

## Power Schottky Rectifier - 40Amp 200Volt

### ☐ Features

- Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
- High Junction Temperature Capability
- Low forward voltage, high current capability
- High surge capacity
- Low power loss, high efficiency
- ESD performance human body mode > 4 KV

### ☐ Application

- AC/DC Switching Adaptor and other Switching Power Supply
- PDP

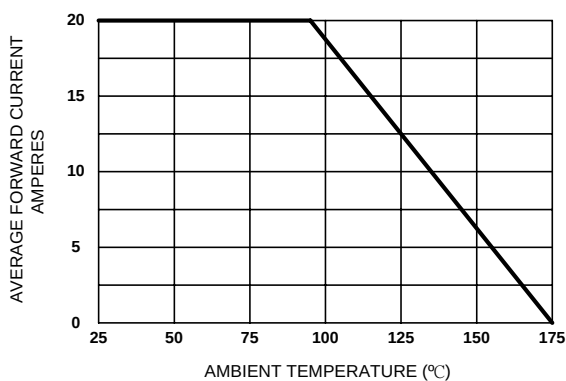
### ☐ Absolute maximum ratings

| Symbol   | Ratings     | Unit | Conditions                        |
|----------|-------------|------|-----------------------------------|
| IF(AV)   | 40          | A    | Average Forward Current           |
| VRRM     | 200         | V    | Repetitive Peak Reverse Voltage   |
| IFSM     | 400         | A    | Peak Forward Surge Current        |
| VF       | 0.72        | V    | Forward Voltage Drop              |
| Tj, Tstg | -50 to +175 | °C   | Operating and Storage Temperature |

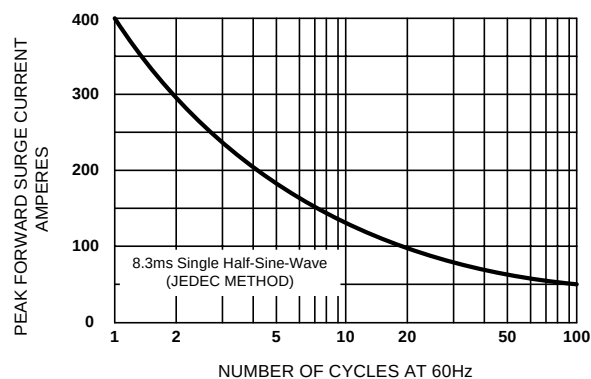
### ☐ Electrical characteristics

| Parameters                                  | Symbol  | Ratings   | Conditions                        |
|---------------------------------------------|---------|-----------|-----------------------------------|
| Maximum Instantaneous Forward Voltage       | VF      | 0.90V     | Per Leg at IF = 20A<br>Tc = 25°C  |
|                                             |         | 0.72V     | Tc = 125°C                        |
| Maximum Reverse Leakage Current             | IR      | 0.05mA    | Per Leg at VR = 200V<br>Tc = 25°C |
|                                             |         | 10mA      | Tc = 125°C                        |
| Typical Thermal Resistance,Junction to Case | Rθ(j-c) | 2.2 °C/W  | Per Leg<br>TO-220AB               |
|                                             |         | 4.5 °C/W  | ITO-220AB                         |
|                                             |         | 1.25 °C/W | TO-247AD                          |
|                                             |         | 1.1 °C/W  | TO-3P                             |

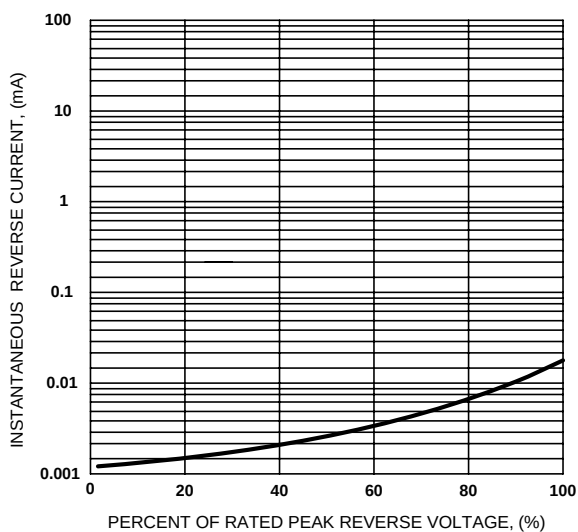
June 2010 / Rev.6.6



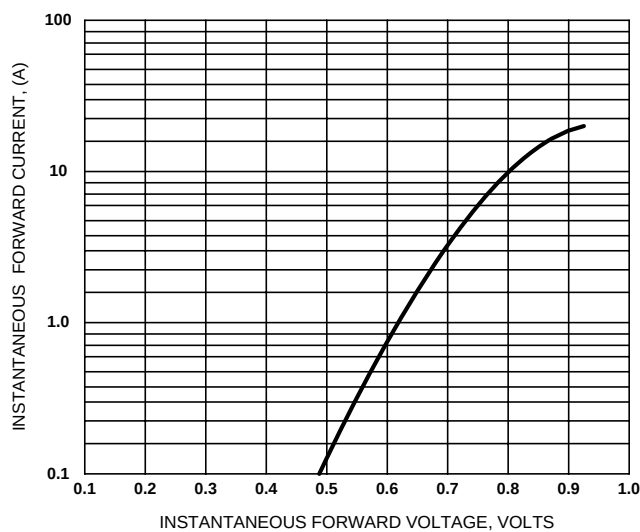
**Figure 1. Forward Current Derating Curve**



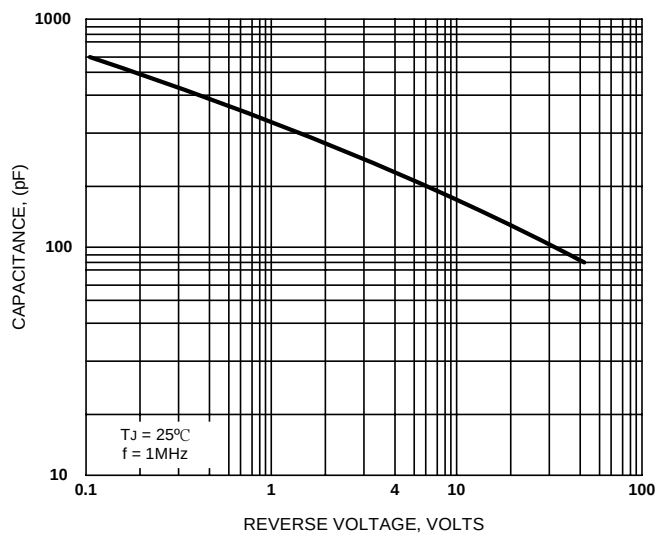
**Figure 2. Maximum Non-repetitive Surge Current**



**Figure 3. Typical Reverse Characteristics**



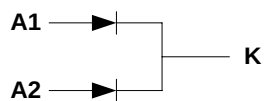
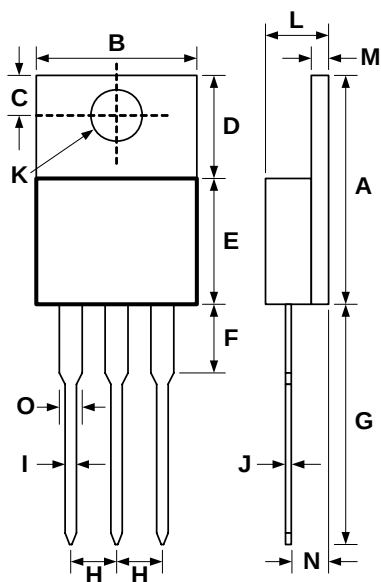
**Figure 4. Typical Forward Characteristics**



**Figure 5. Typical Junction Capacitance**

## MBR40200CT

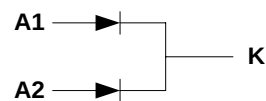
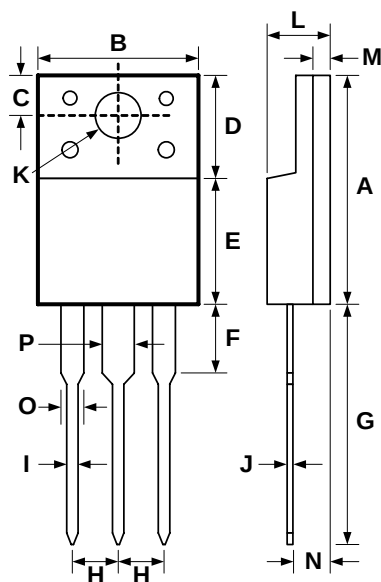
### TO-220AB



| DIMENSIONS |        |      |       |       |      |
|------------|--------|------|-------|-------|------|
| DIM        | INCHES |      | MM    |       | NOTE |
|            | MIN    | MAX  | MIN   | MAX   |      |
| A          | .579   | .606 | 14.70 | 15.40 |      |
| B          | .392   | .411 | 9.95  | 10.45 |      |
| C          | .104   | .116 | 2.65  | 2.95  |      |
| D          | .248   | .272 | 6.30  | 6.90  |      |
| E          | .325   | .350 | 8.25  | 8.90  |      |
| F          | .126   | .157 | 3.20  | 4.00  |      |
| G          | .492   | .551 | 12.50 | 14.00 |      |
| H          | .096   | .108 | 2.45  | 2.75  |      |
| I          | .028   | .039 | 0.70  | 1.00  |      |
| J          | .010   | .022 | 0.25  | 0.55  |      |
| K          | .146   | .157 | 3.70  | 4.00  |      |
| L          | .167   | .187 | 4.25  | 4.75  |      |
| M          | .045   | .057 | 1.15  | 1.45  |      |
| N          | .089   | .114 | 2.25  | 2.90  |      |
| O          | .047   | .055 | 1.20  | 1.40  |      |

## MBR40200FCT

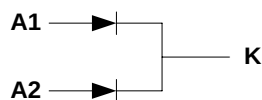
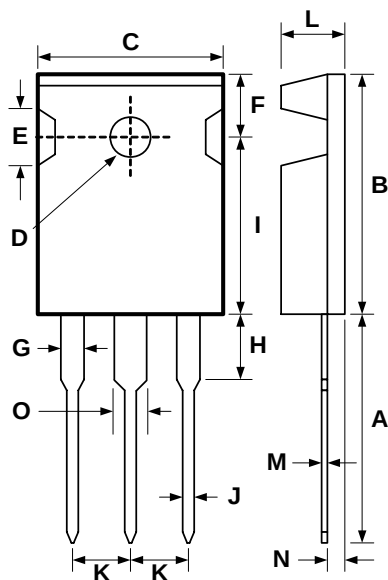
### ITO-220AB



| DIMENSIONS |        |      |       |       |      |
|------------|--------|------|-------|-------|------|
| DIM        | INCHES |      | MM    |       | NOTE |
|            | MIN    | MAX  | MIN   | MAX   |      |
| A          | .577   | .600 | 14.65 | 15.25 |      |
| B          | .386   | .406 | 9.80  | 10.30 |      |
| C          | .098   | .114 | 2.50  | 2.90  |      |
| D          | .258   | .274 | 6.55  | 6.95  |      |
| E          | .315   | .331 | 8.00  | 8.40  |      |
| F          | .110   | .161 | 2.80  | 4.10  |      |
| G          | .508   | .551 | 12.90 | 14.00 |      |
| H          | .089   | .106 | 2.25  | 2.70  |      |
| I          | .020   | .028 | 0.50  | 0.70  |      |
| J          | .020   | .028 | 0.50  | 0.70  |      |
| K          | .120   | .138 | 3.05  | 3.50  |      |
| L          | .169   | .185 | 4.30  | 4.70  |      |
| M          | .051   | .063 | 1.30  | 1.60  |      |
| N          | .079   | .112 | 2.00  | 2.85  |      |
| O          | .043   | .055 | 1.10  | 1.40  |      |
| P          | .051   | .071 | 1.30  | 1.80  |      |

## MBR40200PT

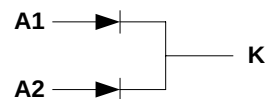
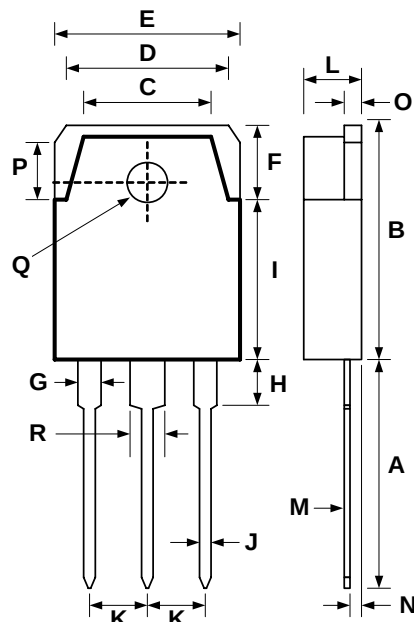
### TO-247AD



| DIMENSIONS |        |      |       |       |      |
|------------|--------|------|-------|-------|------|
| DIM        | INCHES |      | MM    |       | NOTE |
|            | MIN    | MAX  | MIN   | MAX   |      |
| A          | .748   | .827 | 19.00 | 21.00 |      |
| B          | .787   | .866 | 20.00 | 22.00 |      |
| C          | .598   | .638 | 15.20 | 16.20 |      |
| D          | .130   | .150 | 3.30  | 3.80  |      |
| E          | .205   | .242 | 5.20  | 6.15  |      |
| F          | .209   | .232 | 5.30  | 5.90  |      |
| G          | .077   | .091 | 1.95  | 2.30  |      |
| H          | .161   | .189 | 4.10  | 4.80  |      |
| I          | .551   | .610 | 14.00 | 15.50 |      |
| J          | .045   | .055 | 1.15  | 1.40  |      |
| K          | .197   | .219 | 5.00  | 5.55  |      |
| L          | .189   | .205 | 4.80  | 5.20  |      |
| M          | .020   | .031 | 0.50  | 0.80  |      |
| N          | .083   | .094 | 2.10  | 2.40  |      |
| O          | .116   | .128 | 2.95  | 3.25  |      |

## MBR40200PT

### TO-3P



| DIMENSIONS |        |      |       |       |      |
|------------|--------|------|-------|-------|------|
| DIM        | INCHES |      | MM    |       | NOTE |
|            | MIN    | MAX  | MIN   | MAX   |      |
| A          | .744   | .783 | 18.90 | 19.90 |      |
| B          | .787   | .827 | 20.00 | 21.00 |      |
| C          | .346   | .386 | 8.80  | 9.80  |      |
| D          | .512   | .535 | 13.00 | 13.60 |      |
| E          | .602   | .628 | 15.30 | 15.95 |      |
| F          | .256   | .276 | 6.50  | 7.00  |      |
| G          | .077   | .085 | 1.95  | 2.15  |      |
| H          | .098   | .126 | 2.50  | 3.20  |      |
| I          | .528   | .551 | 13.40 | 14.00 |      |
| J          | .035   | .047 | 0.90  | 1.20  |      |
| K          | .205   | .220 | 5.20  | 5.60  |      |
| L          | .183   | .195 | 4.65  | 4.95  |      |
| M          | .022   | .035 | 0.55  | 0.90  |      |
| N          | .053   | .059 | 1.35  | 1.50  |      |
| O          | .055   | .065 | 1.40  | 1.65  |      |
| P          | .165   | .197 | 4.20  | 5.00  |      |
| Q          | .128   | .140 | 3.25  | 3.55  |      |
| R          | .114   | .130 | 2.90  | 3.30  |      |