

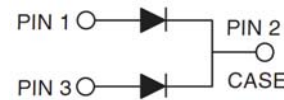
Dual Common Cathode Schottky Rectifier

FEATURES

- Low power loss, high efficiency
- Guardring for overvoltage protection
- High surge current capability
- UL Recognized File # E-326243
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



TO-247AD (TO-3P)



MECHANICAL DATA

Case: TO-247AD (TO-3P)

Molding compound, UL flammability classification rating 94V-0

Base P/N with suffix "G" on packing code - halogen-free

Base P/N with prefix "H" on packing code - AEC-Q101 qualified

Terminal: Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test

with prefix "H" on packing code meet JESD 201 class 2 whisker test

Polarity: As marked

Mounting torque: 10 in-lbs maximum

Weight: 6.1 g (approximately)

| MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted) | | | | | | | | |
|--|--------------------|----------------------|-------------|----------------------|-------------|-------------------|--------------|------|
| PARAMETER | SYMBOL | MBR 6035 PT | MBR 6045 PT | MBR 6050 PT | MBR 6060 PT | MBR 6090 PT | MBR 60100 PT | UNIT |
| Maximum repetitive peak reverse voltage | V _{RRM} | 35 | 45 | 50 | 60 | 90 | 100 | V |
| Maximum RMS voltage | V _{RMS} | 24 | 31 | 35 | 42 | 63 | 70 | V |
| Maximum DC blocking voltage | V _{DC} | 35 | 45 | 50 | 60 | 90 | 100 | V |
| Maximum average forward rectified current | I _{F(AV)} | 60 | | | | | | A |
| Peak repetitive forward current (Rated V _R , Square wave, 20KHz) | I _{FRM} | 60 | | | | | | A |
| Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load | I _{FSM} | 420 | | | | | | A |
| Peak repetitive reverse surge Current (Note 1) | I _{RRM} | 1 | | | | | | A |
| Maximum instantaneous forward voltage (Note 2) I _F =30A, T _J =25°C I _F =30A, T _J =125°C I _F =60A, T _J =25°C | V _F | 0.70 0.60 0.82 | | 0.75 0.65 0.93 | | 0.84 - 0.98 | | V |
| Maximum reverse current @ rated VR T _J =25 °C T _J =125 °C | I _R | 1 30 20 10 | | | | | | mA |
| Voltage rate of change,(Rated V _R) | dV/dt | 10,000 | | | | | | V/μs |
| Typical thermal resistance | R _{θJC} | 1.2 | | | | | | °C/W |
| Operating junction temperature range | T _J | - 55 to +150 | | | | | | °C |
| Storage temperature range | T _{STG} | - 55 to +150 | | | | | | °C |

Note 1: 2.0μs Pulse Width, f=1.0KHz

Note 2: Pulse Test : 300μs Pulse Width, 1% Duty Cycle

| ORDERING INFORMATION | | | | | |
|----------------------|--------------------|--------------|---------------------|---------|-----------|
| PART NO. | AEC-Q101 QUALIFIED | PACKING CODE | GREEN COMPOUND CODE | PACKAGE | PACKING |
| MBR60xxPT (Note 1) | Prefix "H" | C0 | Suffix "G" | TO-3P | 30 / Tube |

Note 1: "xx" defines voltage from 35V (MBR6035PT) to 100V (MBR60100PT)

| EXAMPLE | | | | | |
|---------------|-----------|--------------------|--------------|---------------------|--------------------|
| PREFERRED P/N | PART NO. | AEC-Q101 QUALIFIED | PACKING CODE | GREEN COMPOUND CODE | DESCRIPTION |
| MBR6060PT C0 | MBR6060PT | | C0 | | |
| MBR6060PT C0G | MBR6060PT | | C0 | G | Green compound |
| MBR6060PTH0 | MBR6060PT | H | C0 | | AEC-Q101 qualified |

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

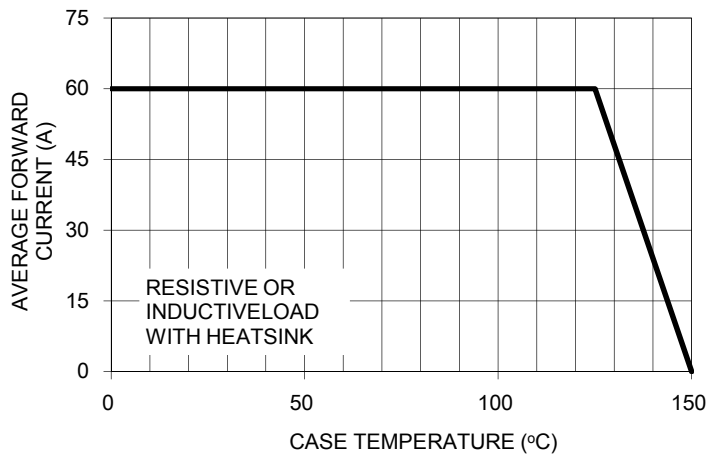


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

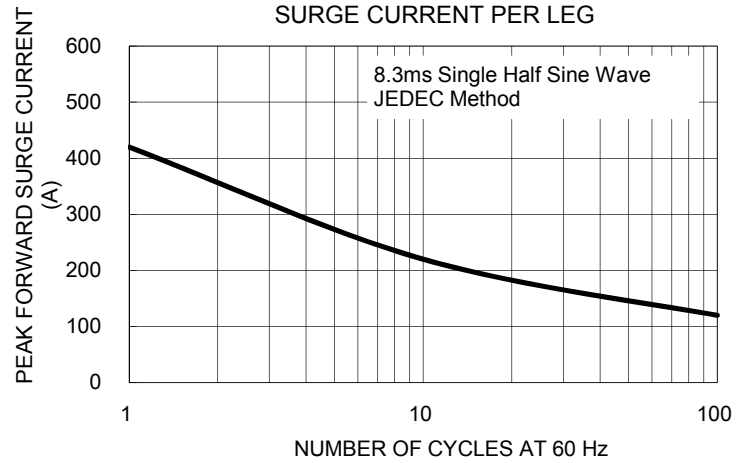


FIG. 3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

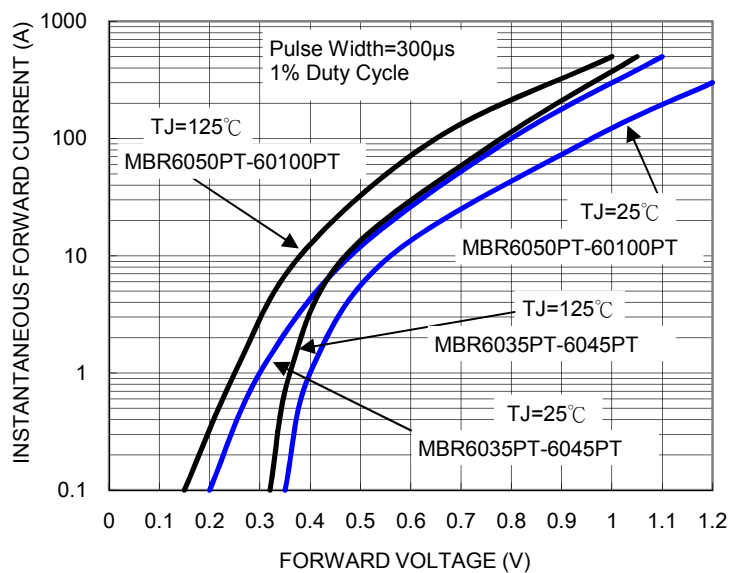


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

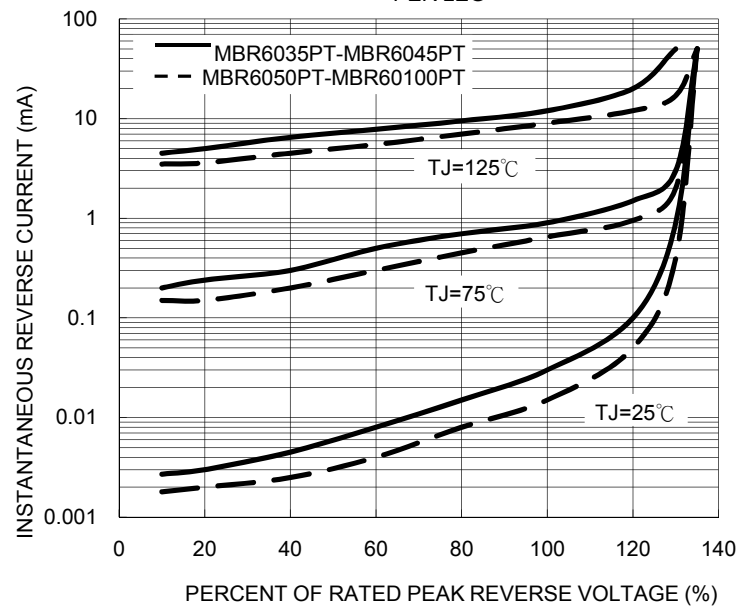


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG

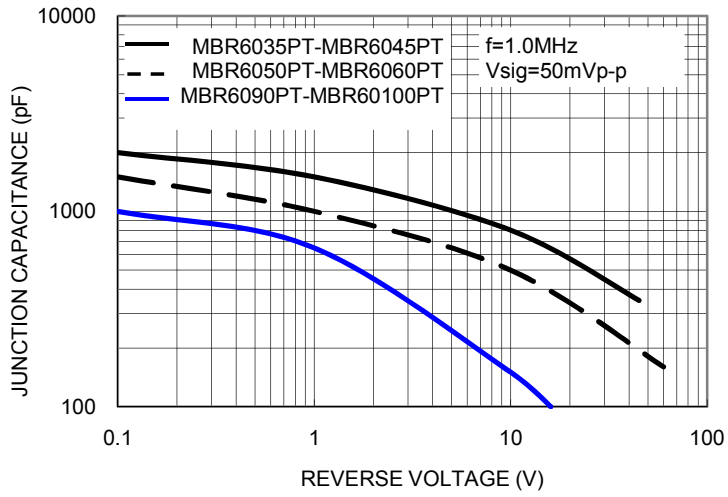
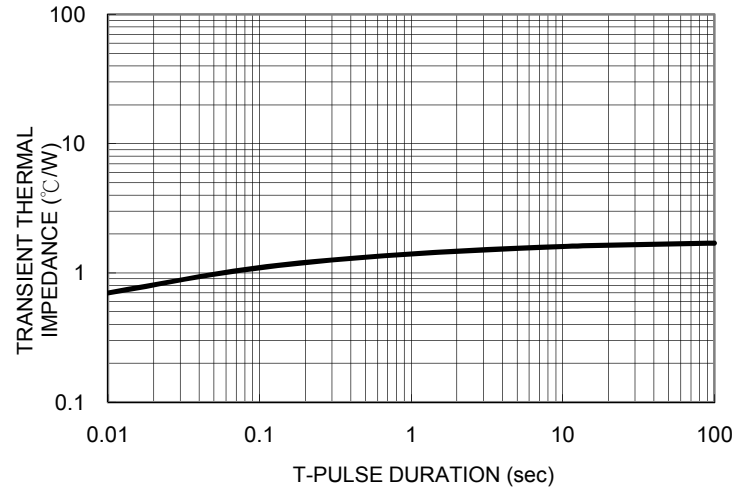
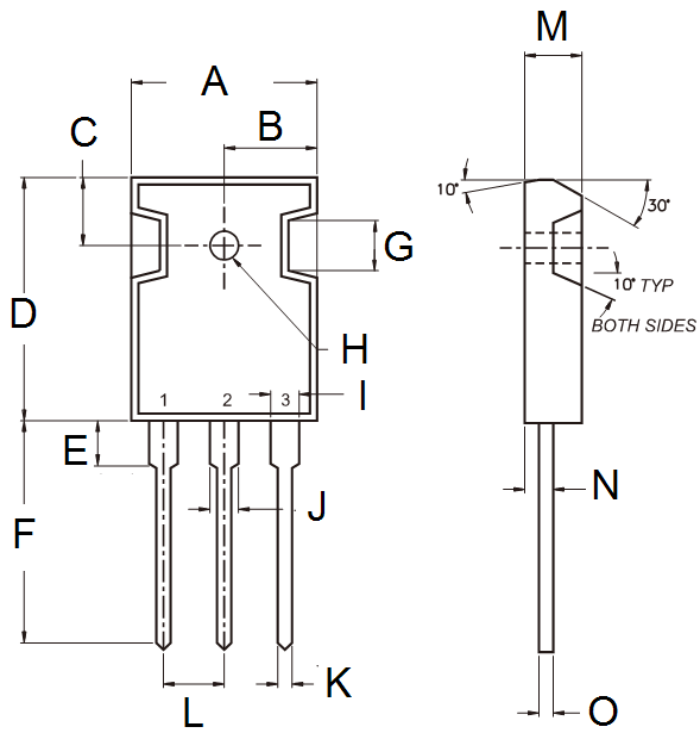


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

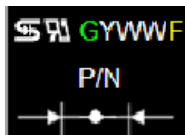


PACKAGE OUTLINE DIMENSIONS



| DIM. | Unit (mm) | | Unit (inch) | |
|------|-----------|-------|-------------|-------|
| | Min | Max | Min | Max |
| A | 15.90 | 16.40 | 0.626 | 0.646 |
| B | 7.90 | 8.20 | 0.311 | 0.323 |
| C | 5.70 | 6.20 | 0.224 | 0.244 |
| D | 20.80 | 21.30 | 0.819 | 0.839 |
| E | 3.50 | 4.10 | 0.138 | 0.161 |
| F | 19.70 | 20.20 | 0.776 | 0.795 |
| G | - | 4.30 | - | 0.169 |
| H | 2.90 | 3.40 | 0.114 | 0.134 |
| I | 1.93 | 2.18 | 0.076 | 0.086 |
| J | 2.97 | 3.22 | 0.117 | 0.127 |
| K | 1.12 | 1.22 | 0.044 | 0.048 |
| L | 5.20 | 5.70 | 0.205 | 0.224 |
| M | 4.90 | 5.16 | 0.193 | 0.203 |
| N | 2.70 | 3.00 | 0.106 | 0.118 |
| O | 0.51 | 0.76 | 0.020 | 0.030 |

MARKING DIAGRAM



- P/N = Marking Code
- G = Green Compound
- YWW = Date Code
- F = Factory Code