

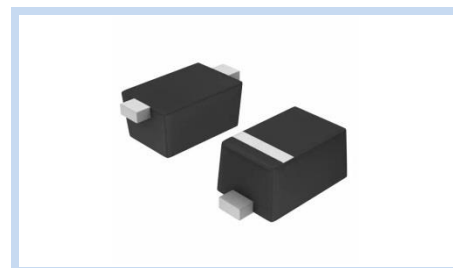
# ESD Suppressor AEC-Q101 5V Bidirectional SOD-523

ME51B20S523A

MERITEK

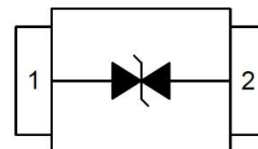
## FEATURE

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



## APPLICATION

- Cellular Handsets & Accessories
- Personal Digital Assistants (PDAs)
- Notebooks & Handhelds
- Cordless Phones
- Digital Cameras
- Peripherals



## 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 Current ( $t_p=8/20\mu\text{s}$ )	$I_{PP}$	20	A
Operating & Storage Temperature Range	$T_J, T_{STG}$	-55~+150	$^{\circ}\text{C}$

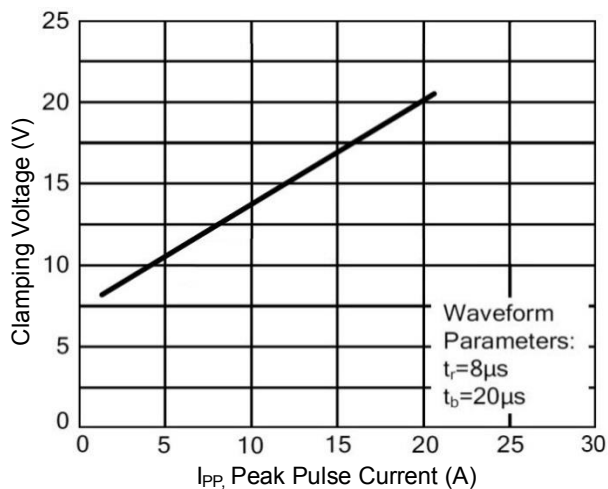
## ELECTRICAL CHARACTERISTICS

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	$V_R=5\text{V}$	$I_R$	--	--	1	$\mu\text{A}$
Clamping Voltage	$I_{PP}=20\text{A}, t_p=8/20\mu\text{s}$	$V_C$	--	20	--	V
Off State Junction Capacitance	$V_{dc}=0, f=1\text{MHz}$	$C_J$	--	30	--	pF

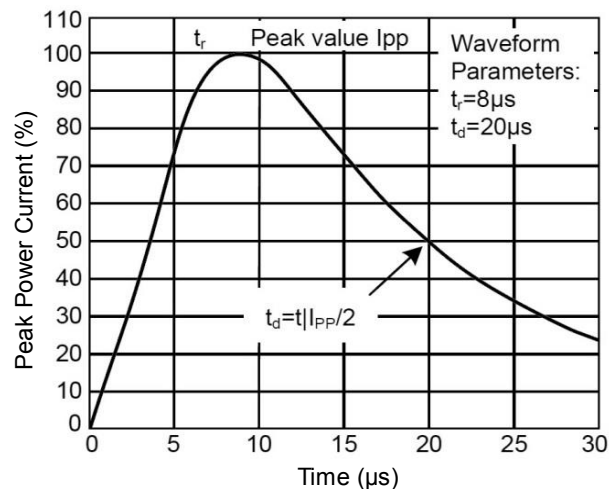
Notes:  $T_J=25^{\circ}\text{C}$  unless otherwise specified

## CHARACTERISTIC CURVES

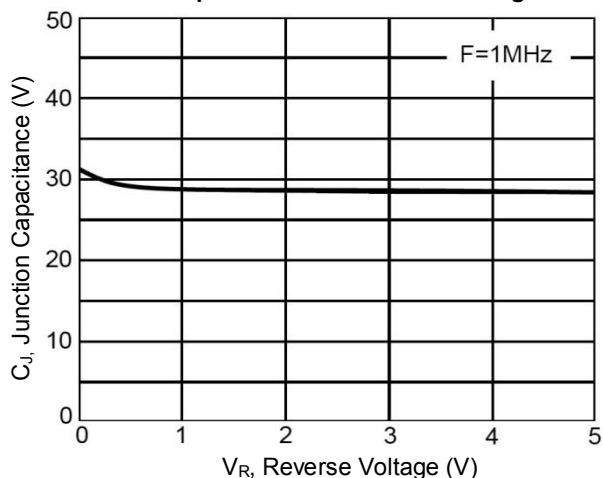
Clamping Voltage vs. Peak Pulse Current



Pulse Waveforms

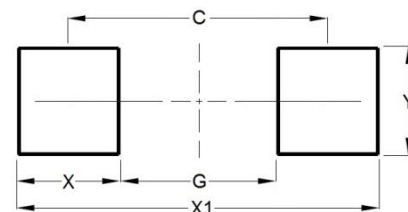
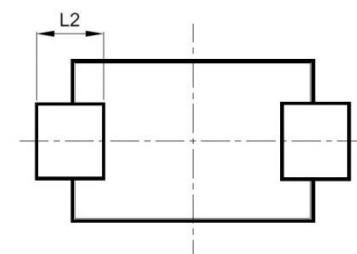
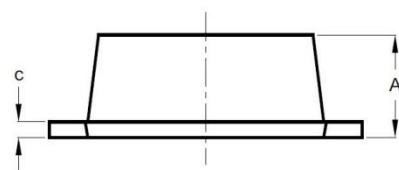
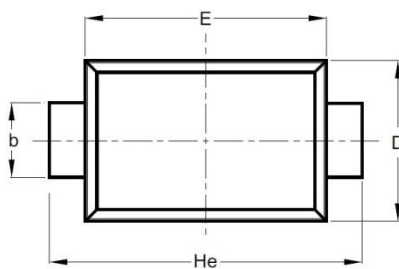


Capacitance vs. Reverse Voltage



## DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A	0.50	0.70
b	0.25	0.35
C	0.07	0.20
D	0.70	0.90
E	1.10	1.30
He	1.50	1.70
L2	0.15	0.25
C	1.40	1.40
G	0.80	0.80
X	0.60	0.60
X1	2.00	2.00
Y	0.70	0.70



\*Specifications subject to change without notice.