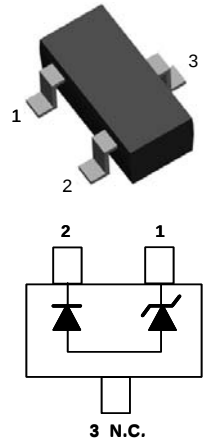
ULTRA LOW CAPACITANCE SINGLE TVS FOR HIGH SPEED DATA LINES

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



SOT23

SPECIFICATION FEATURES

- **Working Peak Reverse Voltage Range - 5, 12, 15 and 24V**
- **Maximum Leakage Current of 5µA**
- **IEC61000-4-2 Compliance 15kV Air, 8kV Contact Discharge**
- **IEC61000-4-5 17 Amps peak, 8/20 µs Waveform**
- **100% Tin Matte Finish (RoHS Compliant)**

APPLICATIONS

- **Mobile Phones and accessories**
- **Universal Serial Bus (USB1.1 and 2.0) Applications**
- **Portable Consumer Electronics**
- **Instrumentation Equipment**
- **Ethernet 10, 100 and 1000 Base Port Protection**

Device	Marking Code
PJSLC05	T1S
PJSLC12	S12
PJSLC15	S15
PJSLC24	S24

MAXIMUM RATINGS

Rating	Symbol	Value	Units
Peak Pulse Power 8/20µs Waveform	P_{pp}	400	W
Peak Pulse Current 8/20µs Waveform	I_{pp}	17	A
ESD Voltage (HBM)	V_{ESD}	>25	kV
Operating Temperature Range	T_J	-55 to +125	°C
Storage Temperature Range	T_{stg}	-55 to +150	°C
Lead Soldering Temperature (max 10 secs)	T_L	260	°C

ELECTRICAL CHARACTERISTICS Tj = 25°C

PJSLC05

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			5	µA
Clamping Voltage (8/20µs)	V_c	I_{pp} = 1 Amps			9.5	V
Clamping Voltage (8/20µs)	V_c	I_{pp} = 5 Amps			12	V
Maximum Peak Pulse Current	I_{pp}	8/20 µs Waveform			17	A
Off State Junction Capacitance	Cj	0 Vdc Bias f = 1MHz Between pins 1 and 2			1.2	pF

ELECTRICAL CHARACTERISTICS Tj = 25°C

PJSLC12

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{WRM}				12	V
Reverse Breakdown Voltage	V_{BR}	I_{BR} = 1 mA	13.3			V
Reverse Leakage Current	I_R	V_R = 12V			1	µA
Clamping Voltage (8/20µs)	V_c	I_{pp} = 1 Amps			19	V
Clamping Voltage (8/20µs)	V_c	I_{pp} = 5 Amps			24	V
Maximum Peak Pulse Current	I_{pp}	8/20 µs Waveform			12	A
Off State Junction Capacitance	Cj	0 Vdc Bias f = 1MHz Between pins 1 and 2			1.2	pF

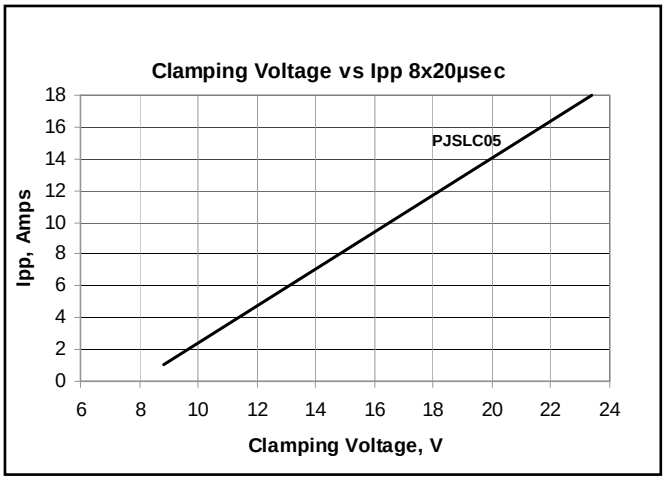
PJSLC15

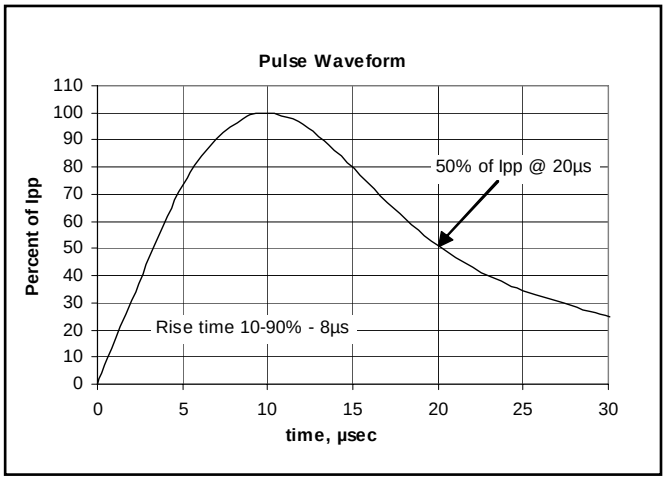
Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{WRM}				15	V
Reverse Breakdown Voltage	V_{BR}	I_{BR} = 1 mA	16.7			V
Reverse Leakage Current	I_R	V_R = 15V			1	µA
Clamping Voltage (8/20µs)	V_c	I_{pp} = 1 Amps			24	V
Clamping Voltage (8/20µs)	V_c	I_{pp} = 5 Amps			30	V
Maximum Peak Pulse Current	I_{pp}	8/20 µs Waveform			10	A
Off State Junction Capacitance	Cj	0 Vdc Bias f = 1MHz Between pins 1 and 2			1.2	pF

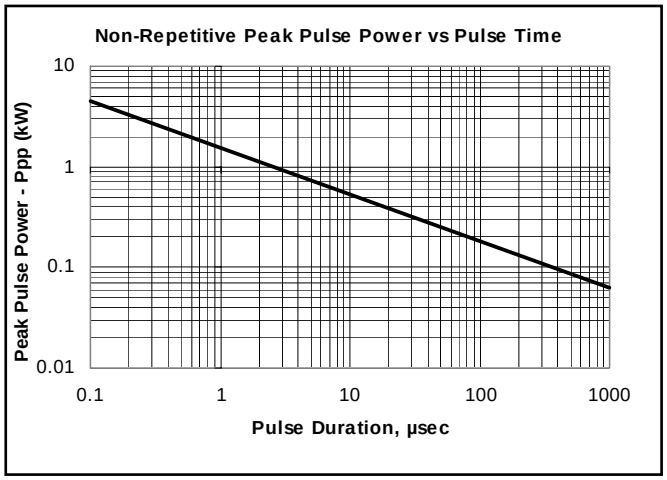
PJSLC24

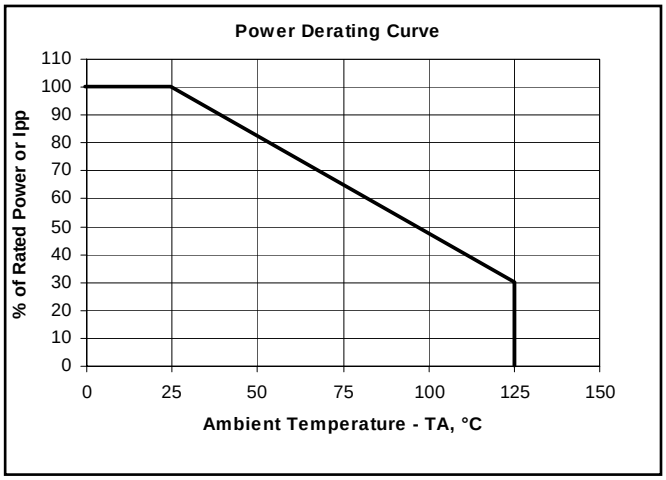
Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{WRM}				24	V
Reverse Breakdown Voltage	V_{BR}	I_{BR} = 1 mA	26.7			V
Reverse Leakage Current	I_R	V_R = 24V			1	µA
Clamping Voltage (8/20µs)	V_c	I_{pp} = 1 Amps			43	V
Clamping Voltage (8/20µs)	V_c	I_{pp} = 5 Amps			55	V
Maximum Peak Pulse Current	I_{pp}	8/20 µs Waveform			5	A
Off State Junction Capacitance	Cj	0 Vdc Bias f = 1MHz Between pins 1 and 2			1.2	pF

TYPICAL CHARACTERISTIC CURVES

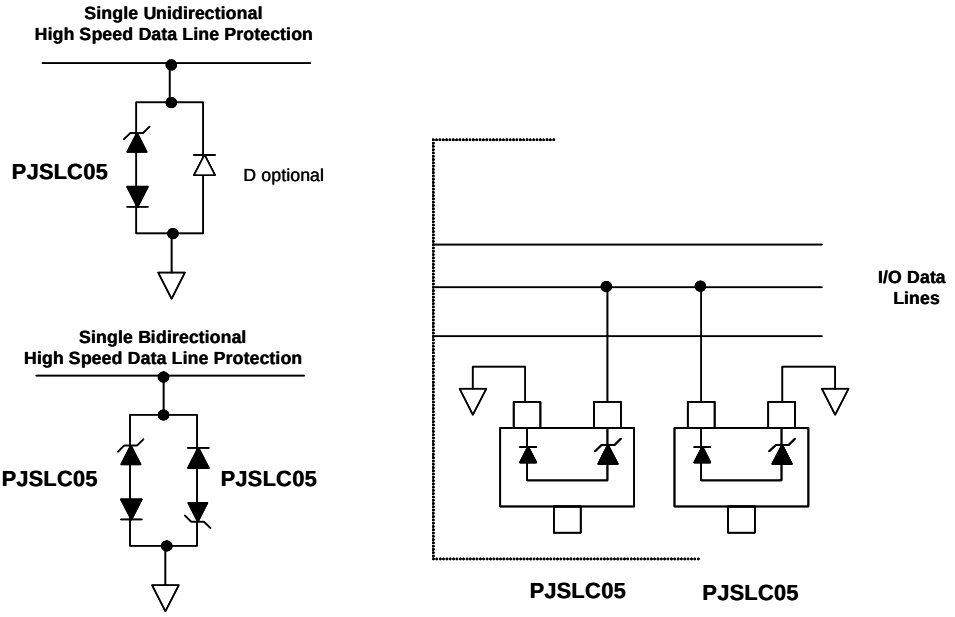




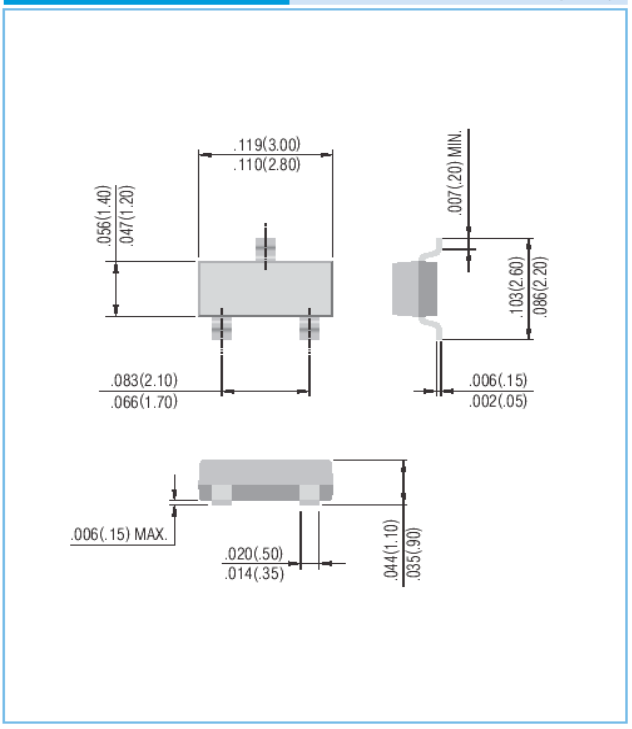




TYPICAL APPLICATION CONFIGURATIONS



SOT-23 Unit: inch (mm)



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