



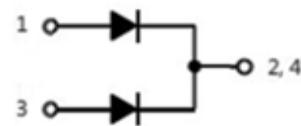
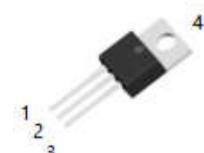
MBRF10100CT/MBR10100CT

Dual High Voltage Schottky Rectifier

General Description and Features

- Low forward voltage drop
- Low power loss, high efficiency
- High surge capability
- 10A total (5A per diode leg)
- 150°C operating junction temperature
- RoHS compliant
- Matte Tin(Sn) lead finish
- Pb-free package is available
- Terminal leads surface is corrosion resistant and can withstand to 260°C
- Wave soldering or per MIL-STD-750 method 2026

SCHOTTKY BARRIER RECTIFIERS
CURRENT 10A VOLTAGE 100V



- 1 – Anode 1
2 – Cathode
3 – Anode 2
4 – Tab Cathode

Absolute Maximum Rating (Ta=25°C unless otherwise specified)

| Symbol | Parameter | Value | Unit |
|--------------------|--|--------------------------------|------|
| V _{RRM} | Maximum Repetitive Reverse Voltage | 100 | V |
| V _R | Maximum DC Reverse Voltage | | |
| I _{F(AV)} | Average Rectified Forward Current, TC=115°C | 5 (Per Leg) 10 (Per Device) | A |
| I _{FRM} | Peak Repetitive Forward Current per Leg (Square Wave, 20 kHz, TC = 150°C) | 10 | A |
| I _{FSM} | Peak Forward Surge Current, 8.3mS, Half Sine wave | 200 | A |
| T _j | Operating Junction Temperature | 150 | °C |
| T _{STG} | Storage Temperature Range | -40 to +150 | °C |

Thermal Characteristics (Ta = 25°C unless otherwise specified)

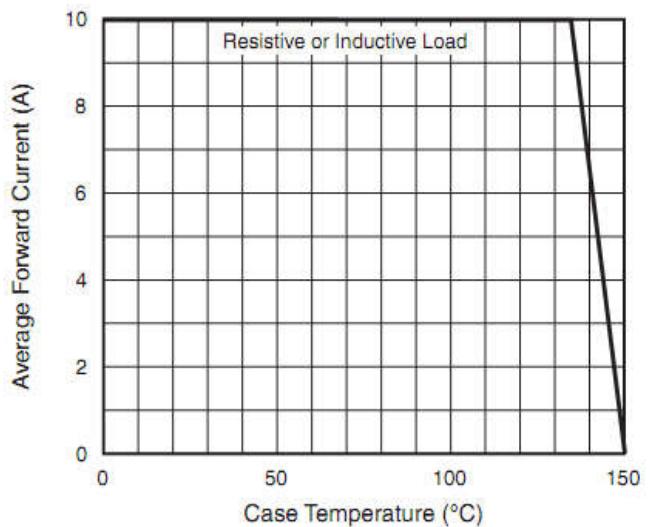
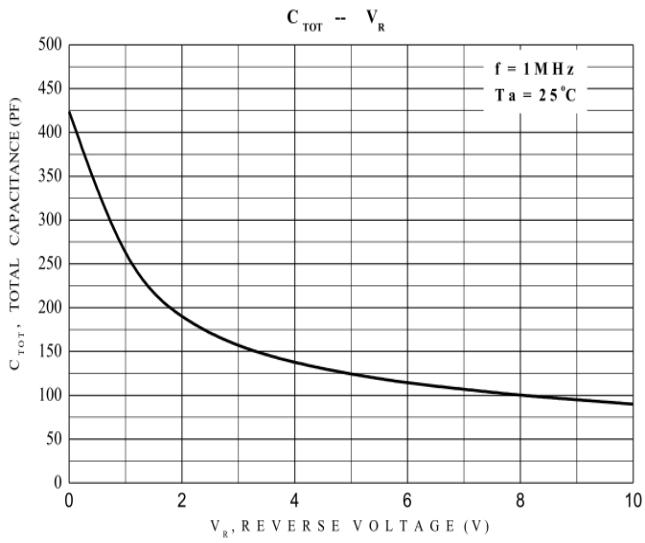
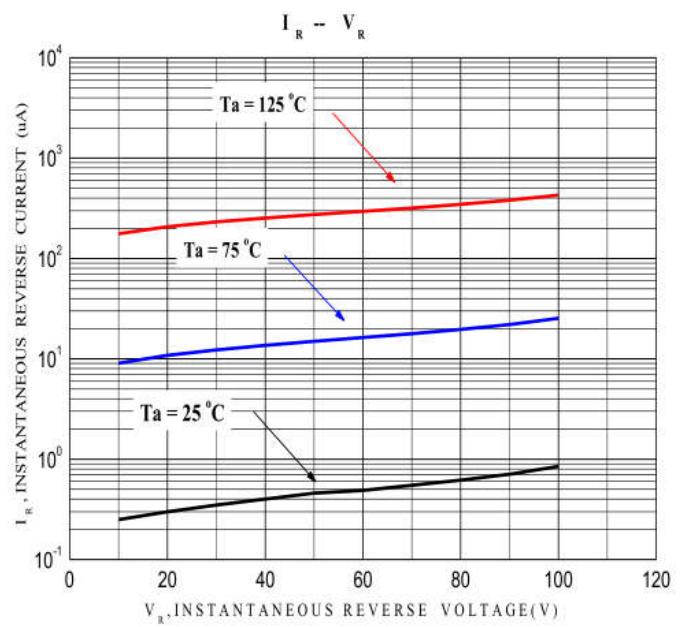
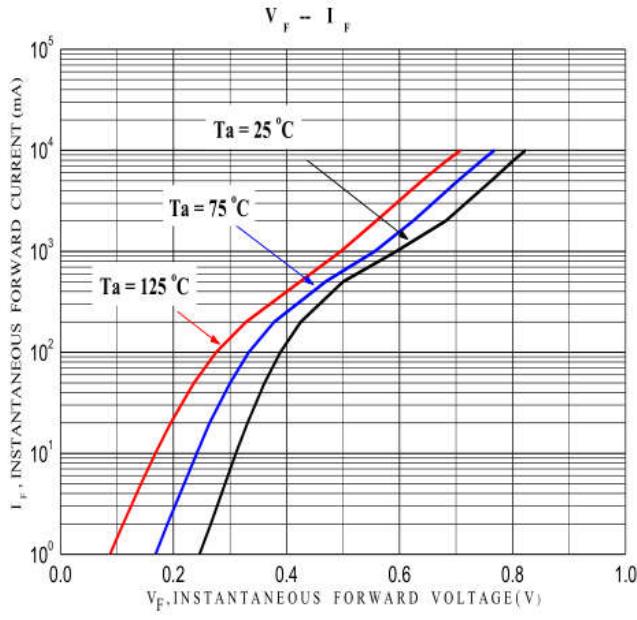
| Symbol | Parameter | Maximum | Unit |
|------------------|--|---------|------|
| R _{θJC} | Thermal Resistance, Junction to Case per Leg | 5 | °C/W |

Electrical Characteristics (Per Diode Leg)

| Symbol | Parameter | Test Condition | Minimum | Typical | Maximum | Unit |
|----------------|-----------------|--|---------|---------|---------|------|
| I _R | Reverse Current | V _R = 100V, T _c = 25°C | | | 5 | uA |
| V _F | Forward Voltage | I _F = 5A, T _c = 25°C | | 0.77 | 0.85 | V |

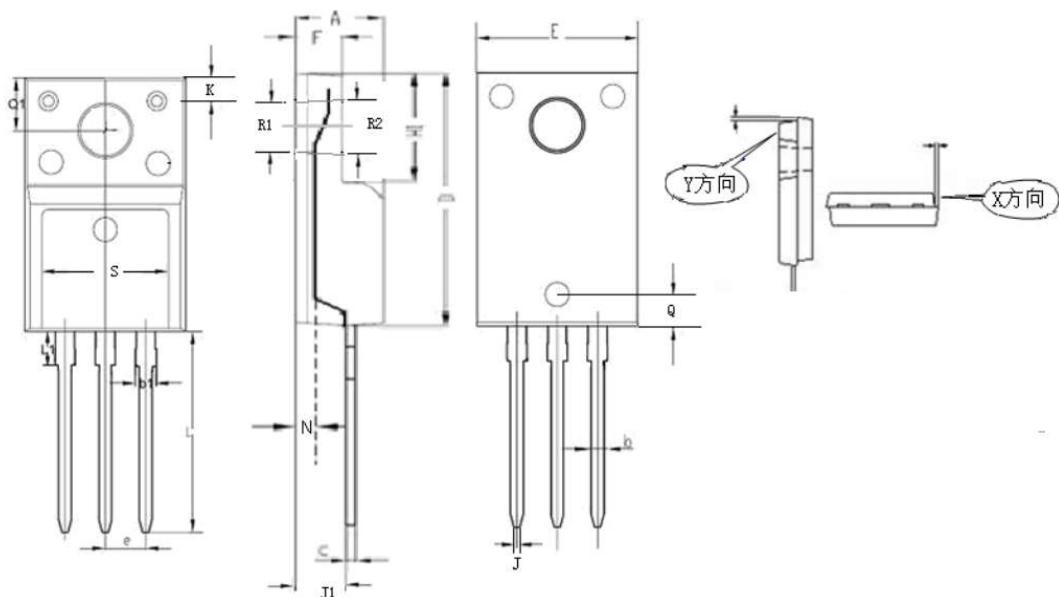


Characteristics Curves





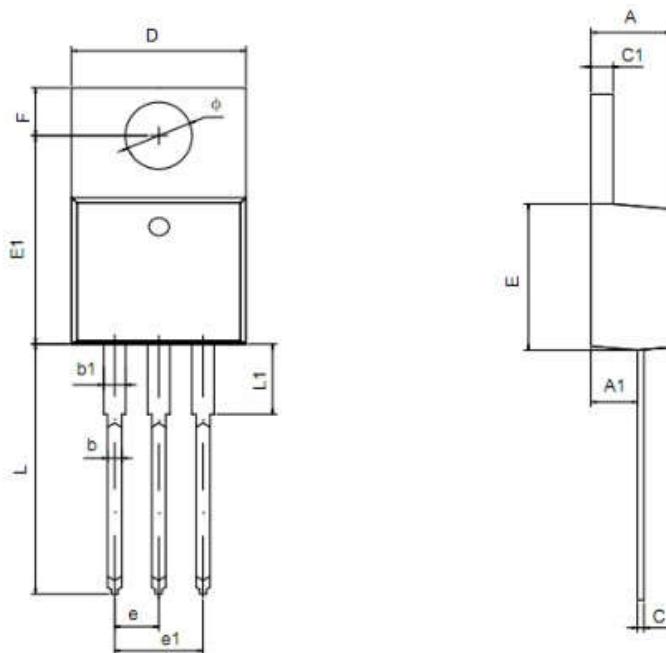
TO-220F POD



| SYMBOL | INCHES | | MILLIMETERS | | NOTES |
|--------|------------|-------|-------------|-------|-------|
| | MIN | MAX | MIN | MAX | |
| A | 0.178 | 0.194 | 4.53 | 4.93 | |
| b | 0.028 | 0.036 | 0.71 | 0.91 | |
| C | 0.018 | 0.024 | 0.45 | 0.6 | |
| D | 0.617 | 0.633 | 15.67 | 16.07 | |
| E | 0.392 | 0.408 | 9.96 | 10.36 | |
| e | 0.100 TYP. | | 2.54TYP. | | |
| H1 | 0.256 | 0.272 | 6.5 | 6.9 | |
| J1 | 0.101 | 0.117 | 2.56 | 2.96 | |
| L | 0.503 | 0.519 | 12.78 | 13.18 | |
| φQ | 0.117 | 0.133 | 2.98 | 3.38 | |
| b1 | 0.045 | 0.055 | 1.15 | 1.39 | |
| L1 | 0.114 | 0.13 | 2.9 | 3.3 | |
| Q1 | 0.122 | 0.138 | 3.1 | 3.5 | |
| N | 0.016 | 0.024 | 0.4 | 0.6 | |
| F | 0.092 | 0.108 | 2.34 | 2.74 | |
| J | 0.013 | 0.017 | 0.32 | 0.43 | |
| K | 0.047 | 0.071 | 1.20 | 1.80 | |
| R1 | 0.121 | 0.129 | 3.08 | 3.28 | |
| R2 | 0.126 | 0.136 | 3.20 | 3.45 | |
| Q | 0.075 | 0.083 | 1.90 | 2.10 | |
| S | 0.311 | 0.319 | 7.90 | 8.10 | |
| X | 0 | 0.005 | 0 | 0.127 | |



TO-220 POD



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|--------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 4.420 | 4.720 | 1.174 | 0.186 |
| A1 | 2.520 | 2.820 | 0.099 | 0.111 |
| b | 0.710 | 0.910 | 0.028 | 0.036 |
| b1 | 1.170 | 1.370 | 0.046 | 0.054 |
| c | 0.360 | 0.460 | 0.014 | 0.018 |
| c1 | 1.170 | 1.370 | 0.046 | 0.054 |
| D | 9.950 | 10.250 | 0.392 | 0.404 |
| E | 8.990 | 9.290 | 0.354 | 0.366 |
| E1 | 12.550 | 12.850 | 0.494 | 0.506 |
| e | 2.540TYP | | 0.100TYP | |
| e1 | 4.980 | 5.180 | 0.196 | 0.204 |
| F | 2.590 | 2.890 | 0.102 | 0.114 |
| L | 13.080 | 13.480 | 0.515 | 0.531 |
| L1 | 2.470 | 2.870 | 0.097 | 0.113 |
| φ | 3.790 | 3.890 | 0.149 | 0.153 |