



**CHENMKO ENTERPRISE CO.,LTD**

Lead free devices

**SURFACE MOUNT**

**SWITCHING DIODE ARRAY**

**VOLTAGE 80 Volts CURRENT 250 mAmpere**

**MMBD4448TPT**

#### APPLICATION

- \* Fast high speed switching

#### FEATURE

- \* Small surface mounting type. (SC-75/SOT-416)
- \* High speed. ( $T_{RR}=4.0\text{ns}$  Max.)
- \* Fast Switching Speed.
- \* Ultra-Small Surface Mount Package.
- \* For General Purpose Switching Applications.
- \* High Conductance.

#### CONSTRUCTION

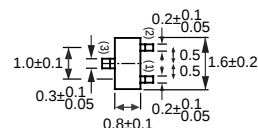
- \* Silicon epitaxial planar

#### MARKING

- \* TJ



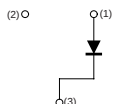
**SC-75/SOT-416**



Dimensions in millimeters

**SC-75/SOT-416**

#### CIRCUIT



#### MAXIMUM RATINGS ( At $T_A = 25^\circ\text{C}$ unless otherwise noted )

| RATINGS                                                                                                        | SYMBOL                             | MMBD4448TPT | UNITS              |
|----------------------------------------------------------------------------------------------------------------|------------------------------------|-------------|--------------------|
| Maximum Non-Repetitive Peak Reverse Voltage                                                                    | $V_{RM}$                           | 100         | Volts              |
| Maximum Repetitive Peak Reverse Voltage<br>Maximum Working Peak Reverse Voltage<br>Maximum DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_{DC}$ | 80          | Volts              |
| Maximum RMS Voltage                                                                                            | $V_{RMS}$                          | 57          | Volts              |
| Maximum Average Forward Rectified Current                                                                      | $I_O$                              | 250         | mAmps              |
| Repetitive Peak Forward Current                                                                                | $I_{FRM}$                          | 500         | mAmps              |
| Peak Forward Surge Current at 1uSec.                                                                           | $I_{FSM}$                          | 2.0<br>4.0  | Amps               |
| Total Capacitance                                                                                              | $C_T$                              | 3.5         | pF                 |
| Maximum Reverse Recovery Time                                                                                  | $t_{rr}$                           | 4.0         | nSec               |
| Maximum Thermal Resistance                                                                                     | $R_{\theta JA}$                    | 625         | $^\circ\text{C/W}$ |
| Maximum Operating and Storage Temperature Range                                                                | $T_J, T_{STG}$                     | -65 to +150 | $^\circ\text{C}$   |

#### ELECTRICAL CHARACTERISTICS ( At $T_A = 25^\circ\text{C}$ unless otherwise noted )

| CHARACTERISTICS                                                                                                                                                                               | SYMBOL | MMBD4448TPT      | UNITS            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------------|------------------|
| Maximum Instantaneous Forward Voltage<br>@ $I_F = 5.0\text{ mA}$<br>@ $I_F = 100\text{ mA}$                                                                                                   | $V_F$  | 0.72<br>1.0      | Volts            |
| Maximum Average Reverse Current (Note 1)<br>$V_R = 20\text{ V @ } T_J = 25^\circ\text{C}$<br>$V_R = 75\text{ V @ } T_J = 150^\circ\text{C}$<br>$V_R = 25\text{ V @ } T_J = 150^\circ\text{C}$ | $I_R$  | 25nA<br>50<br>30 | $\mu\text{Amps}$ |

NOTES : 1. Short duration test pulse used to minimize self-heating effect.

2004-10

## RATING CHARACTERISTIC CURVES ( MMBD4448TPT)

FIG. 1 - FORWARD CHARACTERISTICS

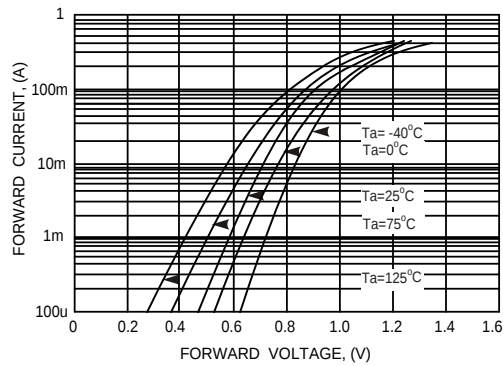


FIG. 2 - REVERSE CHARACTERISTICS

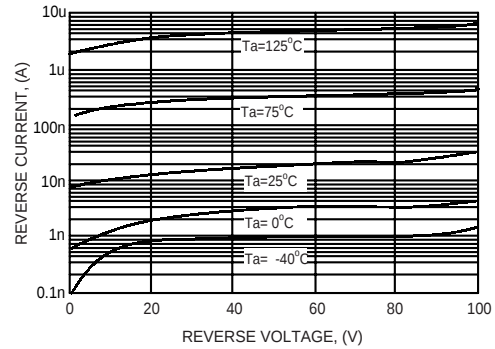


FIG. 3 - TYPICAL JUNCTION CAPACITANCE

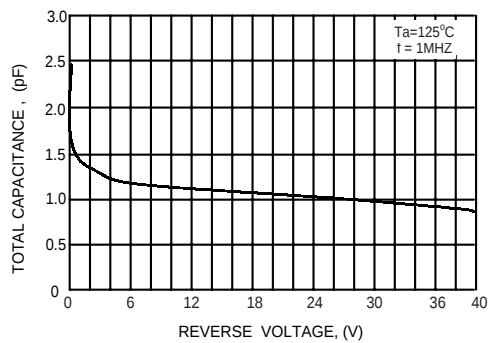


FIG. 4 - TYPICAL FORWARD CURRENT DERATING CURVE

