

MMBD4448WT

Features

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- High Conductance

Mechanical Data

- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Polarity: See Diagram
- Marking: KA3

Maximum Ratings @ 25°C Unless Otherwise Specified

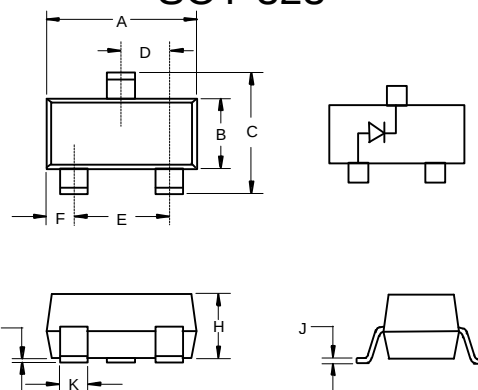
Characteristic	Symbol	Value	Unit
Non-Repetitive Peak Reverse Volt.	V_{RM}	100	V
Peak Repetitive Reverse Voltage	V_{RRM}	75	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
RMS Reverse Voltage	$V_{R(RMS)}$	53	V
Forward Continuous Current(Note1)	I_{FM}	500	mA
Average Rectified Output Current	I_O	250	mA
Non-Repetitive Peak @ $t \leq 1.0s$	I_{FSM}	2	A
Forward Surge Current @ $t \leq 1.0us$		4	A
Power Dissipation(Note 1)	P_d	200	mW
Thermal Resistance(Note 1)	R	357	K/W
Operation/Storage Temp. Range	T_j, T_{STG}	-55 to +150	°C

Electrical Characteristics @ 25°C Unless Otherwise Specified

Charateristic	Symbol	Min	Max	Unit	Test Cond.
Maximum Forward Voltage Drop	V_{FM}	0.62	0.72	V	$I_F = 5.0mA$
		-----	0.855		$I_F = 10mA$
			1		$I_F = 100mA$
			1.25		$I_F = 150mA$
Maximum Peak Reverse Current	I_{RM}	-----	2.5	uA	$V_R = 75V$
			50	uA	$V_R = 75V T_j = 150^\circ C$
			30	uA	$V_R = 25V T_j = 150^\circ C$
			25	nA	$V_R = 20V$
Junction Capacitance	C_j	-----	4	pF	$V_R = 0V, f = 1.0MHz$
Reverse Recovery Time	t_{rr}	-----	4	ns	

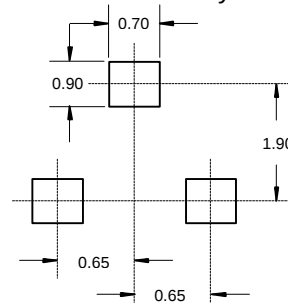
Surface Mount Switching Diode 200mW

SOT-323



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.071	.087	1.80	2.20	
B	.045	.053	1.15	1.35	
C	.079	.087	2.00	2.20	
D	.026 Nominal		0.65 Nominal		
E	.047	.055	1.20	1.40	
F	.012	.016	.30	.40	
G	.000	.004	.000	.100	
H	.035	.039	.90	1.00	
J	.004	.010	.100	.250	
K	.012	.016	.30	.40	

Suggested Solder Pad Layout

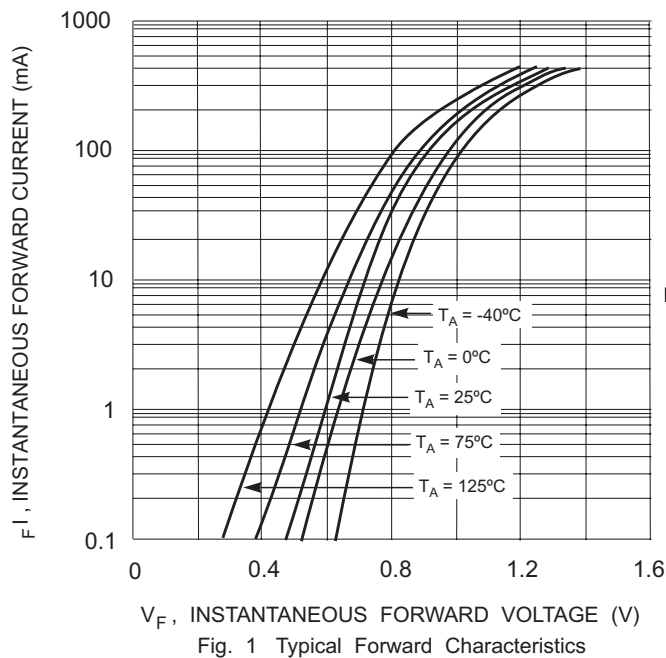


Note: 1. Valid provided that terminals are kept at ambient temperature

2. T_{rr} Test Condition: $I_F = I_R = 10mA$, $I_{rr} = 0.1 \cdot I_R$, $R = 100 \text{ OHM}$

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Figure 1
Typical Forward Characteristics



M.C.C.

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Figure 2
Forward Derating Curve

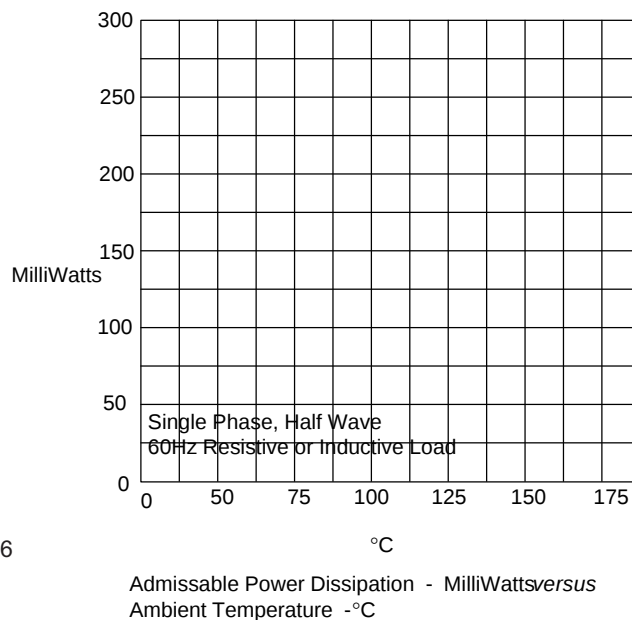
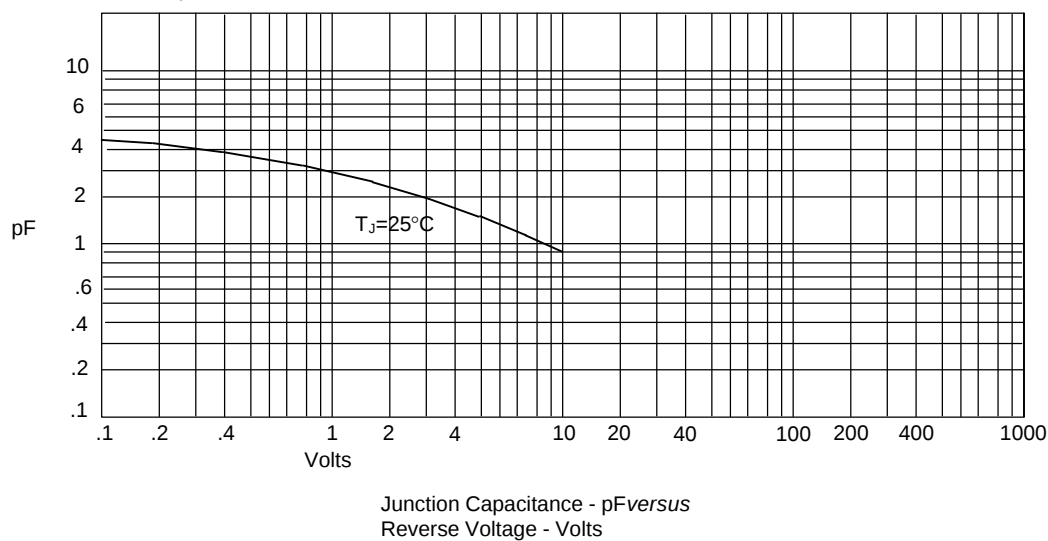


Figure 3
Junction Capacitance

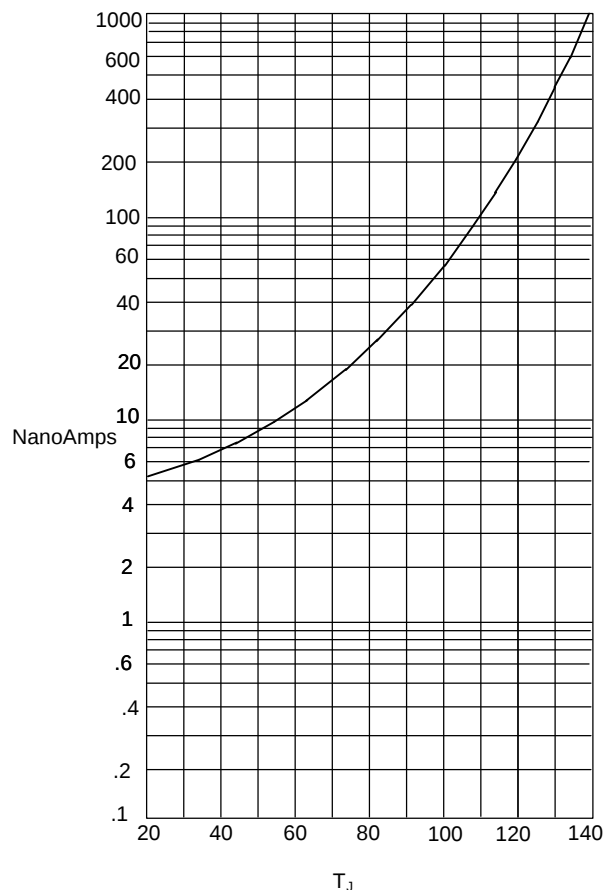


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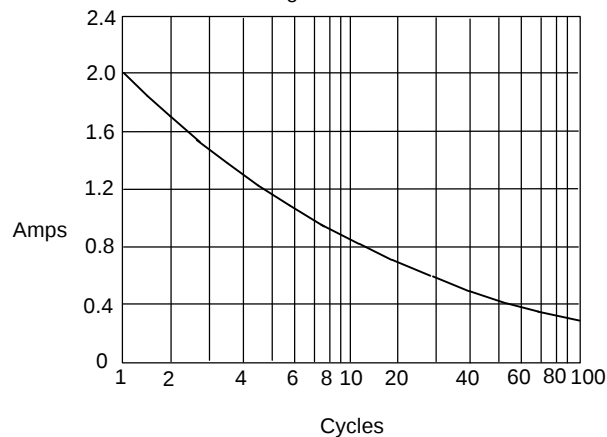
Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - NanoAmpere *versus*
Junction Temperature - $^{\circ}\text{C}$

$T_A=25^{\circ}\text{C}$

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles



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