

LOW CAPACITANCE SINGLE TVS 350W FOR HIGH SPEED DATA LINES

This Transient Voltage Suppressor is intended to Protect Sensitive Equipment against Electrostatic Discharge and Transient Events as well to offer a Minimum insertion loss in high speed data communication transmission line ports used in Portable Consumer, Computing and Networking Applications.



PRELIMINARY

SPECIFICATION FEATURES

- Working Peak Reverse Voltage Range 5, 12, 15 and 24V
- Max Power Dissipation of 350W, 8/20μs
- Maximum Leakage Current of 2μA
- IEC61000-4-2 Compliance 15kV Air, 8kV Contact Discharge
- Typical capacitance of 7pF (Unidirectional), 5pF (Bi-directional) at 0Vdc
- Unidirectional and Bi-directional versions available
- 100% Tin Matte lead finish (RoHS Compliant)

APPLICATIONS

- Mobile Phones and accessories
- Universal Serial Bus (USB1.1 and 2.0) Applications
- Portable Consumer Electronics
- Instrumentation Equipment
- Video I/O Ports

MAXIMUM RATINGS

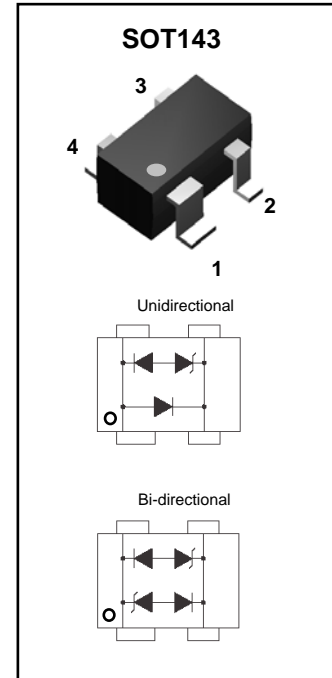
Rating	Symbol	Value	Units
Peak Pulse Power 8/20μs Waveform	P_{pp}	350	W
ESD Voltage (HBM)	V_{ESD}	>25	kV
Operating Temperature Range	T_J	-55 to +150	°C
Storage Temperature Range	T_{stg}	-55 to +150	°C
Lead Soldering Temperature (max 10 s)	T_L	260	°C

ELECTRICAL CHARACTERISTICS $T_j = 25^\circ C$

PJSLC054, PJSLC054C

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{WRM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_{BR} = 1mA$	6			V
Reverse Leakage Current	I_R	$V_R = 5V$			2	μA
Clamping Voltage (8/20μs)	V_C	$I_{pp} = 5A$			10	V
Clamping Voltage (8/20μs)	V_C	$I_{pp} = 17A$			18.3	V
Maximum Peak Pulse Current	I_{pp}	8/20 μs Waveform			24	A
Off State Junction Capacitance	C_j	0 Vdc Bias f = 1MHz Between pins 1,4 and 2,3		7 (5)*		pF

* Note: C_j values - Unidirectional (Bi-directional)



ELECTRICAL CHARACTERISTICS $T_j = 25^\circ\text{C}$
PJSLC124, PJSLC124C

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{WRM}				12	V
Reverse Breakdown Voltage	V_{BR}	$I_{BR} = 1\text{mA}$	13.3			V
Reverse Leakage Current	I_R	$V_R = 12\text{V}$			2	μA
Clamping Voltage (8/20 μs)	V_C	$I_{pp} = 5\text{A}$			18	V
Clamping Voltage (8/20 μs)	V_C	$I_{pp} = 15\text{A}$			22	V
Maximum Peak Pulse Current	I_{pp}	8/20 μs Waveform			17	A
Off State Junction Capacitance	C_j	0 Vdc Bias f = 1MHz Between pins 1,4 and 2,3		7 (5)*		pF

PJSLC154, PJSLC154C

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{WRM}				15	V
Reverse Breakdown Voltage	V_{BR}	$I_{BR} = 1\text{mA}$	16.7			V
Reverse Leakage Current	I_R	$V_R = 15\text{V}$			2	μA
Clamping Voltage (8/20 μs)	V_C	$I_{pp} = 5\text{A}$			24	V
Clamping Voltage (8/20 μs)	V_C	$I_{pp} = 12\text{A}$			28	V
Maximum Peak Pulse Current	I_{pp}	8/20 μs Waveform			15	A
Off State Junction Capacitance	C_j	0 Vdc Bias f = 1MHz Between pins 1,4 and 2,3		7 (5)*		pF

PJSLC244, PJSLC244C

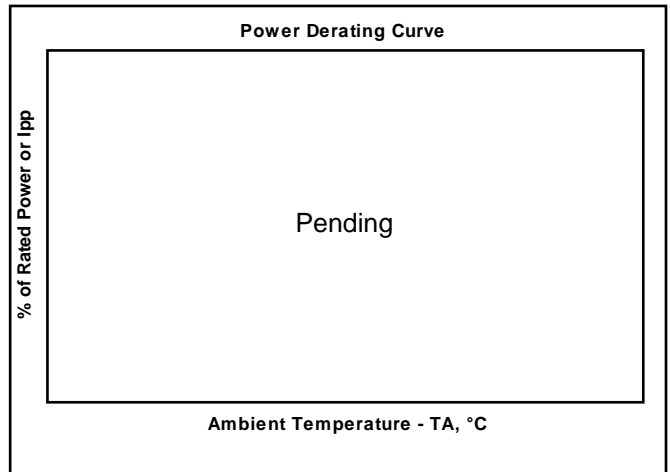
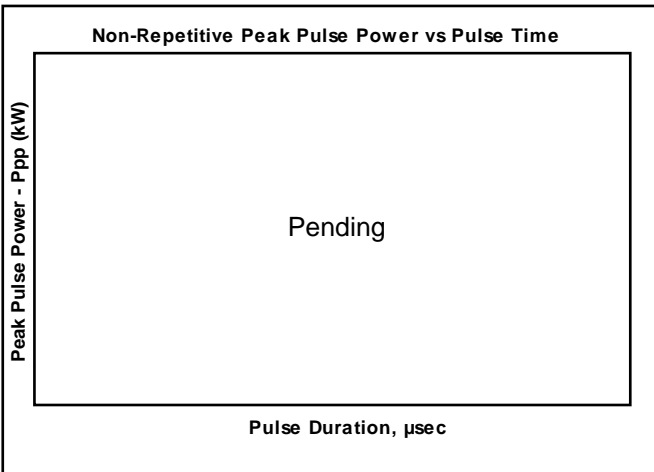
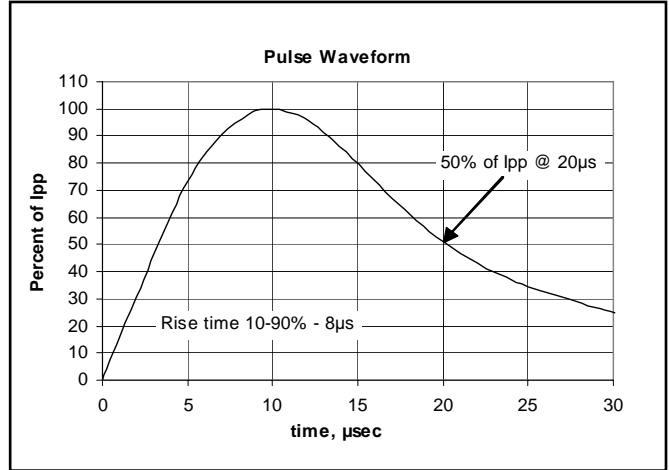
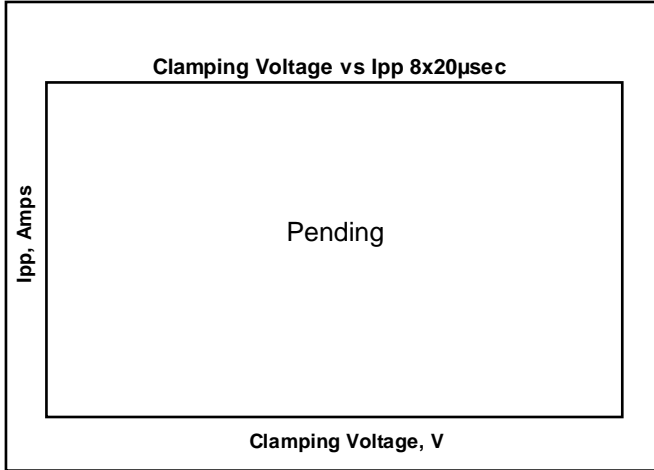
Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{WRM}				24	V
Reverse Breakdown Voltage	V_{BR}	$I_{BR} = 1\text{mA}$	26.7			V
Reverse Leakage Current	I_R	$V_R = 24\text{V}$			2	μA
Clamping Voltage (8/20 μs)	V_C	$I_{pp} = 5\text{A}$			36	V
Clamping Voltage (8/20 μs)	V_C	$I_{pp} = 8\text{A}$			43	V
Maximum Peak Pulse Current	I_{pp}	8/20 μs Waveform			10	A
Off State Junction Capacitance	C_j	0 Vdc Bias f = 1MHz Between pins 1,4 and 2,3		7 (5)*		pF

* Note: C_j values - Unidirectional (Bi-directional)

PRELIMINARY

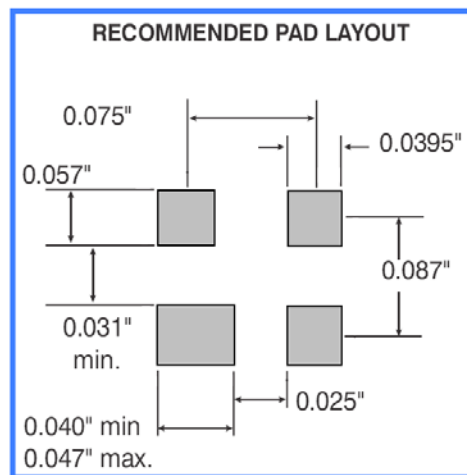
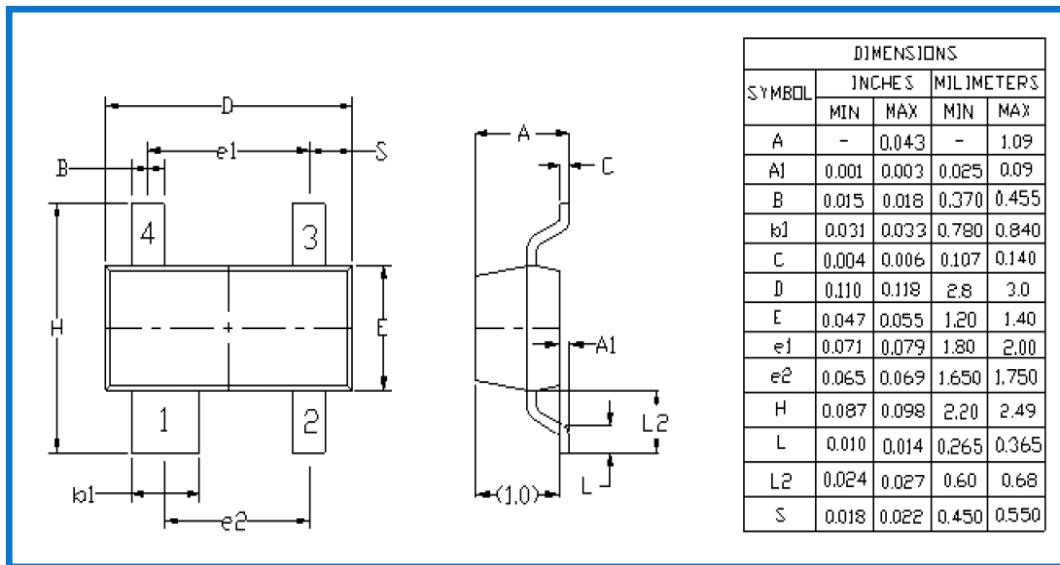
TYPICAL CHARACTERISTIC CURVES

PRELIMINARY



PACKAGE AND SUGGESTED PAD LAYOUT DIMENSIONS

PRELIMINARY



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