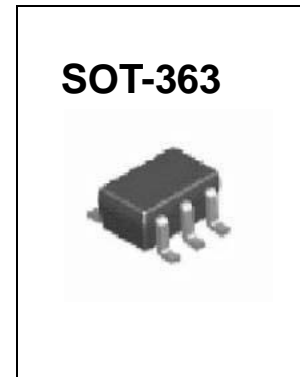




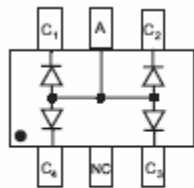
## SOT-363 Plastic-Encapsulate Diode

### MMBD4448AQW/ADW/CDW/SDW/TW Diode

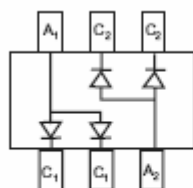


#### FEATURES

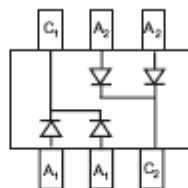
- Fast Switching Speed
- Ultra-Small Surface Mount Package
- For General Purpose Switching Applications
- High Conductance Power dissipation



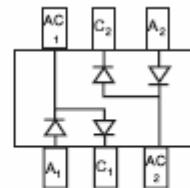
Marking: KA5  
MMBD4448HAQW



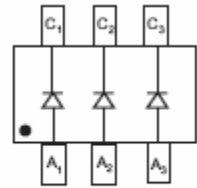
Marking: KA6  
MMBD4448HADW



Marking: KA7  
MMBD4448HCDW



Marking: KAB  
MMBD4448HSDW



Marking: KAA  
MMBD4448HTW

#### Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	$V_{RM}$	100	V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	80	V
RMS Reverse Voltage	$V_{R(RMS)}$	57	V
Forward Continuous Current (Note 1)	$I_{FM}$	500	mA
Average Rectified Output Current (Note 1)	$I_O$	250	mA
Non-Repetitive Peak Forward Surge Current @ $t = 1.0\mu\text{s}$ @ $t = 1.0\text{s}$	$I_{FSM}$	4.0 2.0	A
Power Dissipation (Note 1)	$P_d$	200	mW
Thermal Resistant Junction to Ambient Air (Note 1)	$R_{\theta JA}$	625	$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +150	$^\circ\text{C}$

Notes: 1. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch; pad layout as shown on Diodes Inc. suggested pad layout document AP02001, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.

#### Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	$V_{(BR)R}$	80	—	V	$I_R = 100\mu\text{A}$
Forward Voltage (Note 2)	$V_F$	0.62	0.72 0.855 1.0 1.25	V	$I_F = 5.0\text{mA}$ $I_F = 10\text{mA}$ $I_F = 100\text{mA}$ $I_F = 150\text{mA}$
Reverse Current (Note 2)	$I_R$	—	100 50 30 25	nA $\mu\text{A}$ $\mu\text{A}$ nA	$V_R = 70\text{V}$ $V_R = 75\text{V}, T_J = 150^\circ\text{C}$ $V_R = 25\text{V}, T_J = 150^\circ\text{C}$ $V_R = 20\text{V}$
Total Capacitance	$C_T$	—	3.5	pF	$V_R = 6\text{V}, f = 1.0\text{MHz}$
Reverse Recovery Time	$t_{rr}$	—	4.0	ns	$V_R = 6\text{V}, I_F = 5\text{mA}$

Notes: 2. Short duration test pulse used to minimize self-heating effect.

# Typical Characteristics

# MMBD4448AQW/ADW/CDW/SDW/TW

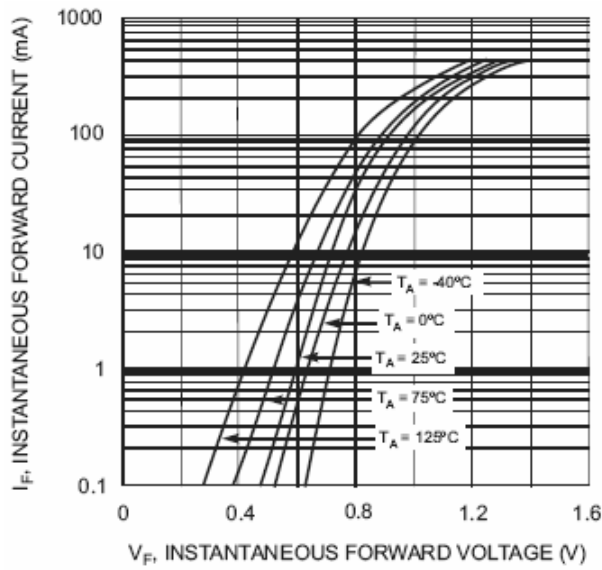


Fig. 1 Typical Forward Characteristics

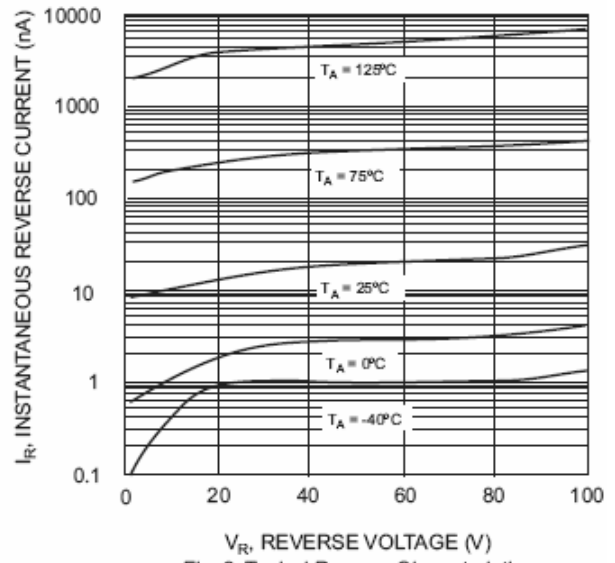


Fig. 2 Typical Reverse Characteristics

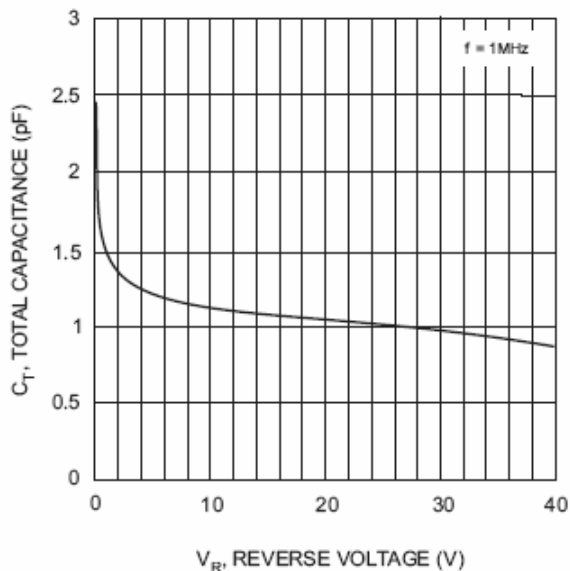


Fig. 3 Typical Capacitance vs. Reverse Voltage

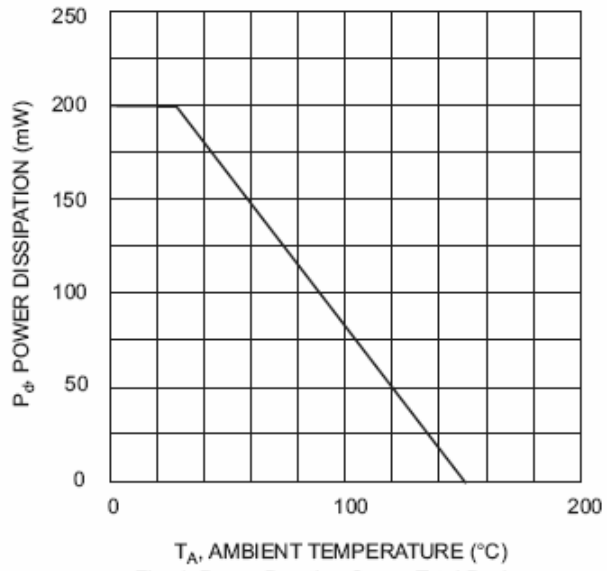


Fig. 4 Power Derating Curve, Total Package

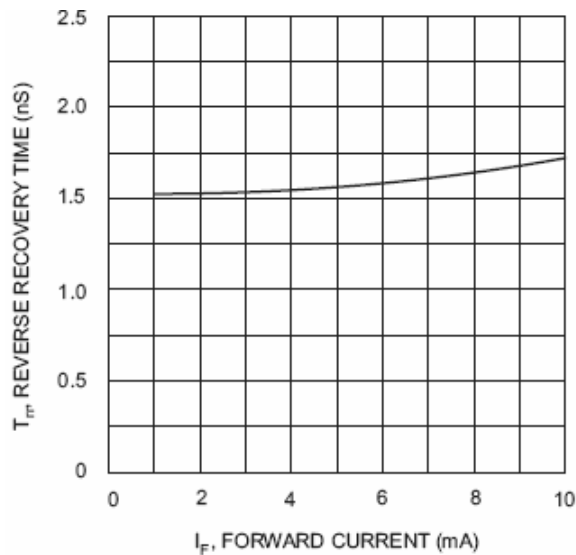


Fig. 5 Reverse Recovery Time vs. Forward Current