



PJSD05CW SERIES

Single Line TVS Diode for ESD Protection in Portable Electronics

VOLTAGE

5 to 36 Volts

POWER

350 Watts

SOD-323

Unit: inch (mm)

FEATURES

- Transient protection for data lines to IEC 61000-4-2 (ESD) + 15kV (air),+ 8kV (contact) IEC 61000-4-5 (Lightning) 24A (8/20μs)
- Small package for use in portable electronics
- Suitable replacement for MLV's in ESD protection applications
- Protects one I/O or power line
- Low clamping voltage
- Solid-state silicon avalanche technology
- In compliance with EU RoHS 2002/95/EC directives

MECHANICAL DATA

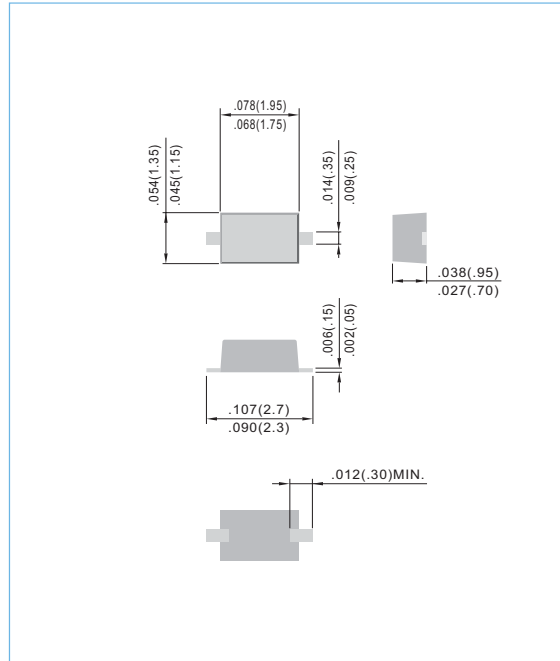
Case : SOD-323, Plastic

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

Approx. Weight: 0.0041 grams

Marking Code :

PJSD05CW=EZB	PJSD08CW=EZC	PJSD12CW=EZD
PJSD15CW=EZE	PJSD24CW=EZF	PJSD36CW=EZG



ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power ($t_p=8/20 \mu s$)	P_{PK}	350	Watts
Lead Soldering Temperature	T_L	260(10 sec.)	°C
Operating Temperature	T_J	-55 to +125	°C
Storage Temperature	T_{STG}	-55 to +150	°C



Fig.130



PJSD05CW SERIES

ELECTRICAL CHARACTERISTICS

PJSD05CW						
Parameter	Symbol	Conditions	Min.	Typical	Max.	Units
Reverse Stand-Off Voltage	V_{RWM}	-	-	-	5	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	6.37	-	7.04	V
Reverse Leakage Current	I_R	$V_{RWM}=5V, T=25^{\circ}C$	-	-	5	μA
Clamping Voltage	V_C	$I_{PP}=5A, t_p=8/20\mu s$	-	-	9.8	V
Clamping Voltage	V_C	$I_{PP}=24A, t_p=8/20\mu s$	-	-	14.5	V
Junction Capacitance	C_J	$V_R=0V, f=1MHz$	-	-	200	pF
PJSD12CW						
Parameter	Symbol	Conditions	Min.	Typical	Max.	Units
Reverse Stand-Off Voltage	V_{RWM}	-	-	-	12	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	13.3	-	14.7	V
Reverse Leakage Current	I_R	$V_{RWM}=12V, T=25^{\circ}C$	-	-	1	μA
Clamping Voltage	V_C	$I_{PP}=5A, t_p=8/20\mu s$	-	-	19	V
Clamping Voltage	V_C	$I_{PP}=15A, t_p=8/20\mu s$	-	-	24	V
Junction Capacitance	C_J	$V_R=0V, f=1MHz$	-	-	100	pF
PJSD15CW						
Parameter	Symbol	Conditions	Min.	Typical	Max.	Units
Reverse Stand-Off Voltage	V_{RWM}	-	-	-	15	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	16.72	-	18.48	V
Reverse Leakage Current	I_R	$V_{RWM}=15V, T=25^{\circ}C$	-	-	1	μA
Clamping Voltage	V_C	$I_{PP}=5A, t_p=8/20\mu s$	-	-	24	V
Clamping Voltage	V_C	$I_{PP}=10A, t_p=8/20\mu s$	-	-	29	V
Junction Capacitance	C_J	$V_R=0V, f=1MHz$	-	-	75	pF
PJSD24CW						
Parameter	Symbol	Conditions	Min.	Typical	Max.	Units
Reverse Stand-Off Voltage	V_{RWM}	-	-	-	24	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	26.6	-	29.4	V
Reverse Leakage Current	I_R	$V_{RWM}=24V, T=25^{\circ}C$	-	-	1	μA
Clamping Voltage	V_C	$I_{PP}=1A, t_p=8/20\mu s$	-	-	36	V
Clamping Voltage	V_C	$I_{PP}=4A, t_p=8/20\mu s$	-	-	42	V
Junction Capacitance	C_J	$V_R=0V, f=1MHz$	-	-	50	pF
PJSD36CW						
Parameter	Symbol	Conditions	Min.	Typical	Max.	Units
Reverse Stand-Off Voltage	V_{RWM}	-	-	-	36	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	40.57	-	44.84	V
Reverse Leakage Current	I_R	$V_{RWM}=36V, T=25^{\circ}C$	-	-	1	μA
Clamping Voltage	V_C	$I_{PP}=1A, t_p=8/20\mu s$	-	-	58	V
Clamping Voltage	V_C	$I_{PP}=3A, t_p=8/20\mu s$	-	-	71	V
Junction Capacitance	C_J	$V_R=0V, f=1MHz$	-	-	45	pF



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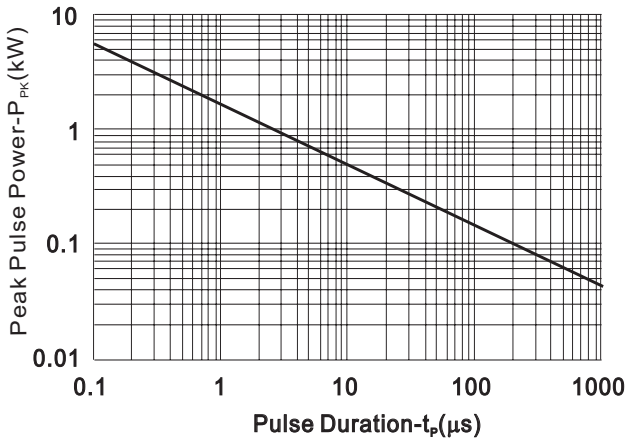


FIG.1 Non-Repetitive Peak Pulse Power vs. Pulse Time

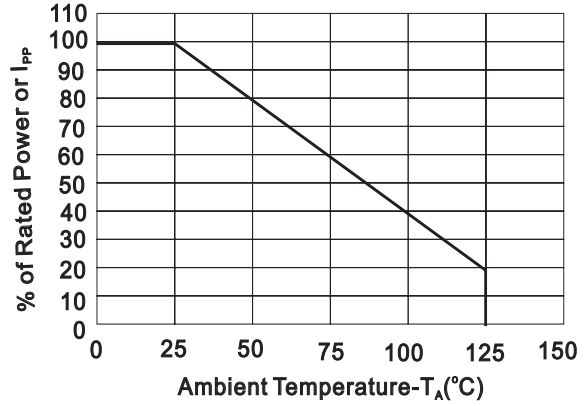


FIG.2 Power Derating Curve

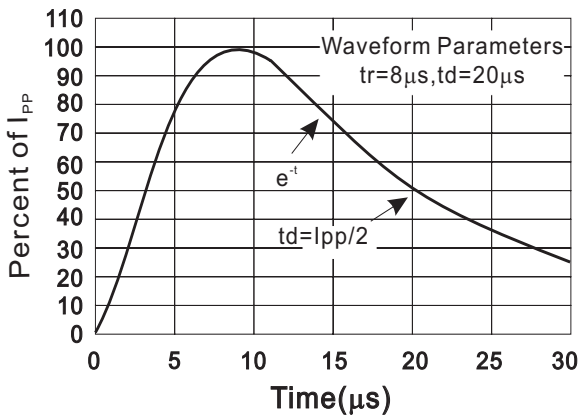


FIG.3 Pulse Waveform

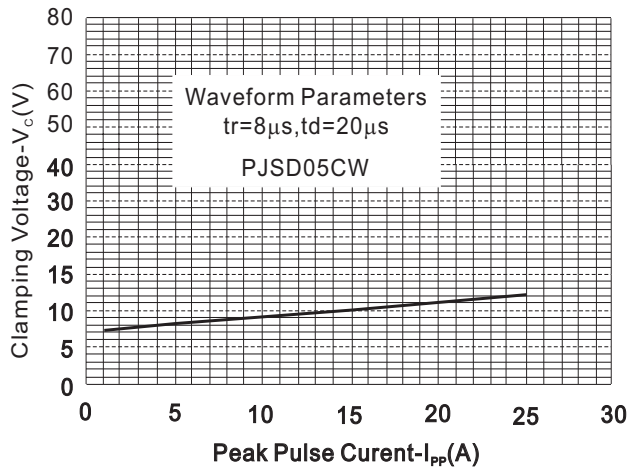


FIG.4 Clamping Voltage vs. Peak Pulse Current

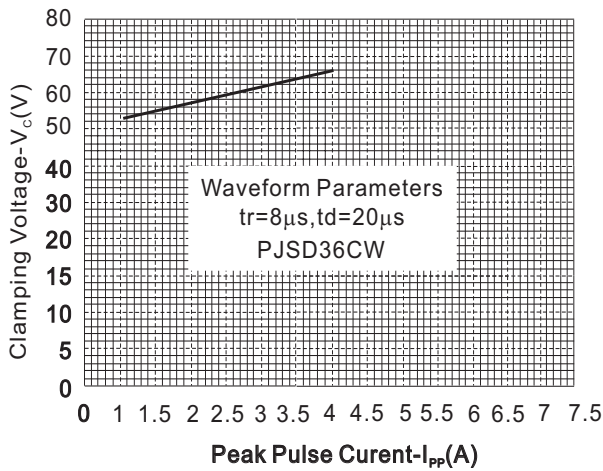
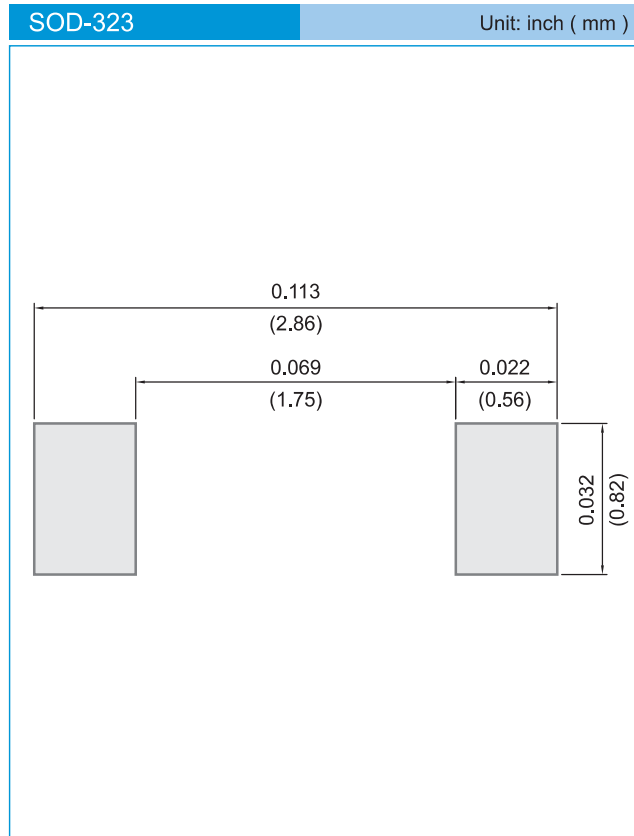


FIG.5 Clamping Voltage vs. Peak Pulse Current



PJSD05CW SERIES

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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