



# PJGL05 SERIES

## 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.

**VOLTAGE** 5~24 Volts    **POWER** 400Watts    **SOT-23**    Unit: inch ( mm )

### FEATURES

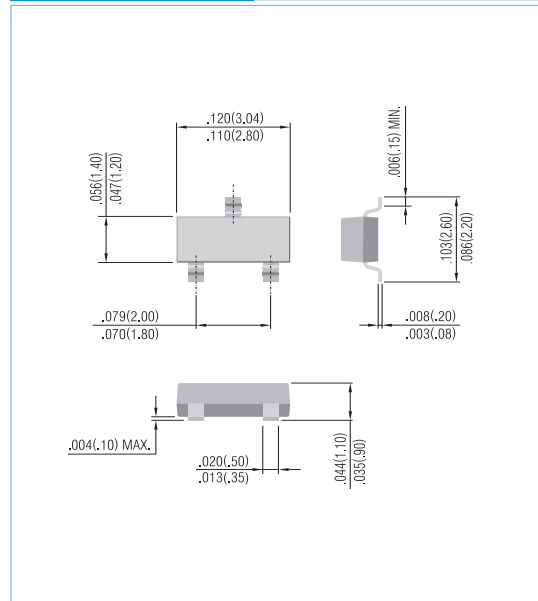
- Working Peak Reverse Voltage Range-5,12,15 and 24V
- Maximum Leakage Current of 5μA
- IEC61000-4-2 Compliance 15kV Air,8kV Contact Discharge
- IEC61000-4-5 17 Amps peak, 8x20μsec Waveform
- In compliance with EU RoHS 2002/95/EC directives

### MECHANICAL DATA

- Case: SOT23, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Weight: approximately 0.008gram

### 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



### MAXIMUM RATINGS

Rating	Symbol	Value	Units
Peak Pulse Power (8x20 μs Waveform)	P <sub>PP</sub>	400	W
Peak Pulse Current (8x20 μs Waveform)	I <sub>PP</sub>	17	A
ESD Voltage (HBM)	V <sub>ESD</sub>	>25	kV
Lead Soldering Temperature (max 10 secs)	T <sub>L</sub>	260	°C
Operating Temperature Range	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	°C

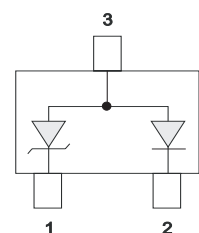


Fig.59



## PJGL05 SERIES

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

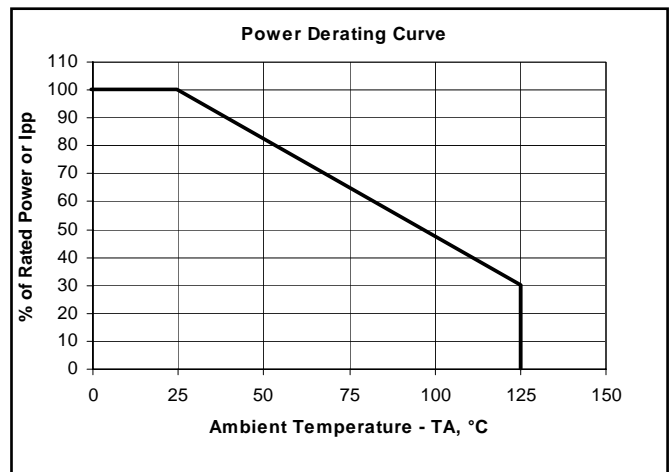
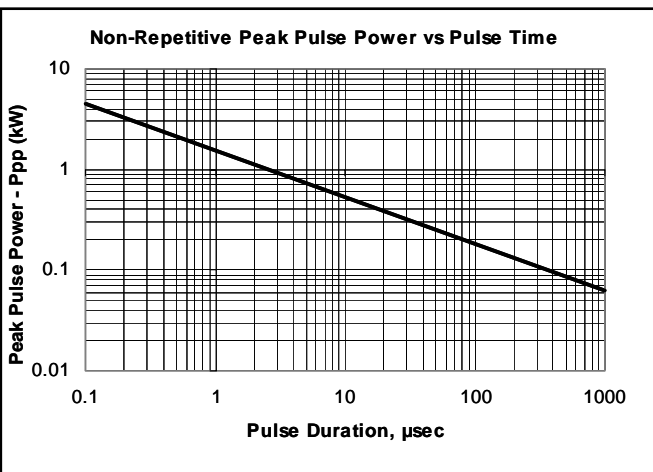
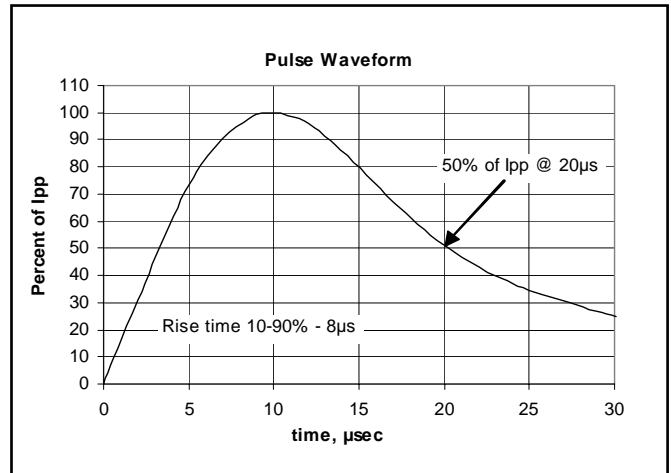
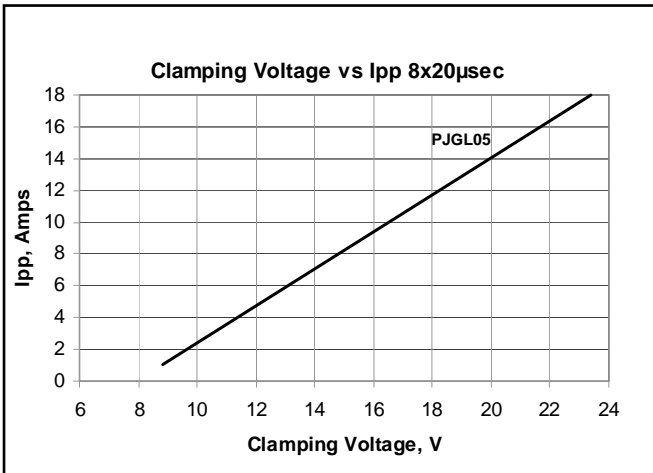
PJGL05 Marking GL5						
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	V <sub>WRM</sub>		-	-	5	V
Reverse Breakdown Voltage	V <sub>BR</sub>	I <sub>BR</sub> =1mA	6	-	-	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>R</sub> =5V	-	-	20	μA
Clamping Voltage (8/20μs)	V <sub>CL</sub>	I <sub>PP</sub> =1Amps	-	-	9.5	V
Clamping Voltage (8/20μs)	V <sub>CL</sub>	I <sub>PP</sub> =5Amps	-	-	11	V
Off State Junction Capacitance	C <sub>J</sub>	0Vdc Bias f = 1MHz Between pins 1 and 2	-	-	1.2	pF
PJGL12 Marking G12						
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
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 (8/20μs)	V <sub>CL</sub>	I <sub>PP</sub> =1Amps	-	-	19	V
Clamping Voltage (8/20μs)	V <sub>CL</sub>	I <sub>PP</sub> =5Amps	-	-	24	V
Off State Junction Capacitance	C <sub>J</sub>	0Vdc Bias f = 1MHz Between pins 1 and 2	-	-	1.2	pF
PJGL15 Marking G15						
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
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 (8/20μs)	V <sub>CL</sub>	I <sub>PP</sub> =1Amps	-	-	24	V
Clamping Voltage (8/20μs)	V <sub>CL</sub>	I <sub>PP</sub> =5Amps	-	-	30	V
Off State Junction Capacitance	C <sub>J</sub>	0Vdc Bias f = 1MHz Between pins 1 and 2	-	-	1.2	pF



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PJGL24 Marking G24						
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
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 (8/20 $\mu s$ )	$V_{CL}$	$I_{PP}=1Amps$	-	-	43	V
Clamping Voltage (8/20 $\mu s$ )	$V_{CL}$	$I_{PP}=5Amps$	-	-	55	V
Off State Junction Capacitance	$C_J$	0Vdc Bias f = 1MHz Between pins 1 and 2	-	-	1.2	pF

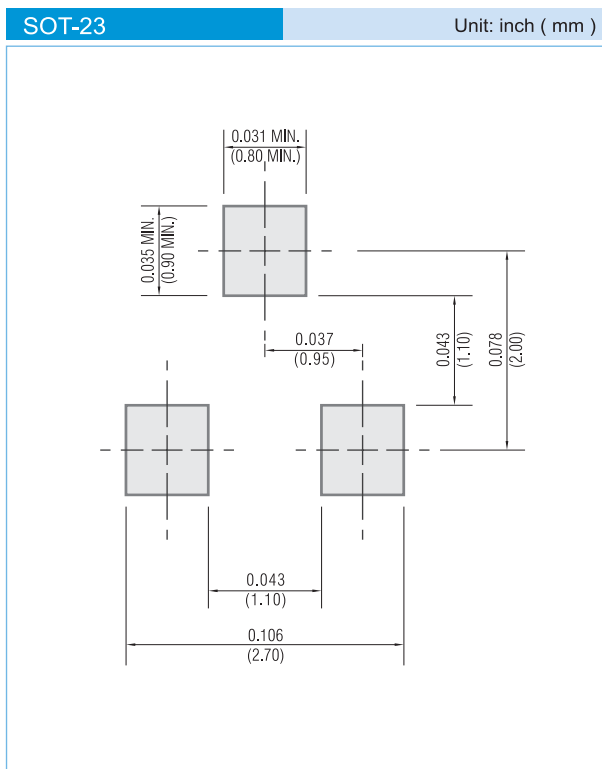
## TYPICAL CHARACTERISTIC CURVES





# PJGL05 SERIES

## MOUNTING PAD LAYOUT



### ORDER INFORMATION

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

### LEGAL STATEMENT

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