



# MMBD4448WT

## Features

- Fast Switching Speed
- Halogen free available upon request by adding suffix "-HF"
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- High Conductance
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Lead Free Finish/Rohs Compliant ("P" Suffix designates RoHS Compliant. See ordering information)

## Mechanical Data

- 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	$V_{RRM}$		
Working Peak Reverse Voltage	$V_{RWM}$	75	V
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 @ $t < 1.0s$	$I_{FSM}$	2	A
Forward Surge Current @ $t = 1.0us$		4	A
Power Dissipation(Note 1)	$P_d$	200	mW
Thermal Resistance(Note 1)	$R_{thja}$	625	K/W
Operation/Storage Temp. Range	$T_j, T_{STG}$	-55 to +150	°C

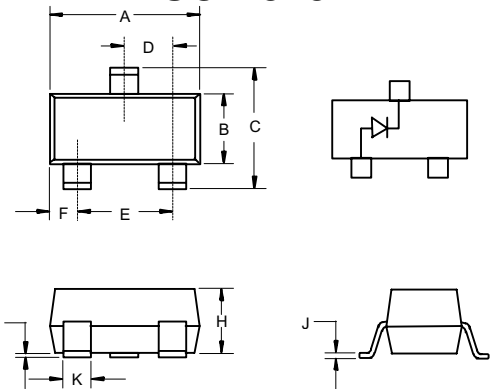
## Electrical Characteristics @ 25°C Unless Otherwise Specified

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 <sub>R</sub> =75V	$T_j = 150^\circ C$	
			50	uA		V <sub>R</sub> =75V	$T_j = 150^\circ C$
			30	uA		V <sub>R</sub> =25V	$T_j = 150^\circ C$
			25	nA		V <sub>R</sub> =20V	
Junction Capacitance	$C_j$	----	4	pF	V <sub>R</sub> =0V, f=1.0MHz		
Reverse Recovery Time	$t_{rr}$	----	4	ns			

Note: 1. Valid provided that terminals are kept at ambient temperature  
 2. Trr Test Condition:  $I_F = I_R = 10mA$ ,  $I_{rr} = 0.1 * I_R$ ,  $R = 100 OHM$

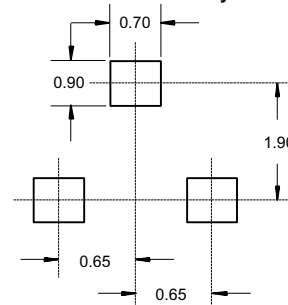
## Surface Mount Switching Diode 200mW

### SOT-323



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.079	.087	2.00	2.20	
B	.045	.053	1.15	1.35	
C	.083	.096	2.10	2.45	
D	.026 Nominal		0.65Nominal		
E	.047	.055	1.20	1.40	
F	.012	.016	.30	.40	
G	.000	.004	.000	.100	
H	.035	.039	.90	1.00	
J	.003	.006	.08	.15	
K	.006	.016	.15	.40	

### Suggested Solder Pad Layout



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Figure 1  
Typical Forward Characteristics

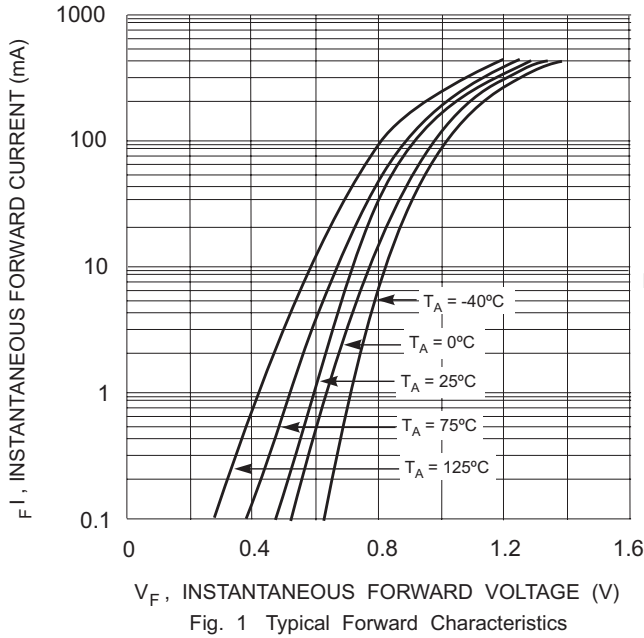


Figure 2  
Forward Derating Curve

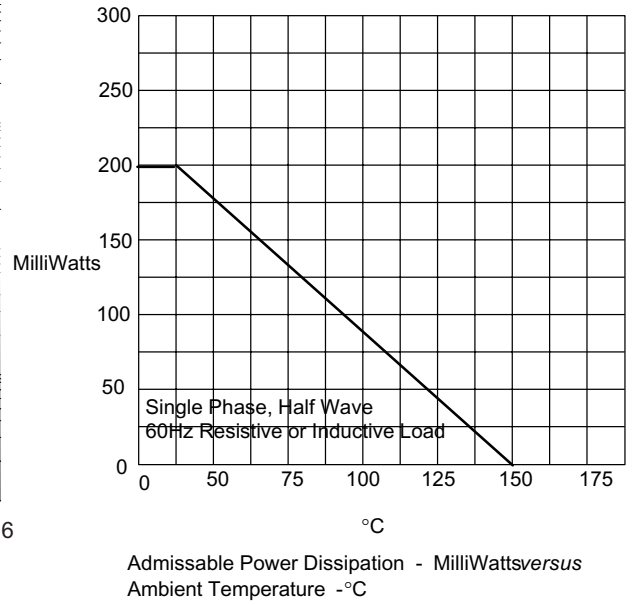
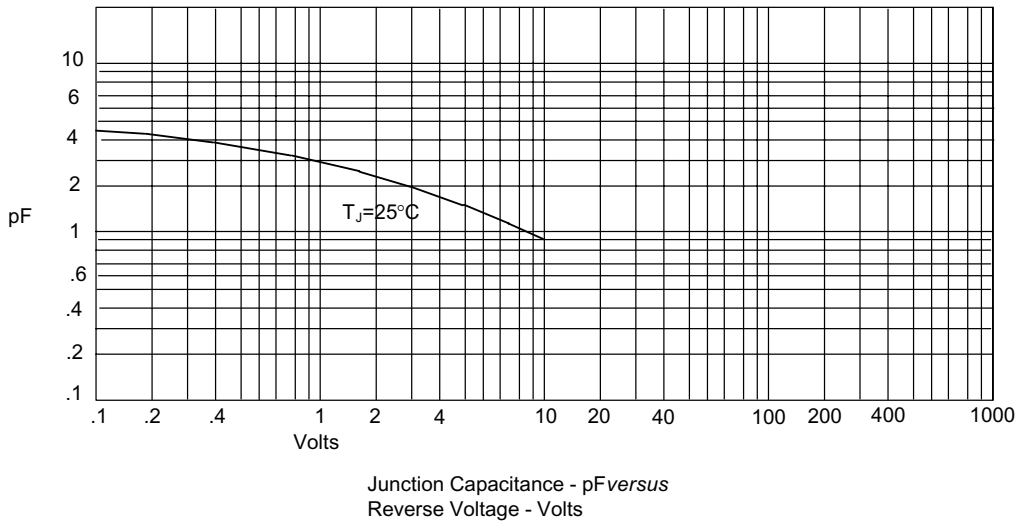


Figure 3  
Junction Capacitance



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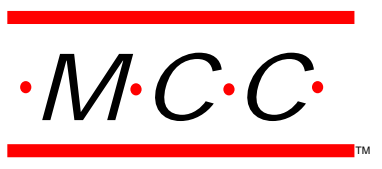
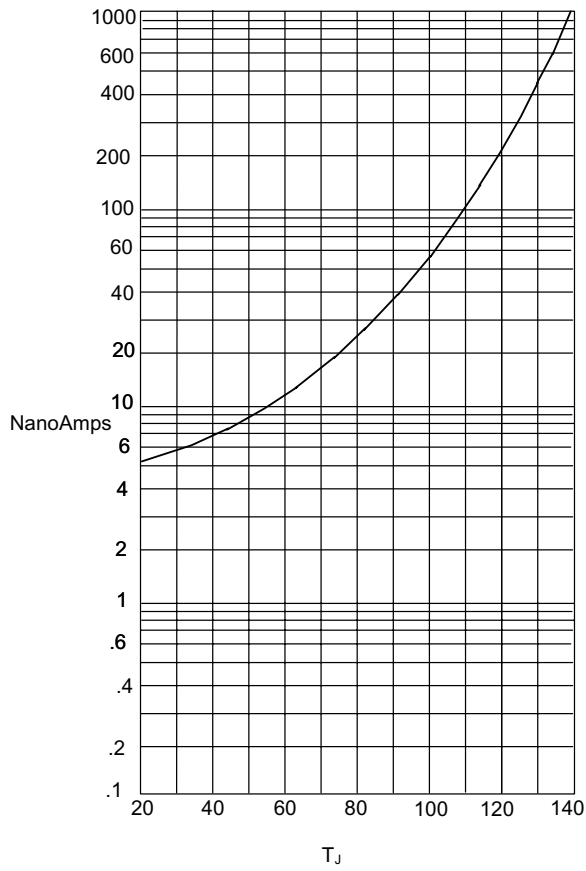


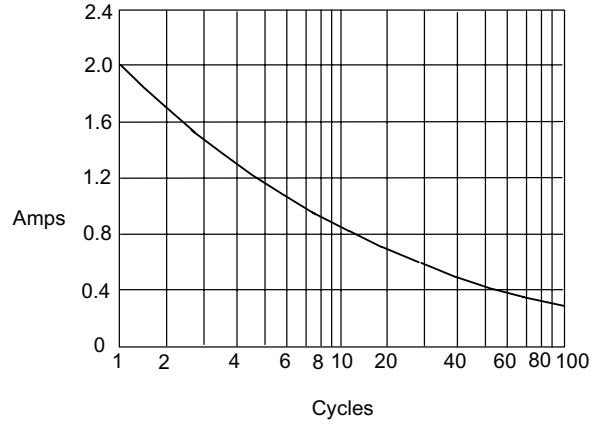
Figure 4  
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - NanoAmperes versus Junction Temperature - °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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### Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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