SR05

LOW CAPACITANCE TVS ARRAY / ESD ARRAY

FEATURES

- ESD protection to
  IEC 61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
  IEC 61000-4-4 (EFT) 40A (5/50ns)
  IEC 61000-4-5 (Lightning) 24A (8/20μs)
- Array of surge rated diodes with internal TVS Diode
- Protects two I/O lines
- Low capacitance (<10pF) for high-speed interfaces
- Low clamping voltage
- Low operating voltage: 5.0V
- Solid-state silicon-avalanche technology

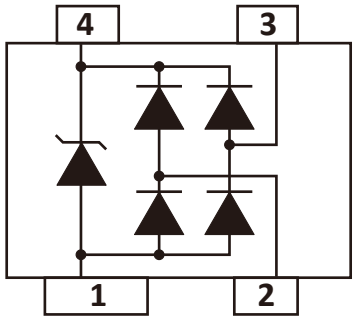
SOT-143

APPLICATIONS

- USB Power & Data Line Protection
- Ethernet 10BaseT
- I^2C Bus Protection
- Video Line Protection
- T1/E1 secondary IC Side Protection
- Portable Electronics
- Microcontroller Input Protection
- WAN/LAN Equipment
- ISDN S/T Interface

RoHS Compliant

Pin Configuration



Absolute Maximum Rating (Tamb=25°C unless otherwise specified)

Rating	Symbol	Value	Units
Peak Pulse Power (tp = 8/20μs)	P_{pk}	500	Watts
Peak Pulse Current (tp = 8/20μs)	I_{PP}	25	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	15 8	kV
Lead Soldering Temperature	T_L	260 (10 sec.)	℃
Operating Temperature	T_J	-55 to +125	℃
Storage Temperature	T_{STG}	-55 to +150	℃

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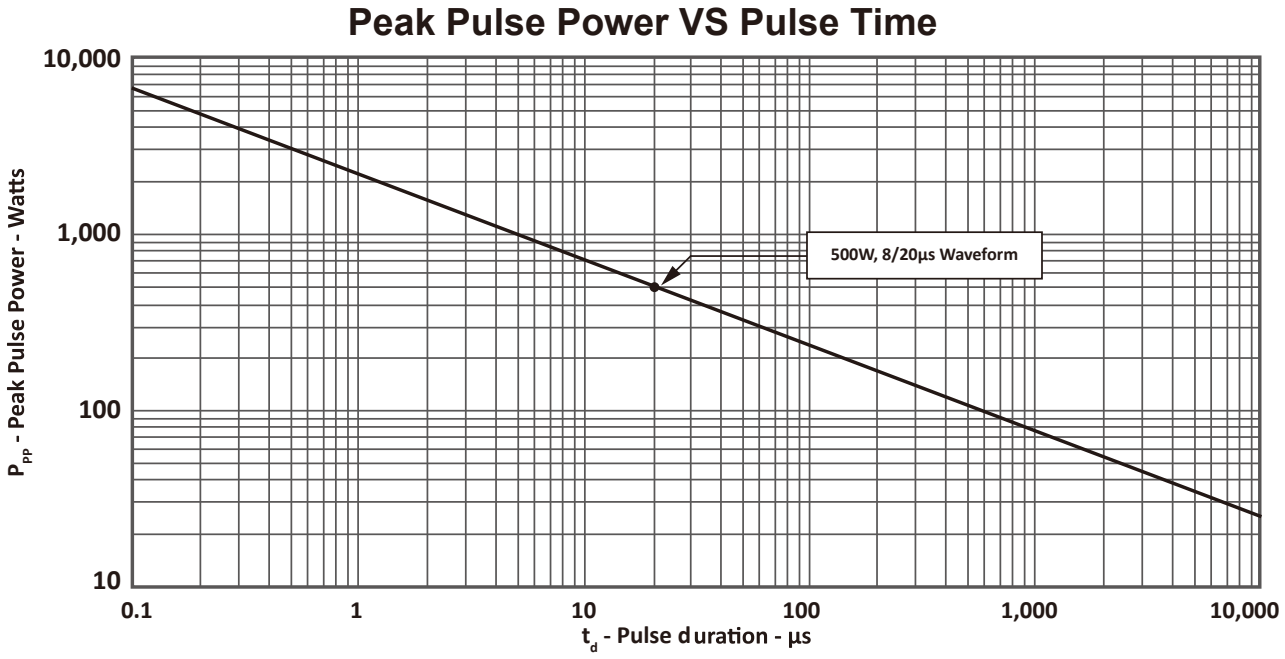
● Electrical Characteristics(Tamb=25 °C)

Parameter	Symbol	Conditions	Minimum	Typical	Maximum	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, T=25°C			5	μA
Clamping Voltage	V_C	I_{PP} = 1A, tp = 8/20μs			9.8	V
Clamping Voltage	V_C	I_{PP} = 10A, tp = 8/20μs			12	V
Clamping Voltage	V_C	I_{PP} = 25A, tp = 8/20μs			20	V
Junction Capacitance	C_j	Between I/O pins and Ground V_R = 0V, f = 1MHz		6	10	pF
		Between I/O pins V_R = 0V, f = 1MHz		3		pF

● Electrical Characteristics Curve



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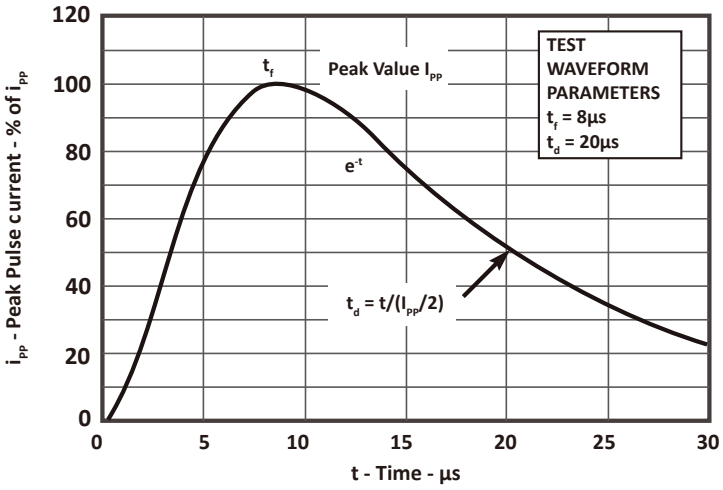
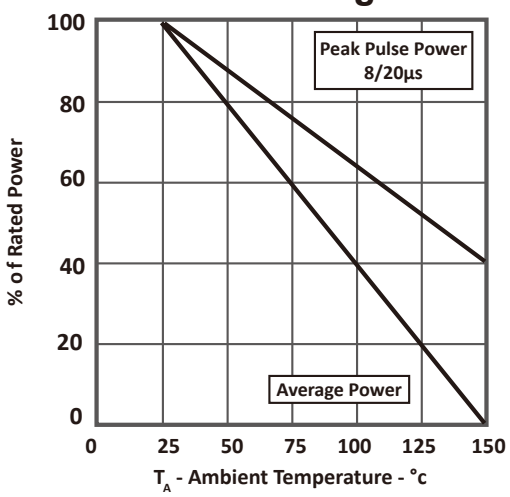
● Electrical Characteristics Curve

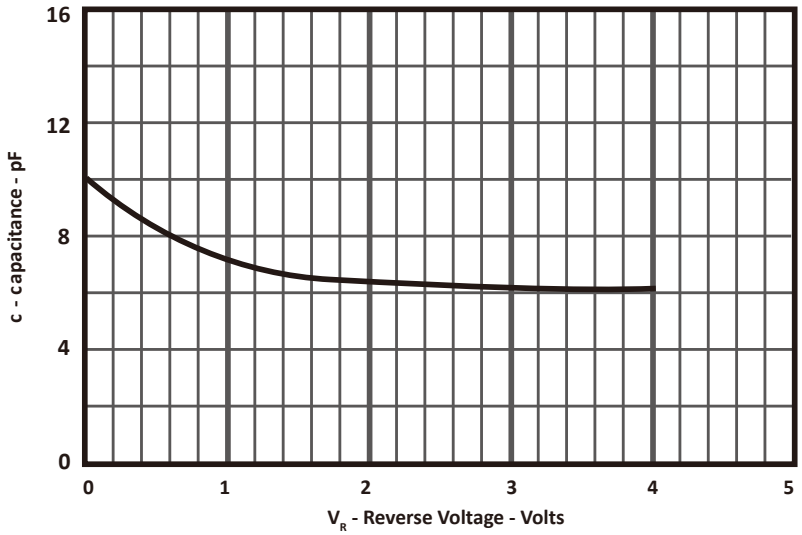
Pulse Waveform



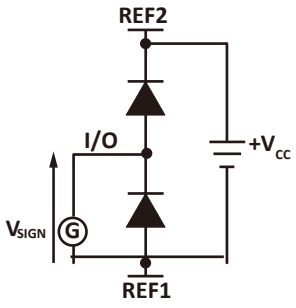
Power Derating Curve



Typcal Reverse Voltage VS Capacitance



Input Capacitance Circuit



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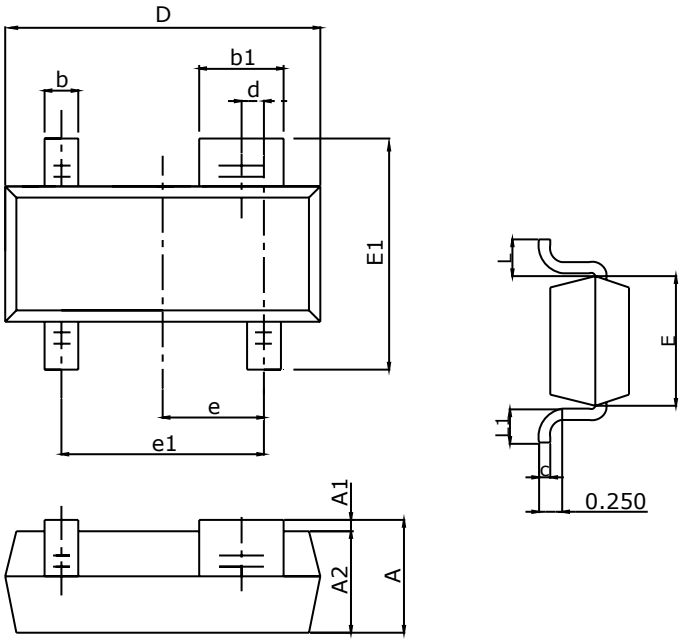
SOT-143 PACKAGE OUTLINE DIMENTION



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	MIN	MAX
A	0.90	1.15	0.035	0.045
A1	0.00	0.10	0.000	0.004
A2	0.90	1.05	0.035	0.041
b	0.30	0.50	0.012	0.020
b1	0.75	0.90	0.030	0.035
c	0.08	0.15	0.003	0.006
D	2.80	3.00	0.110	0.118
d	0.20TYP		0.008TYP	
E	1.20	1.40	0.047	0.055
E1	2.25	2.55	0.089	0.10
e	0.95TYP		0.037TYP	
e1	1.80	2.00	0.071	0.079
L	0.55REF		0.022REF	
L1	0.30	0.50	0.012	0.020