

## PJSLC05~PJSLC24

### 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 Minimum insertion loss in high speed data communication transmission line ports used in Portable Consumer, Computing and Networking Applications.

#### SPECIFICATION FEATURES

- Working Peak Reverse Voltage Range-5,12,15 and 24V
- Maximum Leakage Current of 5 $\mu$ A
- IEC61000-4-2 Compliance 15kV Air, 8kV Contact Discharge
- IEC61000-4-5 17 Amps peak, 8/20 $\mu$ s Waveform
- Lead free in compliance with EU RoHS2.0 (2011/65/EU & directive)
- Green molding compound as per IEC61249 Std. . (Halogen Free)

#### MECHANICAL DATA

Case: SOT-23, Plastic

Terminals: Solderable per MIL-STD-750, Method 2026

Approx. Weight: 0.008gram

Marking:

PJSLC05	PJSLC12	PJSLC15	PJSLC24
T1S	S12	S15	S24

#### 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

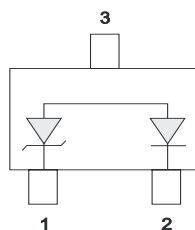
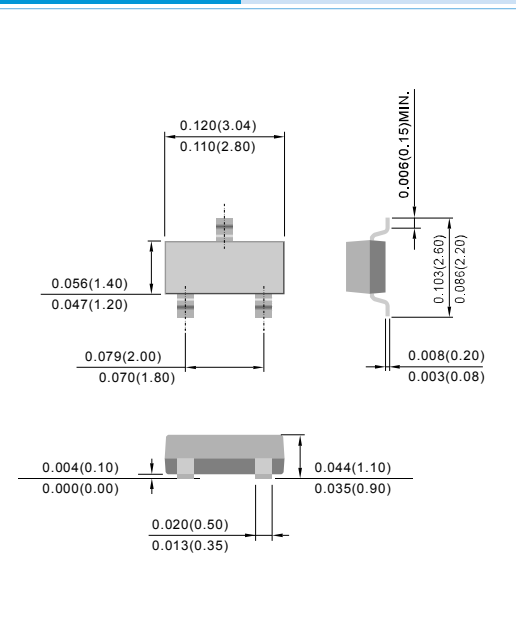


Fig. 24

#### SOT-23

Unit: inch ( mm )



#### MAXIMUM RATINGS

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power 8/20 $\mu$ s Waveform	P <sub>PP</sub>	400	W
Peak Pulse Power 8/20 $\mu$ s Waveform	I <sub>PP</sub>	17	A
ESD Voltage (HBM)	V <sub>ESD</sub>	>25	kV
Operating Temperature Range	T <sub>J</sub>	-55 to +125	°C
Storage Thermal Resistance	T <sub>STG</sub>	-55 to +150	°C
Lead Soldering Temperature (max 10 secs)	T <sub>L</sub>	260	°C



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### ELECTRICAL CHARACTERISTICS T<sub>J</sub>=25°C

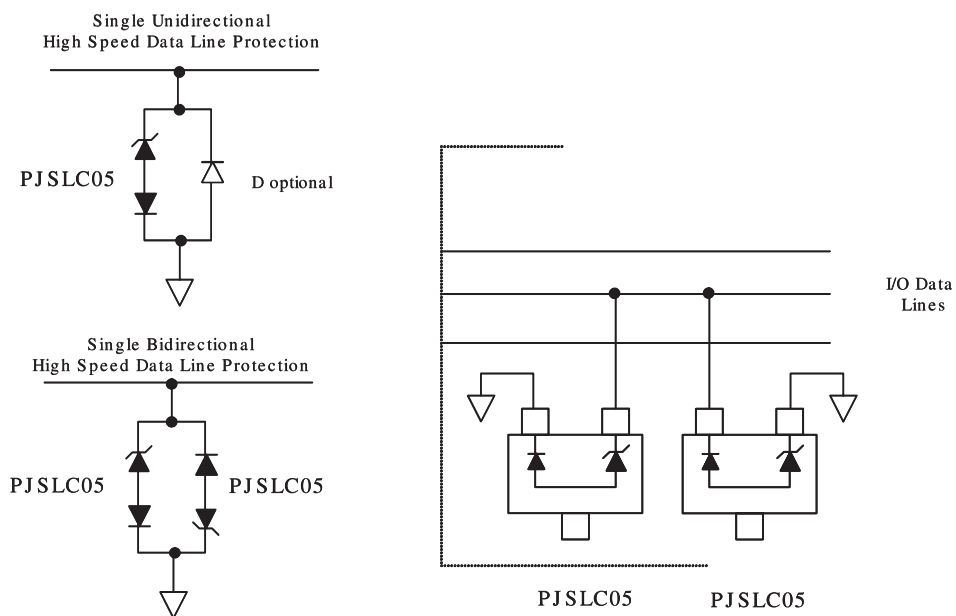
PJSLC05						
Parameter	Symbol	Condition	Min	Typ	Max	Units
Reverse Stand-Off Voltage	V <sub>WRM</sub>		-	-	5	V
Reverse Breakdown Voltage	V <sub>BR</sub>	I <sub>BR</sub> =1mA	6	-	-	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>R</sub> =5V	-	-	5	μA
Clamping Voltage (8x20 μsec)	V <sub>C</sub>	I <sub>PP</sub> =1Amps	-	-	9.8	V
Clamping Voltageee (8x20 μsec)	V <sub>C</sub>	I <sub>PP</sub> =5Amps	-	-	11	V
Off State Junction Capacitance	C <sub>J</sub>	0 Vdc Bias f=1MHz Between pins 1 and 2	-	-	1.2	pF
PJSLC12						
Parameter	Symbol	Condition	Min	Typ	Max	Units
Reverse Stand-Off Voltage	V <sub>WRM</sub>		-	-	12	V
Reverse Breakdown Voltage	V <sub>BR</sub>	I <sub>BR</sub> =1mA	13.3	-	-	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>R</sub> =12V	-	-	1	μA
Clamping Voltage (8x20 μsec)	V <sub>C</sub>	I <sub>PP</sub> =1Amps	-	-	19	V
Clamping Voltageee (8x20 μsec)	V <sub>C</sub>	I <sub>PP</sub> =5Amps	-	-	24	V
Off State Junction Capacitance	C <sub>J</sub>	0 Vdc Bias f=1MHz Between pins 1 and 2	-	-	1.2	pF
PJSLC15						
Parameter	Symbol	Condition	Min	Typ	Max	Units
Reverse Stand-Off Voltage	V <sub>WRM</sub>		-	-	15	V
Reverse Breakdown Voltage	V <sub>BR</sub>	I <sub>BR</sub> =1mA	16.7	-	-	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>R</sub> =15V	-	-	1	μA
Clamping Voltage (8x20 μsec)	V <sub>C</sub>	I <sub>PP</sub> =1Amps	-	-	24	V
Clamping Voltageee (8x20 μsec)	V <sub>C</sub>	I <sub>PP</sub> =5Amps	-	-	30	V
Off State Junction Capacitance	C <sub>J</sub>	0 Vdc Bias f=1MHz Between pins 1 and 2	-	-	1.2	pF

## PJSLC05~PJSLC24

### PJSLC24

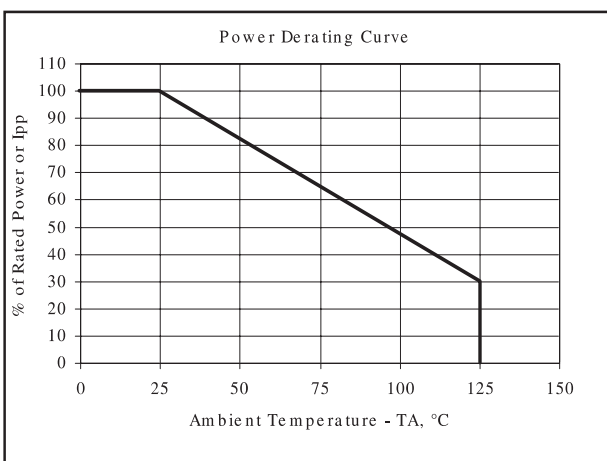
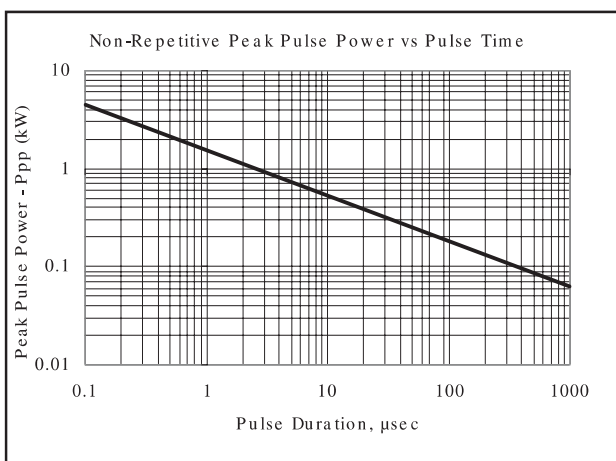
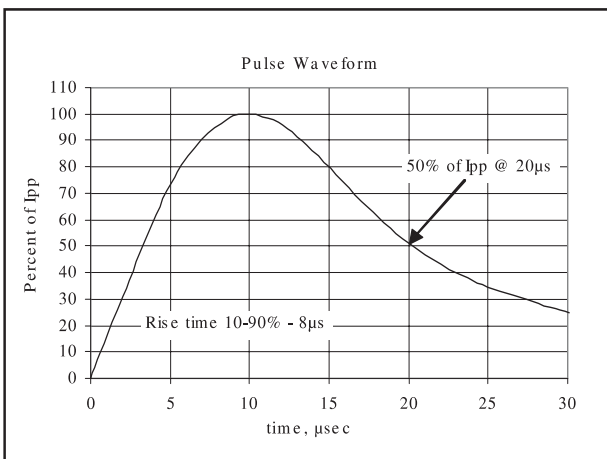
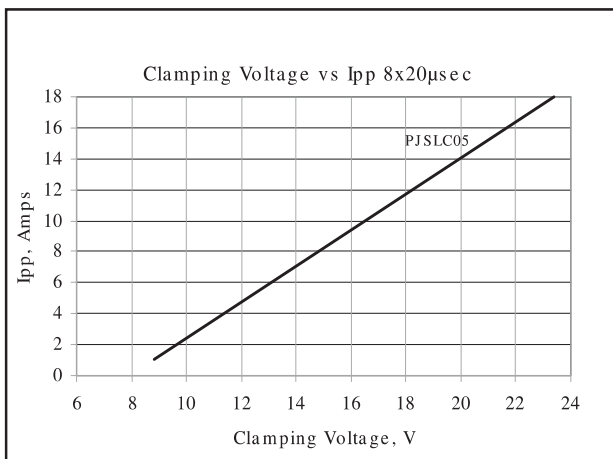
Parameter	Symbol	Condition	Min	Typ	Max	Units
Reverse Stand-Off Voltage	$V_{WRM}$		-	-	24	V
Reverse Breakdown Voltage	$V_{BR}$	$I_{BR}=1mA$	26.7	-	-	V
Reverse Leakage Current	$I_R$	$V_R=24V$	-	-	1	$\mu A$
Clamping Voltage (8x20 $\mu sec$ )	$V_C$	$I_{PP}=1Amps$	-	-	43	V
Clamping Voltage (8x20 $\mu sec$ )	$V_C$	$I_{PP}=5Amps$	-	-	55	V
Off State Junction Capacitance	$C_J$	0 Vdc Bias f=1MHz Between pins 1 and 2	-	-	1.2	pF

### TYPICAL APPLICATION CONFIGURATIONS



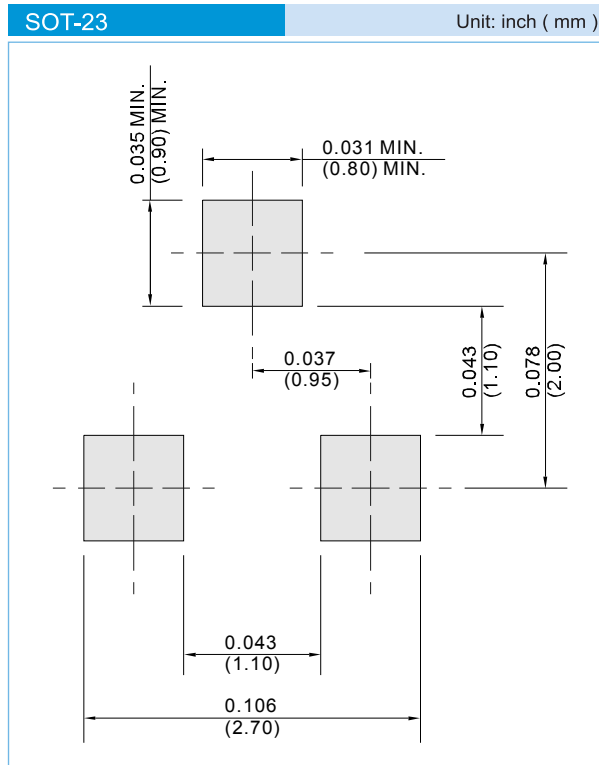
## PJSLC05~PJSLC24

### TYPICAL CHARACTERISTIC CURVES



## PJSLC05~PJSLC24

### MOUNTING PAD LAYOUT



### ORDER INFORMATION

- Packing information
  - T/R - 12K per 13" plastic Reel
  - T/R - 3K per 7" plastic Reel

## PJSLC05~PJSLC24

### Part No\_packing code\_Version

PJSLC05\_R1\_00001

PJSLC05\_R2\_00001

For example :

**RB500V-40\_R2\_00001**

Part No.

Serial number

Version code means HF

Packing size code means 13"

Packing type means T/R

Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



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