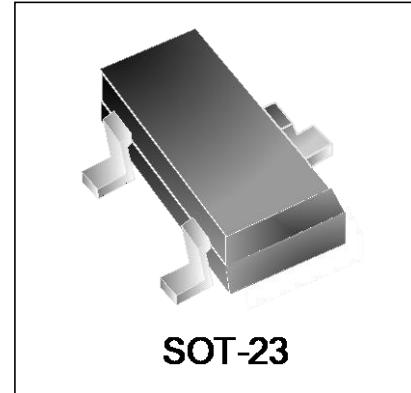




Features

- 450 watts peak pulse power ($t_p = 8/20\mu s$)
- Low Clamping Voltage
- Working Voltages: 5V
- Low Leakage Current
- Response Time is Typically < 1 ns
- AEC-Q101 Qualified



IEC Compatibility (EN61000-4)

- IEC 61000-4-2 (ESD) $\pm 30kV$ (air), $\pm 30kV$ (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 18A (8/20 μs)

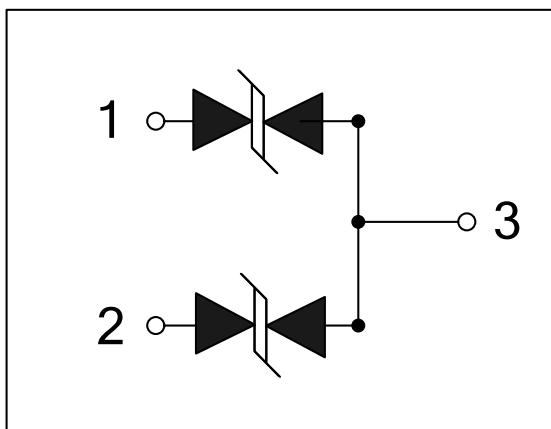
Mechanical Characteristics

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

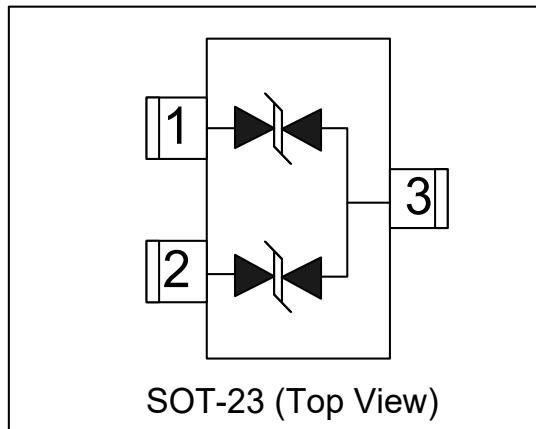
Applications

- RS-232, RS-422 & RS-485
- Cellular Handsets and Accessories
- 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)

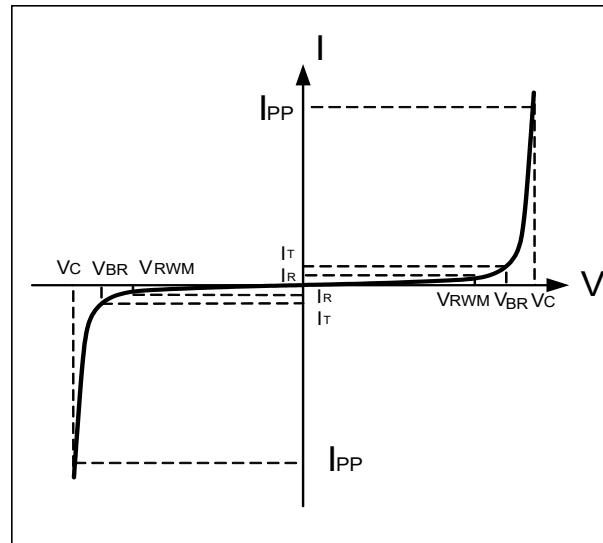


Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu s$)	P_{PP}	450	Watts
Lead Soldering Temperature	T_L	260(10sec)	°C
Operating Temperature	T_J	-55 to + 125	°C
Storage Temperature	T_{STG}	-55 to +150	°C

Electrical Parameters (T=25°C)

Symbol	Parameter
I_{PP}	Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_F	Forward Current
V_F	Forward Voltage @ I_F



Electrical Characteristics

DW05M2T-B-S						
Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	6			V
Reverse Leakage Current	I_R	$V_{RWM}=5V, T=25^\circ C$			1	µA
Peak Pulse Current	I_{PP}	$t_p = 8/20\mu s$			18	A
Clamping Voltage	V_C	$I_{PP}=1A, t_p=8/20\mu s$			9.8	V
Maximum Clamping Voltage	V_C	$I_{PP}=18A, t_p=8/20\mu s$			20	V
Junction Capacitance	C_J	Pin 1 to 3 and Pin 2 to 3 $V_R = 0V, f = 1MHz$		75	80	pF



Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

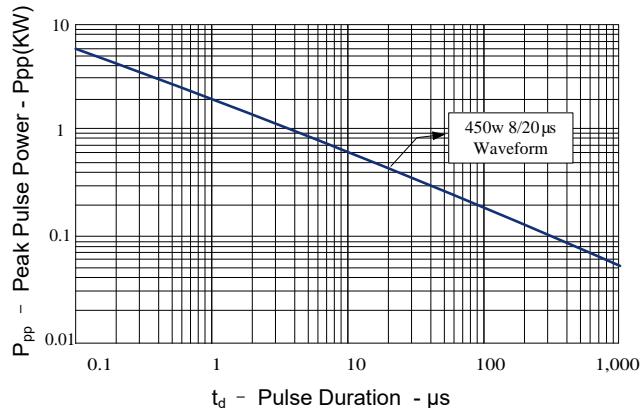


Figure 2: Power Derating Curve

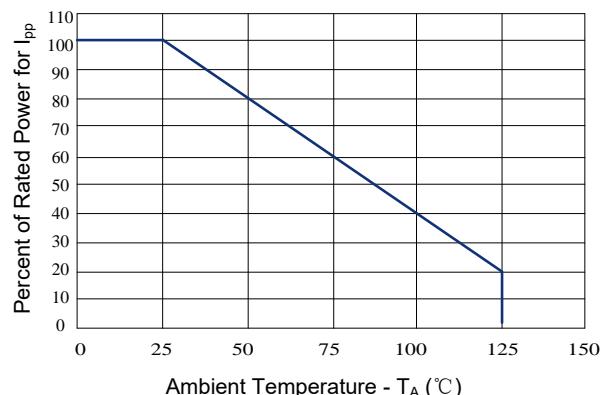


Figure 3: Clamping Voltage vs. Peak Pulse Current

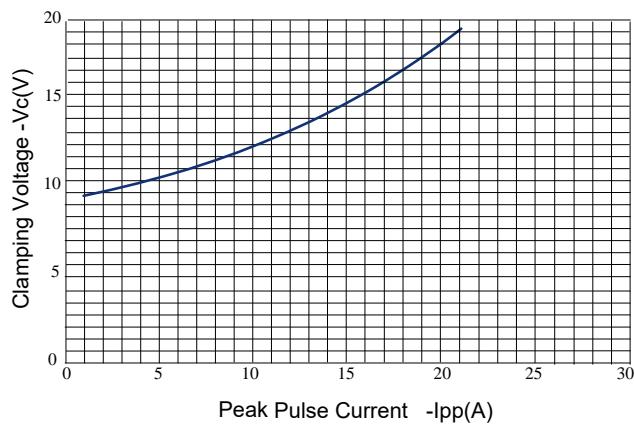


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

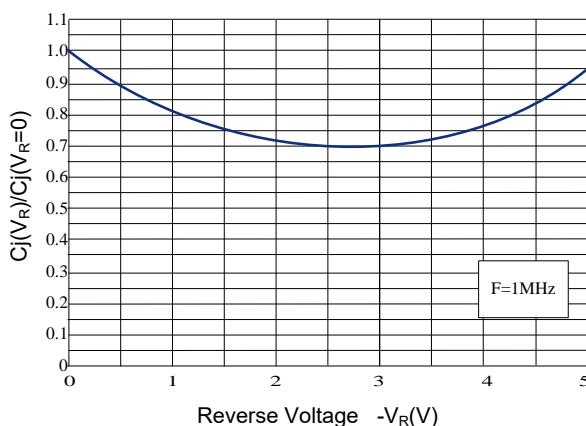
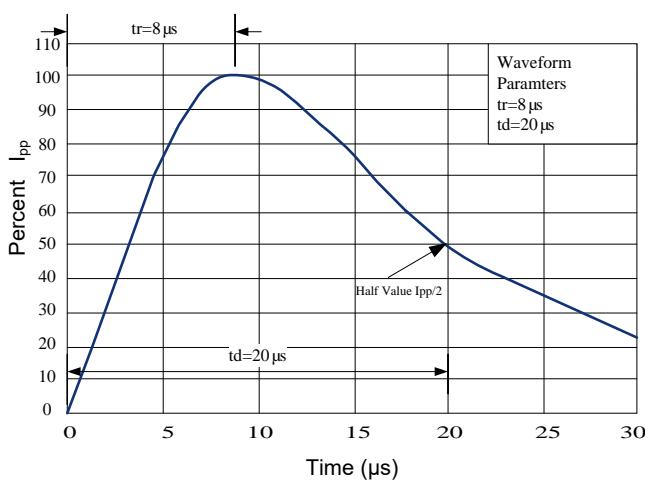


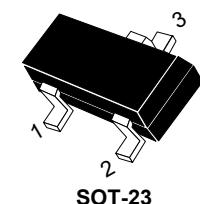
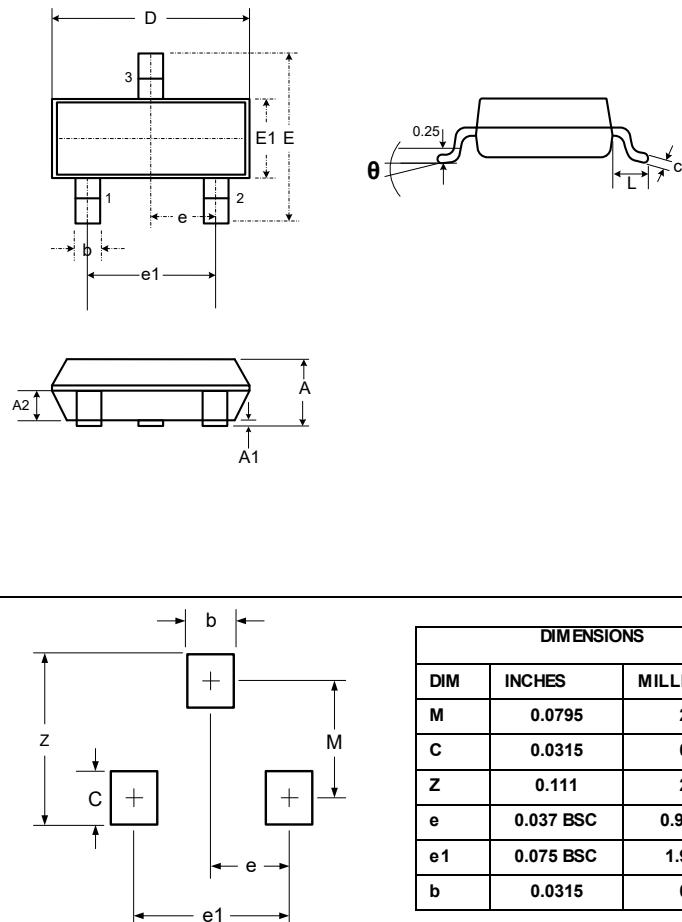
Figure 5: Pulse Waveform





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

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

Marking Codes

Part Number	DW05M2T-B-S
Marking Code	5B2

Package Information

Qty: 3k/Reel