

## Features

- Fast Switching Speed
- Ultra-Small Surface Mount Package
- High Conductance, Power Dissipation
- For General Purpose Switching Applications
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

## Maximum Ratings

- Operating Junction Temperature Range: 150°C
- Storage Temperature Range: -65°C to +150°C
- Thermal Resistance: 625°C/W Junction to Ambient

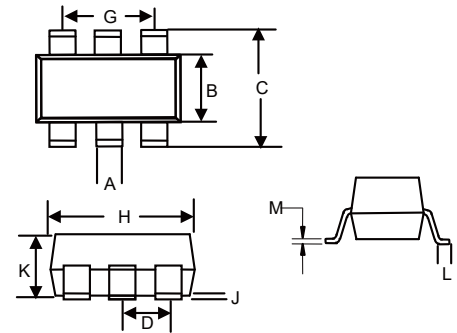
MCC Part Number	Device Marking	Repetitive Peak Reverse Voltage $V_{RRM}$	RMS Reverse Voltage $V_{R(RMS)}$	DC Blocking Voltage $V_R$
MMBD4448HAQW	KA5	80V	57V	80V
MMBD4448HADW	KA6	80V	57V	80V
MMBD4448HCDW	KA7	80V	57V	80V
MMBD4448HSDW	KAB	80V	57V	80V
MMBD4448HCQW	KA4	80V	57V	80V
MMBD4448HTW	KAA	80V	57V	80V

Non-Repetitive Peak Reverse Voltage	$V_{RM}$	100V	
Working Peak Reverse Voltage	$V_{RWM}$	80V	
Forward Continuous Current	$I_{FM}$	500mA	
Average Rectified Output Current	$I_o$	250mA	
Non-Repetitive Peak Forward Surge Current	$I_{FSM}$	4.0A 1.5A	@ t=1.0us @ t=1.0s
Power Dissipation	$P_D$	200mW	

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

# 200mW Switching Diodes

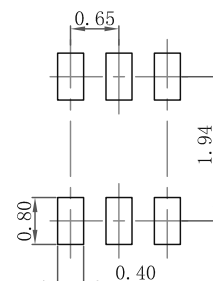
## SOT-363



### DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.006	0.014	0.15	0.35	
B	0.045	0.053	1.15	1.35	
C	0.079	0.096	2.00	2.45	
D	0.026		0.65 Nominal		
G	0.047	0.055	1.20	1.40	
H	0.071	0.087	1.80	2.20	
J	-----	0.004	-----	0.10	
K	0.031	0.043	0.80	1.10	
L	0.010	0.018	0.26	0.46	
M	0.003	0.006	0.08	0.15	

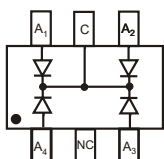
### Suggested Solder Pad Layout



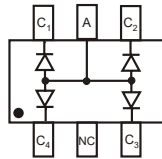
**Electrical Characteristics @ 25°C Unless Otherwise Specified**

Minimum Breakdown Voltage	$V_{BR}$	80V	$I_R=100\mu A$
Maximum Forward Voltage	$V_F$	0.720V 0.855V 1.000V 1.250V	$I_F=5.0mA$ $I_F=10.0mA$ $I_F=50.0mA$ $I_F=150.0mA$
Minimum Forward Voltage	$V_F$	0.620V	$I_F=5.0mA$
Maximum Peak Reverse voltage	$I_R$	25nA 100nA 30 $\mu A$ 50 $\mu A$	$V_R=20V, T_J=25^\circ C$ $V_R=70V, T_J=25^\circ C$ $V_R=25V, T_J=150^\circ C$ $V_R=75V, T_J=150^\circ C$
Maximum Total Capacitance	$C_T$	3.5pF	$V_R=6.0V, f=1.0MHz$
Maximum Reverse Recovery Time	$t_{rr}$	4.0ns	$I_F=5mA, V_R=6V$

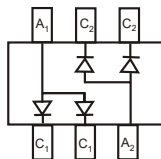
**Internal Structure**



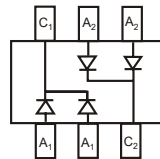
Marking: KA4  
MMBD4448HCQW



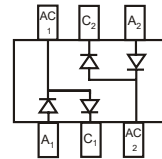
Marking: KA5  
MMBD4448HAQW



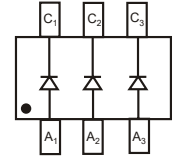
Marking: KA6  
MMBD4448HADW



Marking: KA7  
MMBD4448HCDW



Marking: KAB  
MMBD4448HSDW



Marking: KAA  
MMBD4448HTW

## Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

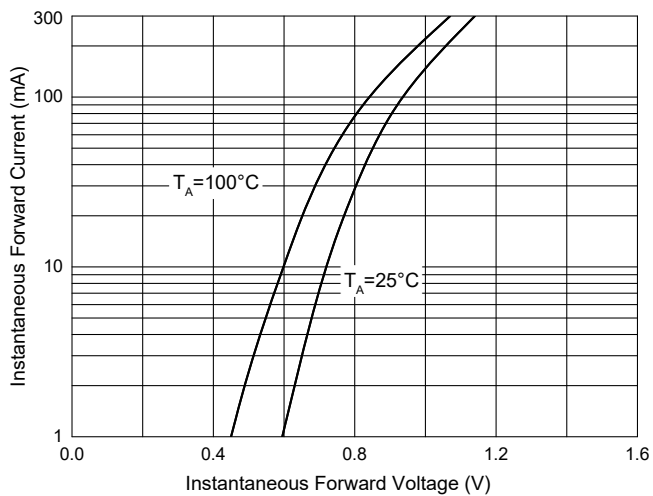


Fig. 2 - Typical Reverse Leakage Characteristics

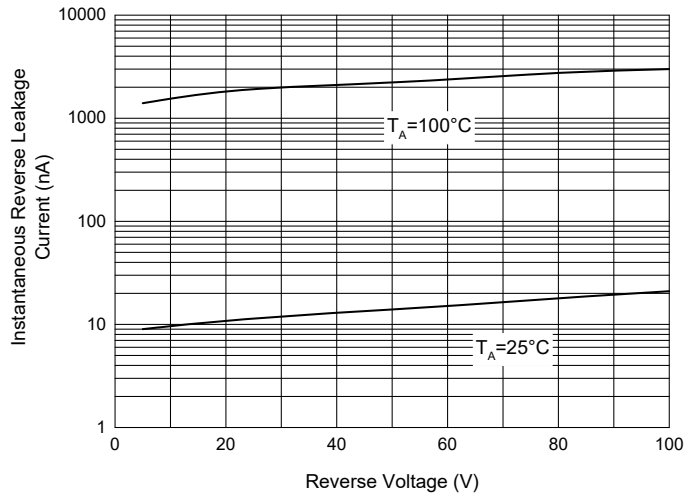


Fig. 3 - Power Derating Curve

