

ESD Suppressor AEC-Q101 5V 2-Unidirectional SOT-143

ME52U15S143A

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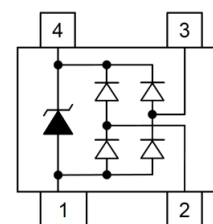
FEATURE

- IEC 61000-4-2 ESD: $\pm 30\text{KV}$ (Air) $\pm 30\text{KV}$ (Contact)
- ESD Protection for two Unidirectional Channels
- Low Leakage Current and Clamping Voltage
- Solid-State Silicon-Avalanche Technology
- AEC-Q101 Qualified



APPLICATION

- USB Power And Data Line Protection
- Video Line Protection
- LAN/WAN Device
- Microcontroller Input Protection
- Portable Electronics



MAXIMUM RATINGS AND CHARACTERISTICS

Parameter	Symbol	Value	Unit
ESD Voltage (Contact discharge)	V_{ESD}	± 30	KV
ESD Voltage (Air discharge)		± 30	
Peak Pulse Current ($t_p=8/20\mu s$)	I_{PP}	3	A
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	$I_{BR}=1\text{mA}$	V_{BR}	6	--	--	V
Reverse Leakage Current	$V_R=5\text{V}$	I_R	--	--	5	μA
Clamping Voltage	$I_{PP}=1\text{A}, t_p=8/20\mu s$	V_C	--	--	9.8	V
	$I_{PP}=2\text{A}, t_p=8/20\mu s$		--	--	15	
Off State Junction Capacitance	$V_{dc}=0, f=1\text{MHz}$, Between I/O pins and GND	C_J	--	0.8	--	pF

Notes:

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

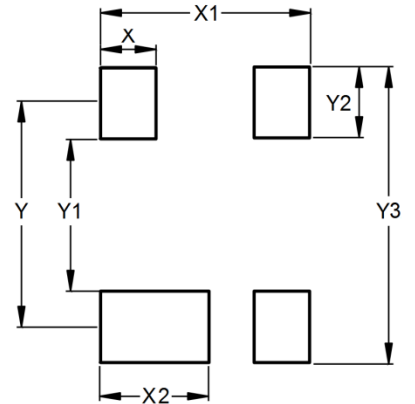
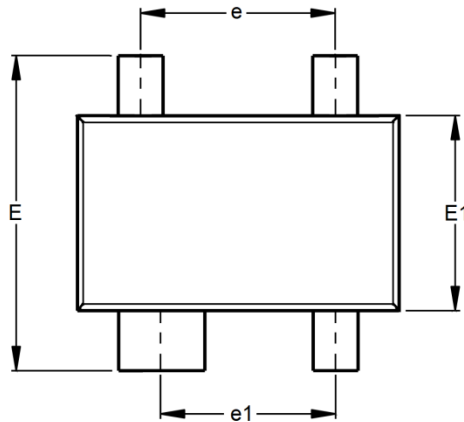
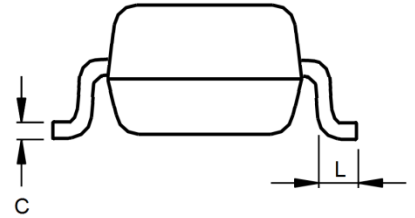
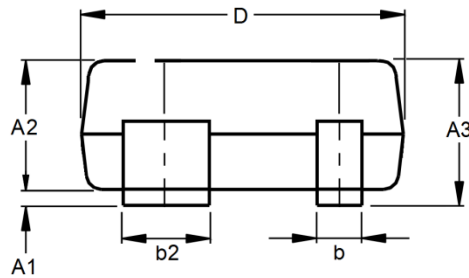
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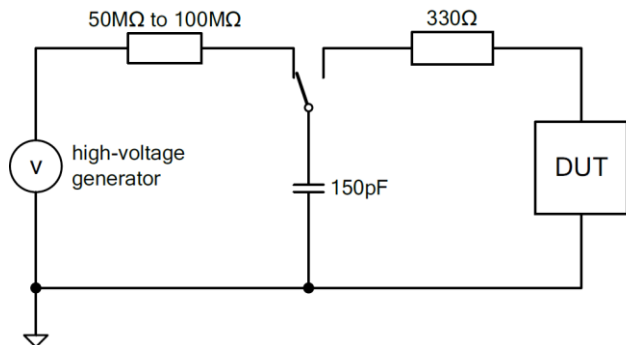
DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A1	-	0.13
A2	-	1.14
A3	-	1.27
b	0.36	0.50
b2	0.76	0.93
C	0.08	0.15
D	2.79	3.04
e	1.90	1.90
e1	1.70	1.70
E	-	2.50
E1	1.19	1.40
L	0.15	-
Y	2.00	2.00
Y1	1.30	1.30
Y2	0.70	0.70
Y3	2.70	2.70
X	0.60	0.60
X1	2.50	2.50
X2	1.00	1.00

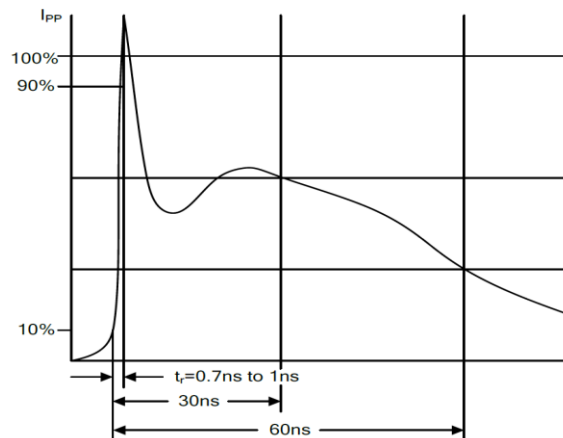


ESD PROTECTION STANDARDS

IEC61000-4-2

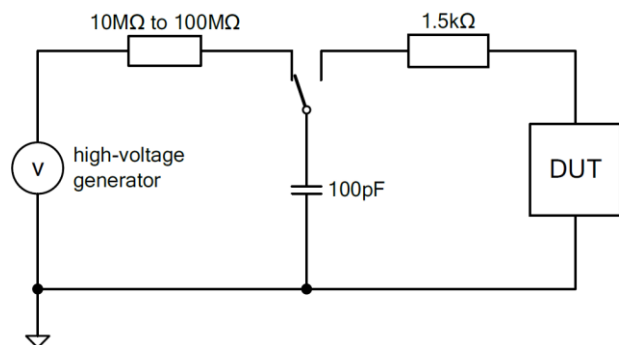


Test Circuit according to IEC61000-4-2

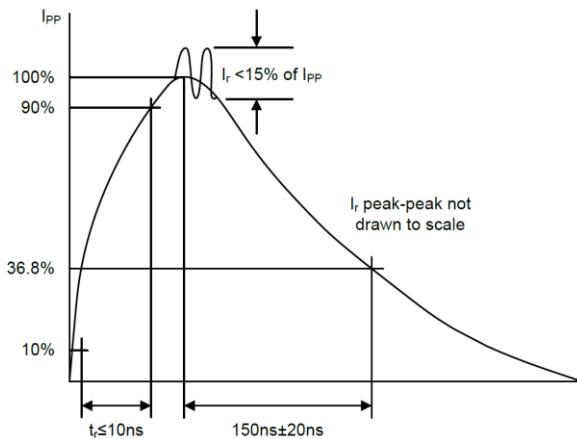


ESD Surge according to IEC61000-4-2

Human Body Model (HBM, 883E method 3015.7)



Test Circuit according to MIL-883E method 3015.7



ESD Surge according to MIL-883E method 3015.7

*Specifications subject to change without notice.