

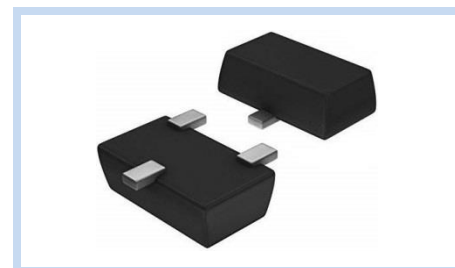
# ESD Suppressor 5V 2-Unidirectional SOT-523F

ME52U15S523FT

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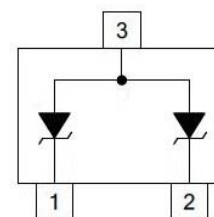
## FEATURE

- IEC 61000-4-2 ESD:  $\pm 18\text{KV}$  (Air)  $\pm 12\text{KV}$  (Contact)
- IEC 61000-4-4 EFT: 40A (5/50ns)
- IEC 61000-4-5 Lightning: 4A (8/20 $\mu\text{s}$ )
- ESD Protection for two Unidirectional Channels
- Low Leakage Current, Maximum 1 $\mu\text{A}$  at Rated Voltage



## APPLICATION

- High Definition Multi-Media Interface Protection
- Monitors, Flat Panel Displays, and Notebook Computers
- Video Line Protection & Base Stations
- USB 3.0 Data Line Protection
- Control Signal Lines Protection



## MAXIMUM RATINGS AND CHARACTERISTICS

Parameter	Symbol	Value	Unit
ESD Voltage (Contact discharge)	$V_{ESD}$	12	KV
ESD Voltage (Air discharge)		18	
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	$V_{BR}=1\text{mA}$ , Between any I/O pins to GND	$V_{BR}$	5.8	--	10.2	V
Reverse Leakage Current	$V_R=5\text{V}$ , Any I/O pin to GND	$I_R$	--	--	1	$\mu\text{A}$
Dynamic Resistance	$t_p=100\text{ns}$	$R_{DYN}$	--	0.25	--	$\Omega$
Clamping Voltage	$I_{PP}=1\text{A}$ , $t_p=8/20\mu\text{s}$ , Any I/O pin to GND	$V_C$	--	9	12	V
	$I_{PP}=4\text{A}$ , $t_p=8/20\mu\text{s}$ , Any I/O pin to GND		--	--	15	
Clamping Voltage TLP	$I_{PP}=4\text{A}$ , $t_p=100\text{ns}$ , Any I/O pin to GND	$V_C$	--	9.6	--	V
	$I_{PP}=8\text{A}$ , $t_p=100\text{ns}$ , Any I/O pin to GND		--	10.6	--	
Off State Junction Capacitance	$V_{dc}=0$ , Bias, $f=1\text{MHz}$ , Between Any I/O pin to GND	$C_J$	--	0.6	0.8	pF

Note:

1. Testing using Transmission Line Pulse (TLP) conditions:  $Z_0=50\Omega$ ,  $t_p=100\text{ns}$
2.  $T_A=25^{\circ}\text{C}$  unless otherwise specified

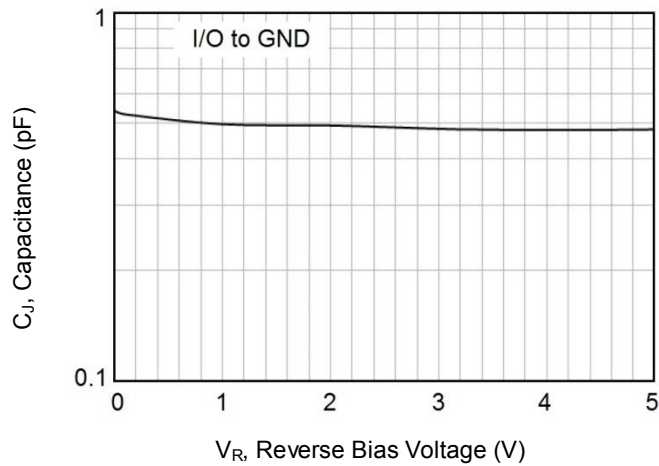
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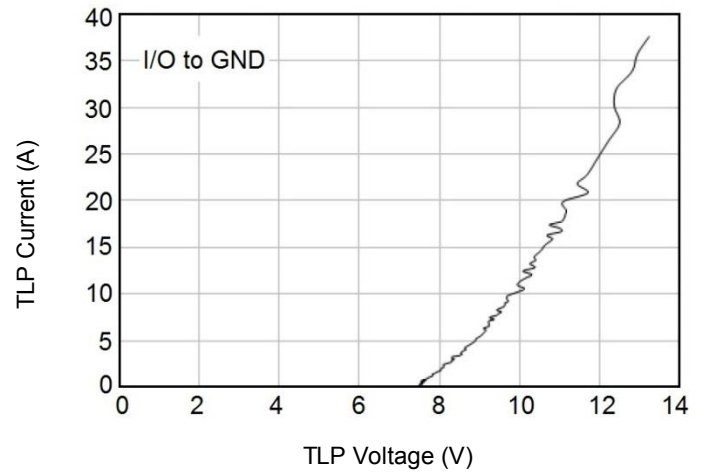
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## CHARACTERISTIC CURVES

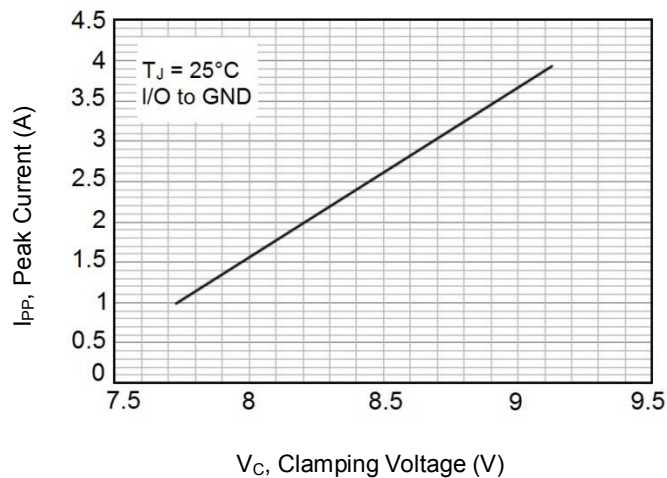
Typical Junction Capacitance



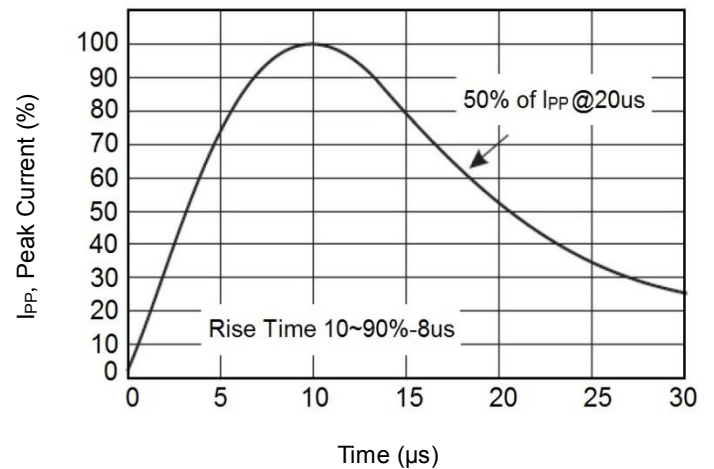
Transmission Line Pulsing



Typical Peak Clamping Voltage



Pulse Waveform



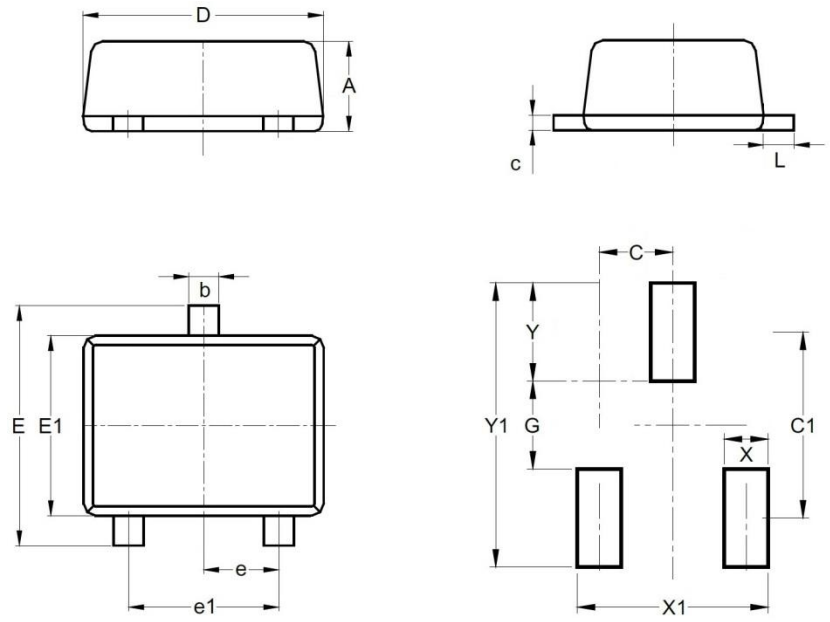
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## DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A	0.50	0.60
b	0.23	0.33
c	0.07	0.17
D	1.50	1.70
e	0.45	0.55
e1	0.90	1.10
E	1.50	1.70
E1	1.10	1.30
L	0.20	0.20
C	0.50	0.50
C1	1.45	1.45
G	0.90	0.90
X	0.40	0.40
X1	1.05	1.05
Y	0.55	0.55
Y1	2.00	2.00



\*Specifications subject to change without notice.