PJGBLC03C-FS

1-Line Low Capacitance Bi-directional TVS Diode

Features

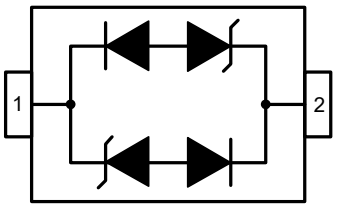
- 350W peak pulse power (8/20μs)
- Ultra low capacitance: 1pF typical
- Ultra low leakage: nA level
- Operating voltage: 3.3V
- Low clamping voltage
- Protects one power line or data line
- Complies with following standards:
  - – IEC 61000-4-2 (ESD) immunity test
    - Air discharge: ±30kV
    - Contact discharge: ±30kV
  - – IEC61000-4-5 (Lightning) 21A (8/20μs)
- RoHS Compliant



SOD-323

Mechanical Characteristics

- Package: SOD-323
- Lead Finish: Matte Tin
- Case Material: “Green” Molding Compound.
- Terminal Connections: See Diagram Below
- Marking Information: See Below



Circuit diagram

Applications

- USB Ports
- Smart Phones
- Wireless Systems
- Ethernet 10/100/1000 Base T

Ordering Information

Part Number	Packaging	Reel Size
PJGBLC03C-FS	3000/Tape & Reel	7 inch



CC = Device code

Marking (Top View)

Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

Parameter	Symbol	Rating	Unit
Peak pulse power (t_p = 8/20μs)	P_{pk}	350	W
Peak pulse current (t_p = 8/20μs)	I_{PP}	21	A
ESD according to IEC61000-4-2 air discharge	V_{ESD}	±30	kV
ESD according to IEC61000-4-2 contact discharge		±30	
Junction temperature	T_J	125	°C
Operation temperature	T_{OP}	-40~85	°C
Lead temperature	T_L	260	°C
Storage temperature	T_{STG}	-55~150	°C

Electrical Characteristics (T_A=25°C unless otherwise specified)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Reverse maximum working voltage	V_{RWM}				3.3	V
Reverse leakage current	I_R	V_{RWM} = 3.3V			200	nA
Reverse breakdown voltage	V_{BR}	I_T = 1mA	3.5			V
Clamping voltage *1)*	V_{CL}	I_{PP} = 16A, t_p = 100ns		12		V
Dynamic resistance *1)*	R_{DYN}			0.41		Ω
Clamping voltage *2)*	V_{CL}	V_{ESD} = 8kV		12		V
Clamping voltage *3)*	V_{CL}	I_{PP} = 1A, t_p = 8/20μs		6	7	V
		I_{PP} = 21A, t_p = 8/20μs		15	17	V
Junction capacitance	C_J	V_R = 0V, f = 1MHz		1		pF

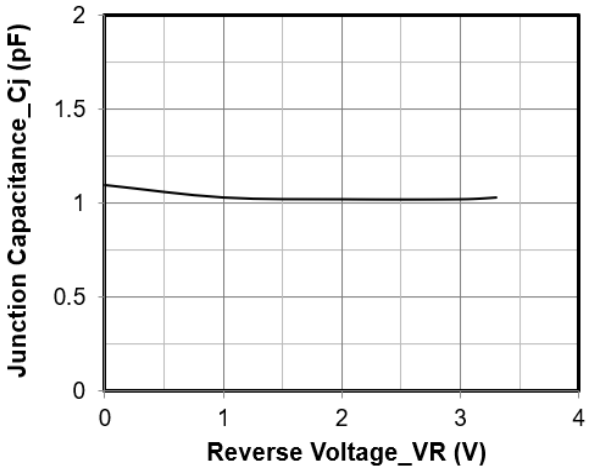
Notes:

1) TLP parameter: Z_0 = 50Ω, t_p = 100ns, t_r = 0.2ns, averaging window from 70ns to 90ns. R_{DYN} is calculated from 4A to 16A.

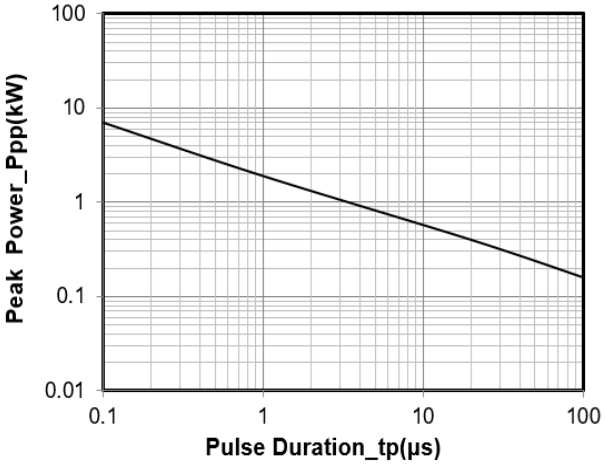
2) Contact discharge mode, according to IEC61000-4-2.

3) Non-repetitive current pulse, according to IEC61000-4-5.

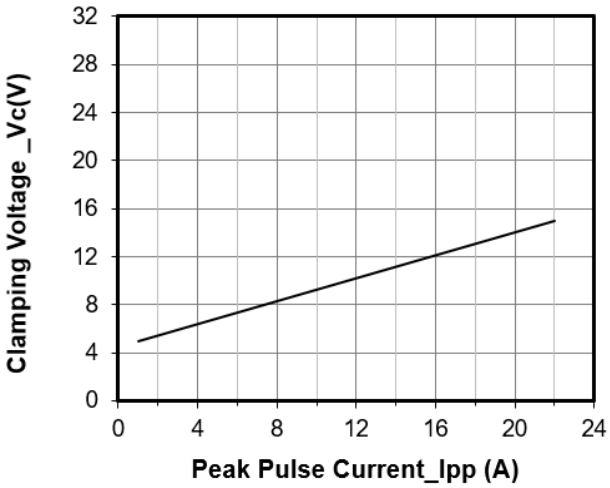
Typical Performance Characteristics (TA=25°C unless otherwise Specified)



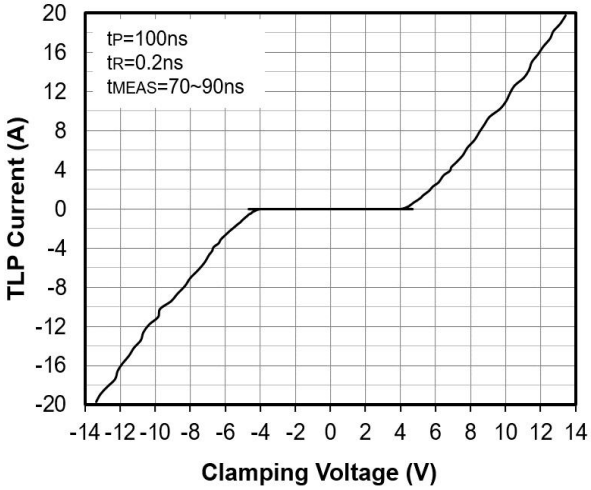
Junction Capacitance vs. Reverse Voltage



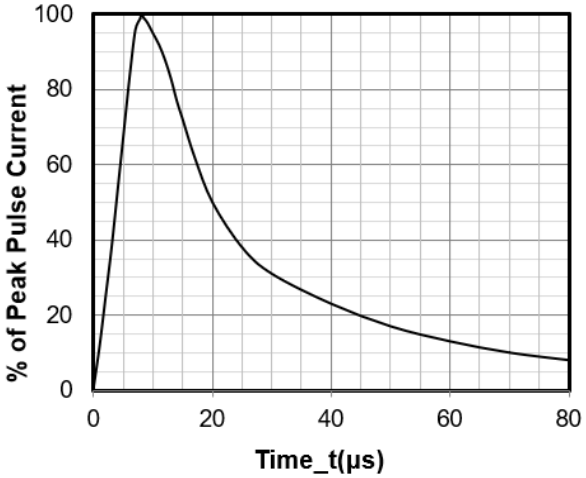
Peak Pulse Power vs. Pulse Time



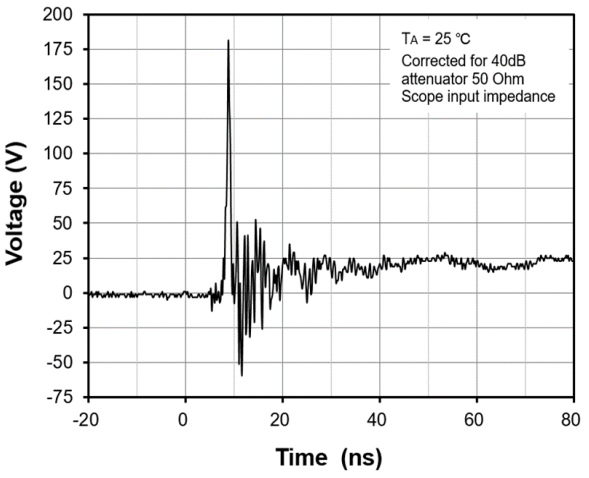
Clamping Voltage vs. Peak Pulse Current (tp = 8/20μs)



TLP Measurement



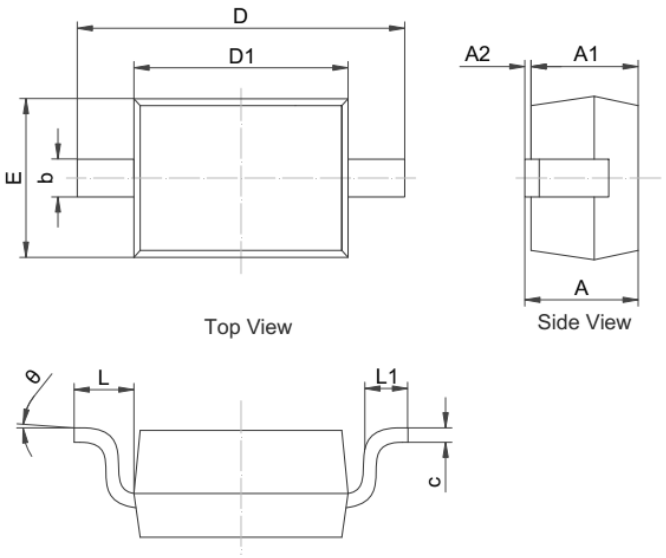
8 X 20μs Pulse Waveform



ESD Clamping Voltage

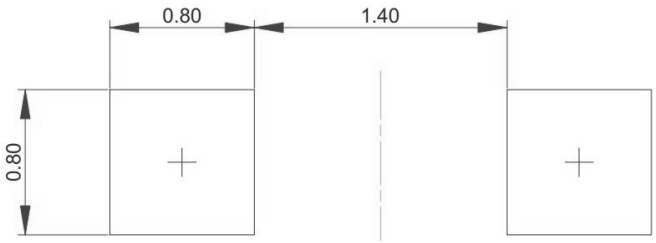
8 kV Contact per IEC61000−4−2

SOD-323 Package Outline Drawing



	MILLIMETERS		
	MIN	NOM	MAX
A	0.800	- -	1.100
A1	0.800	- -	0.900
A2	0.000	- -	0.100
b	0.250	- -	0.400
c	0.080	- -	0.177
D1	1.600	1.700	1.800
D	2.300	- -	2.800
E	1.150	- -	1.400
L	0.475REF		
L1	0.100	- -	0.500
Θ	0°	- -	8°

Suggested Land Pattern



Unit：mm