



SR05

LOW CAPACITANCE TVS ARRAY / ESD ARRAY

FEATURES

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

SOT-143

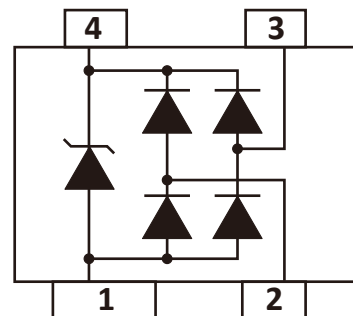


APPLICATIONS

- USB Power & Data Line Protection
- Ethernet 10BaseT
- I²C Bus Protection
- Video Line Protection
- T1/E1 secondary IC Side Protection
- Portable Electronics
- Microcontroller Input Protection
- WAN/LAN Equipment
- ISDN S/T Interface



Pin Configuration



Absolute Maximum Rating (T_{amb}=25°C unless otherwise specified)

Rating	Symbol	Value	Units
Peak Pulse Power (t _p = 8/20 μs)	P _{pk}	500	Watts
Peak Pulse Current (t _p = 8/20 μs)	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.)	°C
Operating Temperature	T _J	-55 to +125	°C
Storage Temperature	T _{STG}	-55 to +150	°C



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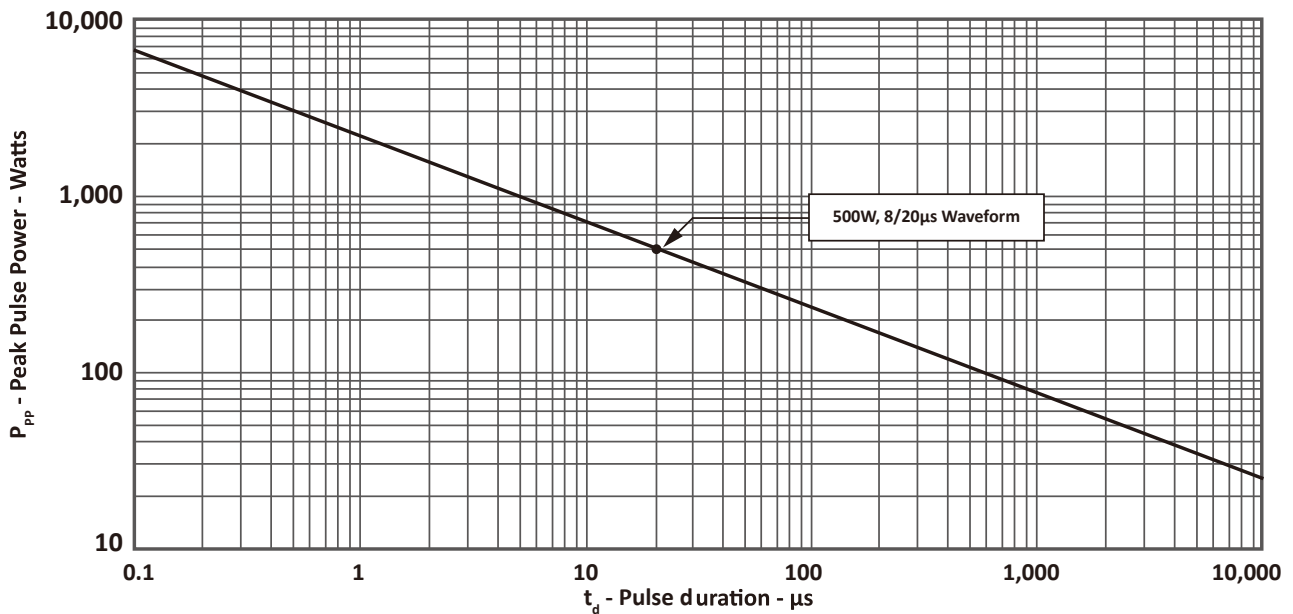
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● Electrical Characteristics(Tamb=25 °C)

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	$V_{RWM} = 5V, T=25^{\circ}C$			5	μA
Clamping Voltage	V_C	$I_{PP} = 1A, t_p = 8/20\mu s$			9.8	V
Clamping Voltage	V_C	$I_{PP} = 10A, t_p = 8/20\mu s$			12	V
Clamping Voltage	V_C	$I_{PP} = 25A, t_p = 8/20\mu s$			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

Peak Pulse Power VS Pulse Time



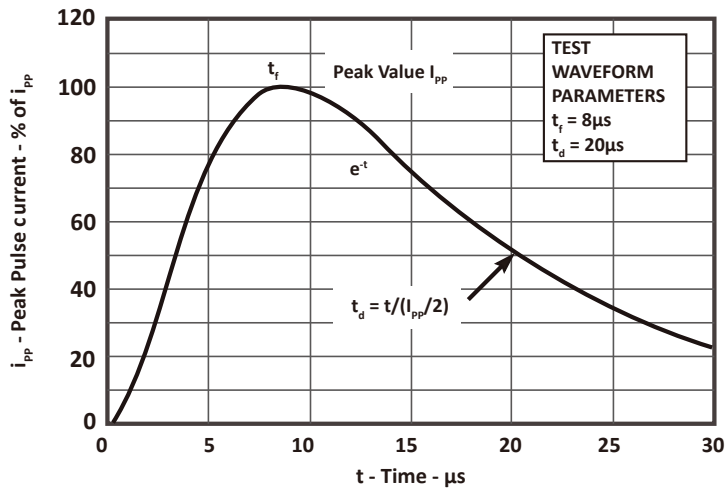


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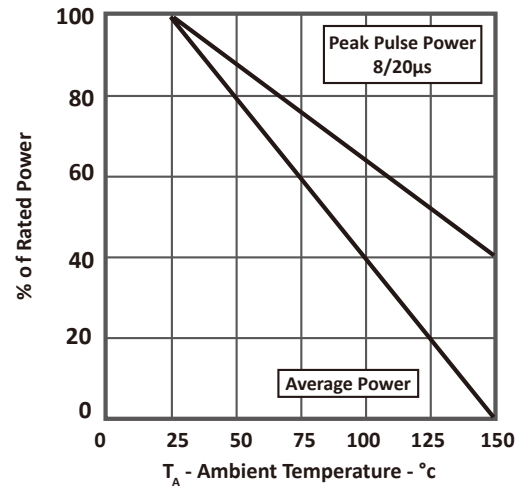
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● Electrical Characteristics Curve

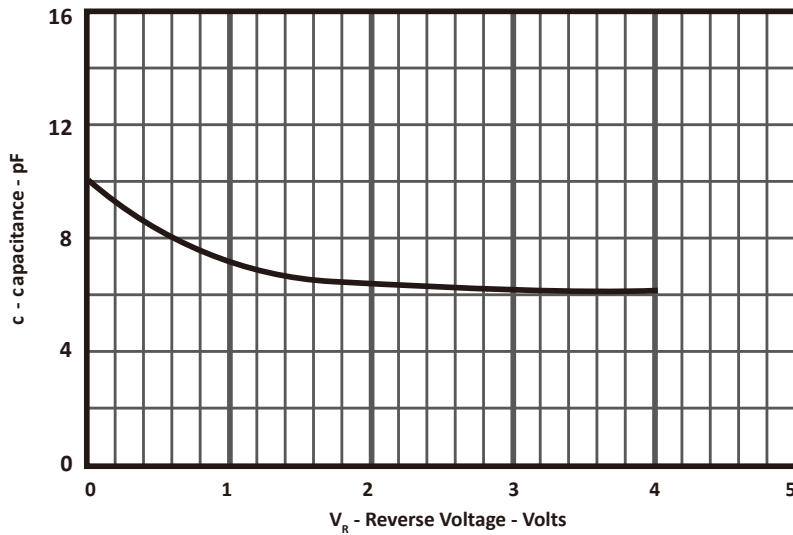
Pulse Waveform



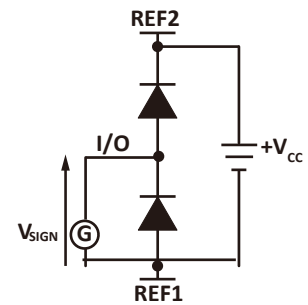
Power Derating Curve



Typical Reverse Voltage VS Capacitance



Input Capacitance Circuit

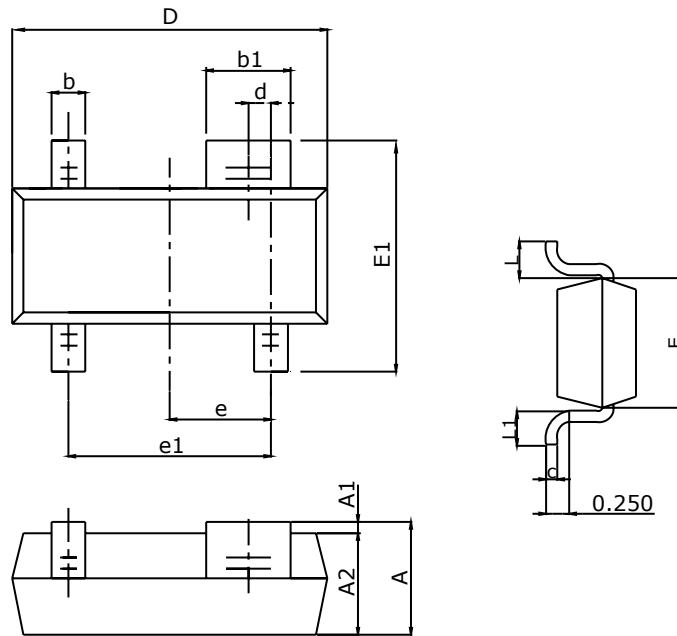




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SOT-143 PACKAGE OUTLINE DIMENTION



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