

SR05

ESD Protection Diode

VOLTAGE 5 Volt

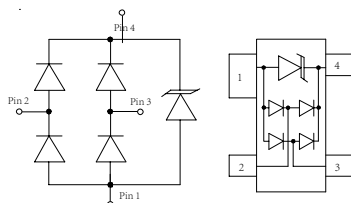
FEATURES

- Low capacitance for high-speed data line
- Low reverse clamping voltage
- Protects two data lines and one power line
- IEC 61000-4-2 $\pm 30\text{KV}$ air, $\pm 30\text{KV}$ contact
- Lead free in compliance with EU RoHS

MECHANICAL DATA

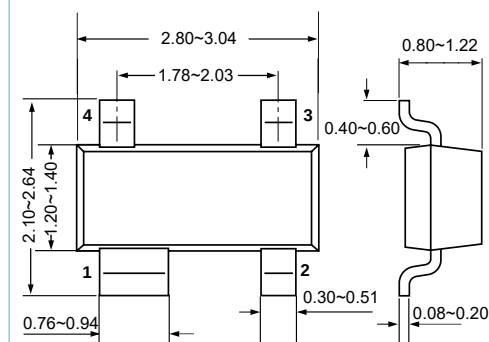
- Case Material: Molded Plastic.
- UL Flammability Classification Rating 94V-0

Schematic Diagram



SOT-143

Unit:mm



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

Parameter	Symbol	Limit	Unit
JESD22-A114-B ESD Voltage	$V_{\text{ESD}}^{(1)}$	± 16	kV
ESD Voltage		± 0.4	
Peak Pulse Power	$P_{\text{PK}}^{(2)}$	500	W
Peak Pulse Current	$I_{\text{PP}}^{(2)}$	25	A
Junction Temperature	T_j	125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 ~ +150	$^\circ\text{C}$

(1).Device stressed with ten non-repetitive ESD pulses.

(2).Non-repetitive current pulse 8/20 μs exponential decay waveform according to IEC61000-4-5.

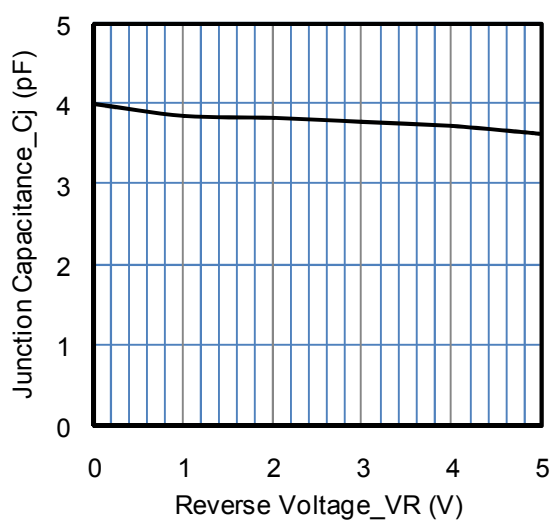
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ELECTRICAL CHARACTERISTICS($T_A = 25^{\circ}\text{C}$ unless otherwise noted)

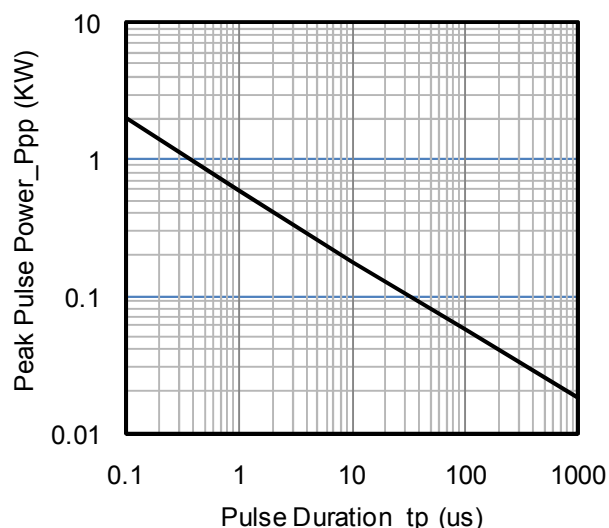
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V_{RWM}			5	V	
Breakdown Voltage	V_{BR}	6			V	$I_T = 1\text{mA}$
Reverse Leakage Current	I_R			0.5	μA	$V_{RWM} = 5\text{V}$
Clamping Voltage	V_C			9	V	$I_{PP} = 1\text{A}$ (8 x 20 μs pulse)
Clamping Voltage	V_C			20	V	$I_{PP} = 25\text{A}$ (8 x 20 μs pulse)
Junction Capacitance	C_J			6	pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$, between I/O pins and GND
Junction Capacitance	C_J		3		pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$, between I/O pins

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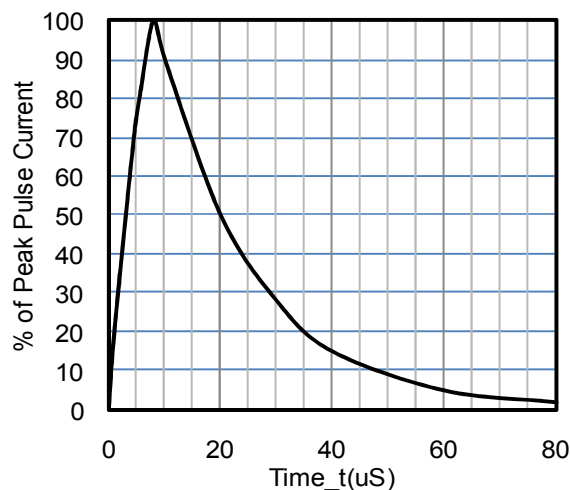
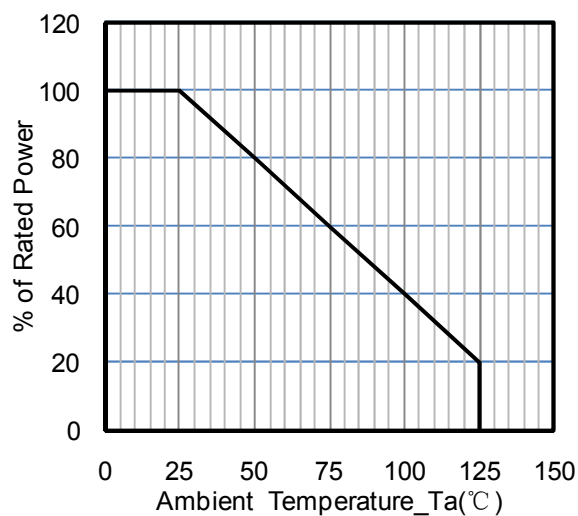
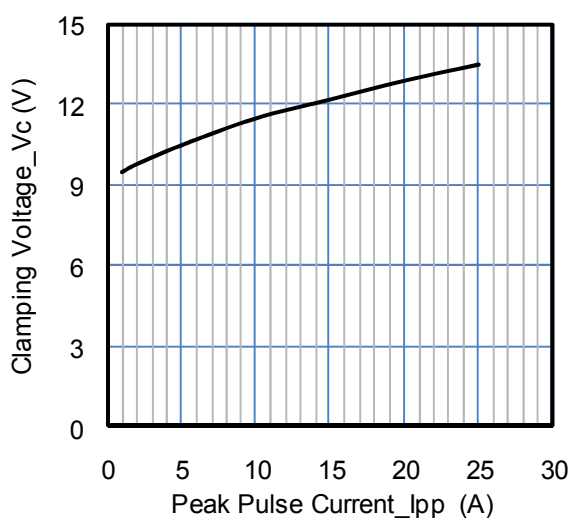
Typical Characteristics



Junction Capacitance vs. Reverse Voltage



Peak Pulse Power vs. Pulse Time



8 X 20uS Pulse Waveform

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ORDER INFORMATION

- Packing information

Part Number	Case	Reel Size	QUANTITY
SR05	SOT-143	7 Inch	3000