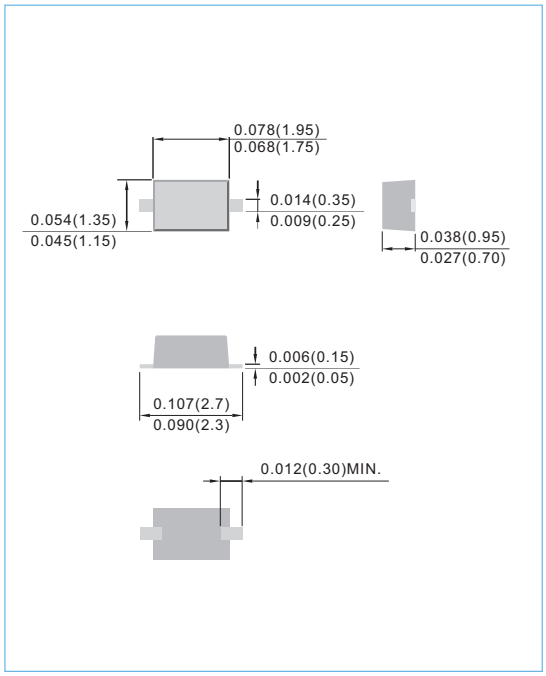
PJSD05CW SERIES

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 technolngy
- Lead free in comply with EU RoHS 2002/95/EC directives.
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

Case : SOD-323, Plastic

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

Approx. Weight: 0.00014 ounces, 0.0041 grams

Marking Code :

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

ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power (t_P=8/20 μs)	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

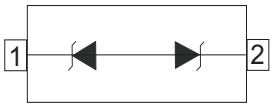


Fig.130

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°C	-	-	5	µA
Clamping Voltage	V_C	I_{PP}=5A, t_p=8/20µs	-	-	9.8	V
Clamping Voltage	V_C	I_{PP}=24A, t_p=8/20µs	-	-	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°C	-	-	1	µA
Clamping Voltage	V_C	I_{PP}=5A, t_p=8/20µs	-	-	19	V
Clamping Voltage	V_C	I_{PP}=15A, t_p=8/20µs	-	-	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°C	-	-	1	µA
Clamping Voltage	V_C	I_{PP}=5A, t_p=8/20µs	-	-	24	V
Clamping Voltage	V_C	I_{PP}=10A, t_p=8/20µs	-	-	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°C	-	-	1	µA
Clamping Voltage	V_C	I_{PP}=1A, t_p=8/20µs	-	-	36	V
Clamping Voltage	V_C	I_{PP}=4A, t_p=8/20µs	-	-	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°C	-	-	1	µA
Clamping Voltage	V_C	I_{PP}=1A, t_p=8/20µs	-	-	58	V
Clamping Voltage	V_C	I_{PP}=3A, t_p=8/20µs	-	-	71	V
Junction Capacitance	C_J	V_R=0V, f=1MHz	-	-	45	pF

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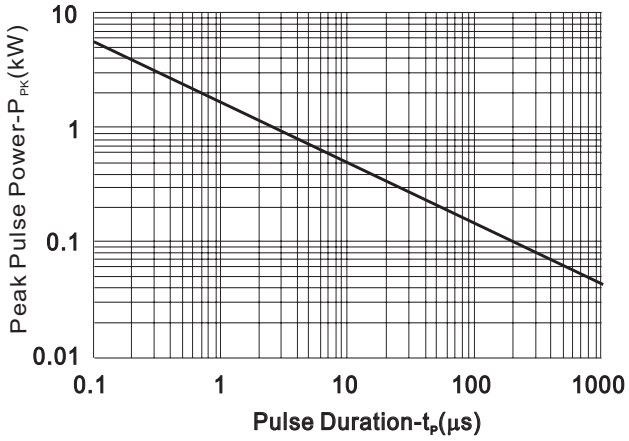

FIG.1 Non-Repetitive Peak Pulse Power vs. Pulse Time

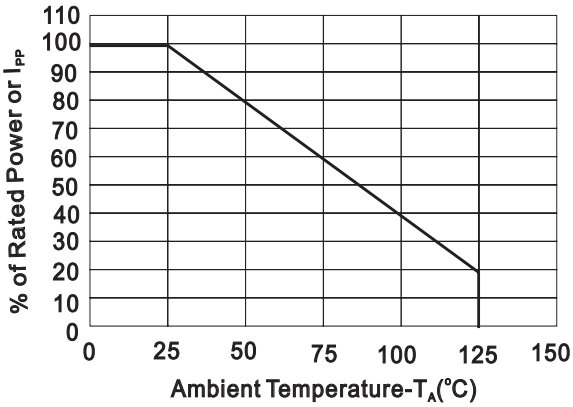

FIG.2 Power Derating Curve

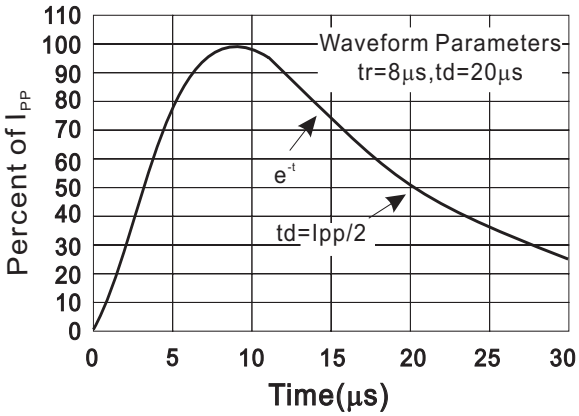

FIG.3 Pulse Waveform

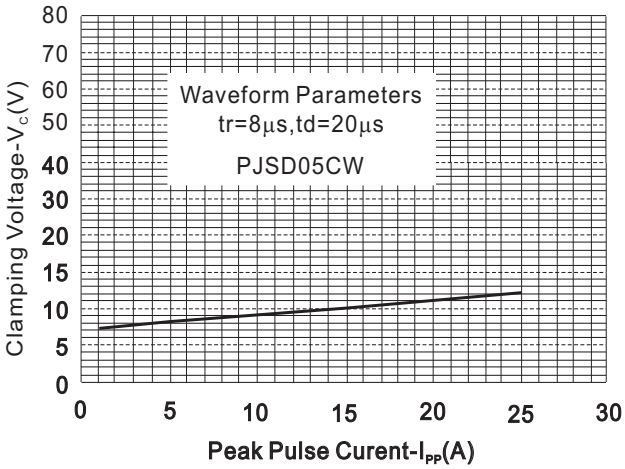

FIG.4 Clamping Voltage vs. Peak Pulse Current

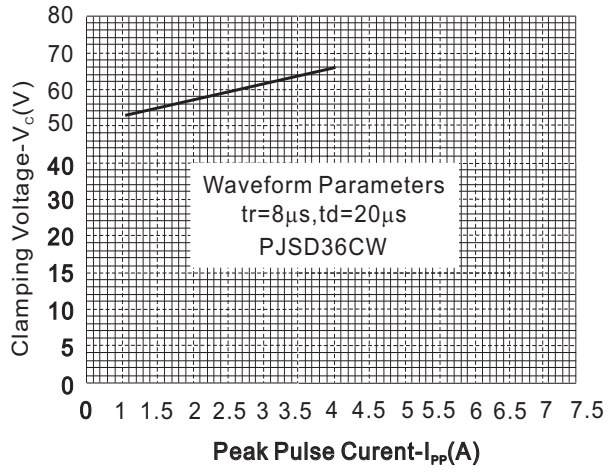

FIG.5 Clamping Voltage vs. Peak Pulse Current

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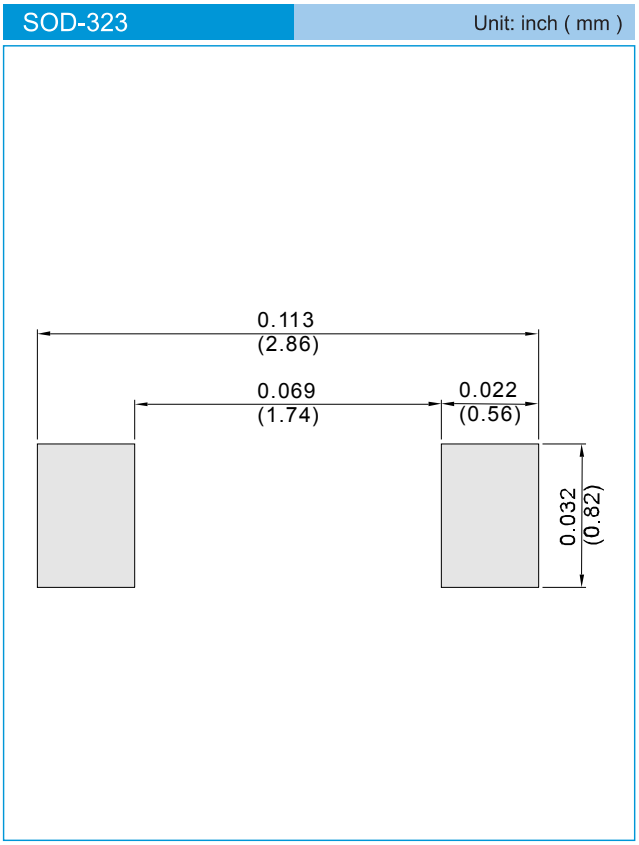
MOUNTING PAD LAYOUT

SOD-323 Unit: inch (mm)



ORDER INFORMATION

- Packing information

  T/R - 12K per 13" plastic Reel

  T/R - 5K per 7" plastic Reel

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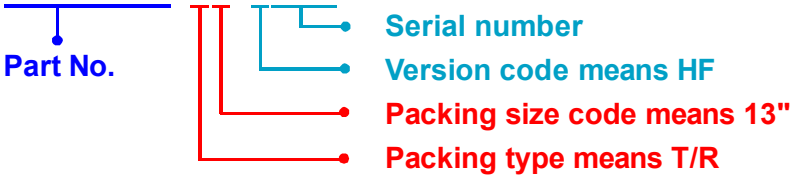
Part No_packing code_Version

PJSD05CW_R1_00001

PJSD05CW_R2_00001

For example :

RB500V-40_R2_00001



Packing Code XX				Version Code XXXXX		
Packing type	1st Code	Packing size code	2nd Code	HF or RoHS	1st Code	2nd~5th 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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