

SOT-143 Plastic-Encapsulate ESD Protection Diodes

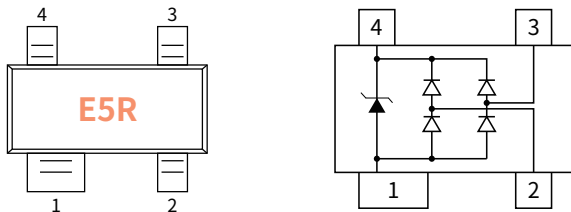
Features

- Low leakage current
- SOT-143 surface mount package
- IEC 61000-4-2 (ESD Air): $\pm 25\text{kV}$
- IEC 61000-4-2 (ESD Contact): $\pm 20\text{kV}$
- IEC 61000-4-5 (Lightning 8/20 μs): 5A

Applications

- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation, Digital Cameras
- Peripherals, Audio Players
- Industrial Equipment

Function Diagram



Reverse Working Voltage
5V Max.

Ultra small capacitance

$C_{I/O-GND}=0.6\text{pF(Typ.)}$

$C_{I/O-I/O}=0.3\text{pF(Typ.)}$

SOT-143

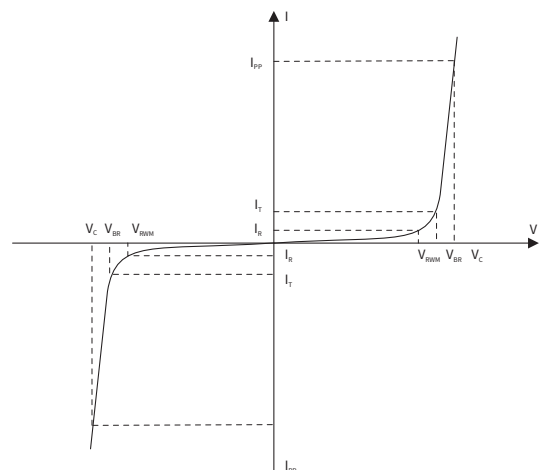


Maximum Ratings (Ta=25°C Unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{ESD}	Electrostatic Discharge Voltage	ESD per IEC 61000-4-2(Air)	± 25	KV
		ESD per IEC 61000-4-2(Contact)	± 20	KV
P_{PP}	Peak Pulse Power	$t_p = 8/20 \mu\text{s}$	75	W
I_{PP}	Rated Peak Pulse Current	$t_p = 8/20 \mu\text{s}$	5	A
T_J	Operating Junction Temperature Range	—	-55 to +125	°C
T_{STG}	Operating Junction Temperature Range	—	-55 to +150	°C

Electrical Parameter

SYMBOL	PARAMETER
V_C	Clamping Voltage @ I_{PP}
V_{BR}	Breakdown Voltage @ I_T
I_{PP}	Peak Pulse Current
I_T	Test Current
I_R	Reverse Leakage Current @ V_{RWM}
V_{RWM}	Peak Reverse Working Voltage
P_{PP}	Peak Pulse Power Dissipation
C_J	Junction Capacitance @ $V_R=0\text{V}, f=1\text{MHz}$
I_F	Forward Current
V_F	Forward Voltage @ I_F



● Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	CONDITION	Min	Typ	Max	UNIT
Peak Reverse Working Voltage	V_{RWM}	$T_a=25^\circ\text{C}$	—	—	5.0	V
Breakdown Voltage	V_{BR}	$I_R=1\text{mA}, T_a=25^\circ\text{C}$	6.0	—	—	V
Reverse Leakage Current	I_R	$V_R=5\text{V}, T_a=25^\circ\text{C}$	—	—	0.5	μA
Clamping Voltage	V_C	$I_{PP}=1.0\text{A}, t_p=8/20\mu\text{s}$	—	—	10	V
		$I_{PP}=5\text{A}, t_p=8/20\mu\text{s}$	—	—	15	
Junction Capacitance	C_J	$V_R=0\text{V}, f=1\text{MHz}, \text{I/O Pin to ground}$	—	0.6	0.8	pF
		$V_R=0\text{V}, f=1\text{MHz}, \text{Between I/O pins}$	—	0.3	0.4	

● Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)

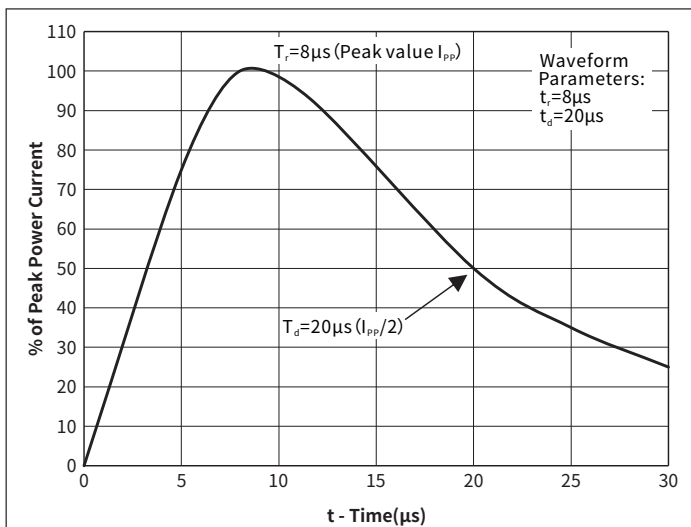


Fig.1 Pulse Waveform

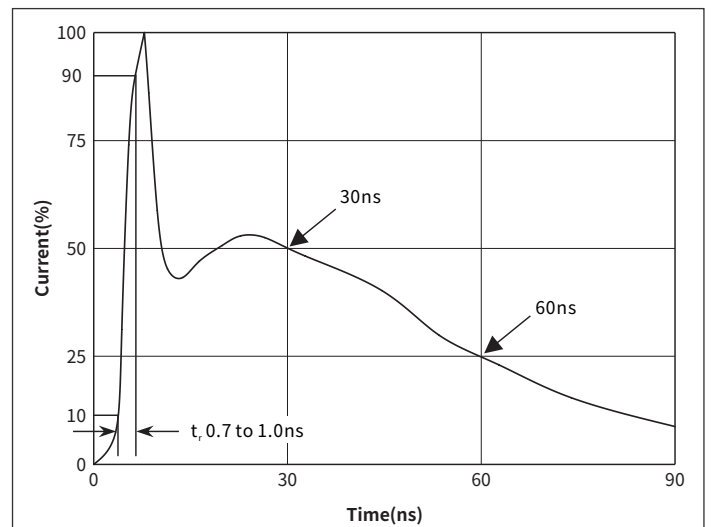


Fig.2 Pulse Waveform-ESD(IEC61000-4-2)

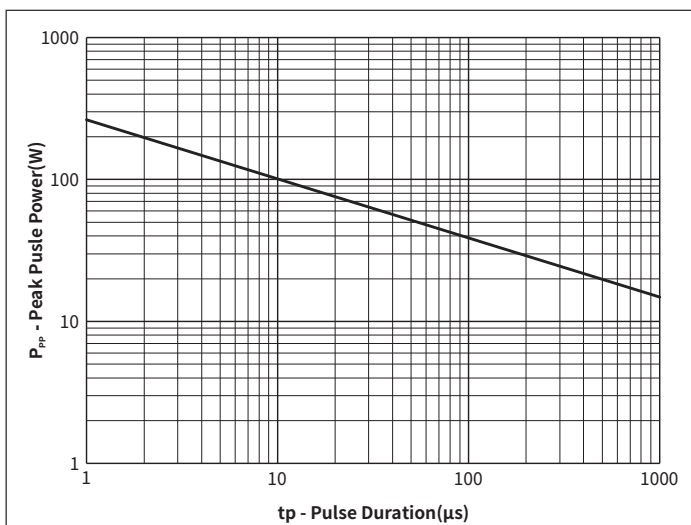


Fig.3 Peak Pulse Power vs. Pulse Time

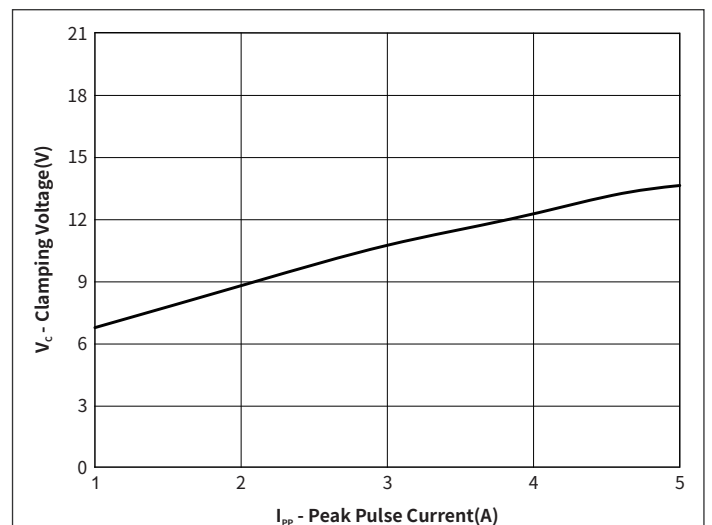


Fig.4 Clamping Voltage vs. Peak Pulse Current

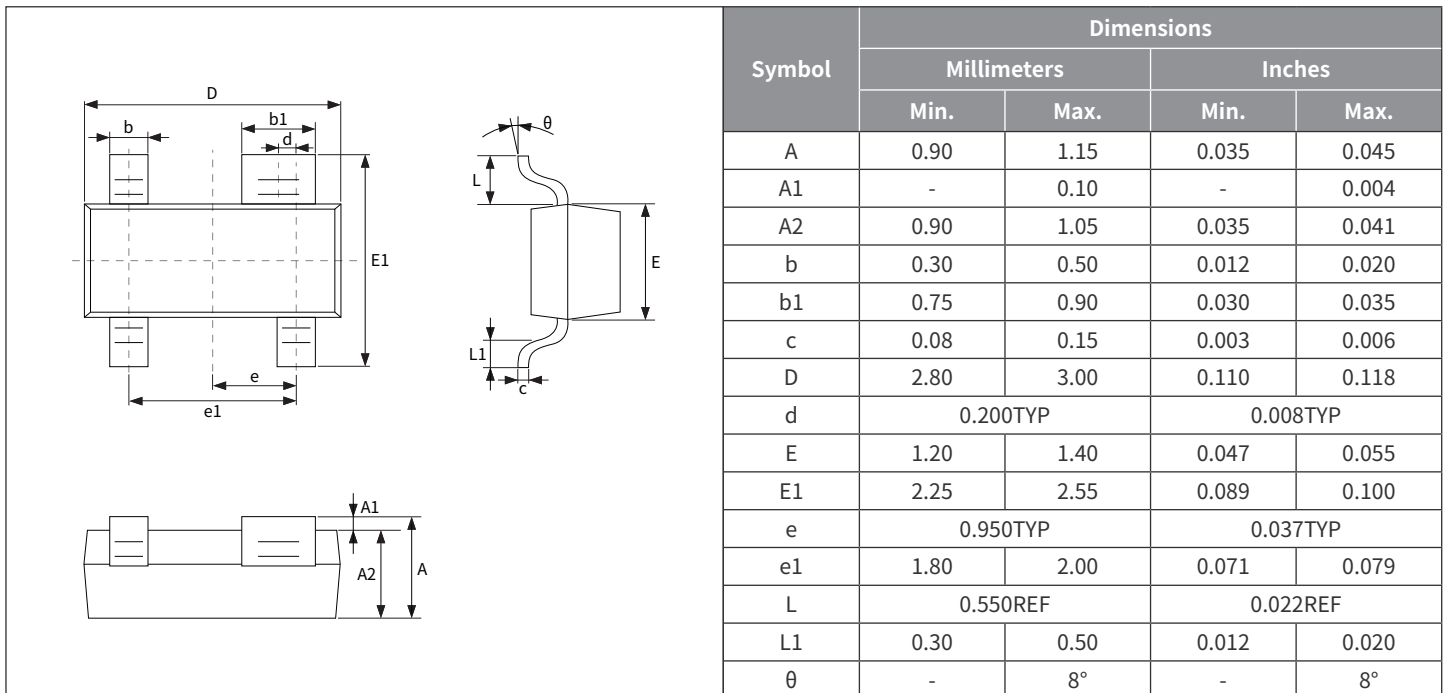
Ordering Information

PREFERED P/N	PACKAGE	SIZE(mm)	DELIVERY MODE	MPQ(PCS)
H5VUT1B	SOT-143	2.90×2.40×1.025	7" REEL	3000

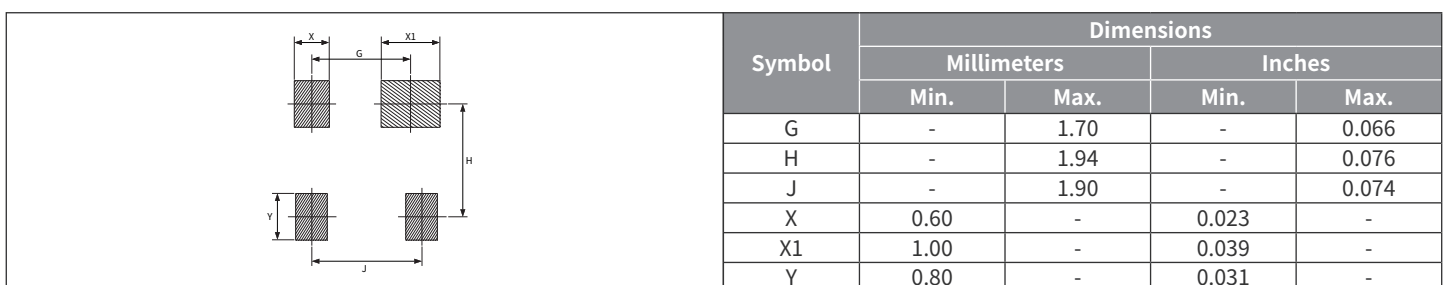
Recommended Soldering Conditions



Package Outline Dimensions (SOT-143)



Suggested Pad Layout



X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [ESD Suppressors / TVS Diodes](#) category:

Click to view products by [hongjiacheng](#) manufacturer:

Other Similar products are found below :

[60KS200C](#) [D18V0L1B2LP-7B](#) [D5V0F4U5P5-7](#) [NTE4902](#) [P4KE27CA](#) [P6KE11CA](#) [P6KE8.2A](#) [SA60CA](#) [SA64CA](#) [SMBJ12CATR](#)
[SMBJ33CATR](#) [SMBJ6.5A](#) [SMBJ8.0A](#) [ESD101-B1-02ELS E6327](#) [ESD112-B1-02EL E6327](#) [ESD7451N2T5G](#) [19180-510](#) [CPDT-5V0USP-](#)
[HF](#) [3.0SMCJ33CA-F](#) [3.0SMCJ36A-F](#) [HSPC16701B02TP](#) [JANTX1N6126A](#) [D3V3Q1B2DLP3-7](#) [D55V0M1B2WS-7](#) [SCM1293A-04SO](#)
[ESD200-B1-CSP0201 E6327](#) [SM12-7](#) [CEN955 W/DATA](#) [VESD12A1A-HD1-GS08](#) [CPDQC5V0-HF](#) [D1213A-01LP4-7B](#) [ESD101-B1-02EL](#)
[E6327](#) [AOZ8808DI-03](#) [5KP15A](#) [5KP48A](#) [5KP90A](#) [ESD3V3D7-TP](#) [15KPA36A-LF](#) [P4KE56CA](#) [P4KE68A](#) [P4KE91CATR](#) [P6KE120A](#)
[P6KE13CA](#) [P6KE43CA](#) [P6KE6.8CA](#) [P6KE8.2](#) [P6SMBJ20CA](#) [JANTX1N6072A](#) [SR2835ESKG](#) [SA90CA](#)