



## 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

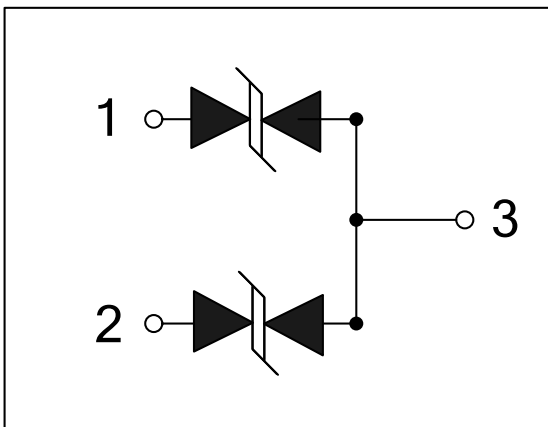
## IEC Compatibility (EN61000-4)

- 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 $\mu s$ )

## 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

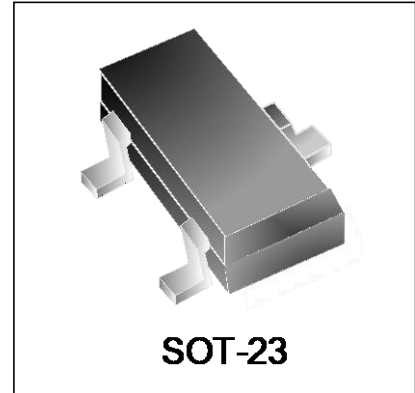
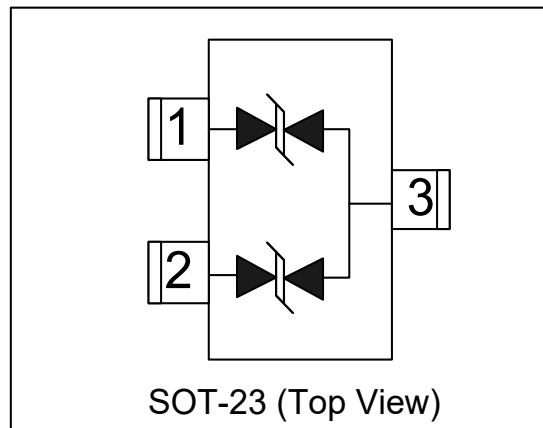
## Circuit Diagram



## 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

## Schematic & PIN Configuration

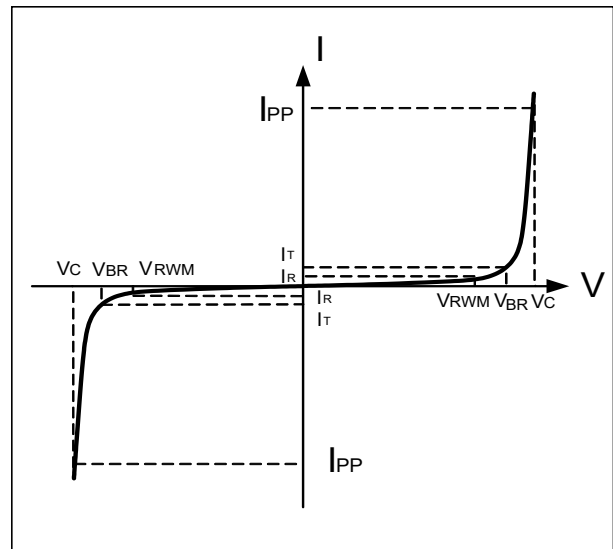


SOT-23

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)	$^{\circ}C$
Operating Temperature	$T_J$	-55 to + 125	$^{\circ}C$
Storage Temperature	$T_{STG}$	-55 to +150	$^{\circ}C$

### Electrical Parameters (T=25 $^{\circ}C$ )

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	$\mu A$
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

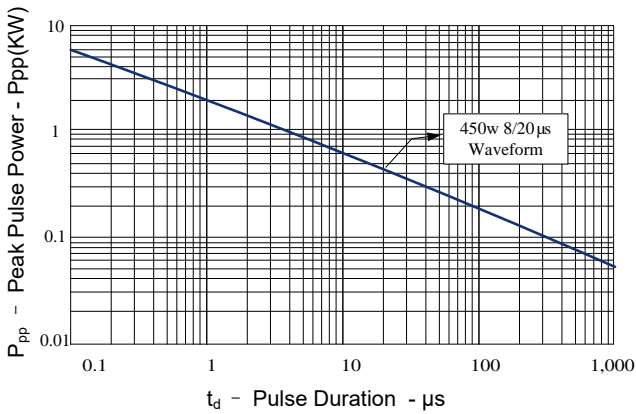


Figure 2: Power Derating Curve

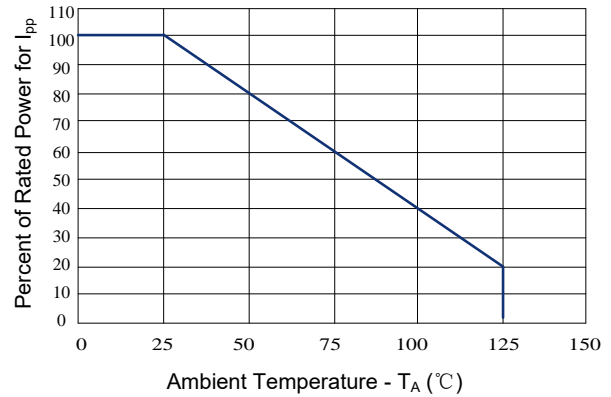


Figure 3: Clamping Voltage vs. Peak Pulse Current

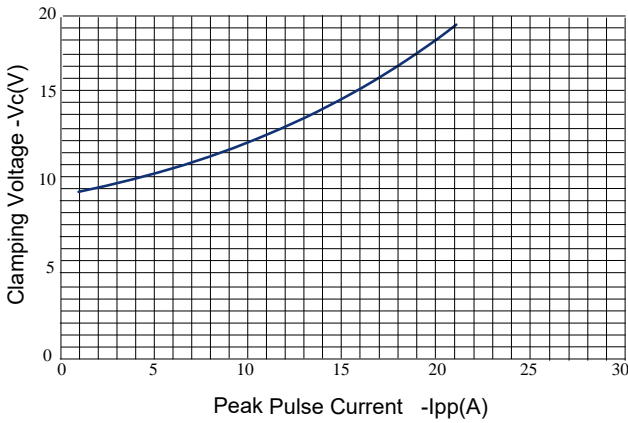


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

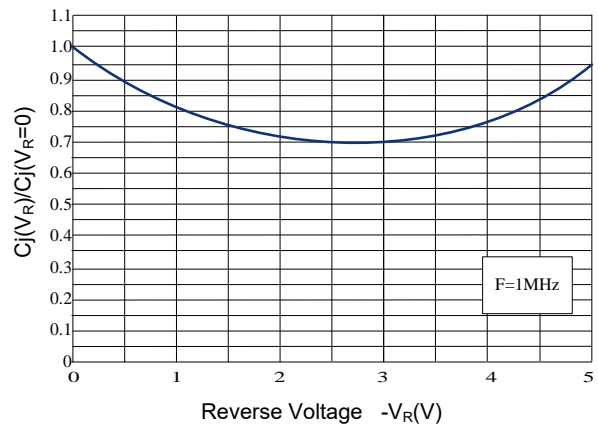
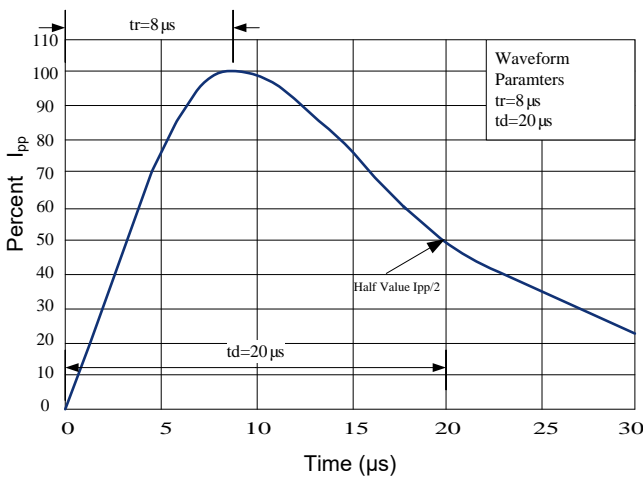
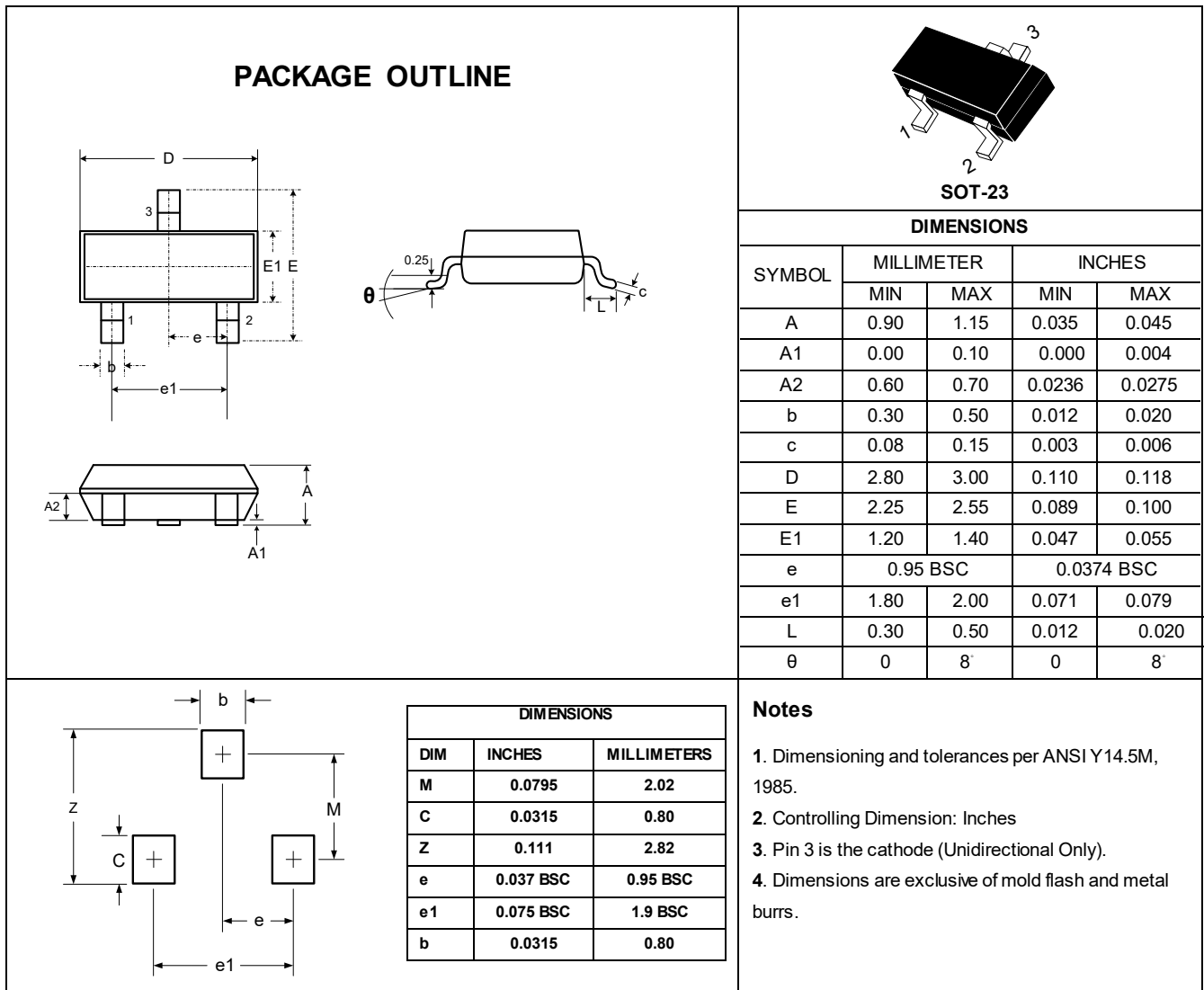


Figure 5: Pulse Waveform



## Outline Drawing – SOT-23



## Marking Codes

Part Number	DW05M2T-B-S
Marking Code	5B2

## Package Information

Qty: 3k/Reel