

Power Schottky Rectifier - 10Amp 45Volt

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
- Halogen-Free

Application

- Switching-Mode Power Supply
- Solar-System Control Box

Absolute maximum ratings

| Symbol | Ratings | Unit | Conditions |
|----------------|-------------|------|-----------------------------------|
| $I_F(AV)$ | 10 | A | Average Forward Current |
| V_{RRM} | 45 | V | Repetitive Peak Reverse Voltage |
| I_{FSM} | 120 | A | Peak Forward Surge Current |
| V_F | 0.52 | V | Forward Voltage Drop |
| T_j, T_{stg} | -50 to +175 | °C | Operating and Storage Temperature |

Electrical characteristics

| Parameters | Symbol | Ratings | Conditions |
|--|-------------------|----------|--|
| Maximum Instantaneous Forward Voltage | V_F | 0.68V | Per Leg at $I_F = 5A$ $T_c = 25^\circ C$ |
| | | 0.52V | $T_c = 125^\circ C$ |
| Maximum Reverse Leakage Current | I_R | 0.05mA | Per Leg at $V_R = 45V$ $T_c = 25^\circ C$ |
| | | 10mA | $T_c = 125^\circ C$ |
| Typical Thermal Resistance, Junction to Case | $R_{\theta(j-c)}$ | 2.2 °C/W | Per Leg TO-220AB / TO-262 / TO-263 |
| | | 4.5 °C/W | ITO-220AB |

- Note : 1.Mounted on P.C.B with copper pad size 20mm x 30mm, thickness 1.5mm
 2.Reverse Surge 3.0A @ 0.004ms, 10 cycle
 3.Repetitive Peak Reverse Current (IRRM) 0.5A @ Per Leg at $t_p = 2\mu s$, 1kHz

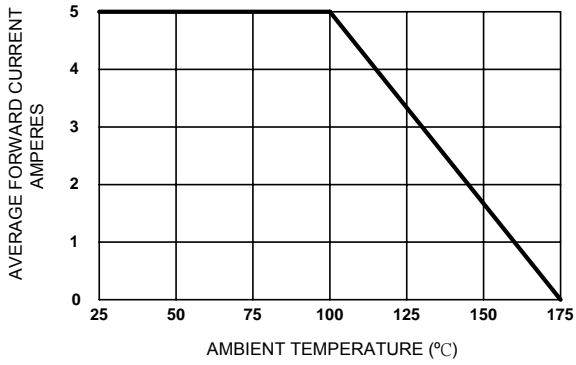


Figure 1. Forward Current Derating Curve

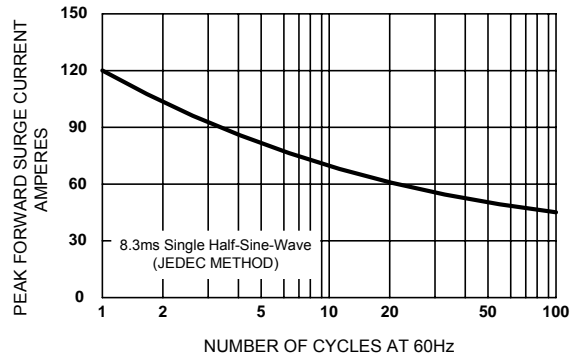


Figure 2. Maximum Non-repetitive Surge Current

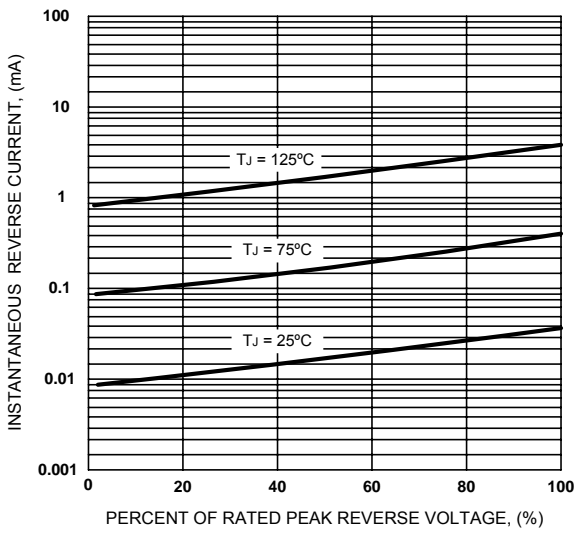


Figure 3. Typical Reverse Characteristics

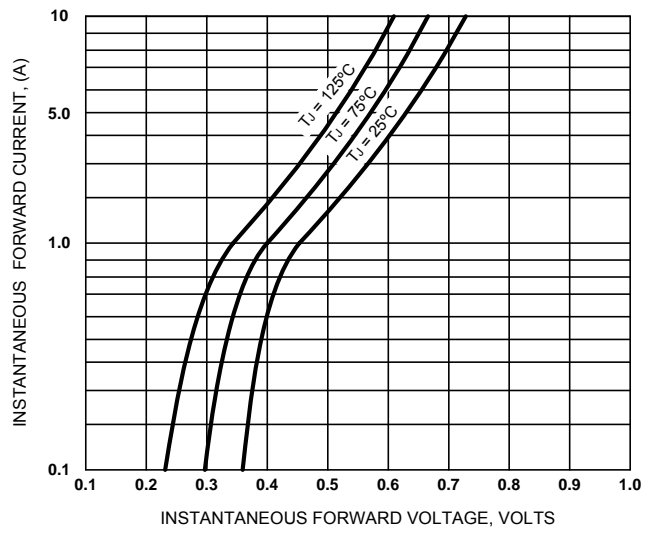


Figure 4. Typical Forward Characteristics

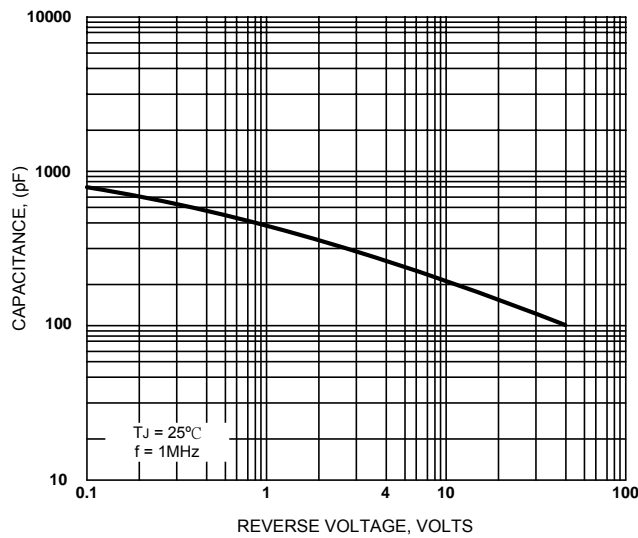
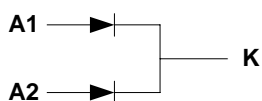
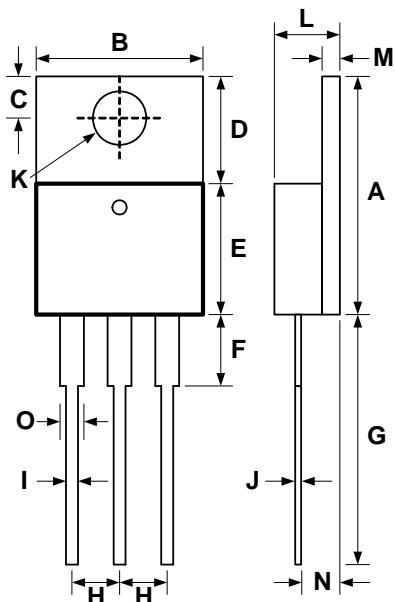


Figure 5. Typical Junction Capacitance

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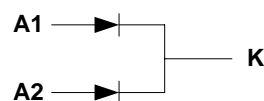
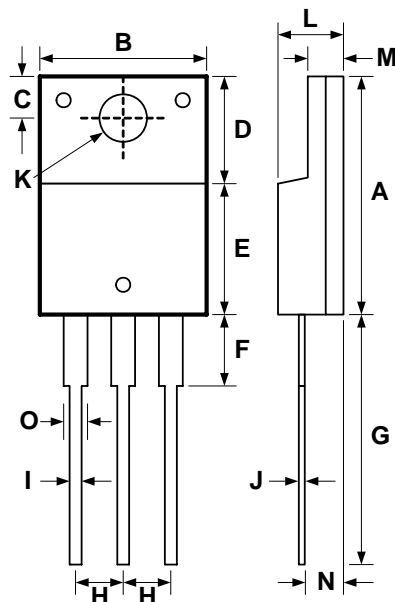
TO-220AB



| DIMENSIONS | | | | | |
|------------|--------|------|-------------|-------|------|
| DIM | INCHES | | MILLIMETERS | | NOTE |
| | MIN | MAX | MIN | MAX | |
| A | .593 | .612 | 15.05 | 15.55 | |
| B | .392 | .411 | 9.95 | 10.45 | |
| C | .104 | .116 | 2.65 | 2.95 | |
| D | .244 | .264 | 6.20 | 6.70 | |
| E | .339 | .358 | 8.60 | 9.10 | |
| F | .154 | .173 | 3.90 | 4.40 | |
| G | .539 | .559 | 13.70 | 14.20 | |
| H | .096 | .108 | 2.45 | 2.75 | |
| I | .028 | .037 | 0.70 | 0.95 | |
| J | .012 | .020 | 0.30 | 0.50 | |
| K | .146 | .157 | 3.70 | 4.00 | |
| L | .175 | .187 | 4.45 | 4.75 | |
| M | .045 | .057 | 1.15 | 1.45 | |
| N | .098 | .114 | 2.50 | 2.90 | |
| O | .047 | .057 | 1.20 | 1.45 | |

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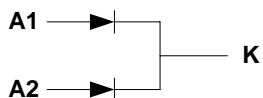
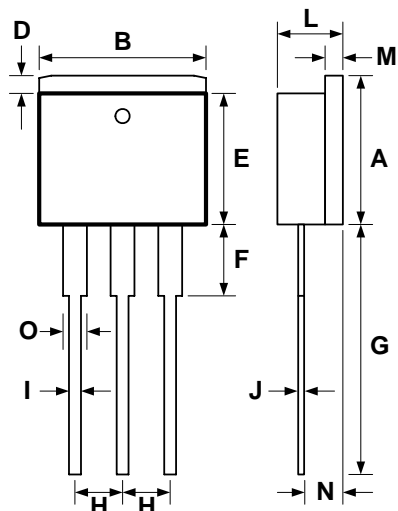
ITO-220AB



| DIMENSIONS | | | | | |
|------------|--------|------|-------------|-------|------|
| DIM | INCHES | | MILLIMETERS | | NOTE |
| | MIN | MAX | MIN | MAX | |
| A | .585 | .604 | 14.85 | 15.35 | |
| B | .386 | .406 | 9.80 | 10.30 | |
| C | .100 | .112 | 2.55 | 2.85 | |
| D | .250 | .270 | 6.35 | 6.85 | |
| E | .325 | .344 | 8.25 | 8.75 | |
| F | .132 | .152 | 3.35 | 3.85 | |
| G | .520 | .539 | 13.20 | 13.70 | |
| H | .096 | .108 | 2.45 | 2.75 | |
| I | .020 | .028 | 0.50 | 0.70 | |
| J | .020 | .028 | 0.50 | 0.70 | |
| K | .120 | .132 | 3.05 | 3.35 | |
| L | .169 | .185 | 4.30 | 4.70 | |
| M | .114 | .130 | 2.90 | 3.30 | |
| N | .098 | .114 | 2.50 | 2.90 | |
| O | .043 | .055 | 1.10 | 1.40 | |

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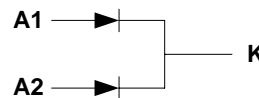
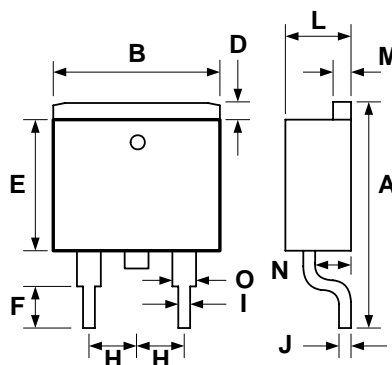
T0-262



| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|------|-------------|-------|------|
| | INCHES | | MILLIMETERS | | |
| | MIN | MAX | MIN | MAX | |
| A | .398 | .417 | 10.10 | 10.60 | |
| B | .391 | .411 | 9.95 | 10.45 | |
| D | .049 | .065 | 1.25 | 1.65 | |
| E | .338 | .358 | 8.60 | 9.10 | |
| F | .153 | .173 | 3.90 | 4.40 | |
| G | .539 | .559 | 13.70 | 14.20 | |
| H | .096 | .108 | 2.45 | 2.75 | |
| I | .027 | .037 | 0.70 | 0.95 | |
| J | .012 | .020 | 0.30 | 0.50 | |
| L | .175 | .187 | 4.45 | 4.75 | |
| M | .045 | .057 | 1.15 | 1.45 | |
| N | .098 | .114 | 2.50 | 2.90 | |
| O | .047 | .057 | 1.20 | 1.45 | |

MBR10B45CGH

T0-263



| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|------|-------------|-------|------|
| | INCHES | | MILLIMETERS | | |
| | MIN | MAX | MIN | MAX | |
| A | .590 | .610 | 15.00 | 15.50 | |
| B | .391 | .411 | 9.95 | 10.45 | |
| D | .049 | .065 | 1.25 | 1.65 | |
| E | .338 | .358 | 8.60 | 9.10 | |
| F | .087 | .106 | 2.20 | 2.70 | |
| H | .096 | .108 | 2.45 | 2.75 | |
| I | .027 | .037 | 0.70 | 0.95 | |
| J | .012 | .020 | 0.30 | 0.50 | |
| L | .175 | .187 | 4.45 | 4.75 | |
| M | .045 | .057 | 1.15 | 1.45 | |
| N | .098 | .114 | 2.50 | 2.90 | |
| O | .047 | .057 | 1.20 | 1.45 | |

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