

DESCRIPTION

The RSTD5A8T is ultra low capacitance TVS arrays designed to protect high speed data interfaces. It has been specifically designed to protect sensitive components which is connected to high-speed data and transmission lines from overvoltage caused by electrostatic(ESD) , cable discharge events(CDE) and electrical fast transients(EFT).

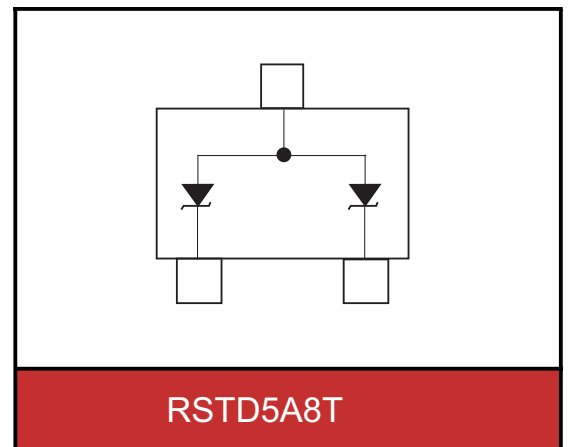
It has a typical capacitance of only 0.8pF(typ.).

This means it can be used on circuits operating in excess of 3GHz without signal attenuation.

HBM : ±8kV
Air Mode : ±15kV

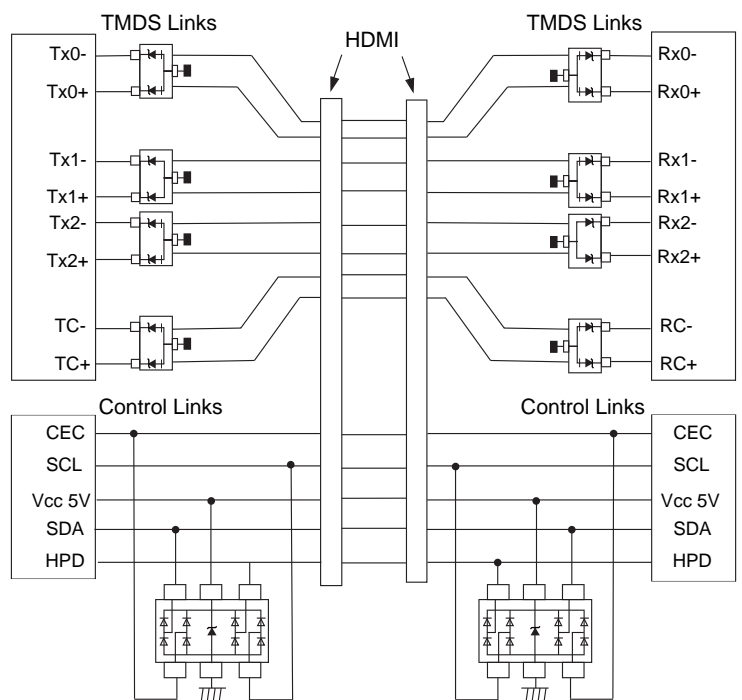
SPECIFICATION FEATURES

- IEC61000-4-2 ESD 15KV Air,8KV contact compliance
- Small SOT-323 surface mount package
- Protects two high speed data lines
- Ultra low capacitance and clamping voltages
- Low leakage current
- Solid-state silicon avalanche technology
- Lead Free/RoHS compliant
- Solder reflow temperature:Pure Tin-Sn,260-270°C
- Flammability rating: UL 94V-0



APPLICATIONS

- HDMI interface protection
- Mobile display digital interface
- RF/Antenna circuits
- USB 2.0 & Firewire ports
- GaAs photodetector protection
- HBT power Amp protection
- Infiniband transceiver protection



MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Peak pulse power (tp=8/20μs waveform)	P _{PP}	200	W
ESD voltage (HBM contact)	V _{ESD}	±8	kV
ESD voltage (AIR contact)		±15	
Storage & operating temperature range	T _{STG} , T _J	-55~+150	°C

ELECTRICAL CHARACTERISTICS (T_J=25°C)

RSTD5A8T (Marking: B BU)

Rating	Symbol	Condition	Min.	Typ.	Max.	Unit
Reverse stand-off voltage	V _{RWM}				5	V
Reverse breakdown voltage	V _{BR}	I _{BR} =1mA	6			V
Reverse leakage current	I _R	V _R =5V each I/O pin			1	μA
Clamping voltage (tp=8/20μs)	V _C	I _{PP} =1A			15	V
Off state junction capacitance	C _J	0Vdc, f=1MHz Between I/O pins and GND		0.8		pF

TYPICAL CHARACTERISTICS CURVES

Figure 1. Power Derating Curve

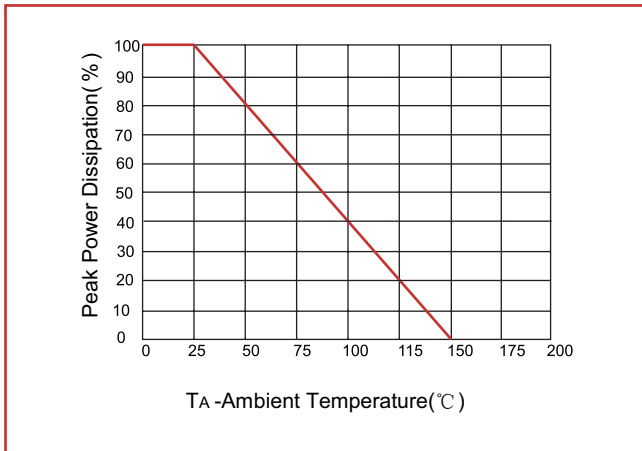


Figure 2. Pulse Waveforms

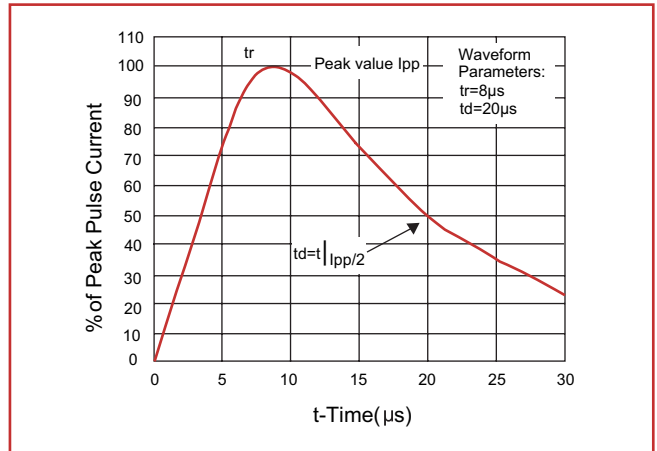


Figure 3. Non-Repetitive Peak Pulse vs Pulse Time

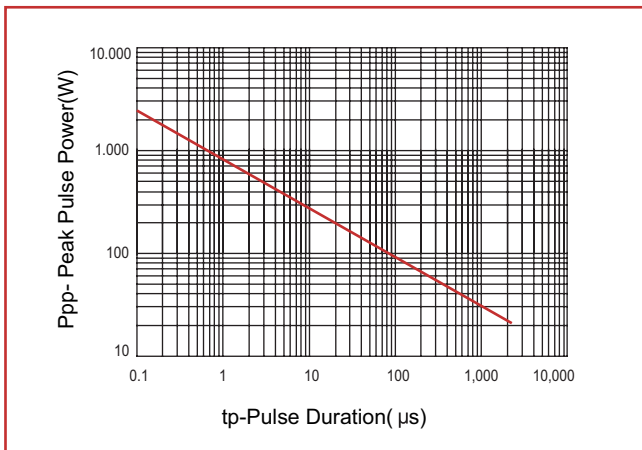
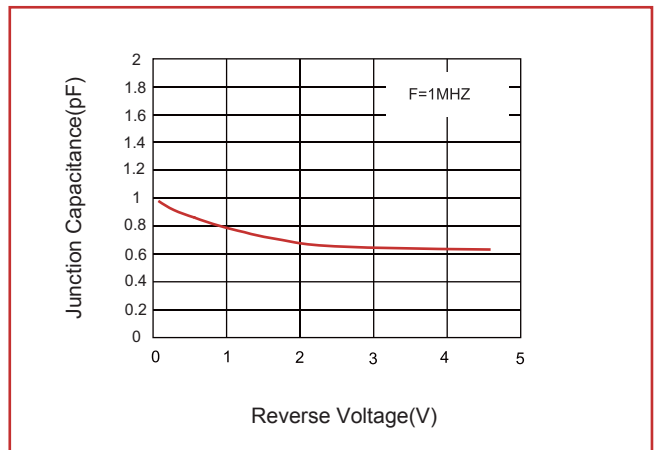


Figure 4. Capacitance vs. Reverse Voltage



PACKAGE AND SUGGESTED PAD LAYOUT DIMENSION

SOT-323(unit:mm)

