

# ESD Suppressor

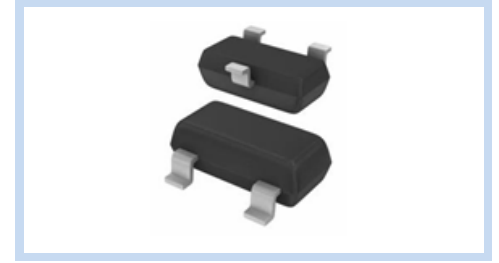
## 5V 2-Unidirectional SOT-323

ME52U10S323

MERITEK

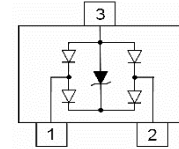
### FEATURES

- IEC 61000-4-2 ESD:  $\pm 15\text{KV}$  (Air),  $\pm 8\text{KV}$  (Contact)
- Low Leakage Current and Clamping Voltage
- Low Operating Voltage
- ESD Protection for Two Unidirectional Channels



### MECHANICAL DATA

- Case: SOT-323 Package, Molded Plastic
- Terminals: Solderable per MIL-STD, Method 2026



### MAXIMUM RATING

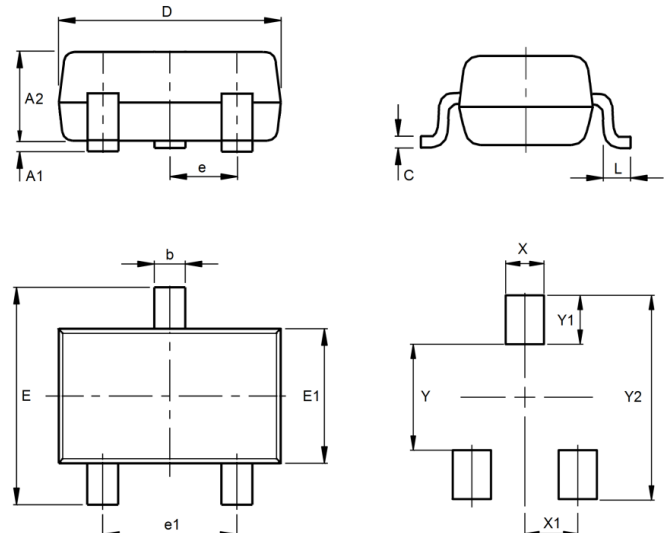
Parameter	Symbol	Value	Unit
ESD Discharge (IEC61000-4-2)	Air	$\pm 15$	KV
	Contact	$\pm 8$	
Peak Pulse Current ( $t_p=8/20\mu\text{s}$ )	$I_{PP}$	4	A
Peak Pulse Power ( $t_p=8/20\mu\text{s}$ )	$P_{PP}$	60	W
Operating Temperature Range	$T_J$	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150	$^{\circ}\text{C}$

### ELECTRICAL CHARACTERISTICS

Parameter	Conditions	Symbol	Min	Typ.	Max	Units
Reverse Stand-Off Voltage	-	$V_{RWM}$	-	-	5.0	V
Reverse Breakdown Voltage	$I_{BR} = 1\text{mA}$ , Any I/O to GND	$V_{BR}$	6.0	-	-	V
Reverse Leakage Current	$V_{RWM}=5\text{V}$	$I_R$	-	-	100	nA
Clamping Voltage	$I_{PP}=1\text{A}$ , $t_p=8/20\mu\text{s}$ , Any I/O to GND	$V_C$	-	-	10	V
	$I_{PP}=4\text{A}$ , $t_p=8/20\mu\text{s}$ , Any I/O to GND		-	-	15	
Forward Voltage	$I_{BR} = 10\text{mA}$ , Any I/O to GND	$V_F$	-	-	1.2	V
Junction Capacitance	$V_R=0\text{V}$ , $f=1\text{MHz}$ , Any I/O to GND	$C_J$	-	0.4	-	pF
	$V_R=0\text{V}$ , $f=1\text{MHz}$ , Between I/O Pins		-	0.2	-	

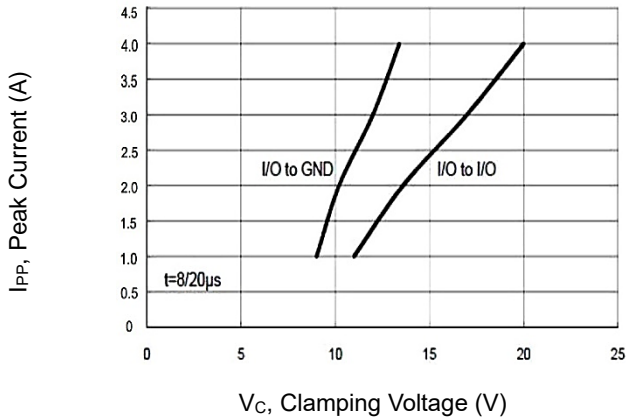
### DIMENSIONS

Item	Min (mm)	Max (mm)
A1	--	0.10
A2	0.90	1.00
b	0.20	0.40
C	0.08	0.15
D	1.90	2.20
e	0.65 TYP	
e1	1.20	1.40
E	2.00	2.45
E1	1.15	1.35
L	0.26	0.46
X	0.70	
X1	0.65	
Y	1.00	
Y1	0.90	
Y2	2.80	

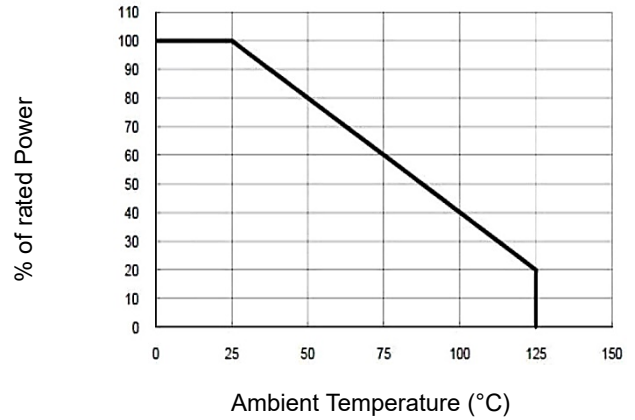


**CHARACTERISTIC CURVES**

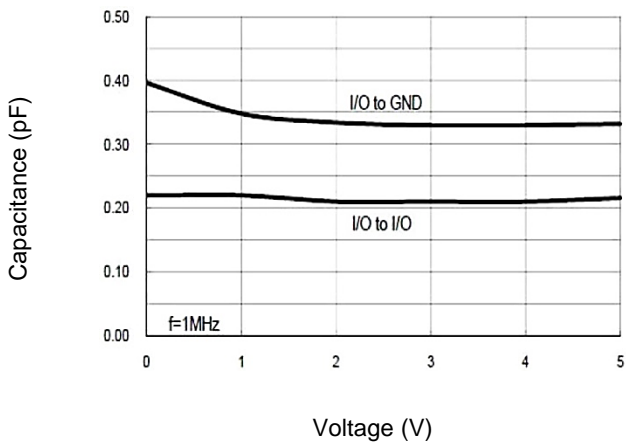
**Clamping Voltage vs. Peak Pulse Current**



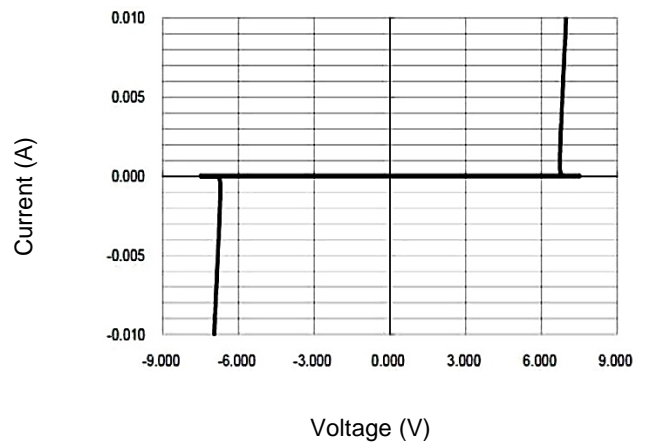
**Power Derating**



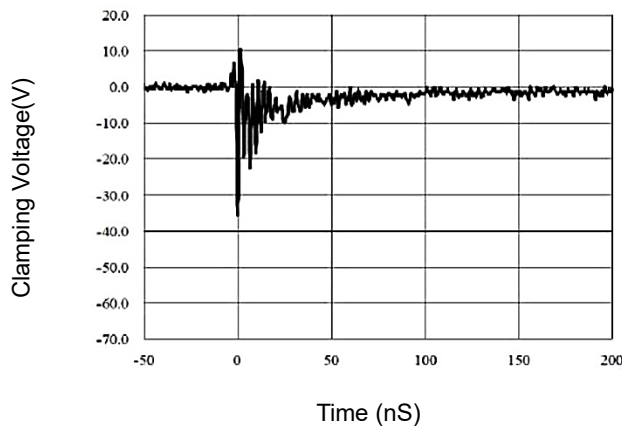
**Volatge vs Capacitance**



**Voltage Sweeping of IO to IO**



**ESD Clamping Voltage -8kV Contact**



**ESD Clamping Voltage 8kV Contact**

