东沃电子
DOWOSEMI

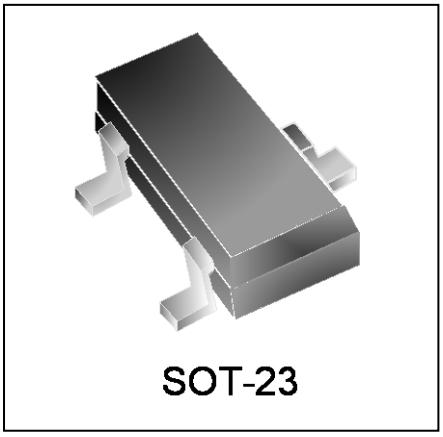
DW24M2T-B-S

Order Code: DW24M2T-B-S

Transient Voltage Suppressor

Features

- 350 watts peak pulse power (t_p = 8/20μs)
- Response Time is Typically < 1 ns
- Protects one bidirectional line or two unidirectional lines
- Working Voltages: 24V
- Low clamping voltages



SOT-23

IEC COMPATIBILITY (EN61000-4)

- **IEC 61000-4-2 (ESD) ±30kV (air), ±30kV (contact)**
- **IEC 61000-4-4 (EFT) 40A (5/50ns)**
- **IEC 61000-4-5 (Lightning) 6.5A (8/20μs)**

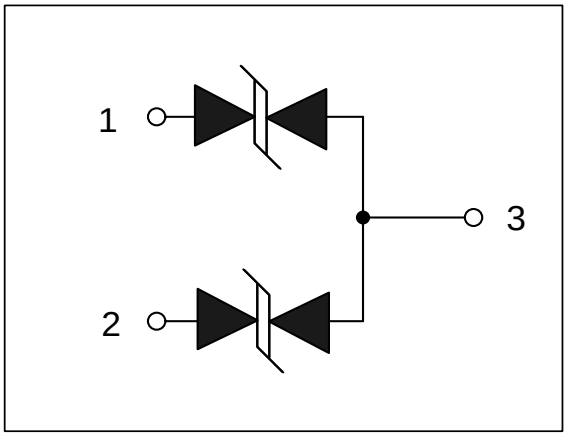
Mechanical Characteristics

- JEDEC SOT-23 package
- Molding compound flammability rating:
- UL 94V-0
- Marking : Marking Code
- Packaging : Tape and Reel per EIA 481
- RoHS Compliant

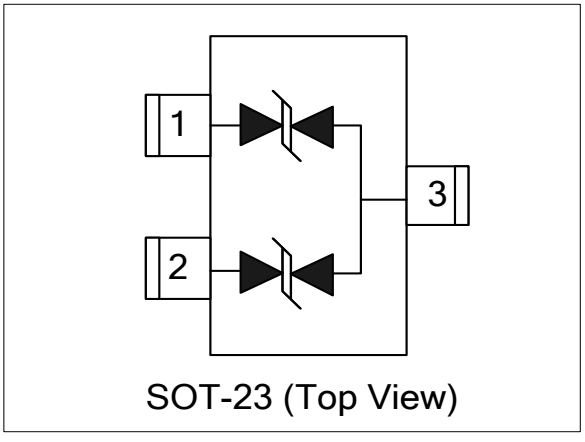
Applications

- Automotive Networks
- Control & Monitoring Systems
- Portable Electronics
- Set-Top Box
- Servers, Notebook, and Desktop PC
- Wireless Bus Protection

Circuit Diagram



Schematic & PIN Configuration

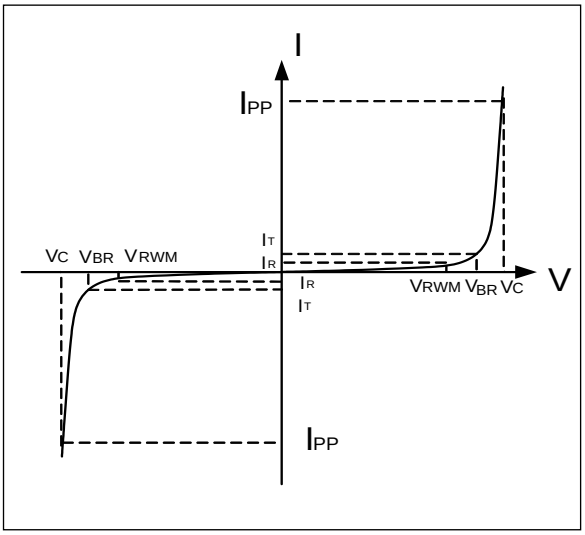


SOT-23 (Top View)

Absolute Maximum Rating			
Rating	Symbol	Value	Units
Peak Pulse Power（t_p=8/20μs）	P_{PP}	350	Watts
Lead Soldering Temperature	T_L	260(10sec)	℃
Operating Temperature	T_J	-55 to + 125	℃
Storage Temperature	T_{STG}	-55 to +150	℃

Electrical Parameters (T=25℃)

Symbol	Parameter
I_{PP}	Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Reverse Stand-Off Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current



Electrical Characteristics

DW24M2T-B-S						
Parameter	**Symbol**	**Conditions**	**Minimum**	**Typical**	**Maximum**	**Units**
Reverse Stand-Off Voltage	V_{RWM}				24	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	26.2			V
Reverse Leakage Current	I_R	V_{RWM}=24V, T=25℃			200	nA
Peak Pulse Current	I_{PP}	t_p =8/20μs			6.5	A
Maximum Clamping Voltage	V_C	I_{PP}=6.5A, tp=8/20μs		40	52	V
Junction Capacitance	C_j	Pin 1 to 3 or Pin 2 to 3 V_R = 0V, f = 1MHz		30	40	pF

Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

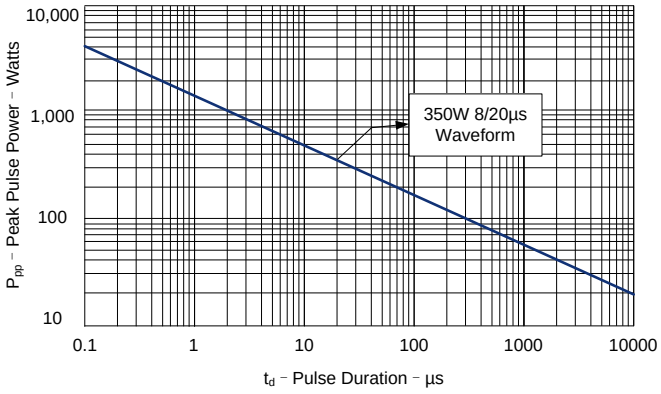


Figure 2: Power Derating Curve

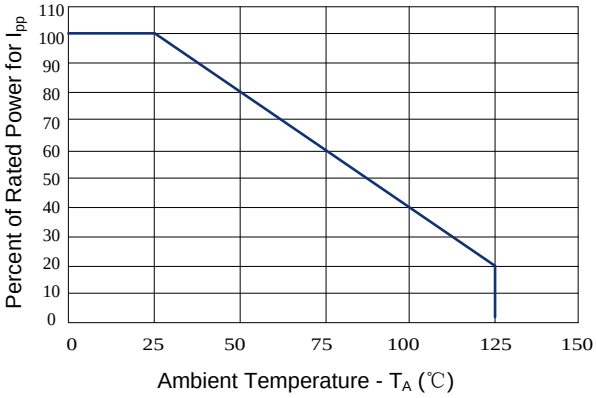


Figure 3: Clamping Voltage vs. Peak Pulse Current

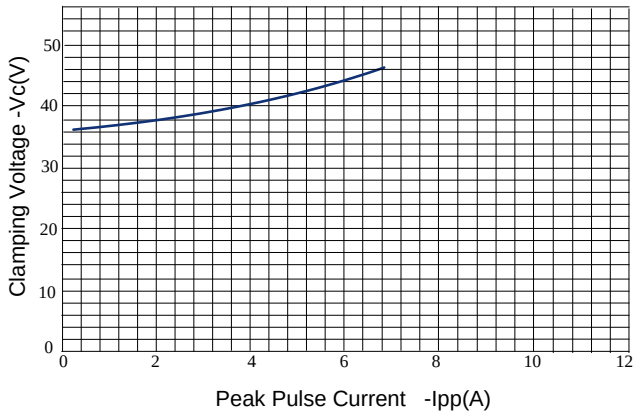


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

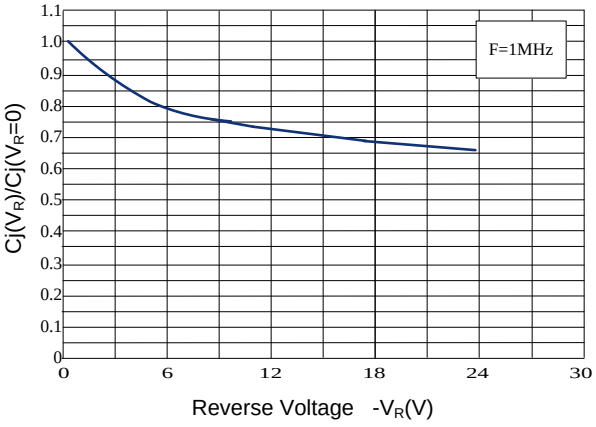
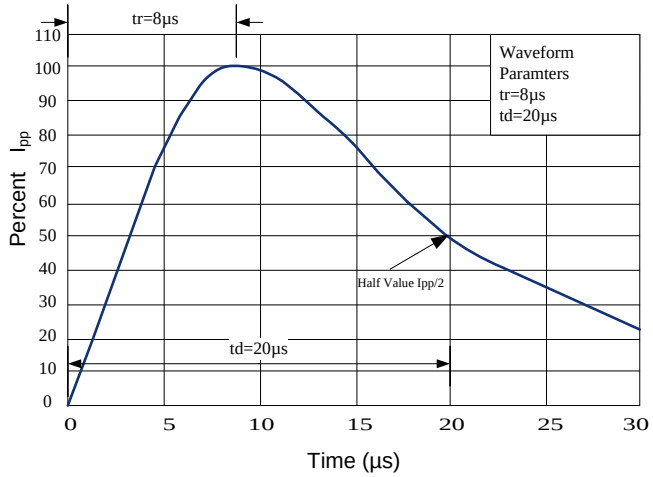
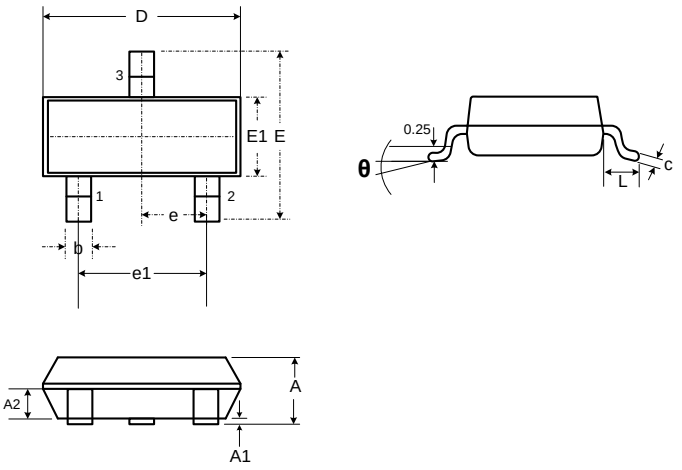


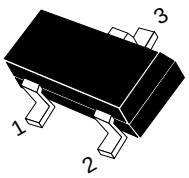
Figure 5: Pulse Waveform



Outline Drawing – SOT-23

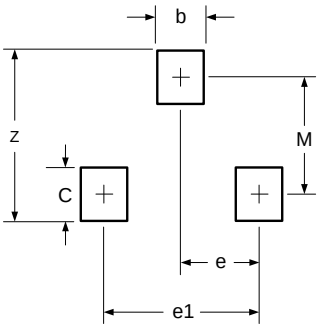
PACKAGE OUTLINE





SOT-23

DIMENSIONS				
SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.90	1.15	0.035	0.045
A1	0.00	0.10	0.000	0.004
A2	0.60	0.70	0.0236	0.0275
b	0.30	0.50	0.012	0.020
c	0.08	0.15	0.003	0.006
D	2.80	3.00	0.110	0.118
E	2.25	2.55	0.089	0.100
E1	1.20	1.40	0.047	0.055
e	0.95 BSC		0.0374 BSC	
e1	1.80	2.00	0.071	0.079
L	0.30	0.50	0.012	0.020
θ	0	8°	0	8°

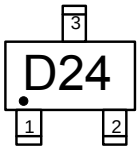


DIMENSIONS		
DIM	**INCHES**	**MILLIMETERS**
M	**0.0795**	**2.02**
C	**0.0315**	**0.80**
Z	**0.111**	**2.82**
e	**0.037 BSC**	**0.95 BSC**
e1	**0.075 BSC**	**1.9 BSC**
b	**0.0315**	**0.80**

Notes

1. Dimensioning and tolerances per ANSI Y14.5M, 1985.
2. Controlling Dimension: Inches
3. Pin 3 is the cathode (Unidirectional Only).
4. Dimensions are exclusive of mold flash and metal burrs.

Marking Codes



Package Information

Qty：3k/Reel