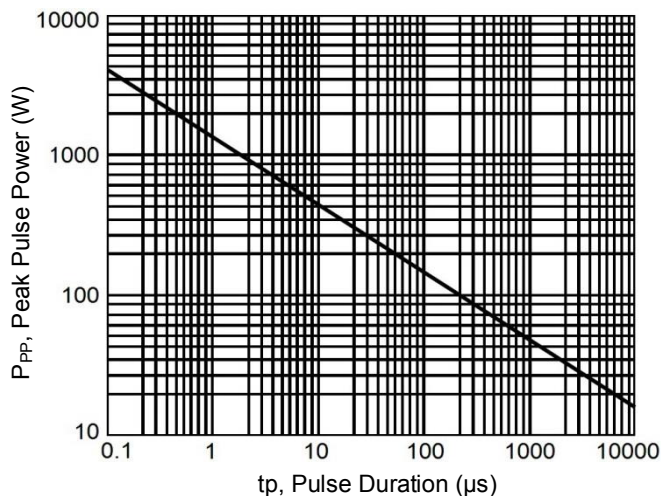
Derating Curve



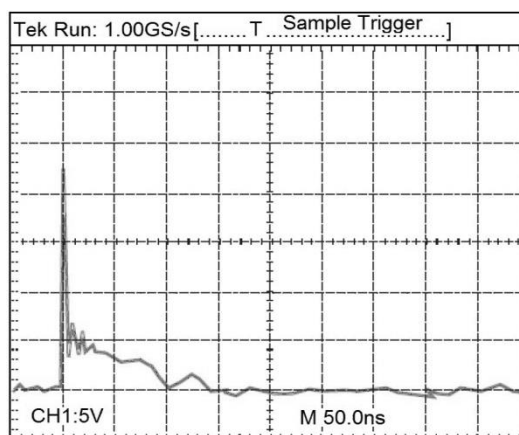
Pulse Waveforms



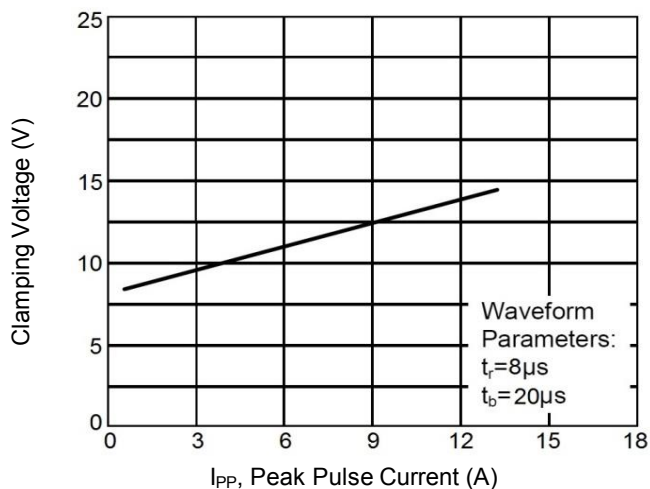
Non-Repetitive Peak Pulse vs. Pulse Time



ESD Clamping (8kV Contact IEC61000-4-2)



Clamping Voltage vs. Peak Pulse Current



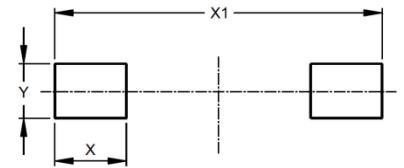
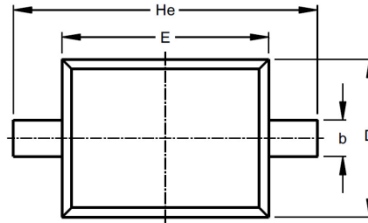
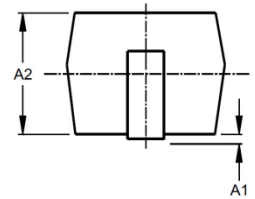
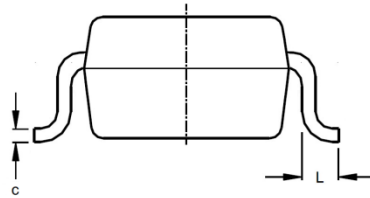
ESD Suppressor AEC-Q101 5V Bidirectional SOD-323G

ME51BS323GA2P

MERITEK

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.