



Micro Commercial Components
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MBR10150CT

Features

- High Junction Temperature Capability
- Good Trade Off Between Leakage Current And Forward Voltage Drop
- Low Leakage Current

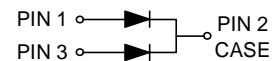
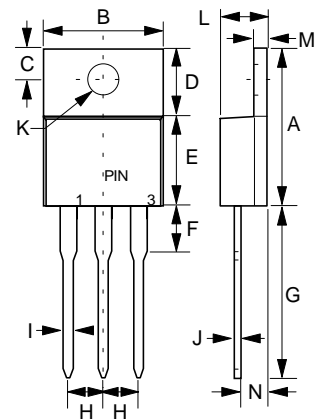
10 Amp High Voltage Power Schottky Barrier Rectifier 150Volts

Maximum Ratings

- Operating Junction Temperature : 150°C
- Storage Temperature: - 50°C to +150°C
- Per diode Thermal Resistance 4°C/W Junction to Case
- Total Thermal Resistance 2.4°C/W Junction to Case

| MCC Catalog Number | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|--------------------|--|---------------------|-----------------------------|
| MBR 10150 CT | 150 V | 105V | 150 V |

TO-220AB



Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|--|-------------|--------------------|---|
| Average Forward Current | $I_{F(AV)}$ | 10 A | $T_C = 155^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 120A | 8.3ms half sine |
| Maximum Instantaneous Forward Voltage MBR10150CT | V_F | .92V | $I_{FM} = 5A$ $T_J = 25^\circ\text{C}$ |
| | V_F | .75V | $I_{FM} = 5A$ $T_J = 125^\circ\text{C}$ |
| Maximum Reverse Current At Rated DC Blocking Voltage | I_R | 50 μ A 7m A | $T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$ |

| DIM | INCHES | | MM | | NOTE |
|-----|-----------|------|---------|-------|------|
| | MIN | MAX | MIN | MAX | |
| A | .600 | .620 | 15.25 | 15.75 | |
| B | .393 | .409 | 10.00 | 10.40 | |
| C | .104 | .116 | 2.65 | 2.95 | |
| D | .244 | .259 | 6.20 | 6.60 | |
| E | .356 | .361 | 9.05 | 9.15 | |
| F | .137 | .154 | 3.50 | 3.93 | |
| G | .511 | .551 | 13.00 | 14.00 | |
| H | .094 | .106 | 2.40 | 2.70 | |
| I | .024 | .034 | 0.61 | 0.88 | |
| J | .019 | .027 | 0.49 | 0.70 | |
| K | .147 | .151 | 3.75 | 3.85 | ∅ |
| L | .173 | .181 | 4.40 | 4.60 | |
| M | .048 | .051 | 1.23 | 1.32 | |
| N | 0.102typ. | | 2.6typ. | | |

*Pulse Test: Pulse Width 380 μ sec, Duty Cycle 2%

Fig. 1: Average forward power dissipation versus average forward current (per diode).

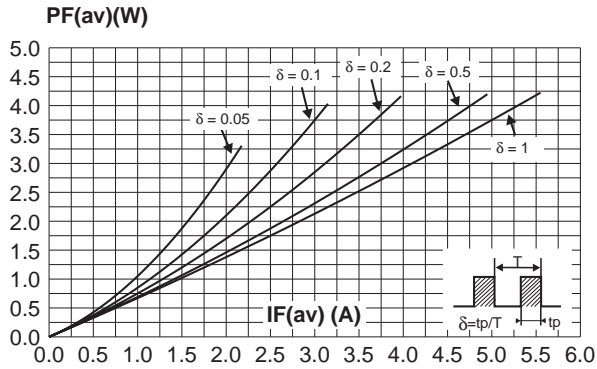


Fig. 2: Average forward current versus ambient temperature ($\delta = 0.5$, per diode).

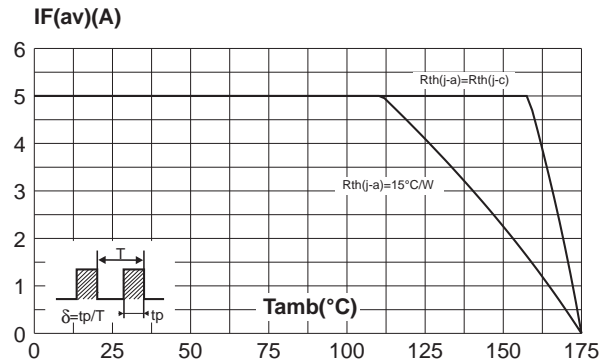


Fig. 3: Non repetitive surge peak forward current versus overload duration (maximum values, per diode).

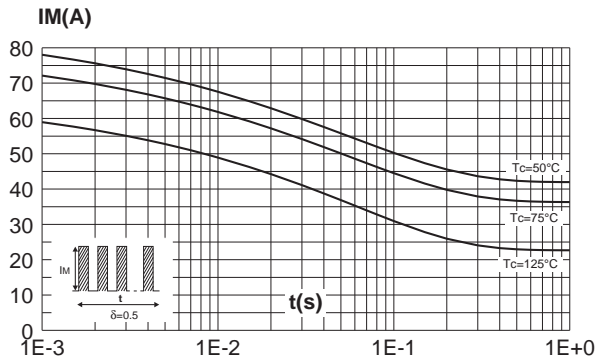


Fig. 4: Relative variation of thermal impedance junction to case versus pulse duration (per diode).

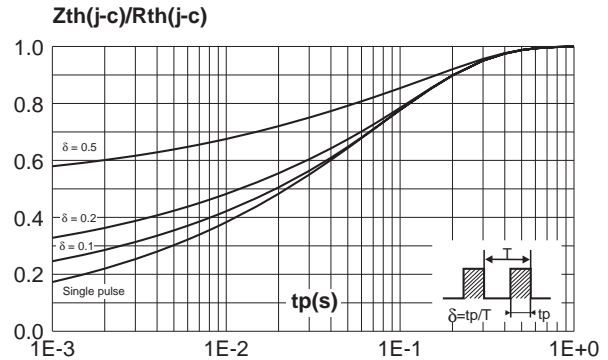


Fig. 5: Reverse leakage current versus reverse voltage applied (typical values, per diode)

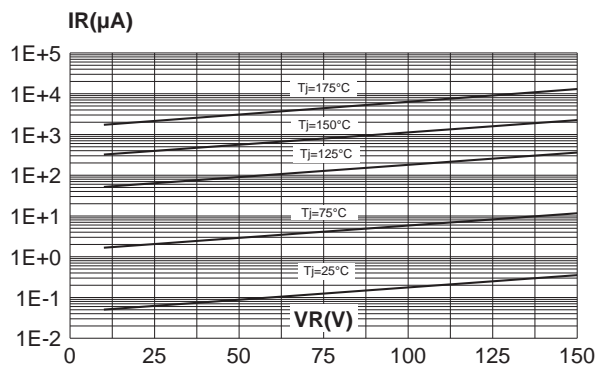


Fig. 6: Junction capacitance versus reverse voltage applied (typical values, per diode).

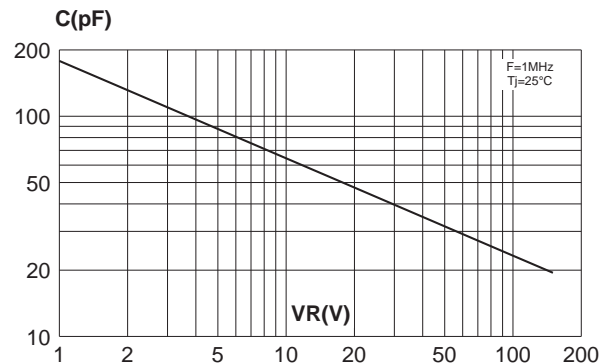


Fig. 7: Forward voltage drop versus forward current (maximum values, per diode).

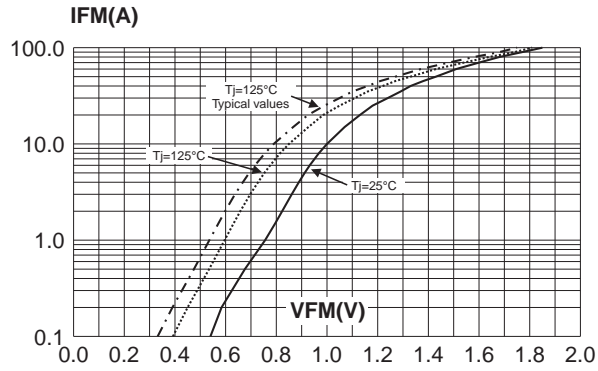
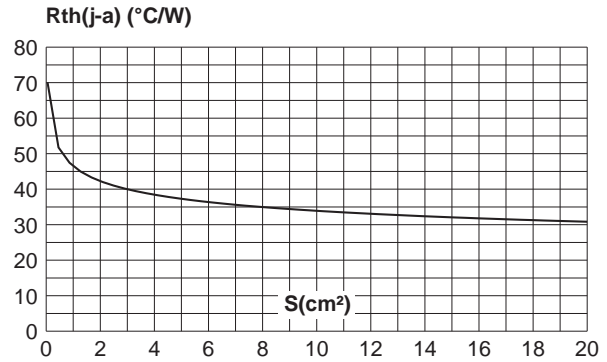


Fig. 8: Thermal resistance junction to ambient versus copper surface under tab (Epoxy printed circuit board, copper thickness: 35µm) (STPS10150CG only).



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