

PJSD03W~PJSD36W

SINGLE LINE TVS DIODE FOR ESD PROTECTION PORTABLE ELECTRONICS

VOLTAGE 3~36 Volts **POWER** 350 Watts

SOD-323

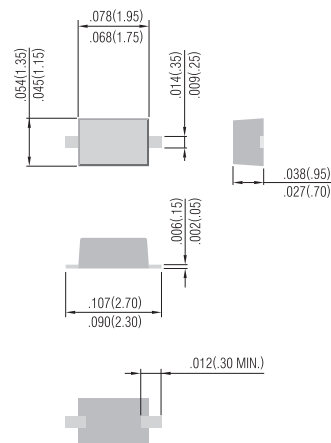
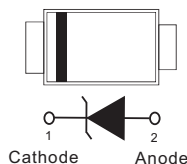
Unit: inch (mm)

FEATURES

- 350 Watts peak pules power($t_p=8/20\mu s$)
- Small package for use in portable electronics
- Suitable replacement for MLV'S in ESD protection applications
- Low clamping voltage and leakage current
- In compliance with EU RoHS 2002/95/EC directives

APPLICATIONS

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



MAXIMUM RATINGS AND ELECTRICAL CHATACTERISTICS

ABSOLUTE MAXIMUM RATING

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20 \mu s$)	P_{PK}	350	W
ESD Voltage	V_{ESD}	25	KV
Operating Temperature	T_J	-50 to 150	°C
Storage Temperature	T_{STG}	-50 to 150	°C

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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	μA
Clamping Voltage(8/20 μs)	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	μA
Clamping Voltage(8/20 μs)	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	μA
Clamping Voltage(8/20 μs)	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	μA
Clamping Voltage(8/20 μs)	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



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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	μA
Clamping Voltage(8/20 μs)	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	μA
Clamping Voltage(8/20 μs)	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	μA
Clamping Voltage(8/20 μs)	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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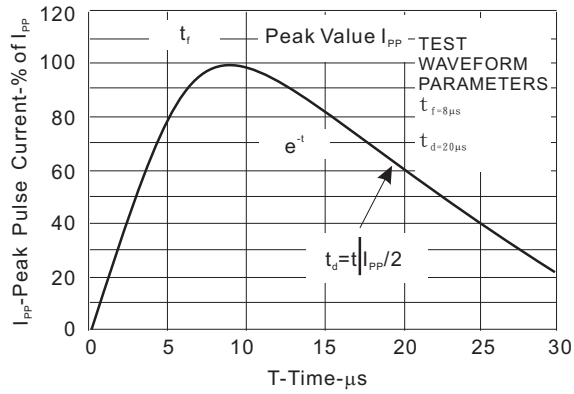


FIG. 1- Pulse Wave Form

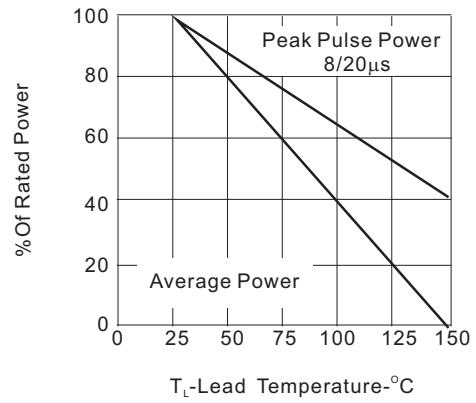


FIG. 2- Power Derating Curve

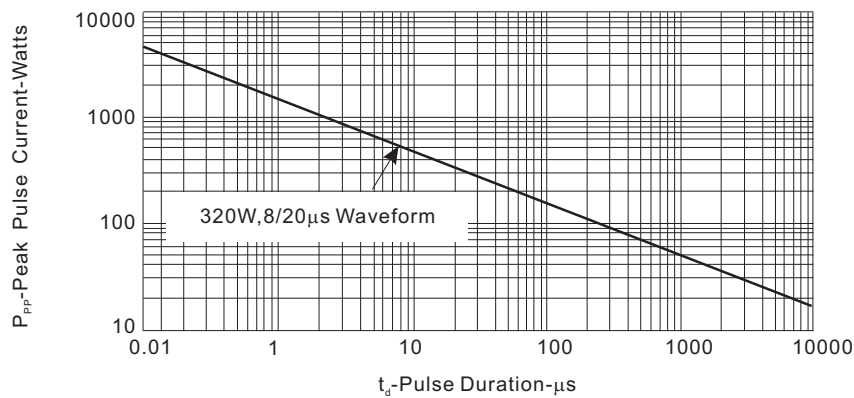


FIG. 3- Peak Pulse Power vs Pulse Time

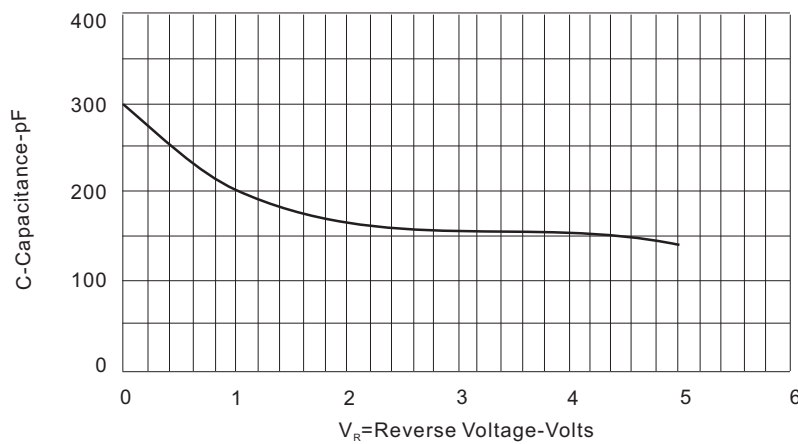
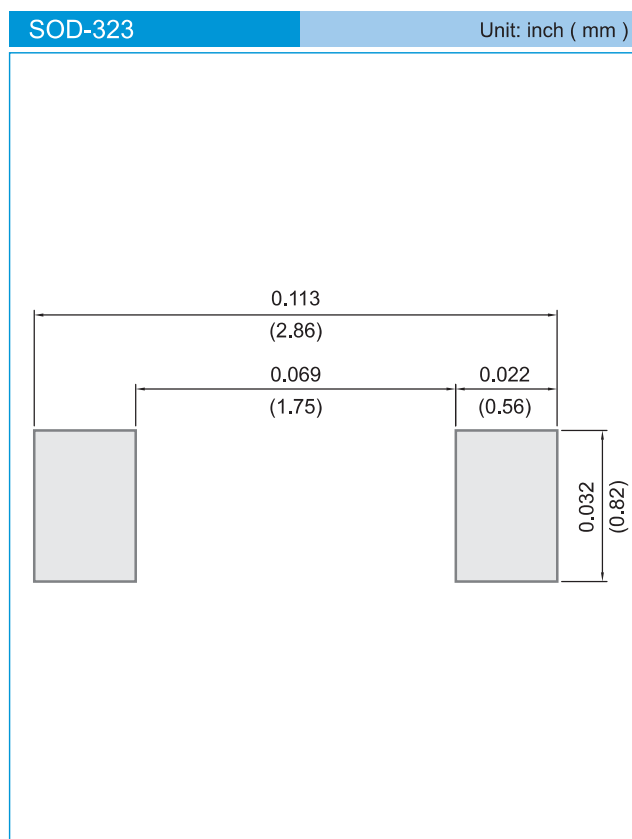


FIG. 4- Typical Reverse Voltage vs Capacitance

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MOUNTING PAD LAYOUT



ORDER INFORMATION

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

LEGAL STATEMENT

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