

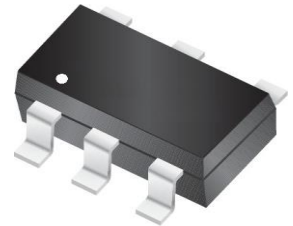
Low Capacitance ESD TVS Array

Features

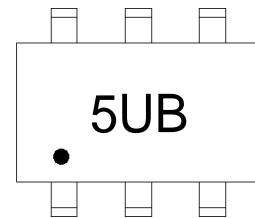
- SOT23-6 package
- Low leakage current
- Low clamping voltage
- 350Watts peak pulse power ($t_p = 8/20\mu s$)
- Solid-state silicon-avalanche technology
- Low capacitance (0.75pF typical I/O to I/O)
- ESD Protection for high-speed data lines to:
- IEC 61000-4-2 $\pm 30KV$ contact $\pm 30KV$ air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 15A (8/20 μs)
- RoHS compliant



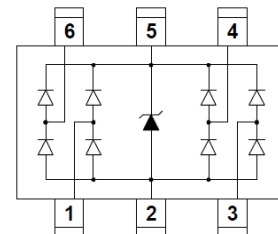
RoHS
COMPLIANT



Marking: .5UB **SOT23-6**



Schematic Diagram



Applications

- Fingerprint sensor
- USB2.0 application
- Other 5.0V application
- Video lines protection
- 100/1000M Ethernet protection

Absolute Maximum Ratings ($T_A = 25^\circ C$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Pulse Power (TP=8/20 μs)	P_{PP}	350	W
Peak Pulse Current (TP=8/20 μs)	I_{PP}	15	A
Operating temperature	T_J	-55 to +125	$^\circ C$
Storage temperature	T_{STG}	-55 to +150	$^\circ C$

Electrical Specifications ($T_A=25^{\circ}\text{C}$ unless otherwise noted)						
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse stand-off Voltage	V_{RWM}				5.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	6.0			V
Reverse Leakage Current	I_R	$V_R=5.0\text{V}$			0.5	μA
Clamping Voltage	V_C	$I_{PP}=15\text{A}, T_P=8/20\mu\text{S}$		20	23	V
Junction Capacitance	C_J	$V_R=0\text{V}, f=1\text{MHz}, I/O$ to I/O		0.75		pF
	C_J	$V_R=0\text{V}, f=1\text{MHz}, I/O$ to GND		1.5		pF

Ratings and Characteristics Curves

($T_A = 25^{\circ}\text{C}$ unless otherwise noted)

Fig.1 Peak Pulse Power Rating Curve

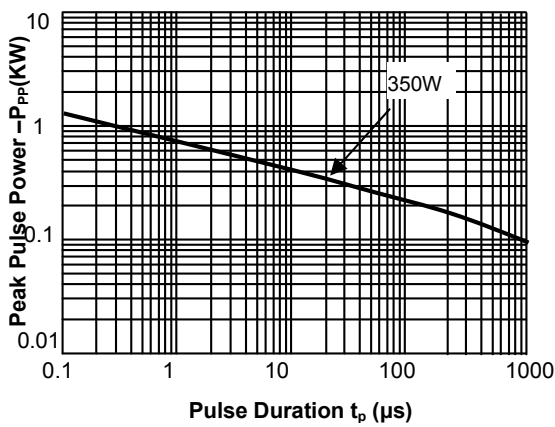


Fig.2 Pulse Derating Curve

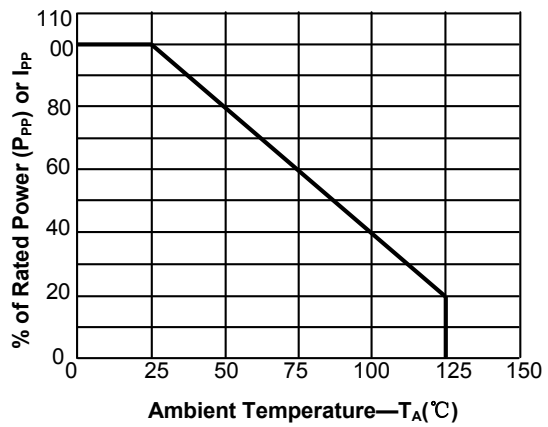


Fig.3 Pulse Waveform-8/20 μs

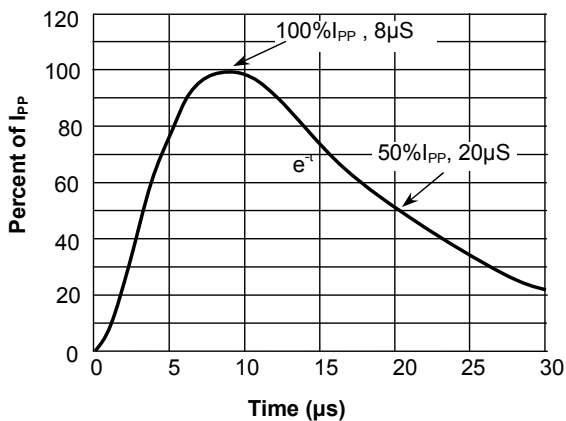
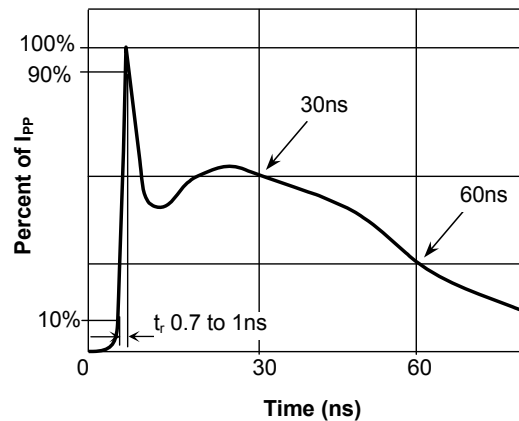
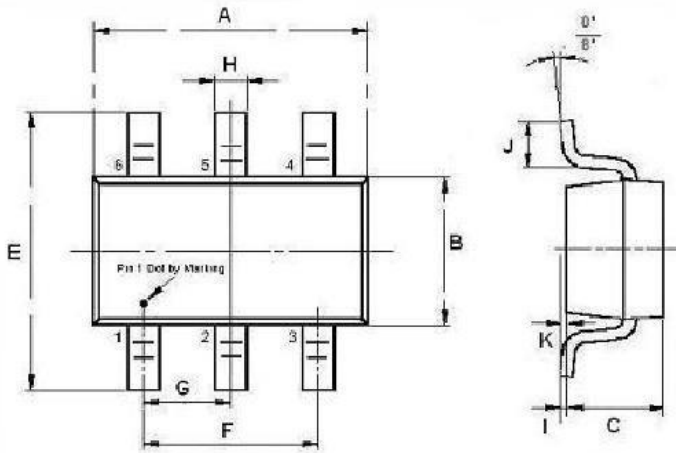


Fig.4 Pulse Waveform-ESD(IEC61000-4-2)



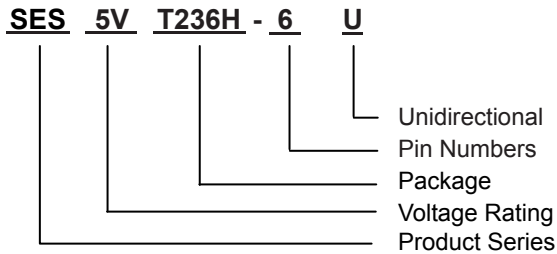
Package Outline Dimensions

millimeters



Symbol	Min	Max
A	2.91	2.93
B	1.50	1.70
C	0.90	1.30
E	2.60	3.00
F	1.80	2.00
G	0.85	1.05
H	0.35	0.50
I	0.20	0.10
J	0.35	0.55
K	0	0.15

Part Number System



Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.01	First issue

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