PDWB0240R8

Ultra Low Capacitance Bi-Directional TVS Diode Array

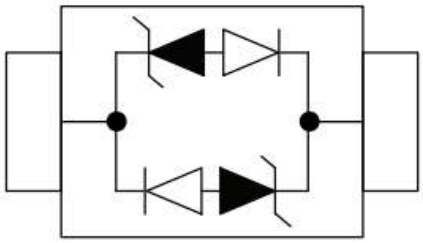
Features

- Ultra low leakage: nA level
- Operating voltage: 24V
- Low clamping voltage
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
    - Air discharge: ±30kV
    - Contact discharge: ±30kV
  - IEC61000-4-4 (EFT) 40A (5/50ns)
  - IEC61000-4-5 (Lightning) 3A (8/20μs)
- RoHS Compliant
- AEC-Q101 qualified

Dimensions SOD-323



Pin Configuration



Applications

- USB Ports
- SIM Ports
- Smart Phones
- Wireless Systems
- Set-top box and digital TV
- Digital video interface (DVI)
- Ethernet 10/100/1000 Base T

Mechanical Characteristics

- Package: SOD-323
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel:3000pcs
- Reel Size:7 inch
- Device Marking:HC

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppp	350	W
ESD per IEC 61000−4−2 (Air)	V_{ESD}	± 30	Kv
ESD per IEC 61000−4−2 (Contact)		± 30	
Operating Temperature Range	T_J	-55 to +125	℃
Storage Temperature Range	T_{STJ}	-55 to +150	℃

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

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				24	V
Breakdown Voltage	V_{BR}	I_T = 1mA	26.7			V
Reverse Leakage Current	I_R	V_{RWM} = 24V			1	μA
Clamping Voltage	V_C	I_{PP} = 1A (8 x 20 μs pulse)			43	V
Clamping Voltage	V_C	I_{PP} = 3A (8 x 20 μs pulse)			60	V
Junction Capacitance	C_J	V_R = 0V, f = 1MHz		1		pF

Characteristic Curves

Fig1. 8/20μs Pulse Waveform

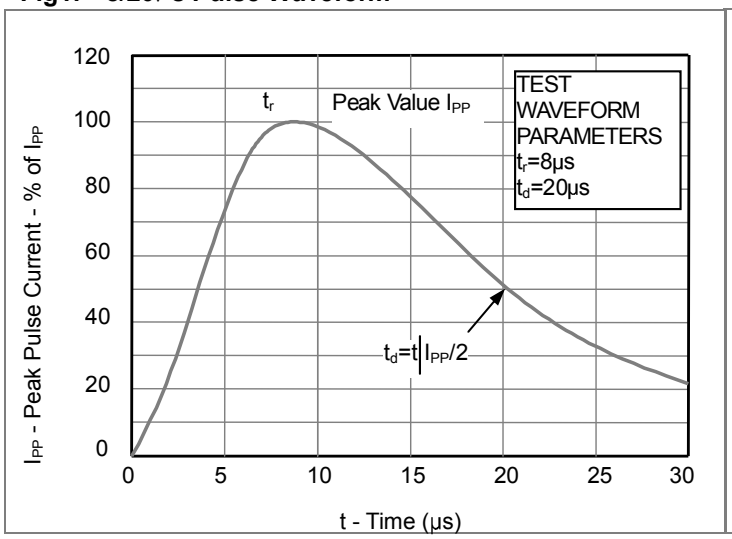


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

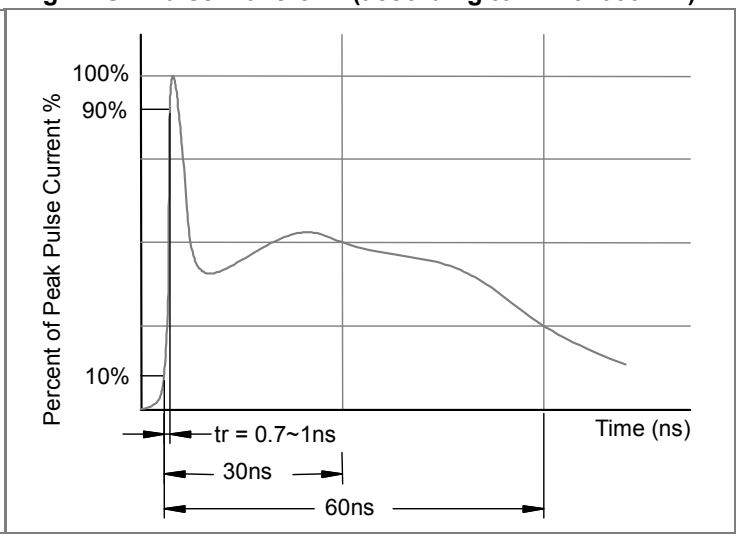
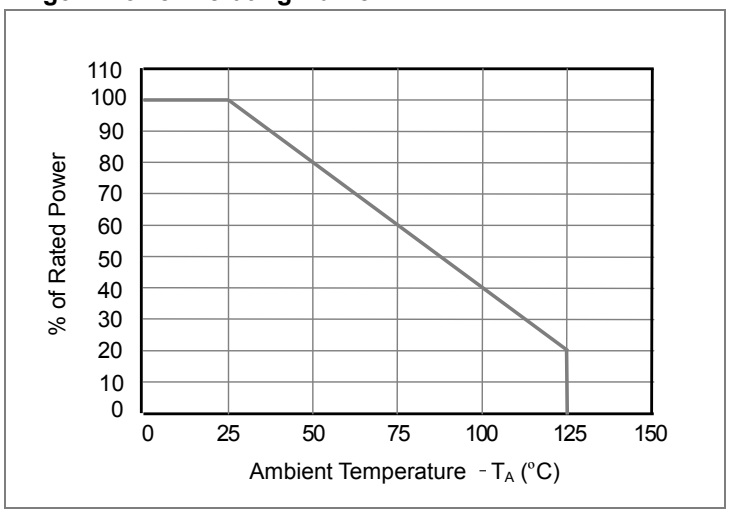
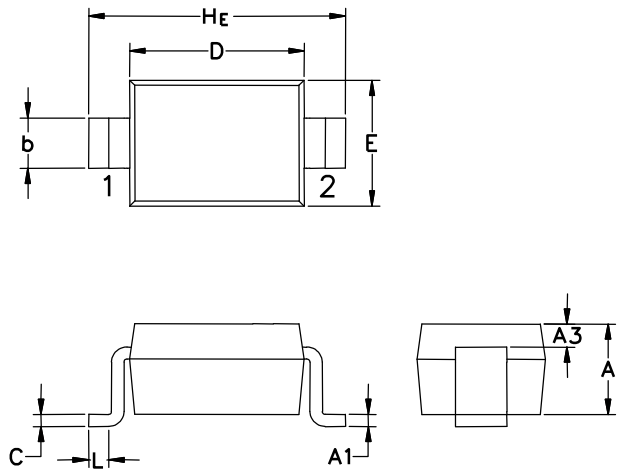


Fig3. Power Derating Curve

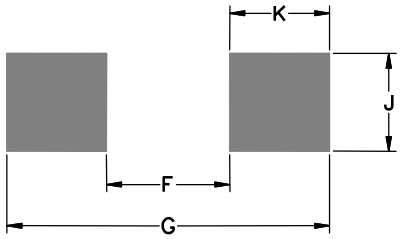


SOD-323 Package Outline & Dimensions



Symbol	Millimeters			Inches		
	Min.	Nom.	Max.	Min.	Nom.	Max.
A	0.80	0.90	1.00	0.031	0.035	0.040
A1	0.00	0.05	0.10	0.000	0.002	0.004
A3	0.15 REF			0.006 REF		
b	0.25	0.32	0.40	0.010	0.012	0.016
C	0.089	0.12	0.177	0.003	0.005	0.007
D	1.60	1.70	1.80	0.062	0.066	0.070
E	1.15	1.25	1.35	0.045	0.049	0.053
L	0.08			0.003		
H_E	2.30	2.50	2.70	0.090	0.098	0.105

Soldering Footprint



Symbol	Millimeters	Inches
F	1.60	0.063
G	2.85	0.112
J	0.83	0.033
K	0.63	0.025

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1.5KE510A LMTL5P02 NVTR4502P S3301TE TPD1E1B04DPYR-TP TPAOZ8804ADI 1.5KE9.1CA L35L5V0CB2 P4KE130A P4SMFJ24CA PS03CBUL2 SM8S26A STL45N10F7AG LC24CI SDA1211CDN SMS24C ULC0524BLC LC0534N 5.0SMDJ110CA 5KP9.0A CM1213-08MR P4KE120A P4KE170CA SD33CW ULC0521C P4KE43CA P4KE480CA PESD36VS2UT HY05U-523 SE10F10B3.3A