



DWS24M3-B-Q ESD Protection Diode

Feature

- Bi-directional ESD protection of two lines
- 260Watts peak pulse power ($t_p = 8/20\mu s$)
- Working voltage: 24.0V
- Junction Capacitance: 14pF(Typ)
- Low leakage current
- Low clamping voltage
- AEC-Q101 qualified
- IEC 61000-4-2 $\pm 25kV$ contact $\pm 25kV$ air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 6A (8/20 μs)

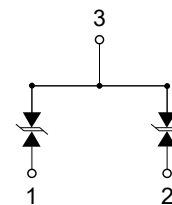
Application

- Handsets and Accessories
- Personal Digital Assestants(PDA's)
- Portable Instrumentation
- Notebooks, Desktops, and Servers
- Pagers Peripherals

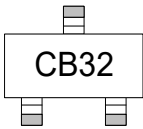
Mechanical Data

- Package: SOT-323
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE Compliant

Schematic & PIN Configuration



Ordering Information

Part Number	Package	Marking	QTY per Reel	Reel Size
DWS24M3-B-Q	SOT-323	 CB32	3000 pcs	7 inches



Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

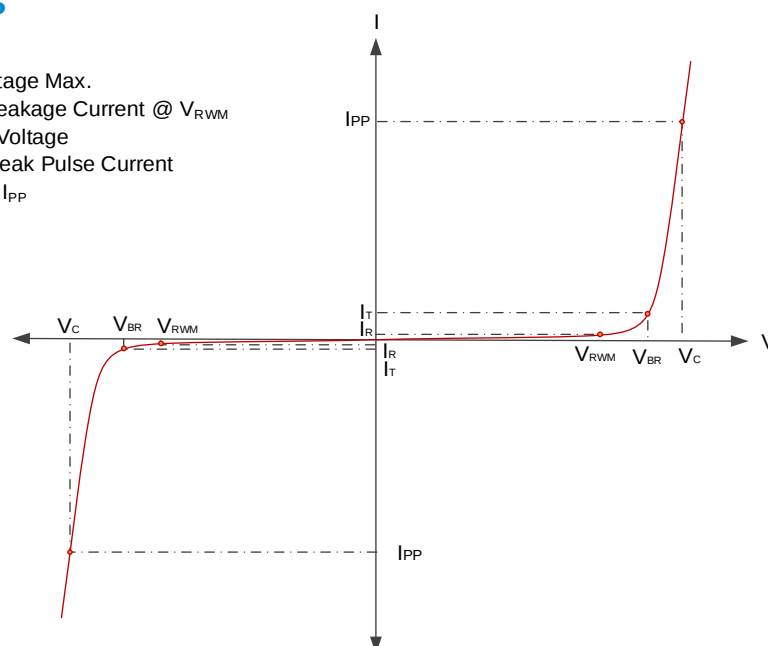
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu\text{s}$)	P_{PP}	260	Watts
Peak Pulse Current ($t_p=8/20\mu\text{s}$) (note1)	I_{pp}	6	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	± 25 ± 25	kV
Lead Soldering Temperature	T_L	260(10seconds)	$^{\circ}\text{C}$
Junction Temperature	T_J	-55 to + 125	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-55 to + 125	$^{\circ}\text{C}$

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				24	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	26.7			V
Reverse Leakage Current	I_R	$V_{RWM}=24\text{V}, T=25^{\circ}\text{C}$		0.1	0.5	μA
Clamping Voltage	V_C	$I_{PP}=6\text{A}, t_p=8/20\mu\text{s}$		40	44	V
Junction Capacitance	C_J	$V_R=0\text{V}, f=1\text{MHz}$		14		pF

Electrical Parameters

- V_{RWM} Reverse Working Voltage Max.
 I_R Maximum Reverse Leakage Current @ V_{RWM}
 V_{BR} Reverse Breakdown Voltage
 I_{PP} Maximum Reverse Peak Pulse Current
 V_C Clamping Voltage @ I_{PP}



Note1: 8/20 μs pulse waveform.



Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

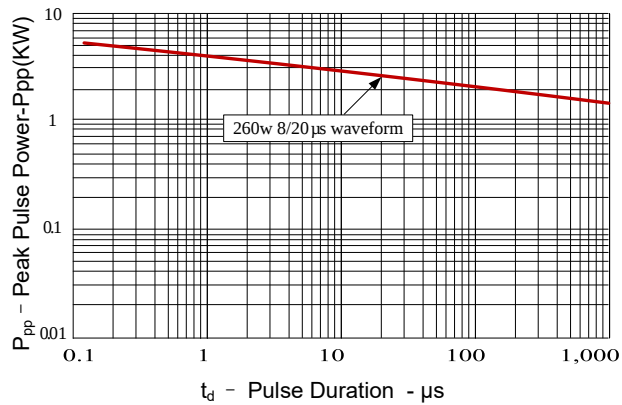


Figure 2: Power Derating Curve

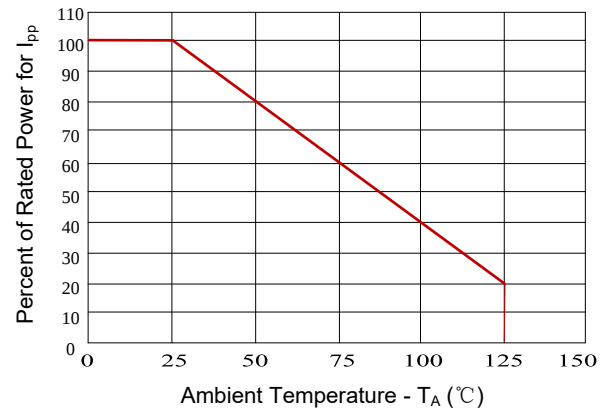


Figure3: Pulse Waveform

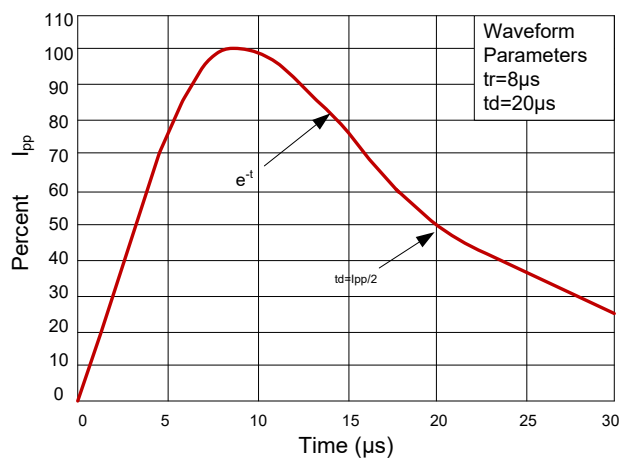
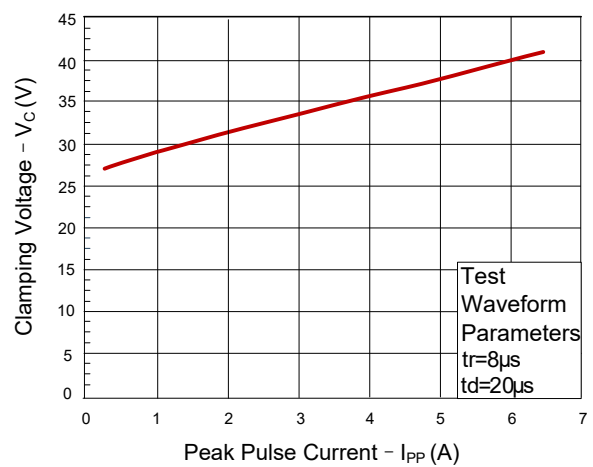
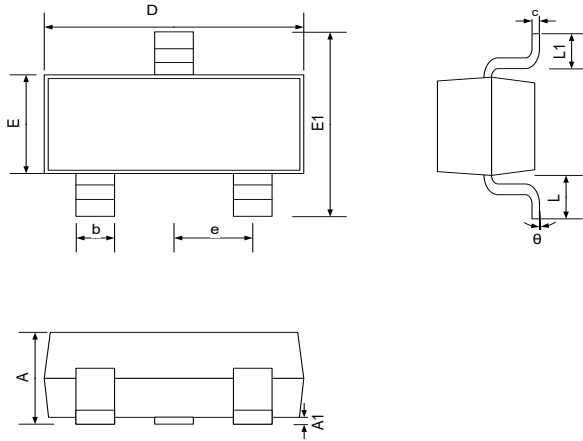


Figure 4: Clamping Voltage vs. Ipp





SOT-323 Outline Drawing



COMMON DIMENSION (mm)			
PKG	SOT323		
REF.	MIN.	NOM.	MAX.
A	0.80	1.00	1.10
A1	0.00	0.05	0.10
b	0.20	0.30	0.40
c	0.08	0.12	0.15
D	2.00	2.10	2.20
E	1.15	1.25	1.35
E1	2.15	2.30	2.45
e		0.650TPY	
L		0.525REF	
L1	0.26	0.36	0.46
θ	0°	4°	8°

Notes: This PCB Layout Is For Reference Purposes Only.