



Micro Commercial Components



Micro Commercial Components  
20736 Marilla Street Chatsworth  
CA 91311

Phone: (818) 701-4933

Fax: (818) 701-4939

# MMBD4448HAQW/ ADW/CDW/SDW/ CQW/TW

## Features

- Fast Switching Speed
- For General Purpose Switching Applications
- High Conductance, Power Dissipation
- Ultra-Small Surface Mount Package
- 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)
- Halogen free available upon request by adding suffix "-HF"

## Maximum Ratings

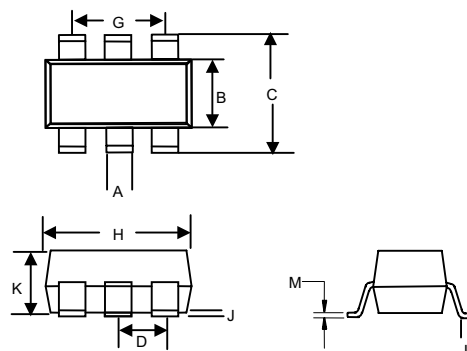
| Symbol          | Rating                                  | Rating      | Unit          |
|-----------------|-----------------------------------------|-------------|---------------|
| $V_{RM}$        | Non-Repetitive Peak Reverse Voltage     | 100         | V             |
| $V_{RRM}$       | Peak Repetitive Reverse Voltage         | 80          | V             |
| $V_{RWM}$       | Working Peak Reverse Voltage            |             |               |
| $V_R$           | DC Blocking Voltage                     |             |               |
| $V_{R(RMS)}$    | RMS Reverse Voltage                     | 57          | V             |
| $I_{FM}$        | Forward Continuous Current              | 500         | mA            |
| $I_O$           | Average Rectified Output Current        | 250         | mA            |
| $I_{FSM}$       | Peak Forward Surge Current @1.0 $\mu$ s | 4.0         | A             |
|                 |                                         | @1.0s       |               |
| $R_{\theta JA}$ | Thermal Resistance Junction to Ambient  | 625         | $^{\circ}C/W$ |
| $P_D$           | Power dissipation                       | 200         | mW            |
| $T_J$           | Junction Temperature                    | 150         | $^{\circ}C$   |
| $T_{STG}$       | Storage Temperature                     | -65 to +150 | $^{\circ}C$   |

## Electrical Characteristics @ 25 $^{\circ}C$ Unless Otherwise Specified

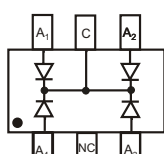
| Symbol     | Parameter                       | Min  | Max        | Test Conditions             |
|------------|---------------------------------|------|------------|-----------------------------|
| $V_{(BR)}$ | Reverse Breakdown Voltage       | 80V  | ---        | $I_R=100 \mu A$             |
| $I_R$      | Reverse Voltage Leakage Current | ---  | 100nA      | $V_R=70V$                   |
|            |                                 |      | 50 $\mu A$ | $V_R=75V, T_J=150^{\circ}C$ |
|            |                                 |      | 30 $\mu A$ | $V_R=25V, T_J=150^{\circ}C$ |
|            |                                 |      | 25nA       | $V_R=20V$                   |
| $V_F$      | Forward Voltage                 | 0.62 | 0.72V      | $I_F=5.0mA$                 |
|            |                                 | ---  | 0.855V     | $I_F=10mA$                  |
|            |                                 | ---  | 1.0V       | $I_F=50mA$                  |
|            |                                 | ---  | 1.25V      | $I_F=150mA$                 |
| $C_T$      | Total Capacitance               | ---  | 3.5pF      | $V_R=6V, f=1MHz$            |
| $t_{rr}$   | Reverse Recovery Time           | ---  | 4.0ns      | $I_F=5mA, V_R=6V$           |

## 200mW Switching Diodes

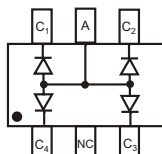
## SOT-363



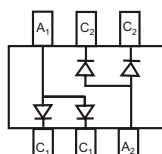
| DIM | INCHES |      | MM   |         | NOTE |
|-----|--------|------|------|---------|------|
|     | MIN    | MAX  | MIN  | MAX     |      |
| A   | .006   | .014 | 0.15 | 0.35    |      |
| B   | .045   | .053 | 1.15 | 1.35    |      |
| C   | .085   | .096 | 2.15 | 2.45    |      |
| D   | .026   |      | 0.65 | Nominal |      |
| G   | .047   | .055 | 1.20 | 1.40    |      |
| H   | .071   | .087 | 1.80 | 2.20    |      |
| J   | ---    | .004 | ---  | 0.10    |      |
| K   | .035   | .043 | 0.90 | 1.10    |      |
| L   | .010   | .018 | 0.26 | 0.46    |      |
| M   | .003   | .006 | 0.08 | 0.15    |      |



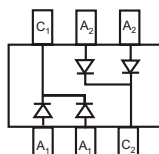
Marking: KA4  
MMBD4448HCQW



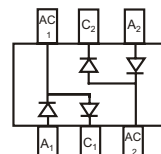
Marking: KA5  
MMBD4448HAQW



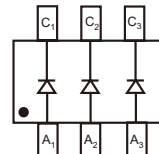
Marking: KA6  
MMBD4448HADW



Marking: KA7  
MMBD4448HCDW



Marking: KAB  
MMBD4448HSDW



Marking: KAA  
MMBD4448HTW

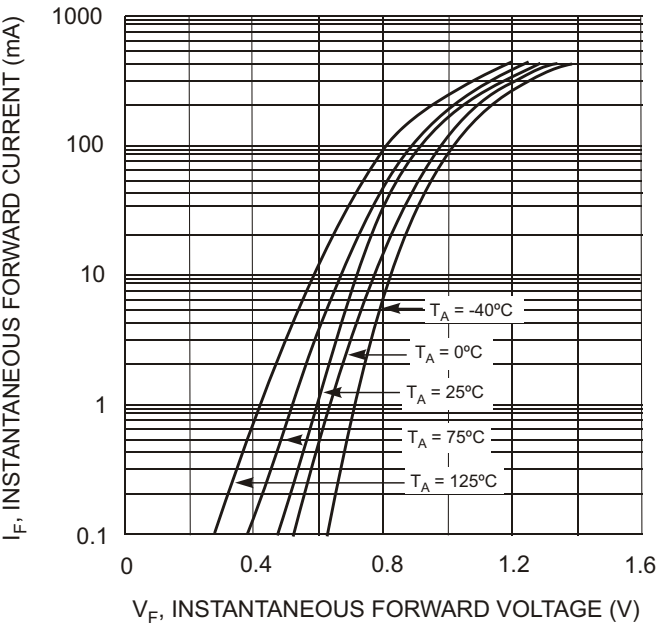


Fig. 1 Typical Forward Characteristics

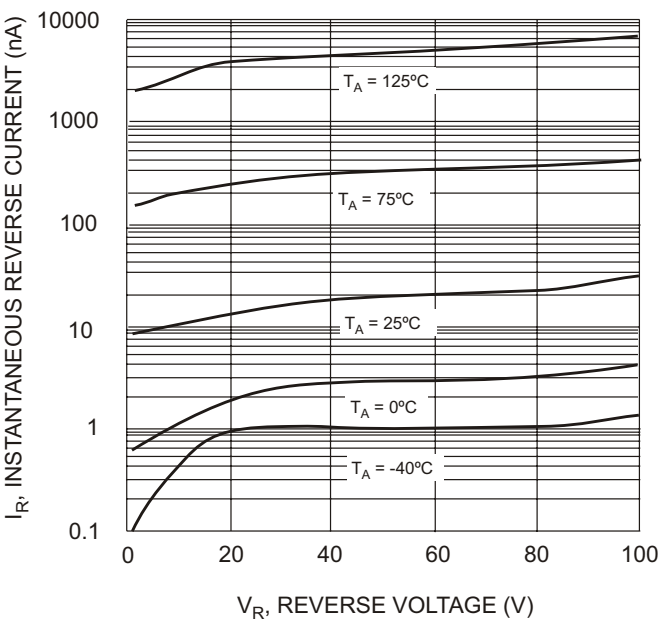


Fig. 2 Typical Reverse Characteristics

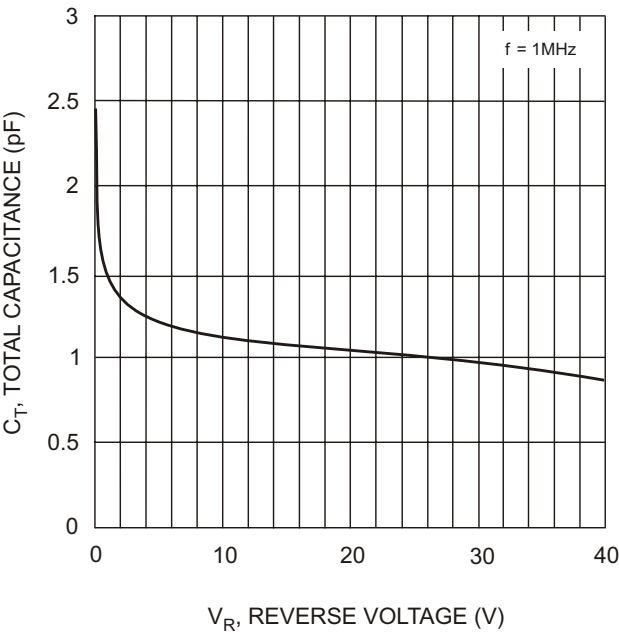


Fig. 3 Typical Capacitance vs. Reverse Voltage

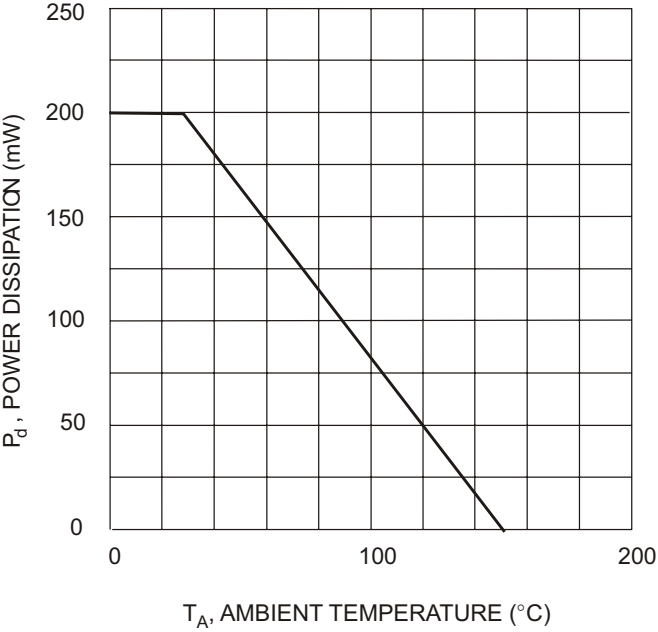
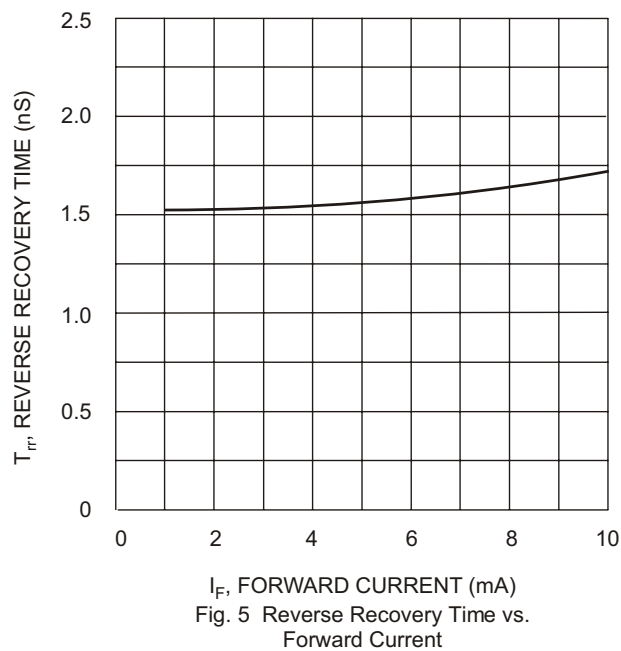


Fig. 4 Power Derating Curve, Total Package





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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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