ESD Suppressor
7.5V 2-Unidirectional SOT-143

ME7V52U20S143

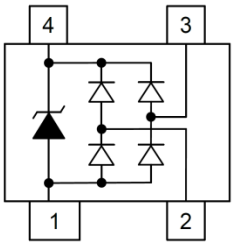
MERITEK

FEATURE

- IEC 61000-4-2 ESD: ±20KV (Air) ±20KV (Contact)
- ESD Protection for two Unidirectional Channels
- Low Leakage Current and Clamping Voltage
- Low Capacitance
- Solid-State Silicon-Avalanche Technology

APPLICATION

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



RoHS

MAXIMUM RATINGS AND CHARACTERISTICS

Parameter	Symbol	Value	Unit
ESD Voltage (Contact discharge)	V_{ESD}	±20	KV
ESD Voltage (Air discharge)		±20	
Peak Pulse Current (tp=8/20μs)	I_{PP}	2	A
Operating & Storage Temperature Range	T_J, T_{STG}	-55~+150	°C

ELECTRICAL CHARACTERISTICS

Parameter	Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	--	V_{RWM}	--	--	7.5	V
Reverse Breakdown Voltage	I_{BR}=1mA	V_{BR}	9.5	--	--	V
Reverse Leakage Current	V_R=7.5V	I_R	--	--	1	μA
Clamping Voltage	I_{PP}=1A, tp=8/20μs	V_C	--	--	20	V
	I_{PP}=2A, tp=8/20μs		--	--	30	
Off State Junction Capacitance	Vdc=0, f=1MHz, Between I/O pins and GND	C_J	--	0.8	1	pF

Notes:
1. T_J= 25°C unless otherwise specified

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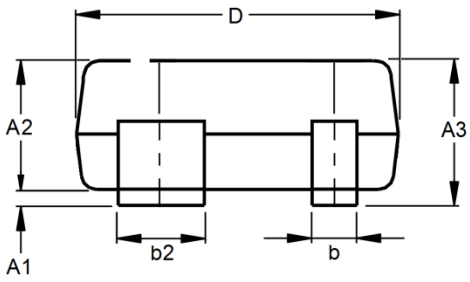
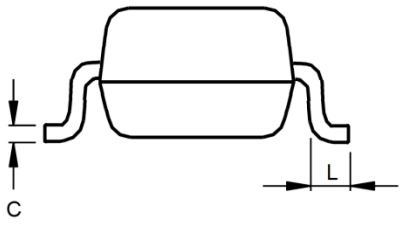
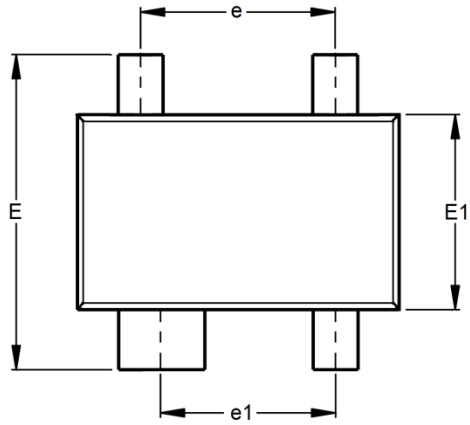
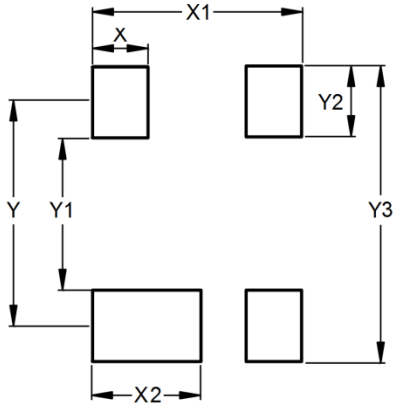
DIMENSIONS AND RECOMMENDED LAND PATTERN

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









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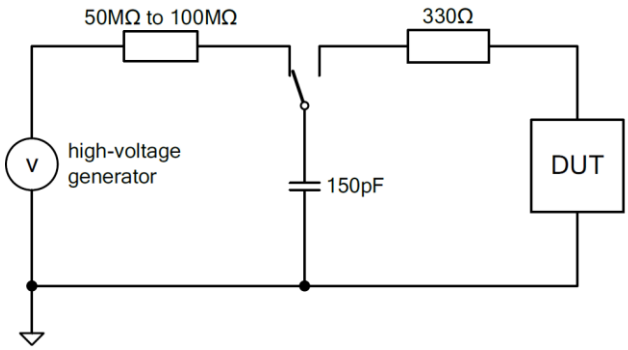
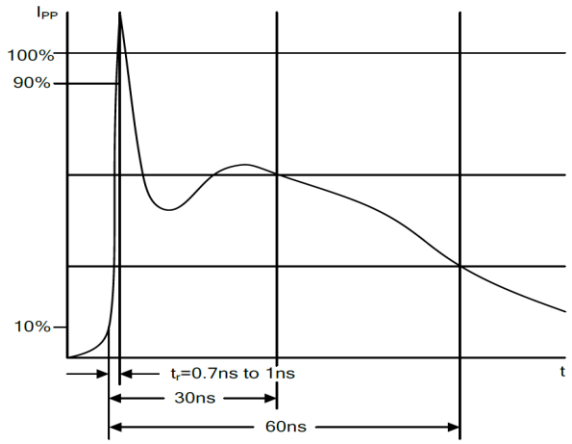
ESD PROTECTION STANDARDS

IEC61000-4-2

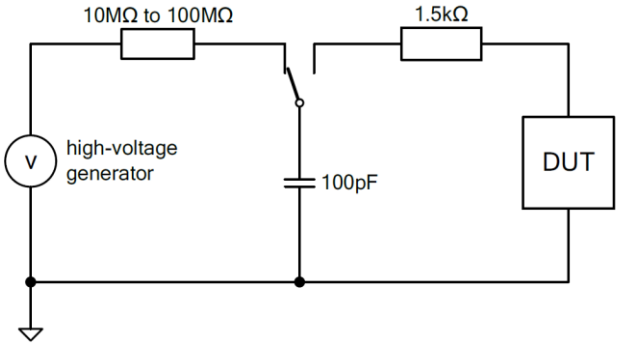


Test Circuit according to IEC61000-4-2

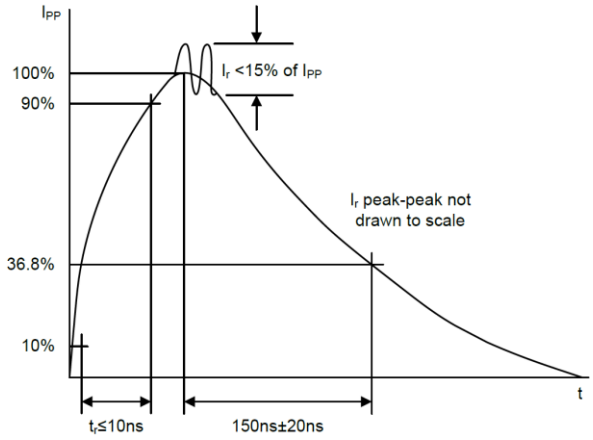


ESD Surge according IEC61000-4-2

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.