

FEATURES

- Common cathode structure
- Low power loss, high efficiency
- High Operating Junction Temperature
- Guard ring for overvoltage protection, High reliability
- RoHS product

APPLICATIONS

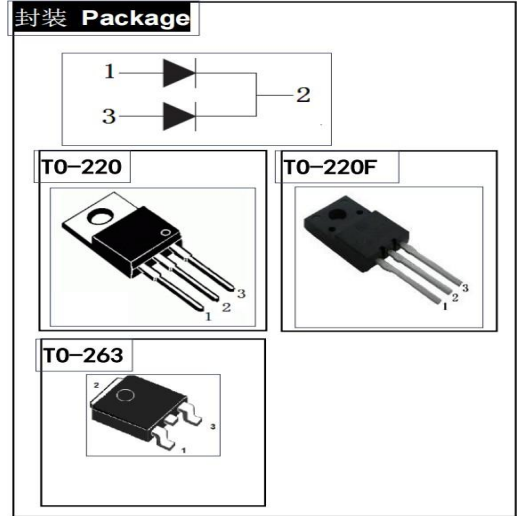
- High frequency switch Power supply
- Free wheeling diodes, Polarity protection applications

产品特性

- 共阴结构
- 低功耗, 高效率
- 良好的高温特性
- 有过压保护环, 高可靠性
- 环保 (RoHS) 产品

用途

- 高频开关电源
- 低压续流电路和保护电路



主要参数 MAIN CHARACTERISTICS

| | |
|--------------|------------------|
| $I_{F(AV)}$ | 30 (2×15) A |
| $V_{F(max)}$ | 0.72V (@Tj=125℃) |
| Tj | 175 ℃ |
| V_{RRM} | 100 V |

产品型号信息 PRODUCT MESSAGE

| 型号 Model | 印记 Marking | 封装 Package |
|-----------|------------|------------|
| MBR30100 | MBR30100 | TO-220C |
| MBRF30100 | MBRF30100 | TO-220F |
| MBR30100S | MBR30100S | TO-263 |
| MBR30100C | MBR30100C | TO-220 |

MBR30100 肖特基二极管 SCHOTTKY DIODE

绝对最大额定值 ABSOLUTE RATINGS (Tc=25°C)

| 项 目 Parameter | | 符 号 Symbol | 数 值 Value | 单 位 Unit |
|---|---------------------------------------|--------------------|--------------|-------------|
| 最大反向重复峰值电压 Repetitive peak reverse voltage | | V _{RRM} | 100 | V |
| 最大直流阻断电压 Maximum DC blocking voltage | | V _{DC} | 100 | V |
| 正向平均整流电流 Average forward current | T _C =150°C (TO-220/263) | I _{F(AV)} | 30 | A |
| | T _C =125°C (TO-220F) | | 15 | |
| 正向峰值浪涌电流 Surge non repetitive forward current (额定负载 8.3ms 半正弦波) 8.3 ms single half-sine-wave | | I _{FSM} | 275 | A |
| 最高结温 Maximum junction temperature | | T _j | 175 | °C |
| 储存温度 Storage temperature range | | T _{STG} | -40~+150 | °C |

电特性 ELECTRICAL CHARACTERISTICS

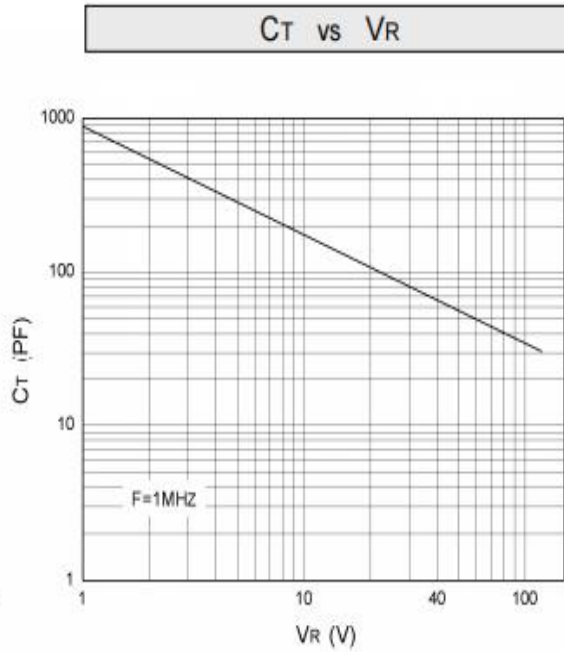
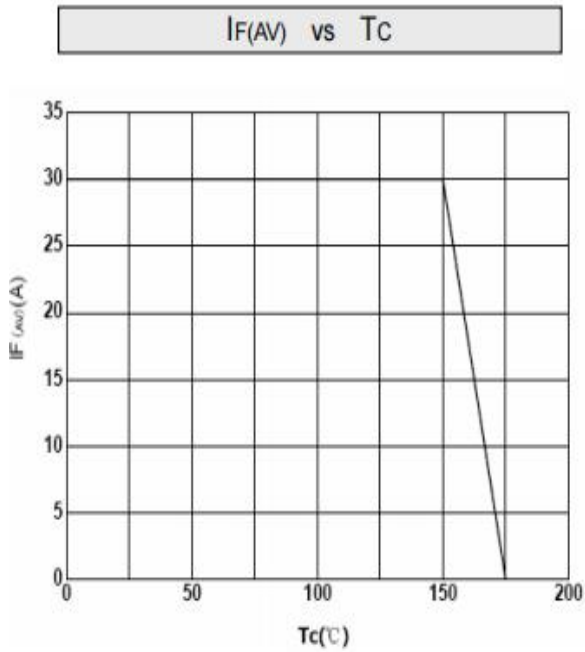
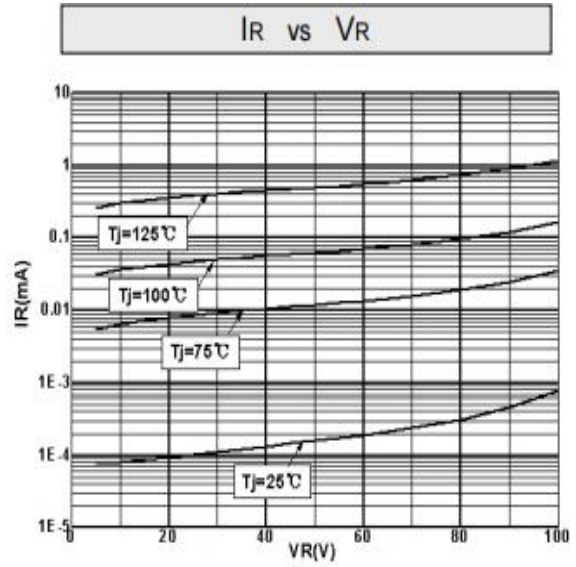
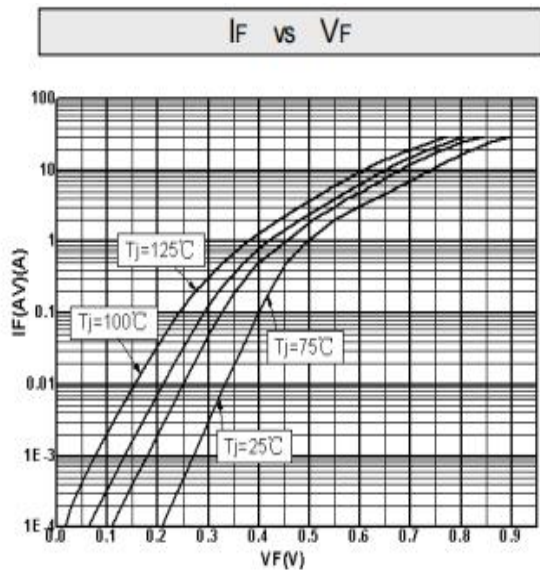
| 项 目 Parameter | 测试条件 Tests conditions | | 最小值 Value(min) | 典型值 Value(typ) | 最大值 Value(max) | 单 位 Unit |
|------------------|--------------------------|----------------------------------|-------------------|-------------------|-------------------|-------------|
| I _R | T _j =25°C | V _R =V _{RRM} | | | 10 | μA |
| | T _j =125°C | | | | 5 | mA |
| V _F | T _j =25°C | I _F =10A | | 0.73 | 0.80 | V |
| | T _j =125°C | | | 0.62 | 0.66 | V |
| | T _j =25°C | I _F =15A | | 0.81 | 0.87 | V |
| | T _j =125°C | | | 0.67 | 0.72 | V |

热特性 THERMAL CHARACTERISTICS

| 项 目 Parameter | 符 号 Symbol | 最小值 Value(min) | 最大值 Value(max) | 单 位 Unit |
|--|----------------------|-------------------|-------------------|-------------|
| 结到管壳的热阻 Thermal resistance from junction to case | R _{th(j-c)} | | 1.9 3.0 1.9 | °C/W |

MBR30100 肖特基二极管 SCHOTTKY DIODE

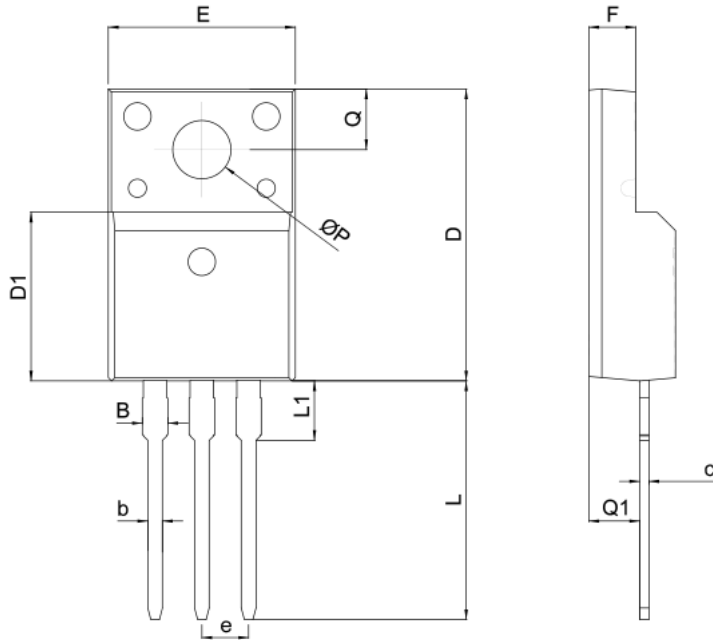
特征曲线 ELECTRICAL CHARACTERISTICS (curves)



MBR30100 肖特基二极管 SCHOTTKY DIODE

外形尺寸 PACKAGE MECHANICAL DATA TO-220F

单位 Unit : mm



| SYMBOL | mm | |
|----------|----------|------|
| | MIN | MAX |
| A | 4.5 | 4.9 |
| B | 1.22 | 1.47 |
| b | 0.7 | 0.9 |
| c | 0.45 | 0.60 |
| D | 15.6 | 16.1 |
| D1 | 9.0 | 9.3 |
| e | 2.54TYPE | |
| E | 9.9 | 10.4 |
| F | 2.3 | 2.8 |
| L | 12.6 | 13.3 |
| L1 | 3.1 | 3.4 |
| Q | 3.2 | 3.4 |
| Q1 | 2.6 | 2.9 |
| ΦP | 3.0 | 3.5 |

