

ESD Suppressor 12V Unidirectional SOD-123G

ME121U14V5S123G

MERITEK

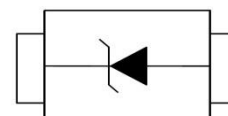
FEATURE

- 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}	± 8	KV
ESD Voltage per IEC61000-4-2 (Air discharge)		± 15	KV
ESD Voltage (HBM)		± 25	KV
Peak Pulse Power ($t_p=8/20\mu\text{s}$)	P_{PP}	400	W
Operating Temperature Range	T_J	$-55\sim+125$	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	$-55\sim+150$	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS

Parameter	Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	--	V_{RWM}	--	--	12	V
Reverse Breakdown Voltage	$I_{\text{BR}}=1\text{mA}$	V_{BR}	13.3	--	--	V
Reverse Leakage Current	$V_{\text{R}}=12\text{V}$	I_{R}	--	--	1	μA
Clamping Voltage	$I_{\text{PP}}=5\text{A}$, $t_p=8/20\mu\text{s}$	V_{C}	--	--	14.5	V
	$I_{\text{PP}}=17\text{A}$, $t_p=8/20\mu\text{s}$		--	--	23	
Off State Junction Capacitance	$V_{\text{dc}}=0$, $f=1\text{MHz}$	C_{J}	--	--	180	pF

Notes:

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

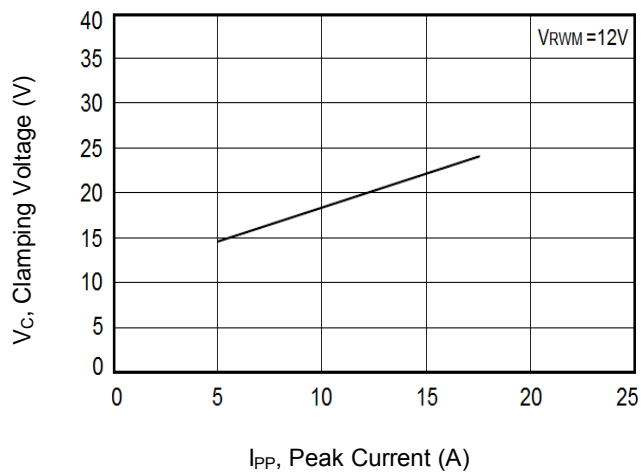
ESD Suppressor 12V Unidirectional SOD-123G

ME121U14V5S123G

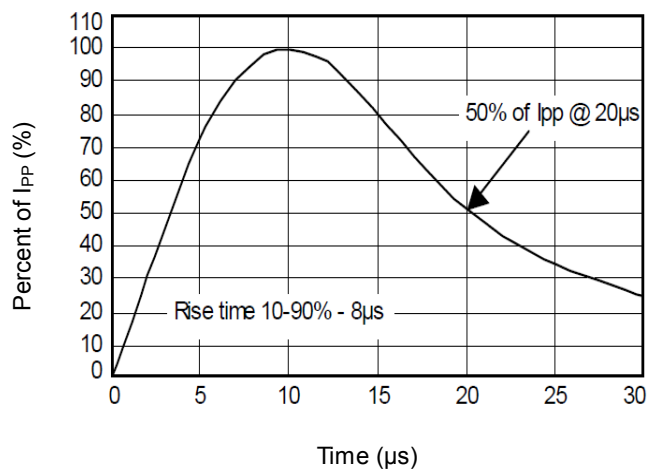
MERITEK

CHARACTERISTIC CURVES

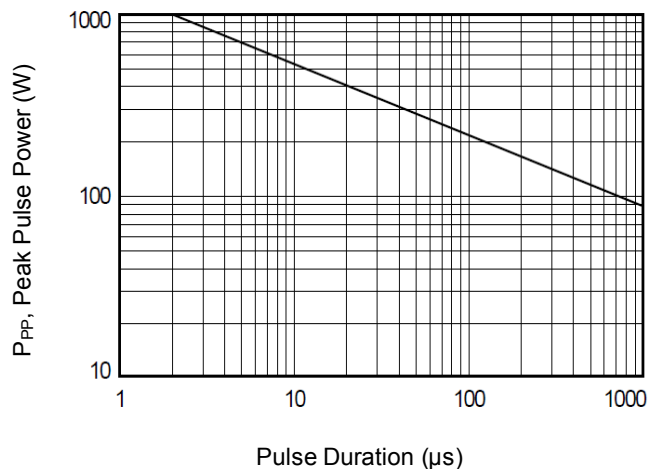
Clamping Voltage vs. I_{PP} 8/20 μ s Surge



Surge Pulse Waveform Definition



Non-Repetitive Peak Pulse Power vs. Pulse Time



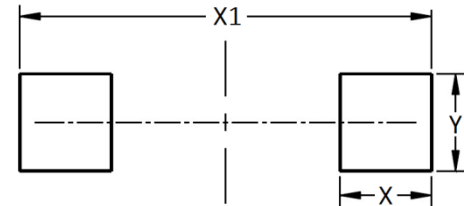
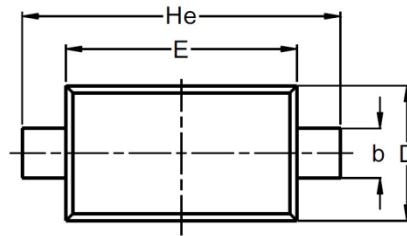
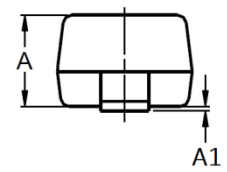
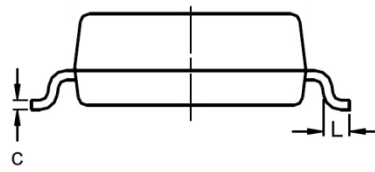
ESD Suppressor 12V Unidirectional SOD-123G

ME121U14V5S123G

MERITEK

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.