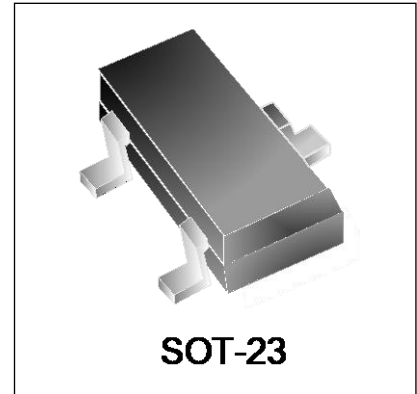


Features

- 350 watts peak pulse power ($t_p = 8/20\mu s$)
- Unidirectional & Bidirectional Configurations
- Working Voltages: 3.3V, 5V, 12V, 15V, 24V and 36V
- Low clamping voltages
- Low Leakage Current
- Response Time is Typically $< 1\text{ ns}$
- AEC-Q101 Qualified



IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD) $\pm 30\text{kV}$ (air), $\pm 30\text{kV}$ (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)

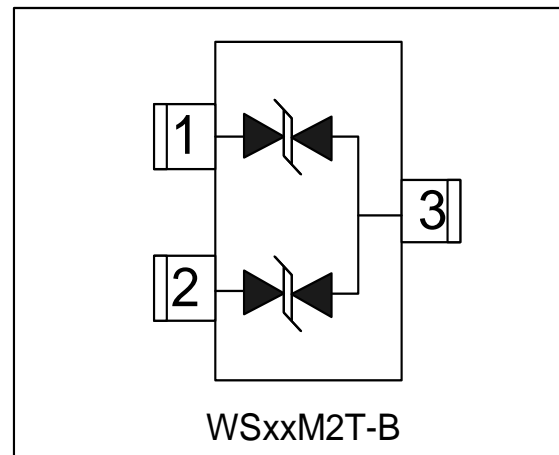
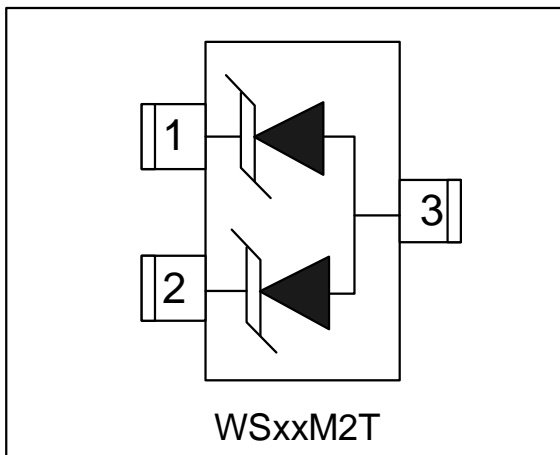
Mechanical Characteristics

- 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

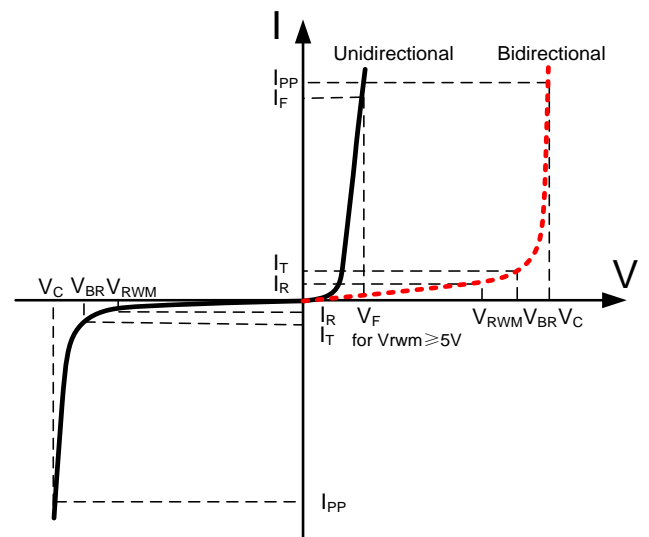
Schematic & PIN Configuration



Absolute Maximum Rating			
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu s$)	P_{PP}	350	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 $^{\circ}C$)

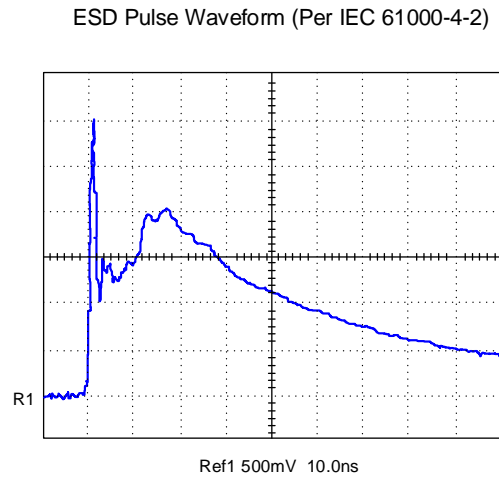
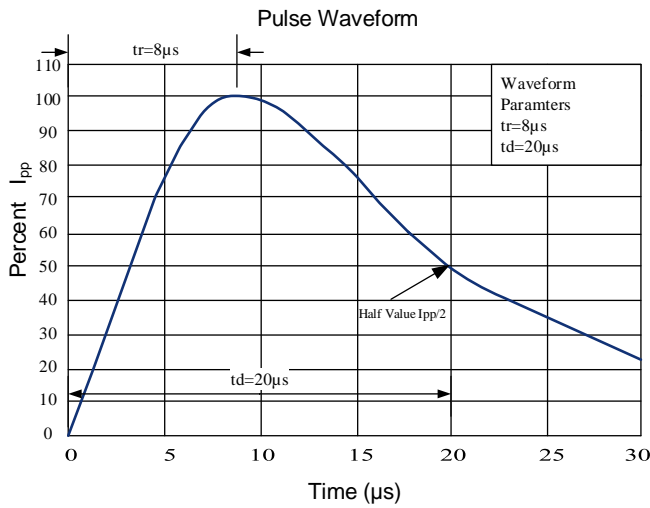
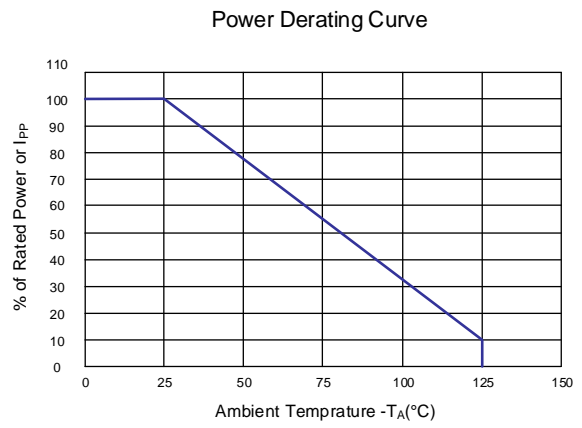
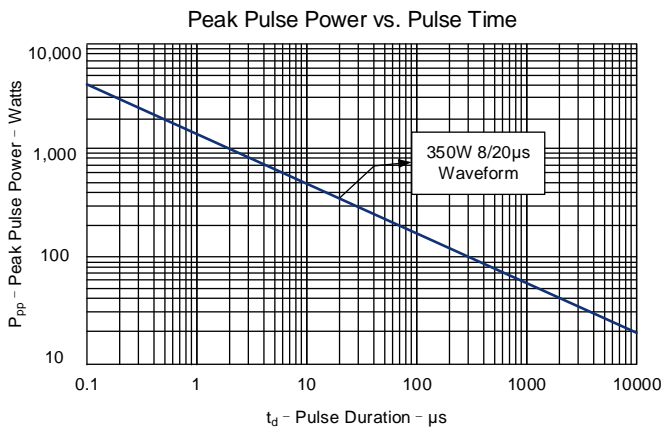
Symbol	Parameter
I_{PP}	Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Reverse Stand-Off Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_F	Forward Current
V_F	Forward Voltage @ I_F



Electrical Characteristics

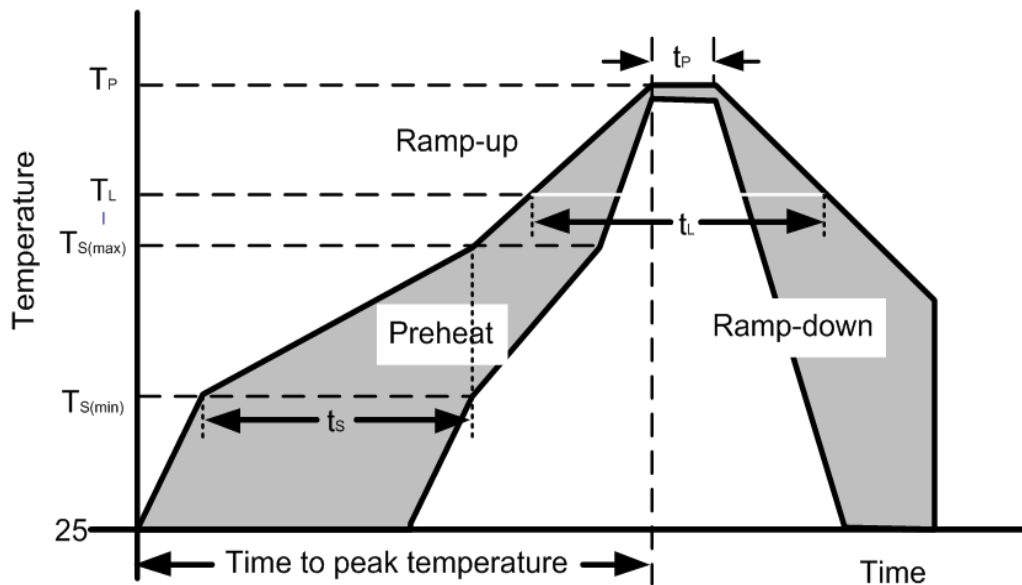
Part Number	Reverse Stand off Voltage V_{RWM} (Volts)	Minimum Breakdown Voltage $V_{BR}@1mA$ (Volts)	Maximum Peak Pulse Current I_{PP} (Amps)	Maximum Clamping Voltage $V_C @I_{PP}$ (Volts)	Maximum Reverse Leakage $I_R @V_{RWM}$ (μA)	Typical Capacitance DC=0V $C_J @ 1 MHz$ (pF)	Maximum Capacitance DC=0V $C_J @ 1 MHz$ (pF)	Marking Code
WS03M2T	3.3	4.0	25	15	1	200	240	3M2
WS03M2T-B	3.3	4.0	25	15	1	100	120	3B2
WS05M2T	5	6.0	20	25	1	150	180	5M2
WS05M2T-B	5	6.0	20	25	1	75	90	5B2
WS12M2T	12	13.3	12	30	1	75	90	AM2
WS12M2T-B	12	13.3	12	30	1	40	45	AB2
WS15M2T	15	16.7	10	35	1	45	55	BM2
WS15M2T-B	15	16.7	10	35	1	25	30	BB2
WS24M2T	24	26.7	6	55	1	30	40	CM2
WS24M2T-B	24	26.7	6	55	1	15	20	CB2
WS36M2T	36	40	6	95	1	25	30	DM2
WS36M2T-B	36	40	6	95	1	15	18	DB2

Typical Characteristics



Soldering Parameters

Reflow Condition		Pb – Free assembly
Pre Heat	Temperature Min ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 190 secs
Average ramp up rate (Liquidus Temp) (T_L) to peak		5°C/second max
$T_{s(max)}$ to T_L Ramp-up Rate		5°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Temperature (t_L)	60 – 150 seconds
Peak Temperature (T_P)		260+0/-5 °C
Time within actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		5°C/second max
Time 25°C to peak Temperature (T_P)		8 minutes Max.
Do not exceed		280°C



Outline Drawing – SOT-23

PACKAGE OUTLINE

SOT-23

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

Part Number	WSxxM2T	WSxxM2T-B
Marking Code		

Package Information

Qty: 3k/Reel

CONTACT INFORMATION

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For additional information, please contact your local Sales Representative.

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Specifications are subject to change without notice...
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time...
Users should verify actual device performance in their specific applications...