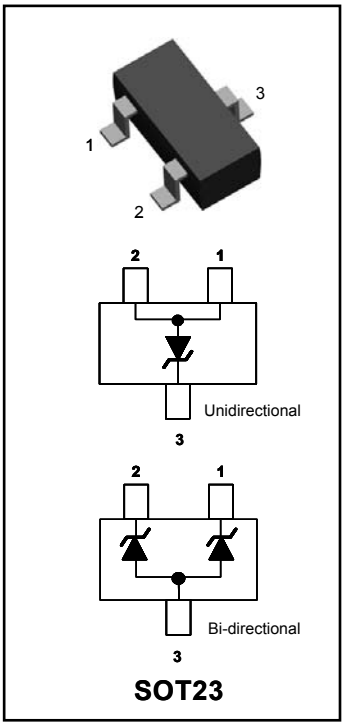
PANJIT SEMI CONDUCTOR

PRELIMINARY

SINGLE AND DUAL TVS FOR ESD / TRANSIENT PROTECTION

This Single and Dual Transient Protector has been designed to protect Sensitive Equipment against ESD and prevent Latch-Up events. The single unidirectional and the dual used as bi-directional devices protect up to two data lines in a single package giving the advantage of board space savings where this is a premium.



SOT23

SPECIFICATION FEATURES

- **Working Peak Reverse Voltage Range - 5 to 24V**
- **Maximum Leakage Current of 5µA**
- **IEC61000-4-2 Compliance 15kV Air, 8kV Contact Discharge**
- **Industry Standard SOT23 Package**

APPLICATIONS

- **Data Transmission Line Ports**
- **Computer Monitor Interface Port Protection**
- **Portable Consumer Electronics**
- **Instrumentation Equipment**

MAXIMUM RATINGS

Rating	Symbol	Value	Units
Peak Pulse Power 8/20µs Waveform	P_{ppm}	500	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 secs)	T_L	260	°C

ELECTRICAL CHARACTERISTICS Tj = 25°C

PJSOT05, PJSOT05C (Bi-directional)

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 (820µs)	V_c	I_{pp} = 20A			10	V
Maximum Peak Pulse Current	I_{pp}	8/20 µs Waveform			30	A
Off State Capacitance (Unidirectional)	Cj	0 Vdc Bias f = 1MHz			550	pF
Off State Capacitance (Bi-directional)	Cj	0 Vdc Bias f = 1MHz between pin 1 and 2			220	pF

PRELIMINARY

ELECTRICAL CHARACTERISTICS Tj = 25°C

PJSOT12, PJSOT12C (Bi-directional)

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{WRM}				12	V
Reverse Breakdown Voltage	V_{BR}	I_{BR} = 1mA	13.3			V
Reverse Leakage Current	I_R	V_R = 12V			5	µA
Clamping Voltage (820µs)	V_c	I_{pp} = 20A			25	V
Maximum Peak Pulse Current	I_{pp}	8/20 µs Waveform			24	A
Off State Capacitance (Unidirectional)	Cj	0 Vdc Bias f = 1MHz			200	pF
Off State Capacitance (Bi-directional)	Cj	0 Vdc Bias f = 1MHz between pin 1 and 2			100	pF

PJSOT15, PJSOT15C (Bi-directional)

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{WRM}				15	V
Reverse Breakdown Voltage	V_{BR}	I_{BR} = 1mA	16.7			V
Reverse Leakage Current	I_R	V_R = 15V			5	µA
Clamping Voltage (8/20µs)	V_c	I_{pp} = 20A			30	V
Maximum Peak Pulse Current	I_{pp}	8/20 µs Waveform			20	A
Off State Capacitance (Unidirectional)	Cj	0 Vdc Bias f = 1MHz			170	pF
Off State Capacitance (Bi-directional)	Cj	0 Vdc Bias f = 1MHz between pin 1 and 2			85	pF

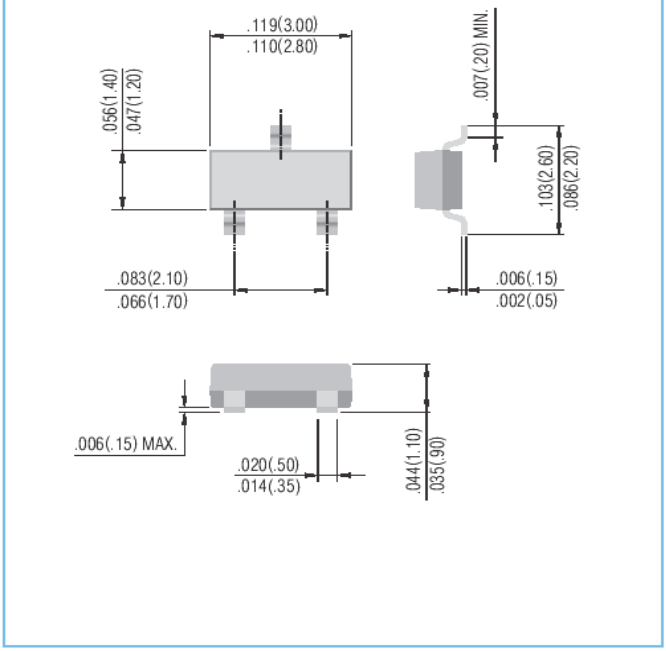
PJSOT24, PJSOT24C (Bi-directional)

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{WRM}				24	V
Reverse Breakdown Voltage	V_{BR}	I_{BR} = 1mA	26.7			V
Reverse Leakage Current	I_R	V_R = 24V			5	µA
Clamping Voltage (8/20µs)	V_c	I_{pp} = 15A			45	V
Maximum Peak Pulse Current	I_{pp}	8/20 µs Waveform			18	A
Off State Capacitance (Unidirectional)	Cj	0 Vdc Bias f = 1MHz			150	pF
Off State Capacitance (Bi-directional)	Cj	0 Vdc Bias f = 1MHz between pin 1 and 2			75	pF

PRELIMINARY

PACKAGE LAYOUT DIMENSIONS AND PAD LAYOUT

SOT-23 Unit: inch (mm)



SOT-23 Unit: inch (mm)

