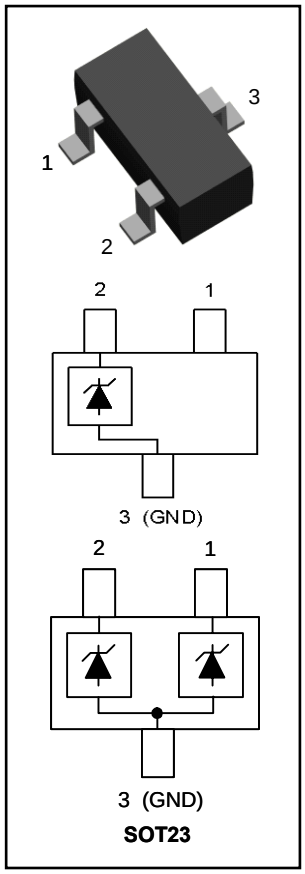
SINGLE AND DUAL LOW CAPACITANCE ESD / TRANSIENT PROTECTOR FOR 1.5 V SYSTEMS

This patented Single and Dual Zener like ESD/Transient Protector has been designed to protect Sensitive Equipment against ESD and prevent Latch-Up events, offering a minimum insertion loss in High speed Data Lines in Communications ports used in Portable Consumer, Computing and Networking Applications operating at 1.5V and below.



SPECIFICATION FEATURES

- **Maximum Capacitance of 10pF @ 0Vdc, 1 MHz**
- **Maximum Leakage Current of 2µA @ 1.5V**
- **Breakdown Voltage of 1.9V @ 1mA**
- **IEC61000-4-2 Compliance 15kV Air, 8kV Contact Discharge**
- **Industry Standard SOT23 Package**

APPLICATIONS

- **High Speed Data Transmission Lines**
- **Microcontroller and Microprocessor I/O Interfaces**
- **Portable Consumer Electronics**
- **Instrumentation Equipment**
- **LAN/WAN Equipment**

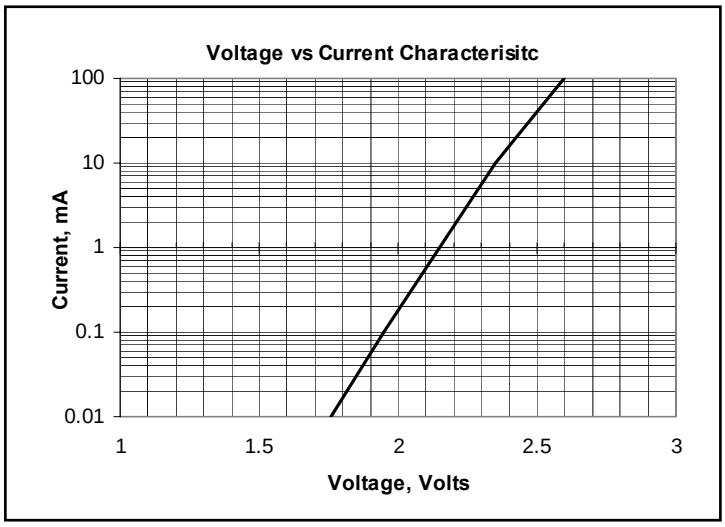
MAXIMUM RATINGS

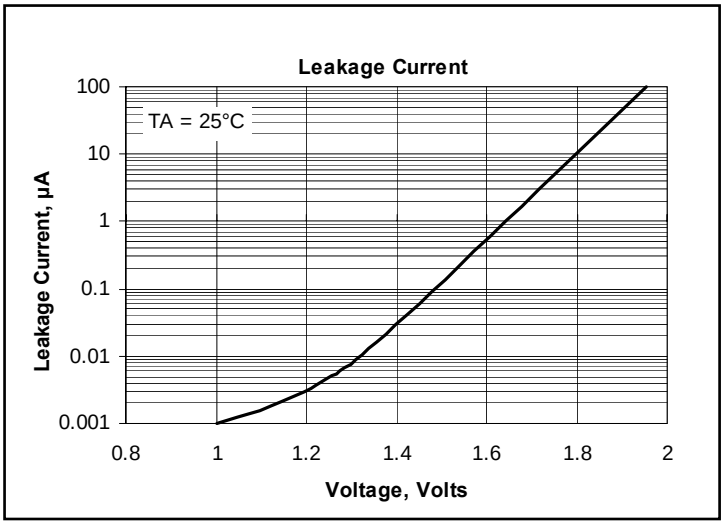
Rating	Symbol	Value	Units
Peak Pulse Power (8/20µs Waveform)	P_{pp}	50	W
ESD Voltage (HBM)	V_{ESD}	>25	kV
Operating Temperature Range	T_J	-55 to +125	°C
Storage Temperature Range	T_{stg}	-55 to +150	°C
Lead Soldering Temperature (max 10 s)	T_L	260	°C

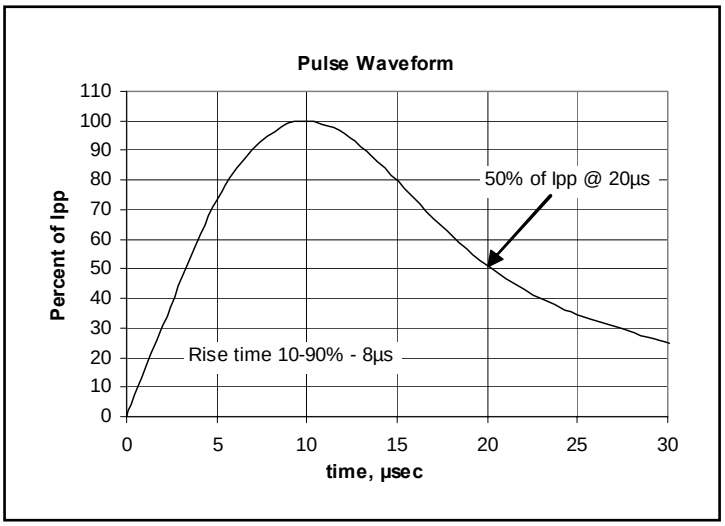
ELECTRICAL CHARACTERISTICS Tj = 25°C

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{WRM}				1.5	V
Reverse Breakdown Voltage	V_{BR}	I_{BR} = 100µA	1.75	1.8		V
		I_{BR} = 1mA	1.9	2.2		V
Reverse Leakage Current	I_R	V_R = 1.5V			2.0	µA
Clamping Voltage (8/20µs)	V_c	I_{pp} = 1 A			4	V
Clamping Voltage (8/20µs)	V_c	I_{pp} = 3 A			7	V
Maximum Peak Pulse Current	I_{pp}	8/20 µs Waveform			5	A
Off State Junction Capacitance	Cj	0 Vdc Bias f = 1MHz Between I/O pins and pin 3		6	10	pF

TYPICAL CHARACTERISTICS Tj = 25°C

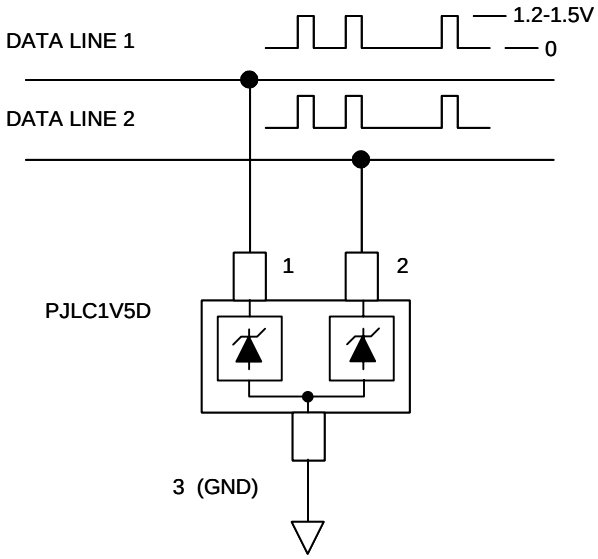




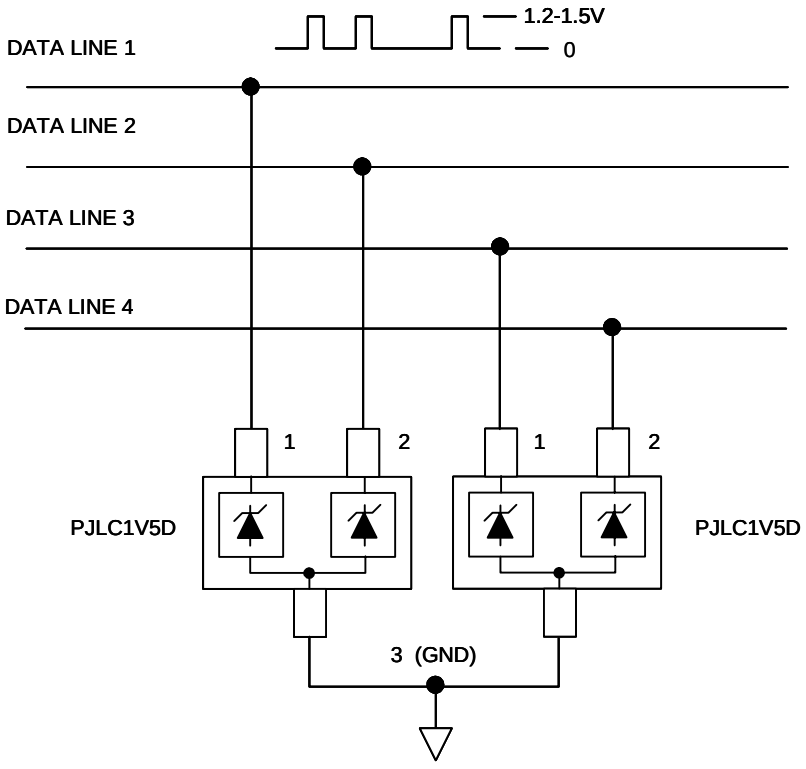


TYPICAL APPLICATION INFORMATION

ESD Protection for two Data Lines

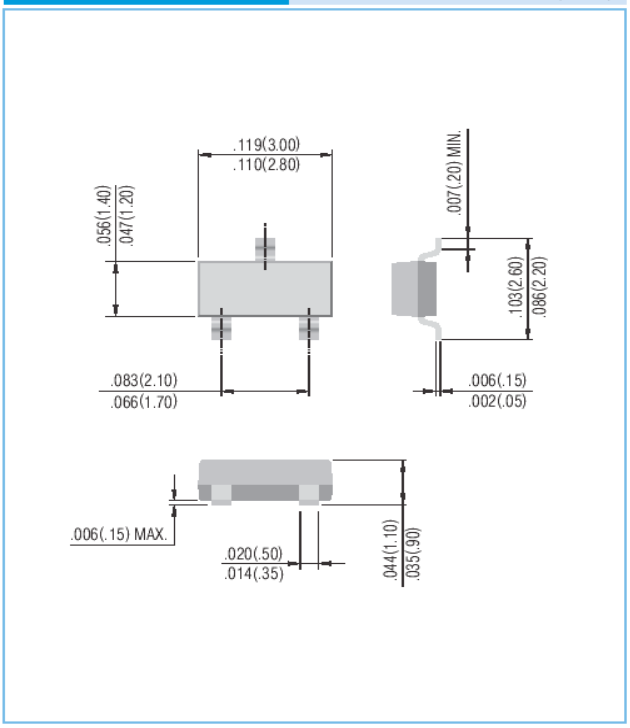


ESD Protection for Four Data Lines

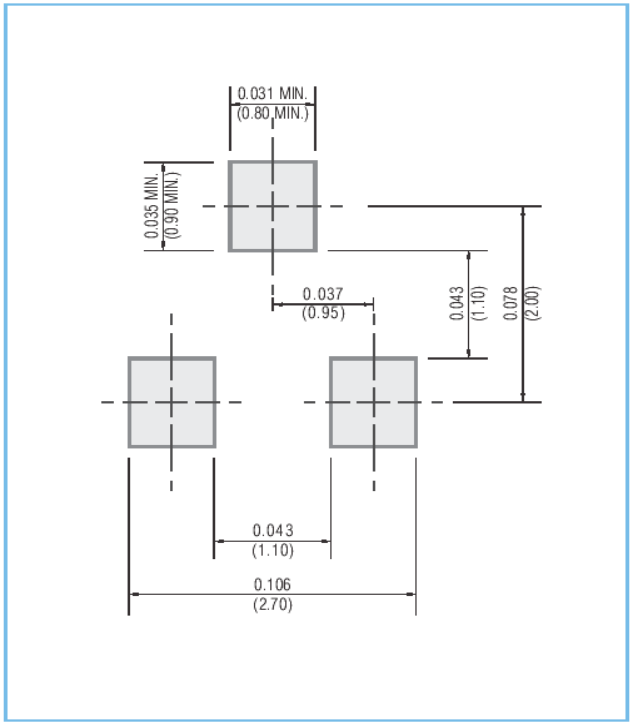


PACKAGE AND PAD LAYOUT DIMENSIONS

SOT-23 Unit: inch (mm)



SOT-23 Unit: inch (mm)



Device	Marking Code
PJLC1V5	T1L
PJLC1V5D	T2L