



# PJSD03W~PJSD36W

## SINGLE LINE TVS DIODE FOR ESD PROTECTION PORTABLE ELECTRONICS

**VOLTAGE**

**3~36 Volt**

**POWER**

**350 Watt**

**SOD-323**

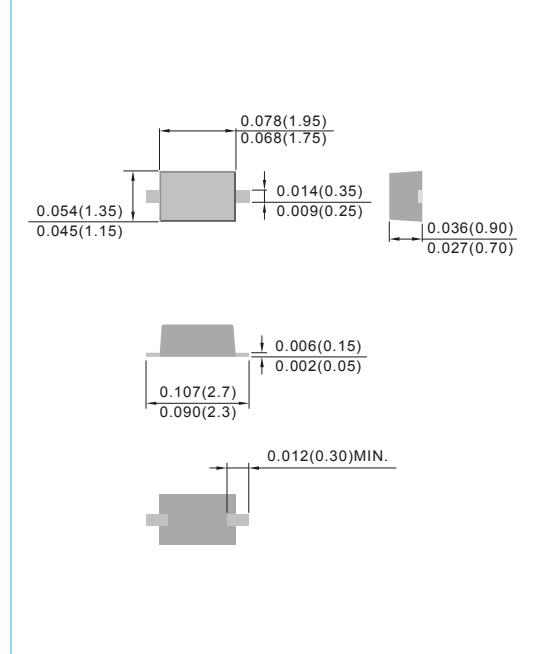
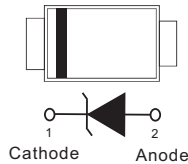
Unit : inch(mm)

### FEATURES

- 350 Watts peak pules power (tp=8/20 $\mu$ s)
- Small package for use in portable electronics
- Suitable replacement for MLV'S in ESD protection applications
- Low clamping voltage and leakage current
- IEC 61000-4-2 (ESD)  $\pm$ 15kV (air),  $\pm$ 8kV (contact)
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound  $\approx$  per IEC61249 Std. . (Halogen Free)

### APPLICATIONS

- Case : SOD-323 plastic
- Terminals : Solderable per MIL-STD-750,Method 2026
- Polarity : Color band cathode
- Apprx. Weight : 0.0001 ounce, 0.0041 gram



### MAXIMUM RATINGS AND ELECTRICAL CHATACTERISTICS

#### ABSOLUTE MAXIMUM RATING

Rating	Symbol	Value	Units
Peak Pulse Power (tp=8/20 $\mu$ s)	P <sub>PK</sub>	350	W
ESD Voltage	V <sub>ESD</sub>	25	KV
Operating Temperature	T <sub>J</sub>	-50 to 150	°C
Storage Temperature	T <sub>STG</sub>	-50 to 150	°C



# PJSD03W~PJSD36W

PJSD03W Marking 03W						
Parameter	Symbol	Conditions	Min.	Typical	Max.	Units
Reverse Stand-Off Voltage	$V_{RWM}$	-	-	-	3.0	V
Reverse Breakdown Voltage	$V_{BR}$	$I_{BR}=1mA$	4	-	5.0	V
Reverse Leakage Current	$I_R$	$V_R=3.0V$	-	-	125	$\mu A$
Clamping Voltage(8/20 $\mu s$ )	$V_C$	$I_{PP}=1A$	-	-	6.5	V
Off State Junction Capacitance	$C_J$	0Vdc Bias=f=1MHz	-	450	-	pF
Off State Junction Capacitance	$C_J$	5Vdc Bias=f=1MHz	-	150	-	pF
PJSD05W Marking 05W						
Parameter	Symbol	Conditions	Min.	Typical	Max.	Units
Reverse Stand-Off Voltage	$V_{RWM}$	-	-	-	5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_{BR}=1mA$	6	-	7.2	V
Reverse Leakage Current	$I_R$	$V_R=5V$	-	-	10	$\mu A$
Clamping Voltage(8/20 $\mu s$ )	$V_C$	$I_{PP}=1A$	-	-	9.8	V
Off State Junction Capacitance	$C_J$	0Vdc Bias=f=1MHz	-	300	-	pF
Off State Junction Capacitance	$C_J$	5Vdc Bias=f=1MHz	-	100	-	pF
PJSD08W Marking 08W						
Parameter	Symbol	Conditions	Min.	Typical	Max.	Units
Reverse Stand-Off Voltage	$V_{RWM}$	-	-	-	8	V
Reverse Breakdown Voltage	$V_{BR}$	$I_{BR}=1mA$	8.5	-	10	V
Reverse Leakage Current	$I_R$	$V_R=8V$	-	-	10	$\mu A$
Clamping Voltage(8/20 $\mu s$ )	$V_C$	$I_{PP}=1A$	-	-	13.4	V
Off State Junction Capacitance	$C_J$	0Vdc Bias=f=1MHz	-	150	-	pF
Off State Junction Capacitance	$C_J$	5Vdc Bias=f=1MHz	-	80	-	pF
PJSD12W Marking 12W						
Parameter	Symbol	Conditions	Min.	Typical	Max.	Units
Reverse Stand-Off Voltage	$V_{RWM}$	-	-	-	12	V
Reverse Breakdown Voltage	$V_{BR}$	$I_{BR}=1mA$	13.3	-	15	V
Reverse Leakage Current	$I_R$	$V_R=12V$	-	-	1	$\mu A$
Clamping Voltage(8/20 $\mu s$ )	$V_C$	$I_{PP}=1A$	-	-	19	V
Off State Junction Capacitance	$C_J$	0Vdc Bias=f=1MHz	-	130	-	pF
Off State Junction Capacitance	$C_J$	5Vdc Bias=f=1MHz	-	50	-	pF



# PJSD03W~PJSD36W

PJSD15W Marking 15W						
Parameter	Symbol	Conditions	Min.	Typical	Max.	Units
Reverse Stand-Off Voltage	$V_{RWM}$	-	-	-	15	V
Reverse Breakdown Voltage	$V_{BR}$	$I_{BR}=1mA$	16.7	-	20	V
Reverse Leakage Current	$I_R$	$V_R=15V$	-	-	1	$\mu A$
Clamping Voltage(8/20 $\mu s$ )	$V_C$	$I_{PP}=1A$	-	-	24	V
Off State Junction Capacitance	$C_J$	0Vdc Bias=f=1MHz	-	120	-	pF
Off State Junction Capacitance	$C_J$	5Vdc Bias=f=1MHz	-	30	-	pF
PJSD24W Marking 24W						
Parameter	Symbol	Conditions	Min.	Typical	Max.	Units
Reverse Stand-Off Voltage	$V_{RWM}$	-	-	-	24	V
Reverse Breakdown Voltage	$V_{BR}$	$I_{BR}=1mA$	26.6	-	30	V
Reverse Leakage Current	$I_R$	$V_R=24V$	-	-	1	$\mu A$
Clamping Voltage(8/20 $\mu s$ )	$V_C$	$I_{PP}=1A$	-	-	43	V
Off State Junction Capacitance	$C_J$	0Vdc Bias=f=1MHz	-	80	-	pF
Off State Junction Capacitance	$C_J$	5Vdc Bias=f=1MHz	-	10	-	pF
PJSD36W Marking 36W						
Parameter	Symbol	Conditions	Min.	Typical	Max.	Units
Reverse Stand-Off Voltage	$V_{RWM}$	-	-	-	36	V
Reverse Breakdown Voltage	$V_{BR}$	$I_{BR}=1mA$	39.9	-	45	V
Reverse Leakage Current	$I_R$	$V_R=36V$	-	-	1	$\mu A$
Clamping Voltage(8/20 $\mu s$ )	$V_C$	$I_{PP}=1A$	-	-	60	V
Off State Junction Capacitance	$C_J$	0Vdc Bias=f=1MHz	-	30	-	pF
Off State Junction Capacitance	$C_J$	5Vdc Bias=f=1MHz	-	1	-	pF



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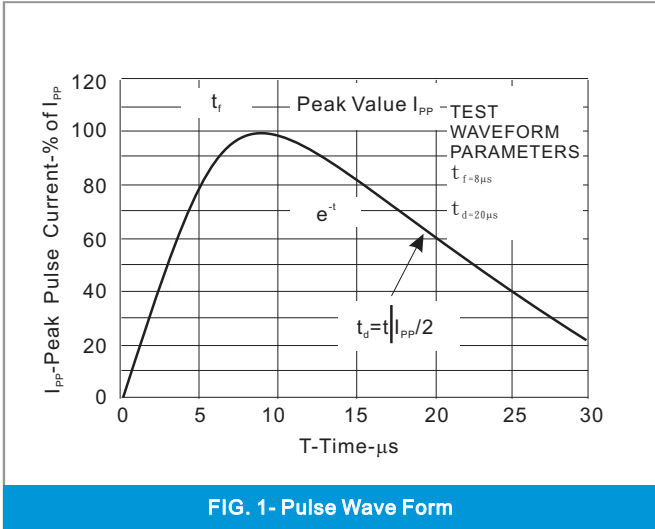


FIG. 1- Pulse Wave Form

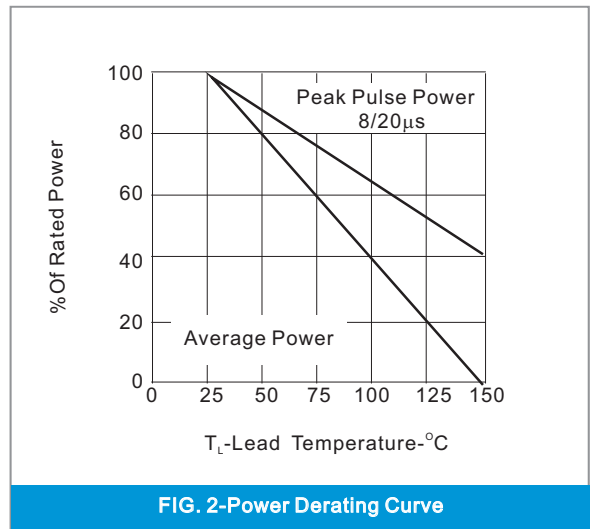


FIG. 2- Power Derating Curve

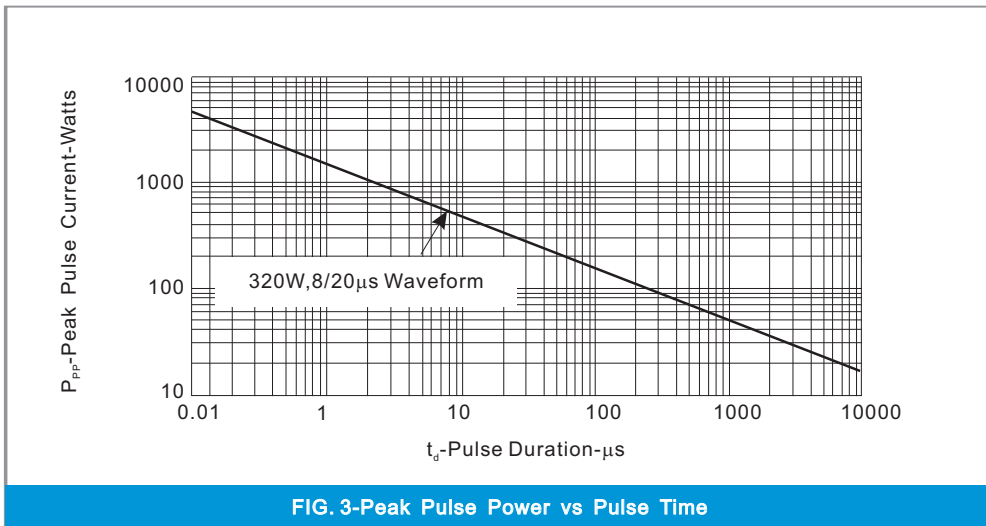


FIG. 3- Peak Pulse Power vs Pulse Time

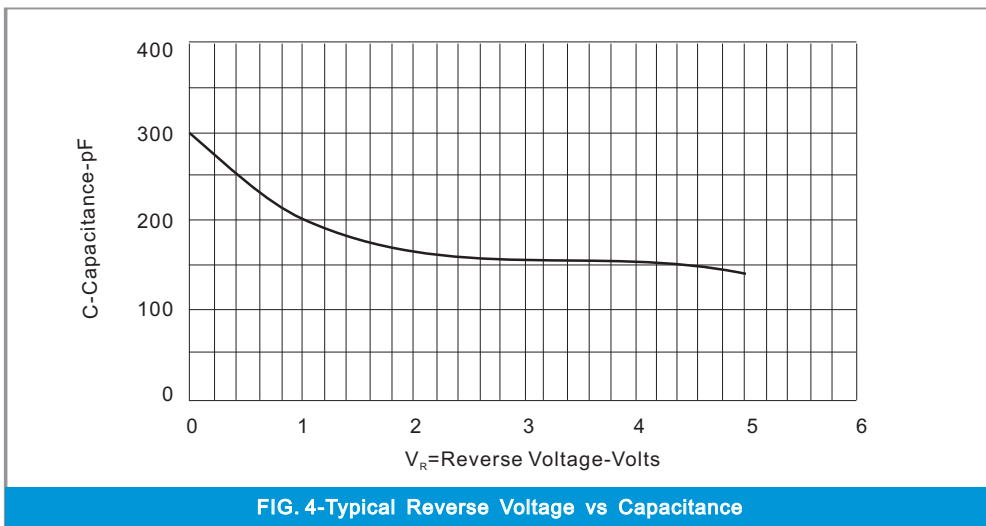


FIG. 4- Typical Reverse Voltage vs Capacitance

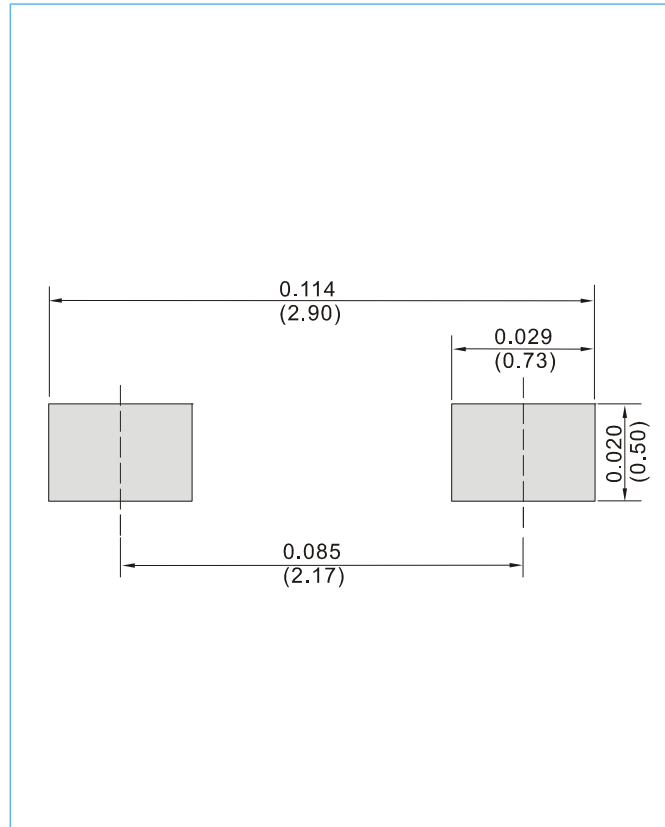


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## MOUNTING PAD LAYOUT

SOD-323

Unit : inch(mm)



## ORDER INFORMATION

- Packing information
  - T/R - 12K per 13" plastic Reel
  - T/R - 5K per 7" plastic Reel



# PJSD03W~PJSD36W

## Part No\_packing code\_Version

PJSD03W\_R1\_00001

PJSD03W\_R2\_00001

For example :

**RB500V-40** **R2** **00001**



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)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



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