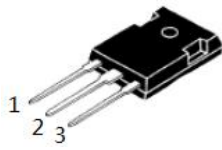
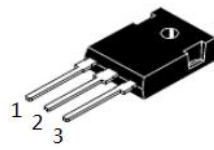




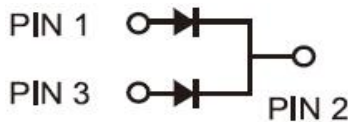
SCHOTTKY BARRIER RECTIFIER



TO-247/PT



TO-247S/PTS



FEATURES

- Low forward voltage
- High current capability
- High forward surge capability
- Low power losses, High efficiency
- Guarding for over voltage protection



**RoHS
COMPLIANT**

APPLICATIONS

Low VF Schottky barrier rectifier are designed for high frequency, miniature switched mode power supplies such as adapters ,lighting and on-board DC/DC conerters

Primary Characteristic

| | |
|---------------|-------|
| I_O | 2*20A |
| V_{RRM} | 150V |
| I_{FSM} | 450A |
| V_F | 0.71V |
| T_{jmax} | 150°C |
| Assembly code | CP |

MECHANICAL DATA

- **Case:** Molded plastic
- **Polarity:** As marked
- **Mounting Position:** Any
- **Molded Plastic:** UL Flammability Classification Rating 94V-0
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Solder bath temperature 275°C maximum,10s per JESD 22-B106

Maximum Ratings (Per Leg) at Ta=25°C unless otherwise specified

| Characteristics | Symbol | Value | Unit |
|---|-----------------|-------------|------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 150 | V |
| Working Peak Reverse Voltage | V_{RWM} | 150 | V |
| Maximum DC Blocking Voltage | V_{DC} | 150 | V |
| Maximum Average Forward Rectified Current | I_O | Per Leg | 20 |
| | | Total | 40 |
| Peak Forward Surge Current,8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I_{FSM} | 450 | A |
| Operating Temperature Range | T_J | 150 | °C |
| Storage Temperature Range | T_{STG} | -40 to +150 | °C |
| Typical Thermal Resistance (Note1) | $R_{\theta JC}$ | 2 | °C/W |

Note1: Thermal resistance from Junction to case per leg mounted on heatsink.

Electrical Characteristics (Per Leg) unless otherwise specified

| Characteristics | | Symbol | Value | | Unit |
|---------------------------------------|----------|--------|-------|------|------|
| Forward Voltage Drop(Note2) | | V_F | Typ. | Max. | V |
| at $I_F=5A$ | TA=25°C | | 0.70 | - | |
| | TA=125°C | | 0.56 | - | |
| at $I_F=10A$ | TA=25°C | | 0.76 | - | |
| | TA=125°C | | 0.63 | - | |
| at $I_F=20A$ | TA=25°C | | 0.83 | 0.88 | |
| | TA=125°C | | 0.71 | - | |
| Maximum Reverse Current at $V_R=150V$ | TA=25°C | I_R | 5 | 10 | µA |
| | TA=125°C | | 3 | - | mA |

Note2:Pulse test: 300 µs pulse width, 1 % duty cycle



RATINGS AND CHARACTERISTIC CURVES

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

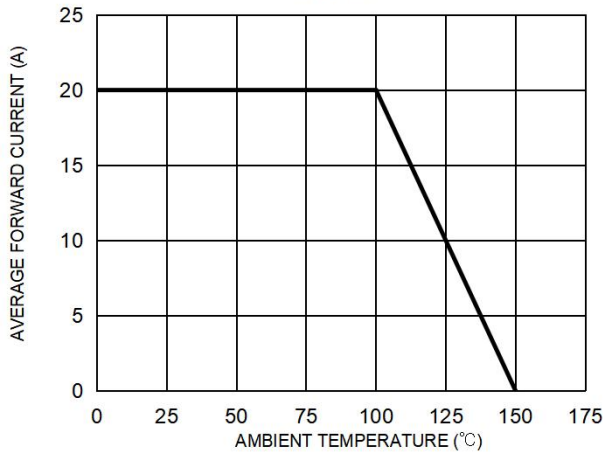


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

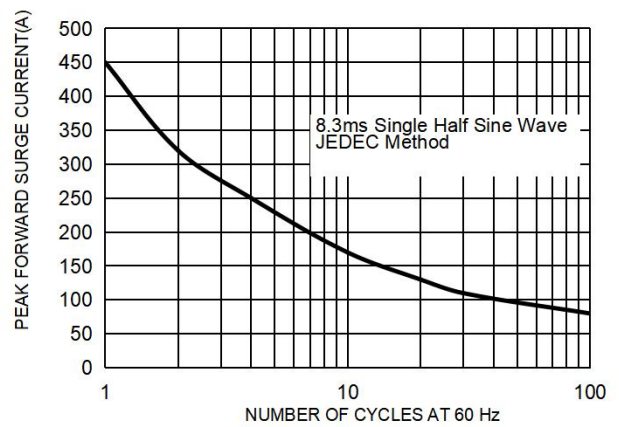


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

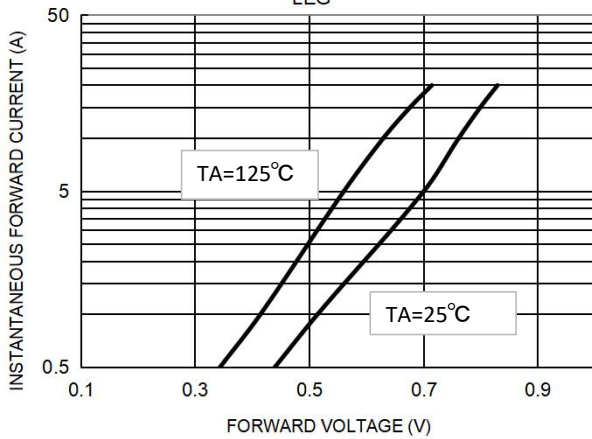
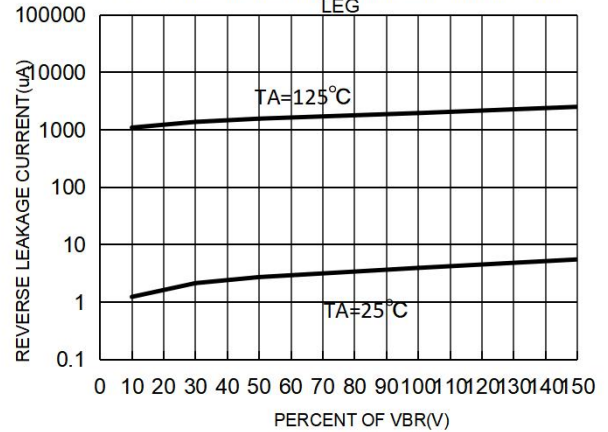


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



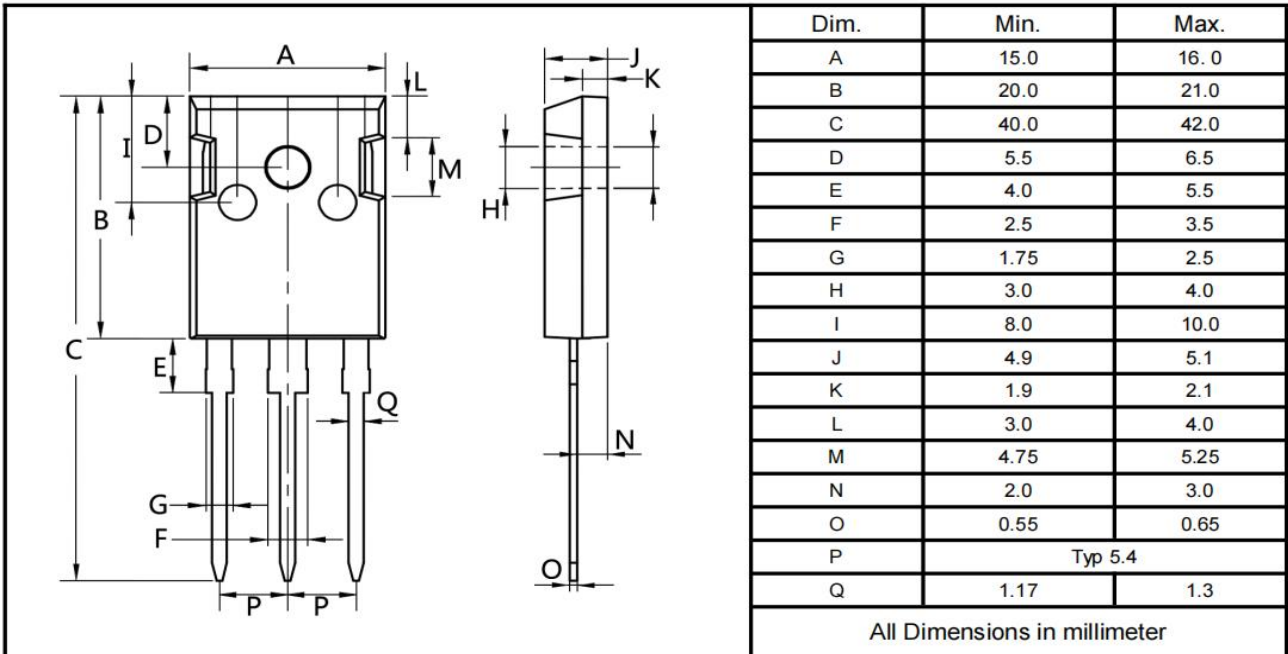


MBR40150PT-B

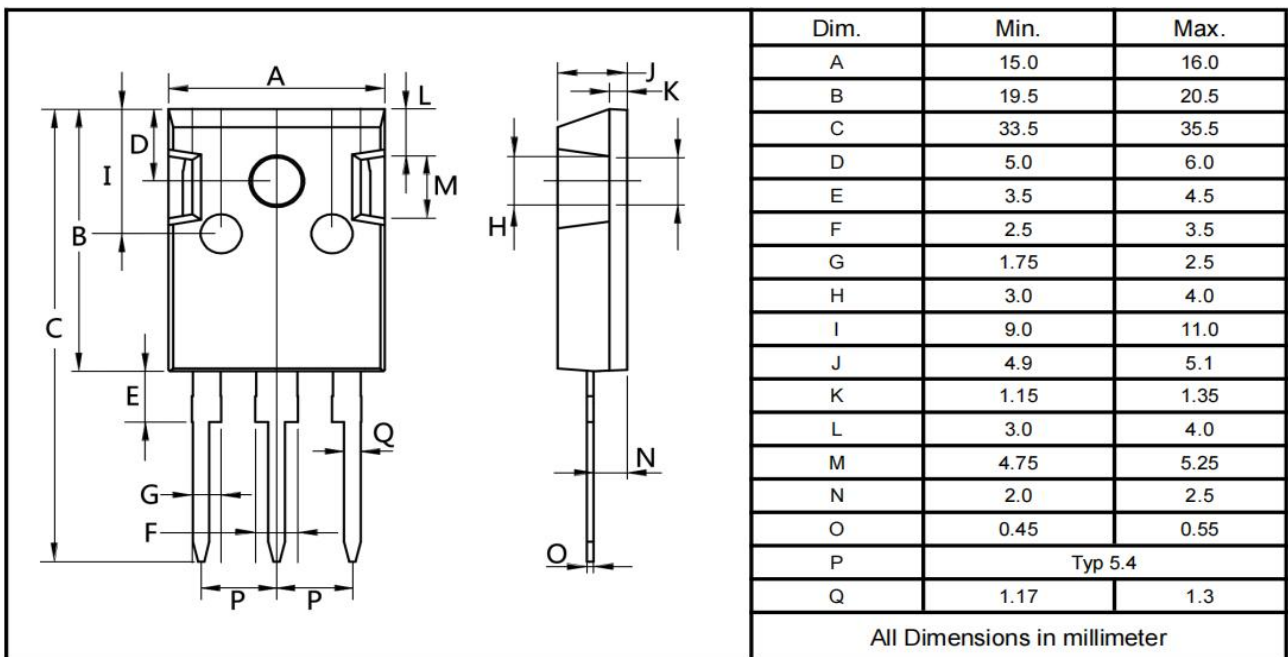
SCHOTTKY BARRIER RECTIFIER

Package Outline Dimensions millimeters

TO-247



TO-247S



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