



# PJMBZ15V / PJMBZ27V

## DUAL TVS ZENER FOR ESD / TRANSIENT PROTECTION

This Dual Zener ESD/Transient Protector with a Common Cathode, Configuration has been designed to protect Sensitive Equipment against,ESD and prevent Latch-Up events.The combination of a dual device protects up to two data lines in a single package giving the advantage of board space savings where this is a premium.

**VOLTAGE** 12 / 22 Volts    **POWER** 150 Watts

**SOT-23**    Unit: inch ( mm )

### FEATURES

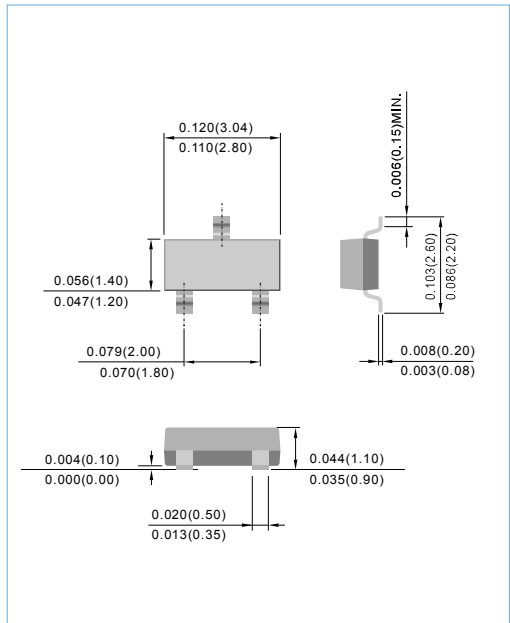
- Working Peak Reverse Voltage of 12V and 22V
- Maximum Leakage Current of 100nA and 50nA @  $V_{RWM}$
- IEC61000-4-2 Compliance 15kV Air, 8kV Contact Discharge
- Industry Standard SOT-23 Package
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### APPLICATIONS

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

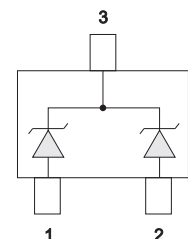
### MECHANICAL DATA

- Case : SOT-23, Plastic
- Terminals : Solderable per MIL-STD-750, Method 2026
- Apporx. Weight : 0.0084 gram



### MAXIMUM RATINGS

PARAMETER	Symbol	Value	Units
Peak Pulse Power 8x20 $\mu$ sec Waveform	P <sub>PP</sub>	150	W
Peak Pulse Power 10x1000 $\mu$ sec		40	
ESD IEC61000-4-2 (Air)	V <sub>ESD</sub>	$\pm$ 30	kV
ESD IEC61000-4-2 (Contact)		$\pm$ 30	
Operating Temperature Range	T <sub>J</sub>	-55 to +150	$^{\circ}$ C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	$^{\circ}$ C
Lead Soldering Temperature (max 10 secs)	T <sub>L</sub>	260	$^{\circ}$ C



**Fig.38**



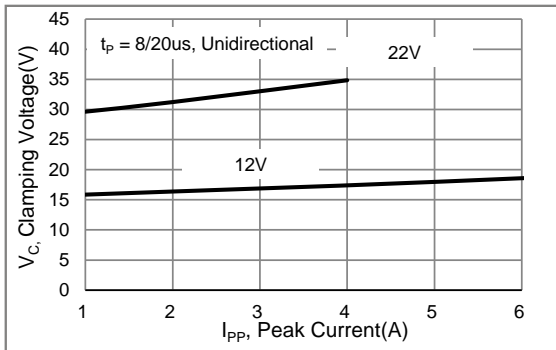
# PJMBZ15V / PJMBZ27V

## ELECTRICAL CHARACTERISTICS Tj = 25°C

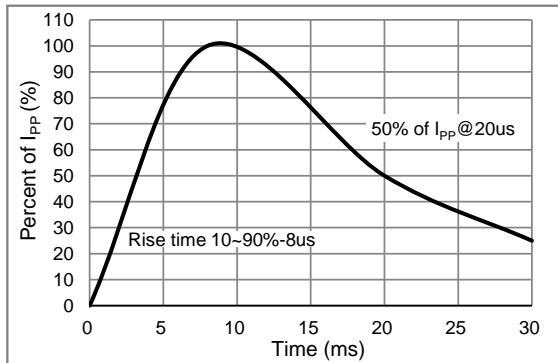
PJMBZ15V Marking UL						
PARAMETER	Symbol	Condition	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V <sub>RWM</sub>		-	-	12	V
Reverse Breakdown Voltage	V <sub>BR</sub>	I <sub>BR</sub> =1mA	14.3	-	15.8	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>RWM</sub> =12V	-	-	100	nA
Clamping Voltage (8x20 μsec)	V <sub>CL</sub>	I <sub>PP</sub> =6Amps	-	-	24	V
Clamping Voltage (10x1000 μsec)	V <sub>CL</sub>	I <sub>PP</sub> =1.9Amps	-	-	21.2	V
Off State Junction Capacitance	C <sub>J</sub>	0 Vdc Bias f=1MHz Between I/O pins and pin 3	-	-	80	pF
PJMBZ27V Marking US						
PARAMETER	Symbol	Condition	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V <sub>RWM</sub>		-	-	22	V
Reverse Breakdown Voltage	V <sub>BR</sub>	I <sub>BR</sub> =1mA	25.65	-	28.35	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>RWM</sub> =22V	-	-	50	nA
Clamping Voltage (8x20 μsec)	V <sub>CL</sub>	I <sub>PP</sub> =4Amps	-	-	36	V
Clamping Voltage (10x1000 μsec)	V <sub>CL</sub>	I <sub>PP</sub> =1Amps	-	-	38	V
Off State Junction Capacitance	C <sub>J</sub>	0 Vdc Bias f=1MHz Between I/O pins and pin 3	-	-	50	pF



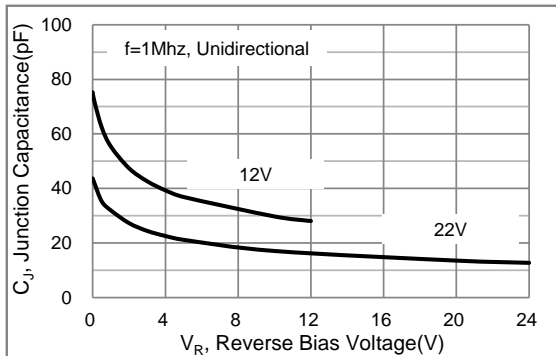
# PJMBZ15V / PJMBZ27V



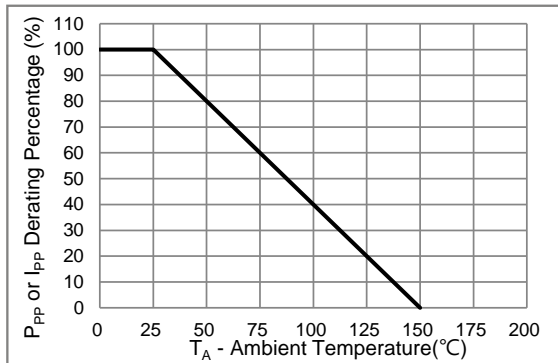
**Fig.1 Typical Peak Clamping Voltage**



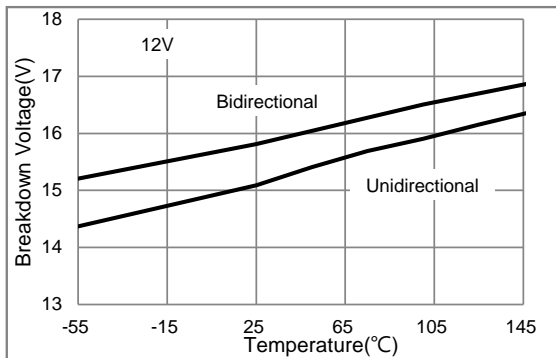
**Fig.2 Pulse Waveform**



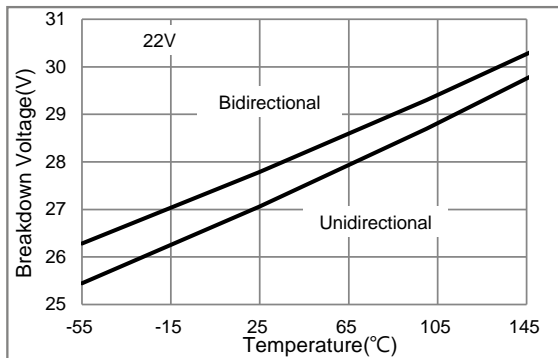
**Fig.3 Typical Junction Capacitance**



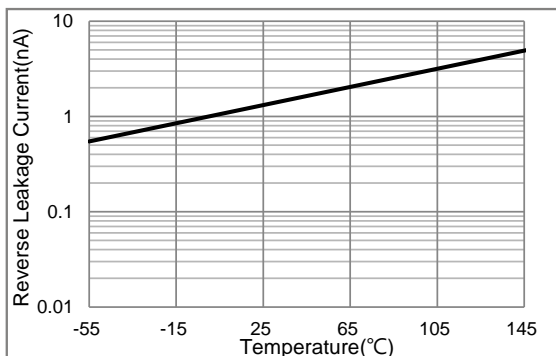
**Fig.4 Derating Curve**



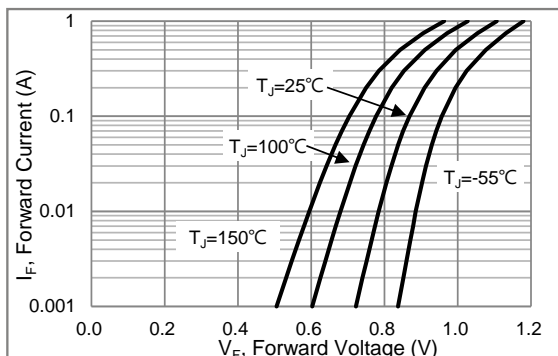
**Fig.5 Typical  $V_{BR}$  versus Temperature**



**Fig.6 Typical  $V_{BR}$  versus Temperature**



**Fig.7 Typical  $I_R$  versus Temperature**

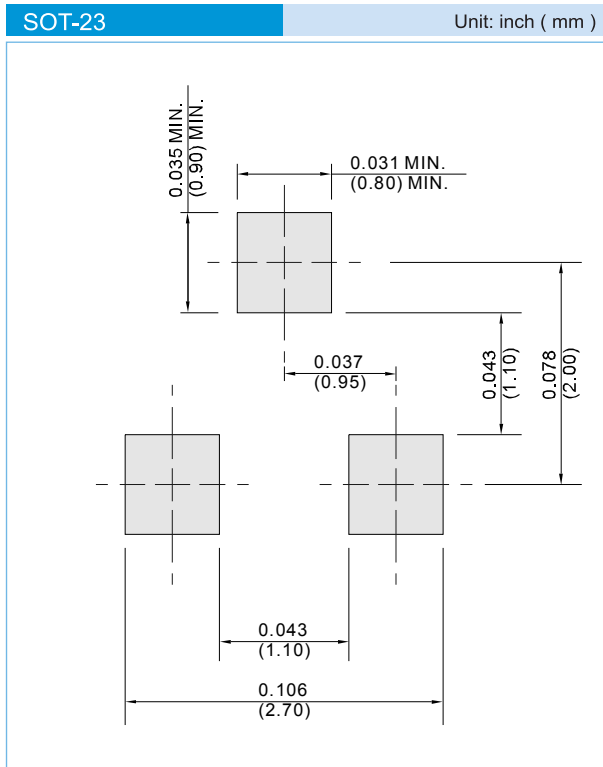


**Fig.8 Typical Forward Characteristics**



# PJMBZ15V / PJMBZ27V

## MOUNTING PAD LAYOUT



## ORDER INFORMATION

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



# PJMBZ15V / PJMBZ27V

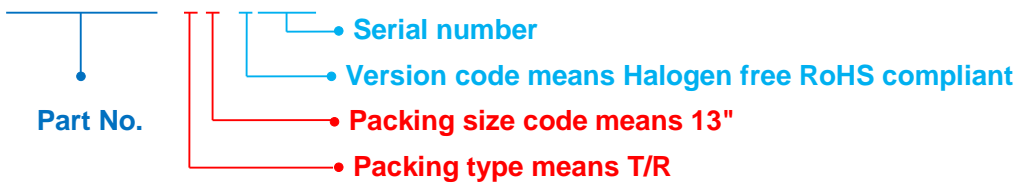
**Part No.\_packing code\_Version**

PJMBZ15V\_R1\_00001

PJMBZ27V\_R2\_00001

For example :

**RB500V-40\_R2\_00001**



Packing Code <b>XX</b>				Version Code <b>X</b>		Serial number <b>XXXX</b>
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HSF Level	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>	Halogen free RoHS compliant	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	RoHS compliant	<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>			



## PJMBZ15V / PJMBZ27V

---

### Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.