

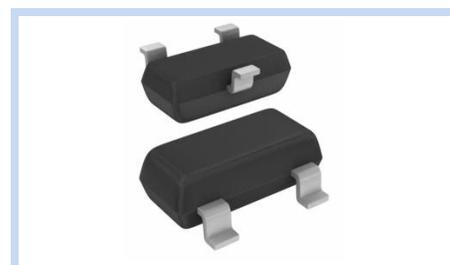
# ESD Suppressor 15V 2-Unidirectional SOT-23

ME152U24S23100

MERITEK

## FEATURE

- IEC 61000-4-2 ESD:  $\pm 30\text{KV}$  (Air)  $\pm 30\text{KV}$  (Contact)
- ESD Protection for two Unidirectional Channels
- ESD Protection for one Bidirectional Channel
- Low Clamping Voltage



## APPLICATION

- Industrial Controls
- Set-Top Box
- Portable Devices
- Notebooks, PC Desktops and Servers



## MAXIMUM RATINGS AND CHARACTERISTICS

Parameter	Symbol	Value	Unit
ESD Voltage (Contact discharge)	$V_{\text{ESD}}$	$\pm 30$	KV
ESD Voltage (Air discharge)		$\pm 30$	
Peak Pulse Power (tp=8/20 $\mu\text{s}$ )	$P_{\text{PP}}$	500	W
Peak Pulse Current (tp=8/20 $\mu\text{s}$ )	$I_{\text{PP}}$	17	A
Operating & Storage Temperature Range	$T_{\text{J}}, T_{\text{STG}}$	-50~+150	$^{\circ}\text{C}$

## ELECTRICAL CHARACTERISTICS

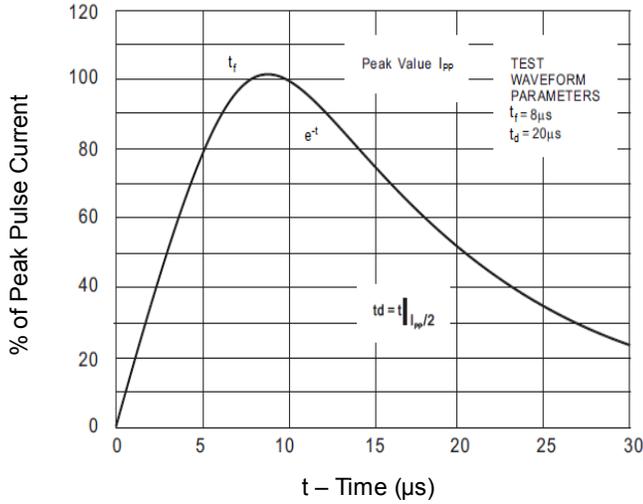
Parameter	Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	--	$V_{\text{RWM}}$	--	--	15	V
Reverse Breakdown Voltage	$I_{\text{BR}}=1\text{mA}$	$V_{\text{BR}}$	16.7	--	--	V
Reverse Leakage Current	$V_{\text{RWM}}=15\text{V}$	$I_{\text{R}}$	--	--	1	$\mu\text{A}$
Forward Voltage	$I_{\text{F}}=100\text{mA}$ , 300 $\mu\text{s}$ -square wave	$V_{\text{F}}$	--	--	1.5	V
Clamping Voltage	$I_{\text{PP}}=17\text{A}$ , tp=8/20 $\mu\text{s}$	$V_{\text{C}}$	--	--	24	V
Off State Junction Capacitance	Vdc=0, f=1MHz, Between I/O pins and GND	$C_{\text{J}}$	--	--	100	pF

Notes:

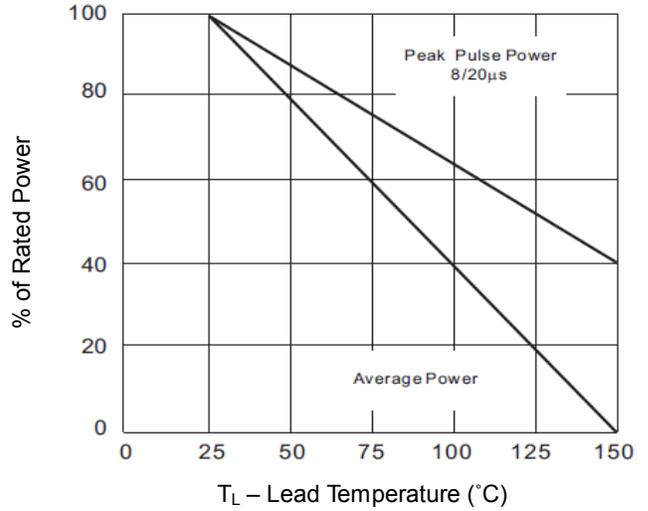
1.  $T_{\text{A}}=25^{\circ}\text{C}$  unless otherwise specified

**CHARACTERISTIC CURVES**

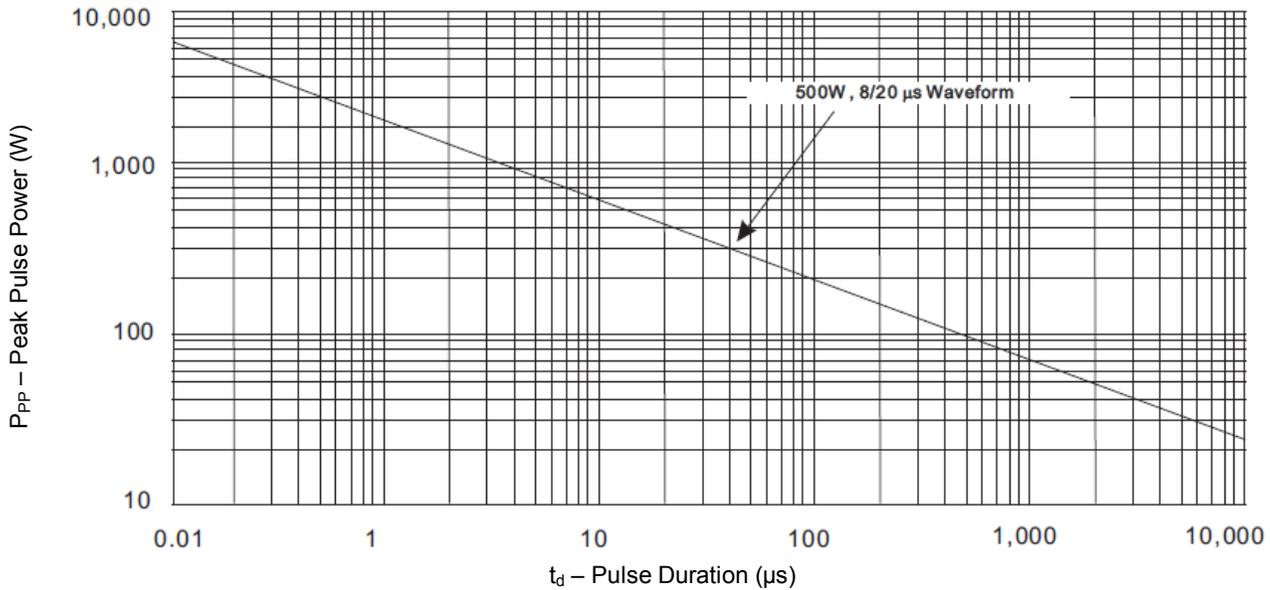
**Pulse Waveform**



**Power Derating Curve**



**Peak Pulse Power vs. Pulse Time**



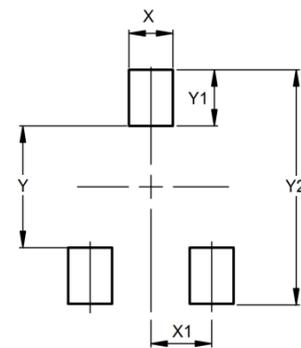
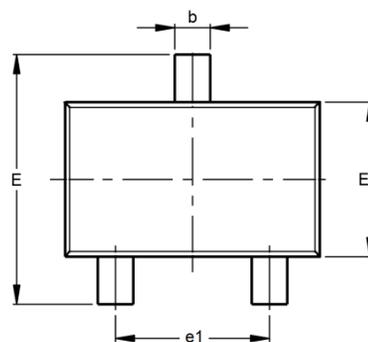
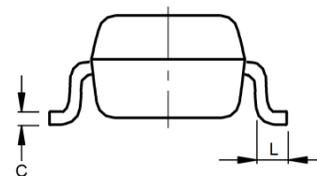
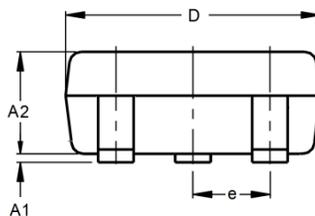
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## DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A1	0.08	0.20
A2	0.82	0.90
b	0.35	0.50
C	0.00	0.10
D	2.80	3.04
e	--	--
e1	1.80	2.00
E	2.20	2.60
E1	1.20	1.40
L	0.15	--
X	0.80	0.80
X1	1.35	1.35
Y	2.90	2.90
Y1	0.90	0.90
Y2	2.00	2.00



\*Specifications subject to change without notice.