



Micro Commercial Components

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MBR1045UPS

10 Amp Schottky Barrier Rectifier 45 Volts

Features

- Halogen free available upon request by adding suffix "-HF"
- Low Forward Voltage Drop
- High Current Capability
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

Maximum Ratings

- Operating Temperature:-55°C to +150°C
- Storage Temperature:-55°C to +150°C

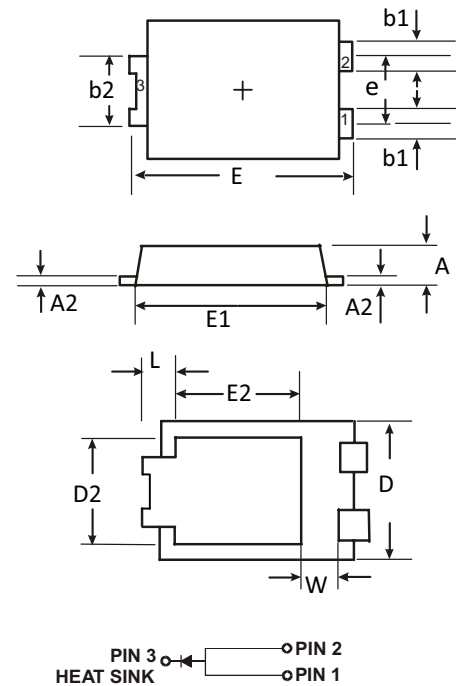
| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| MBR1045UPS | 1045U | 45V | 31.5V | 45V |

Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | | | |
|---|-----------------|--------|-------|--------|--|
| Average Forward Current | $I_{F(AV)}$ | 10A | | | $T_L = 90^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 180A | | | 8.3ms, half sine |
| Forward Voltage | V_F | Min. | Typ. | Max. | $I_F=2A$ $I_F=5A$ $I_F=10A$ $T_J=25^\circ\text{C}$ |
| | | --- | 0.34V | --- | |
| | | --- | 0.39V | --- | |
| | | --- | 0.46V | 0.50V | $I_F=2A$ $I_F=5A$ $I_F=10A$ $T_J=125^\circ\text{C}$ |
| | | --- | 0.30V | --- | |
| | | --- | 0.35V | 0.45V | |
| Reverse Current | I_R | --- | 50uA | --- | $V_R=36$ $T_J=25^\circ\text{C}$ |
| | | --- | --- | 0.25mA | $V_R=45$ $T_J=25^\circ\text{C}$ |
| | | --- | --- | 25mA | $V_R=45$ $T_J=125^\circ\text{C}$ |
| Typical Thermal Resistance, Junction To Ambient Air | $R_{\theta JA}$ | 60°C/W | | | |

Notes: 1. High Temperature Solder Exemption Applied, see EU Directive Annex 7.

TO-277B



| DIM | INCHES | | MM | | NOTE |
|-----|--------|------|------|------|------|
| | MIN | MAX | MIN | MAX | |
| A | .039 | .047 | 1.00 | 1.20 | |
| A2 | .006 | .017 | 0.15 | 0.43 | |
| b1 | .030 | .041 | 0.75 | 1.05 | |
| b2 | .065 | .077 | 1.65 | 1.95 | |
| D | .148 | .169 | 3.75 | 4.30 | |
| D2 | .110 | .126 | 2.80 | 3.20 | |
| E | .250 | .264 | 6.35 | 6.70 | |
| e | .065 | .077 | 1.65 | 1.95 | |
| E1 | .207 | .228 | 5.25 | 5.80 | |
| E2 | .120 | .142 | 3.05 | 3.60 | |
| L | .028 | .051 | 0.70 | 1.30 | |
| W | .031 | .056 | 0.80 | 1.42 | |

MBR1045UPS

RATING AND CHARACTERISTIC CUEVES

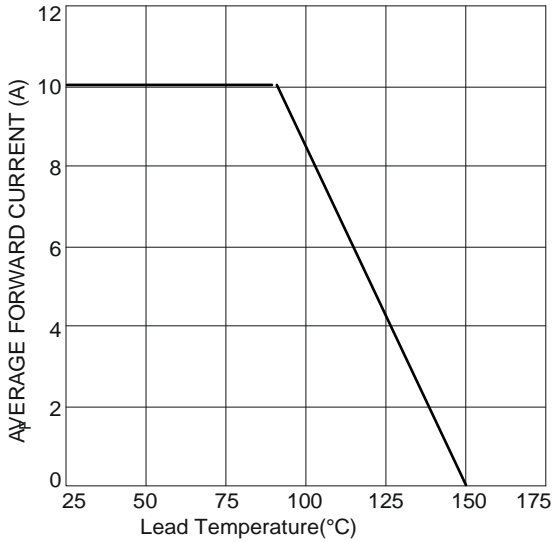


Figure 1 Forward Current Derating Curve

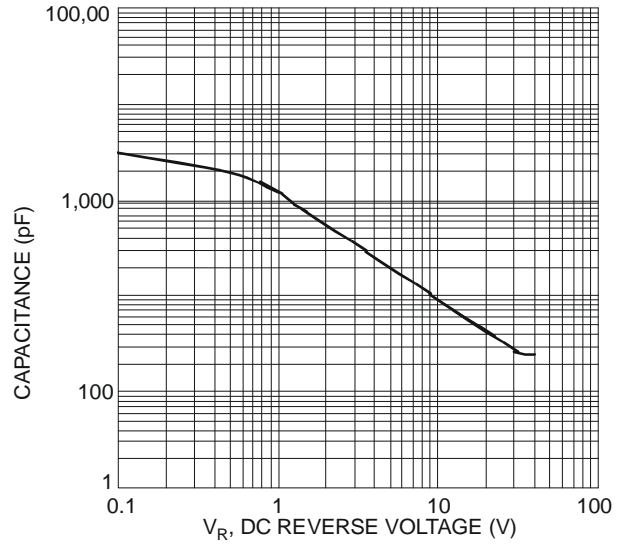


Figure 2 Typical Junction Capacitance

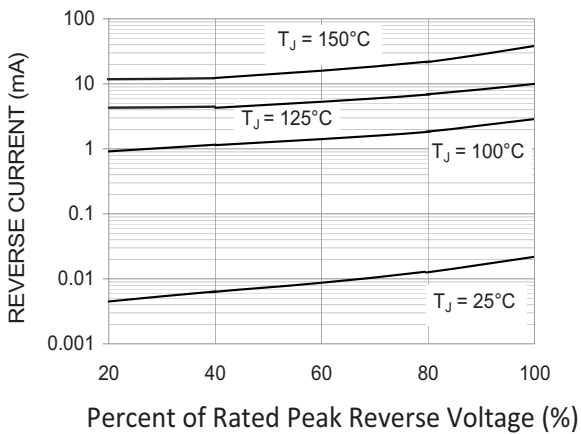


Figure 3 Typical Reverse Characteristics

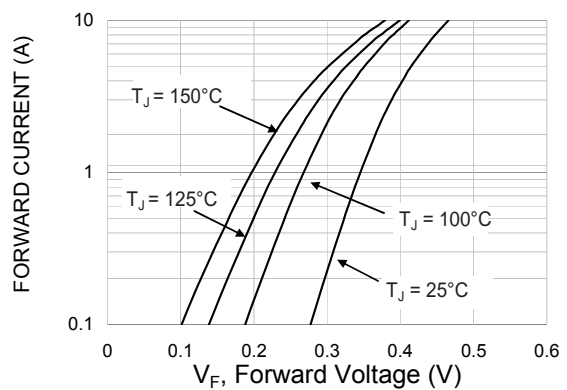


Figure 4 Typical Forward Characteristics



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Ordering Information

| Device | Packing |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 5Kpcs/Reel |

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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