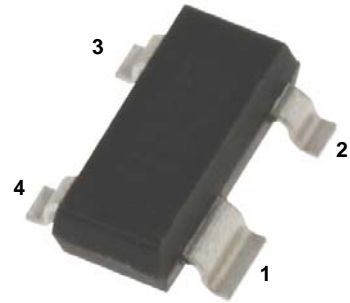
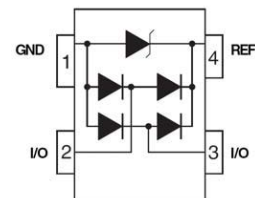


Features

- 500W watts peak power per line ($t_P = 8/20\mu s$)
- ESD protection > 25 KV
- Low Clamping Voltage
- Unidirectional Configuration
- Protects 2 I/O Ports & Power Supply
- Low Capacitance , Typical : 5pF
- RoHS Compliant in Lead-Free Versions
- Molded JEDEC SOT-143
- Available in Lead-Free Pure-Tin Plating(Annealed)
- Solder Reflow Temperature:
Pure-Tin-Sn , 100: 260- 270°C
- 8mm Tape and Reel Per EIA Standard 481



SOT-143



Schematic Diagram

Applications

- Ethernet -10/100 Base T
- FireWire
- Wireless Communications
- USB Interface

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

Parameter	Symbol	Value	Unit
Peak Pulse Power ($T_P=8/20\mu S$)	P_{PP}	500	W
Peak Pulse Current ($t_P = 8/20\mu S$)	I_{PP}	28	A
Forward Voltage @10mA	V_F	1.5	V
Junction Temperature	T_J	-55 to +150	°C
Storage temperature	T_{STG}	-55 to +150	°C

Electrical Characteristics per line ($T_A=25^\circ C$ unless otherwise specified)

Parameter	Symbols	Conditions	Min	Typ	Max	Units
Reverse stand-off Voltage	V_{RWM}	-	-	-	5	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	6	-	-	V
Reverse Leakage Current	I_R	$V_{RWM}=5V$	-	-	5	μA
Clamping Voltage	V_C	$I_{PP}=1A, T_P=8/20\mu S$	-	-	9.8	V
Clamping Voltage	V_C	$I_{PP}=28A, T_P=8/20\mu S$	-	-	20.0	V
Junction Capacitance	C_J	$V_R=0V, f=1MHz$	-	5	-	pF

Typical Characteristics

Fig.1 Peak Pulse Power vs Pulse Time

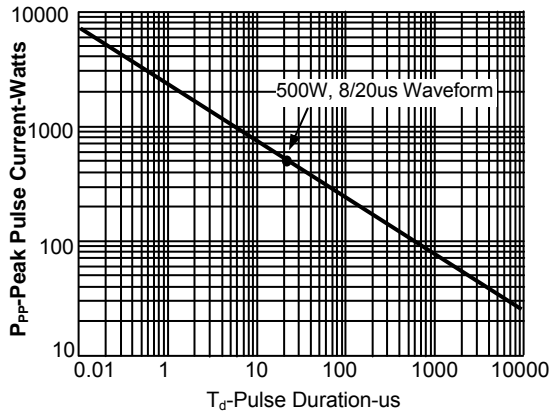


Fig.2 Pulse Wave Form

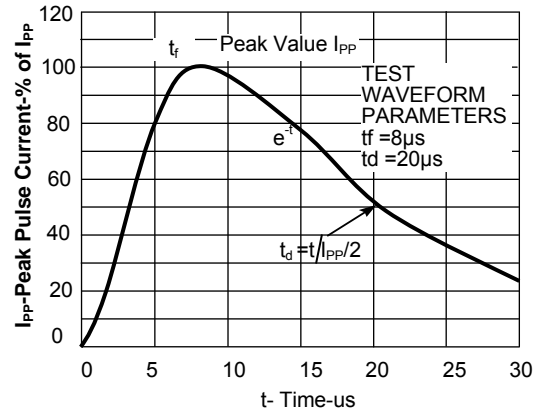


Fig.3 Power Derating Curve

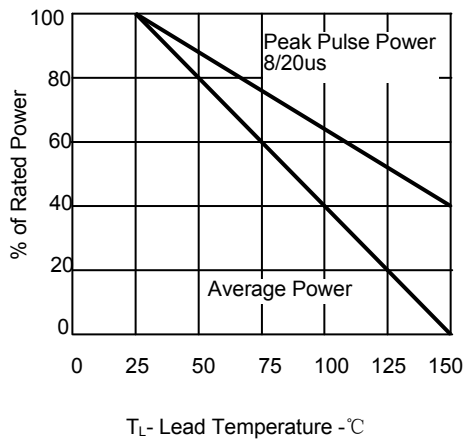
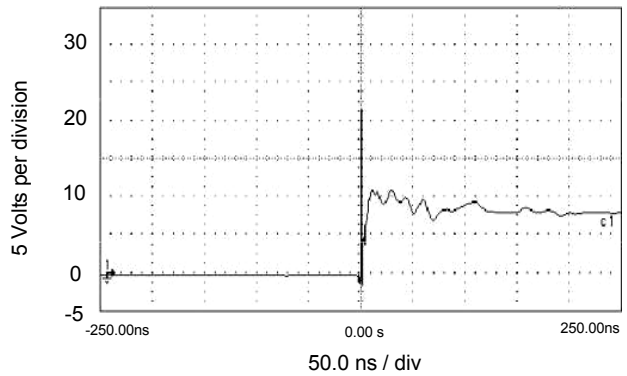


Fig.4 Overshoot & Clamping Voltage



ESD Test Pulse: 5KV, 1/30ns(waveform)

Fig.5 Typical Reverse Voltage vs Capacitance

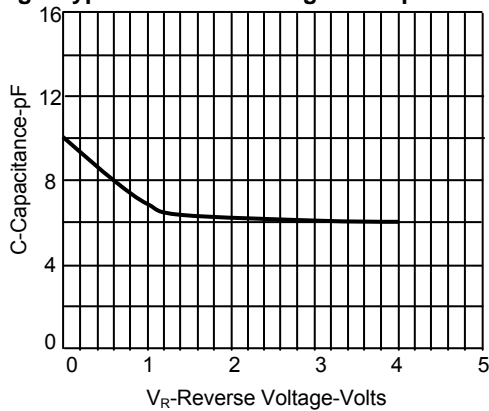
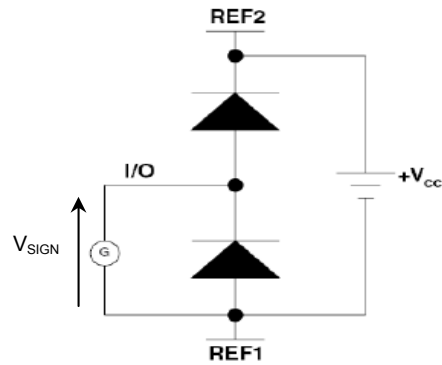
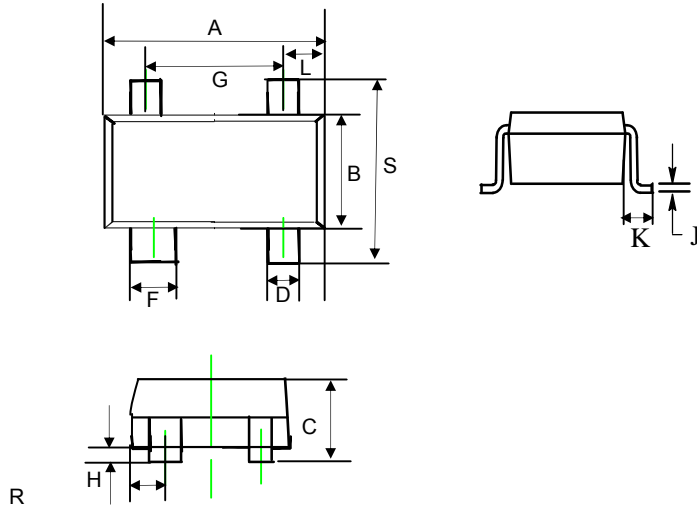


Fig.6 Input Capacitance Circuit



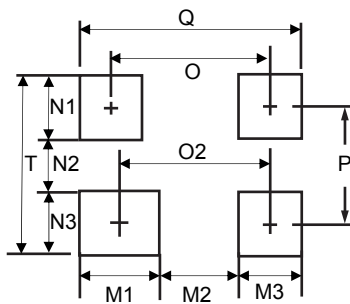
Product Dimensions



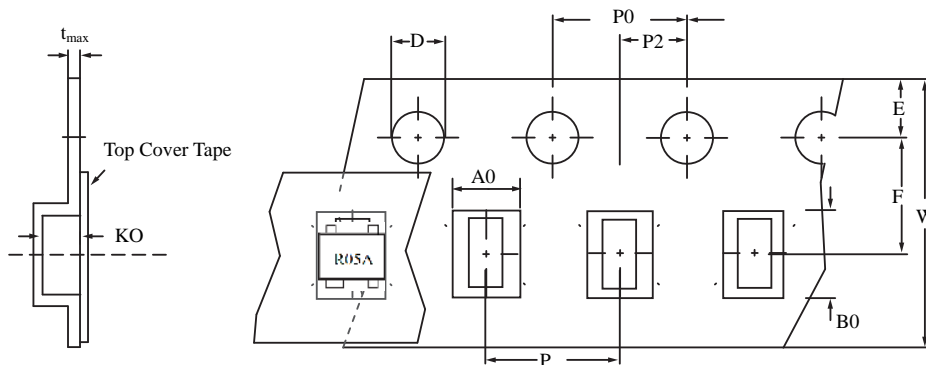
SOT-143

Dim	millimeters	
	min	max
A	2.80	3.04
B	1.20	1.39
C	0.84	1.14
D	0.39	0.50
F	0.79	0.93
G	1.78	2.03
H	0.013	0.10
J	0.08	0.15
K	0.46	0.60
L	0.445	0.60
R	0.72	0.83
S	2.11	2.48
N1	0.85	
N2	1.05	
N3	0.85	
M1	1.20	
M2	0.80	
M3	0.85	
O	2.00	
O2	1.80	
P	1.90	
Q	2.85	
T	2.75	

PAD Dimensions



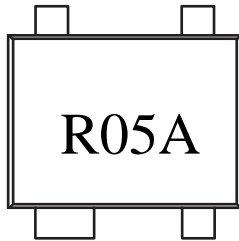
Package Information



Unit:mm

A0	B0	K0	D	E	F	W	P0	P2	P	tmax
3.10±0.10	2.70± 0.10	1.35±0.10	1.50±0.10	1.75±0.10	3.50±0.05	8.00±0.30	4.00± 0.10	2.00± 0.05	4.00± 0.10	0.25

Marking



Order Information

Device	Package	Net Weight	Carrier	Quantity	HSF Status
SPESP5VT143-4U	SOT-143	0.0086g	Tape & Reel	3000pcs	RoHS compliant