

# ESD Suppressor 5V Unidirectional SOD-123G

ME51U7V5S123G

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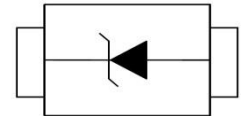
## FEATURE

- IEC 61000-4-2 ESD:  $\pm 15\text{KV}$  (Air)  $\pm 8\text{KV}$  (Contact)
- ESD Protection for one Unidirectional Channel
- Low Leakage Current
- Low Clamping Voltage
- Solid-State Silicon-Avalanche Technology



## APPLICATION

- Personal Digital Assistant (PDA)
- Digital Cameras
- Portable Devices
- Mobile Phones and Accessories
- Notebooks and Desktops



## MAXIMUM RATINGS AND CHARACTERISTICS

Parameter	Symbol	Value	Unit
ESD Voltage per IEC61000-4-2 (Contact discharge)	$V_{ESD}$	$\pm 8$	KV
ESD Voltage per IEC61000-4-2 (Air discharge)		$\pm 15$	KV
ESD Voltage (HBM)		$\pm 25$	KV
Peak Pulse Power ( $t_p=8/20\mu s$ )	$P_{PP}$	400	W
Operating Temperature Range	$T_J$	-55~+125	$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	-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	$V_R=5\text{V}$	$I_R$	--	--	20	$\mu\text{A}$
Clamping Voltage	$I_{PP}=5\text{A}$ , $t_p=8/20\mu s$	$V_C$	--	--	7.5	V
	$I_{PP}=24\text{A}$ , $t_p=8/20\mu s$		--	--	16	
Off State Junction Capacitance	$V_{dc}=0$ , $f=1\text{MHz}$	$C_J$	--	--	550	pF
	$V_{dc}=5$ , $f=1\text{MHz}$		--	--	235	

Notes:

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

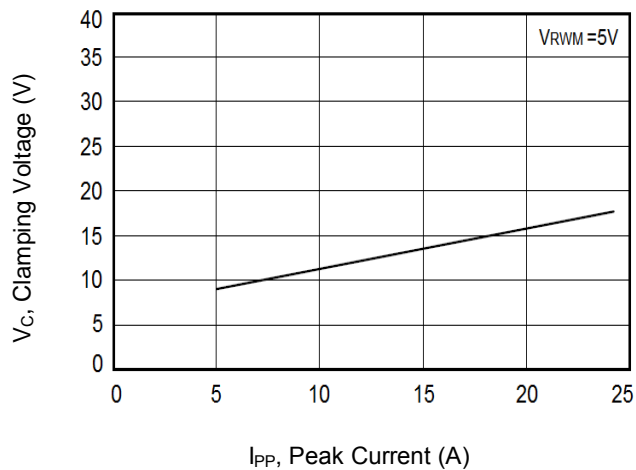
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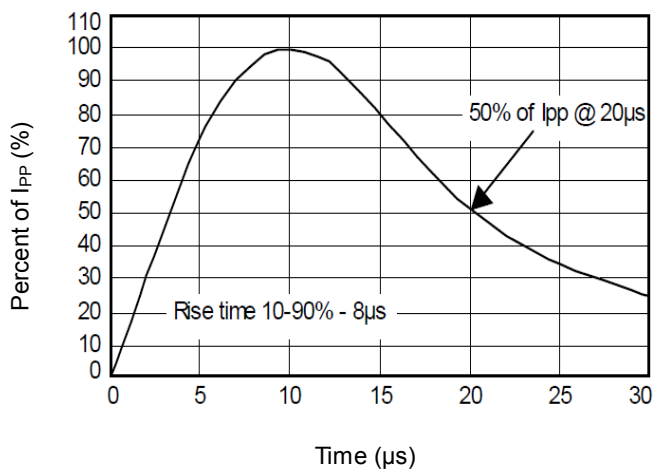
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## CHARACTERISTIC CURVES

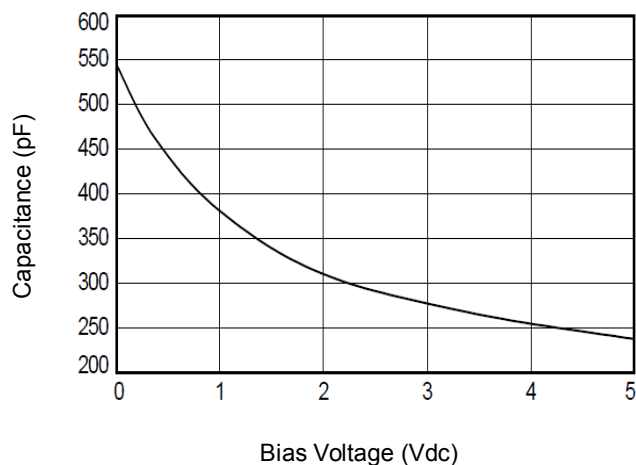
Clamping Voltage vs.  $I_{PP}$  8/20 $\mu$ s Surge



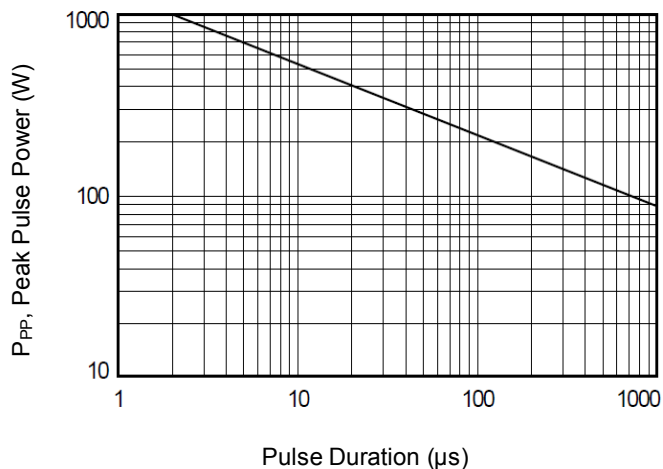
Surge Pulse Waveform Definition



Capacitance vs. Bias Voltage @1MHz



Non-Repetitive Peak Pulse Power vs. Pulse Time



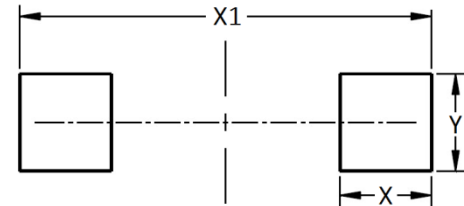
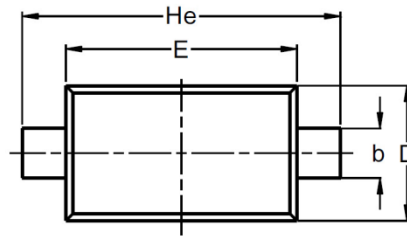
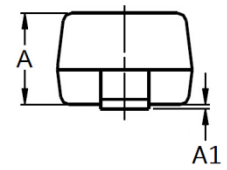
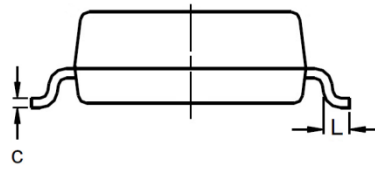
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## DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A	0.83	1.23
A1	-	0.12
b	0.50	0.70
C	-	0.20
D	1.40	1.80
E	2.50	2.80
He	3.60	3.90
L	0.40	-
X	0.90	0.90
X1	4.00	4.00
Y	0.95	0.95



\*Specifications subject to change without notice.