

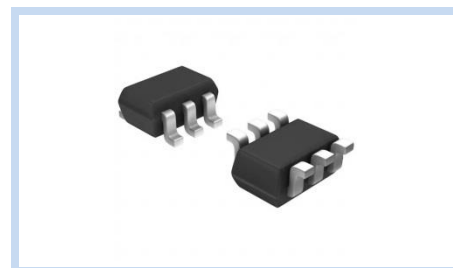
ESD Suppressor 5V 4-Unidirectional SOT-363

ME54U12S363

MERITEK

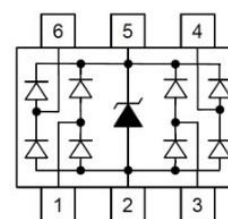
FEATURE

- IEC 61000-4-2 ESD: $\pm 20\text{KV}$ (Air) $\pm 15\text{KV}$ (Contact)
- IEC 61000-4-4 EFT: 40A (5/50ns)
- IEC 61000-4-5 Lightning: 5A (8/20 μs)
- ESD Protection for four Unidirectional Channels
- Low Clamping Voltage



APPLICATION

- Monitors and Flat Panel Display Notebook Computers
- USB 2.0 Data Line Protection
- Video Graphics Cards
- Digital Video Interface (DVI)
- 10/100/1000 Ethernet
- Control Signal Line Protection



MAXIMUM RATINGS AND CHARACTERISTICS

Parameter	Symbol	Value	Unit
ESD Voltage (Contact discharge)	V_{ESD}	± 15	KV
ESD Voltage (Air discharge)		± 20	
Storage & Operating Temperature Range	T_{STG}, T_J	-55~+150	$^{\circ}\text{C}$

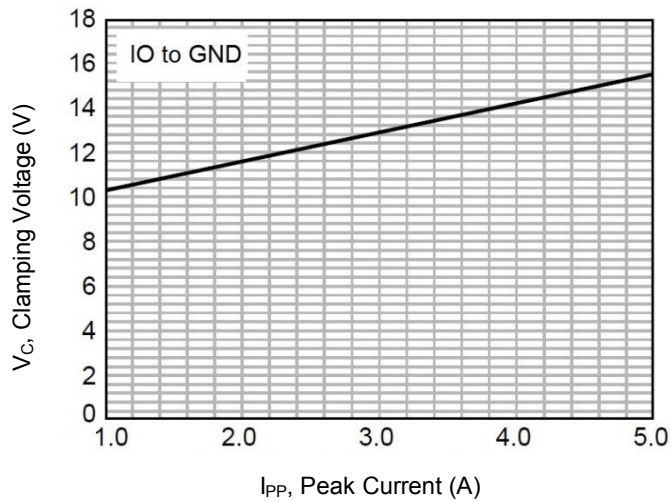
ELECTRICAL CHARACTERISTICS

Parameter	Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage (1)	--	V_{RWM}	--	--	5	V
Reverse Breakdown Voltage	$V_{BR}=1\text{mA}$, Pin 5 to Pin 2	V_{BR}	6	--	9	V
Reverse Leakage Current	$V_R=5\text{V}$	I_R	--	--	1	μA
Forward Voltage	$I_F=1\text{mA}$, Pin 2 to Pin 5	V_F	--	--	1	V
Clamping Voltage	$I_{PP}=1\text{A}$, $t_p=8/20\mu\text{s}$, Any I/O pin to Pin 2	V_C	--	--	12	V
	$I_{PP}=5\text{A}$, $t_p=8/20\mu\text{s}$, Any I/O pin to Pin 2		--	--	20	
Off State Junction Capacitance	$V_{dc}=0$, Bias, $f=1\text{MHz}$, Between any I/O pins to Pin 2	C_J	--	--	0.8	pF
	$V_{dc}=0$, Bias, $f=1\text{MHz}$, Between any I/O pins		--	--	0.4	

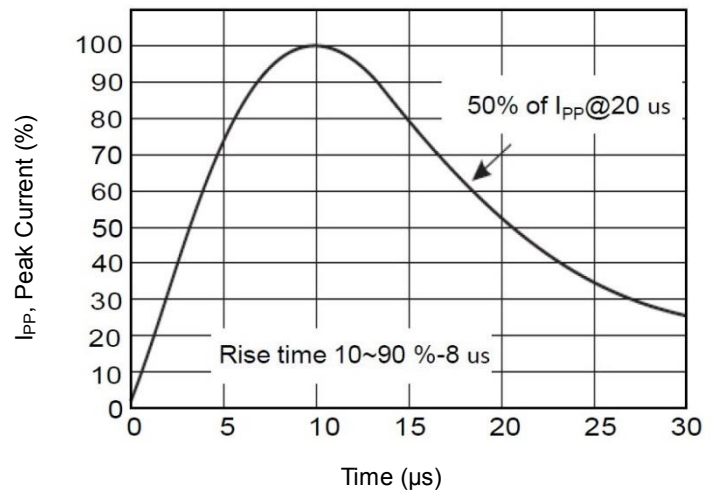
- Note:
1. A transient suppressor is selected according to the working peak reverse voltage V_{RWM} , which should be equal to or greater than the DC or continuous peak operation voltage level
 2. $T_A=25^{\circ}\text{C}$ unless otherwise specified

CHARACTERISTIC CURVES

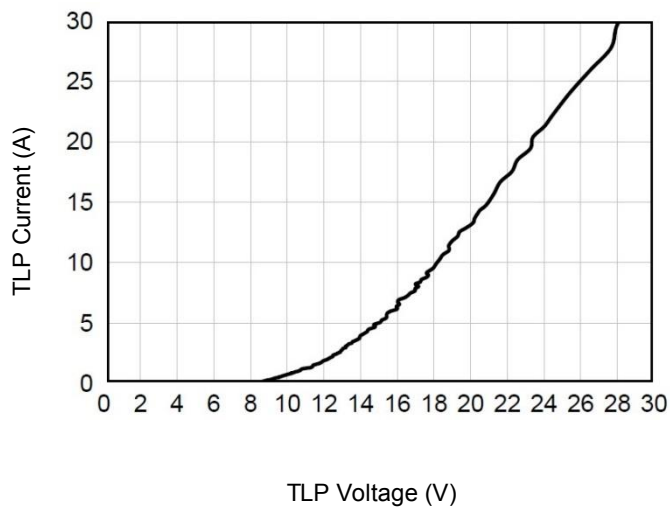
Typical Peak Clamping Voltage



Pulse Waveform



Transmission Line Pulsing



ESD Suppressor

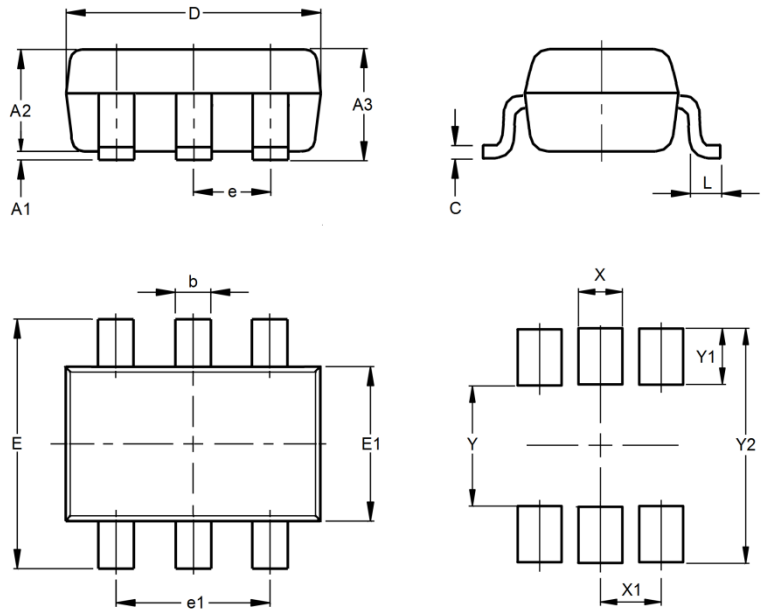
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DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A1	0.00	0.10
A2	0.80	1.00
A3	0.00	1.10
b	0.15	0.30
C	0.08	0.25
D	1.90	2.20
e	0.55	0.75
e1	1.20	1.40
E	2.00	2.20
E1	1.15	1.35
L	0.15	0.45
Y	1.25	1.25
Y1	0.60	0.60
Y2	2.30	2.30
X	0.42	0.42
X1	0.65	0.65



*Specifications subject to change without notice.