

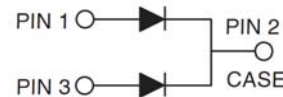
Dual Common Cathode Schottky Rectifier

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 3035 PT | MBR 3045 PT | MBR 3050 PT | MBR 3060 PT | MBR 3090 PT | MBR 30100 PT | MBR 30150 PT | MBR 30200 PT | UNIT |
| Maximum repetitive peak reverse voltage | V _{RRM} | 35 | 45 | 50 | 60 | 90 | 100 | 150 | 200 | V |
| Maximum RMS voltage | V _{RMS} | 24 | 31 | 35 | 42 | 63 | 70 | 105 | 140 | V |
| Maximum DC blocking voltage | V _{DC} | 35 | 45 | 50 | 60 | 90 | 100 | 150 | 200 | V |
| Maximum average forward rectified current | I _{F(AV)} | 30 | | | | | | | | A |
| Peak repetitive forward current (Rated V _R , Square wave, 20KHz) | I _{FRM} | 30 | | | | | | | | A |
| Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load | I _{FSM} | 200 | | | | | | | | A |
| Peak repetitive reverse surge Current (Note 1) | I _{RSM} | 2 | | | 1 | | | | | A |
| Maximum instantaneous forward voltage (Note 2) I _F =15A, T _J =25°C I _F =15A, T _J =125°C I _F =30A, T _J =25°C I _F =30A, T _J =125°C | V _F | - 0.60 0.82 0.73 | - 0.65 - | 0.75 0.65 - | - 0.75 - | 0.85 0.75 - | 0.95 0.92 1.02 | 0.95 0.92 1.02 | 1.05 - | V |
| Maximum reverse current @ rated VR T _J =25 °C T _J =125 °C | I _R | 1 | | | 0.5 | | | | 0.1 | mA |
| Voltage rate of change,(Rated V _R) | dV/dt | 10,000 | | | | | | | | V/μs |
| Typical thermal resistance | R _{θJC} | 1.4 | | | | | | | | °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 |
| MBR30xxPT (Note 1) | Prefix "H" | C0 | Suffix "G" | TO-3P | 30 / Tube |

Note 1: "xx" defines voltage from 35V (MBR3035PT) to 200V (MBR30200PT)

| EXAMPLE | | | | | |
|---------------|-----------|--------------------|--------------|---------------------|--------------------|
| PREFERRED P/N | PART NO. | AEC-Q101 QUALIFIED | PACKING CODE | GREEN COMPOUND CODE | DESCRIPTION |
| MBR3060PT C0 | MBR3060PT | | C0 | | |
| MBR3060PT C0G | MBR3060PT | | C0 | G | Green compound |
| MBR3060PTH0 | MBR3060PT | H | C0 | | AEC-Q101 qualified |

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG. 1 FORWARD CURRENT DERATING CURVE

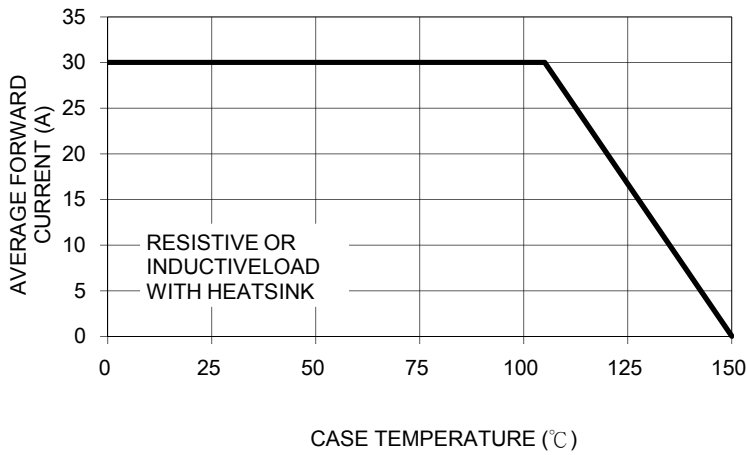


FIG. 2 MAXIMUM FORWARD SURGE CURRENT PER LEG

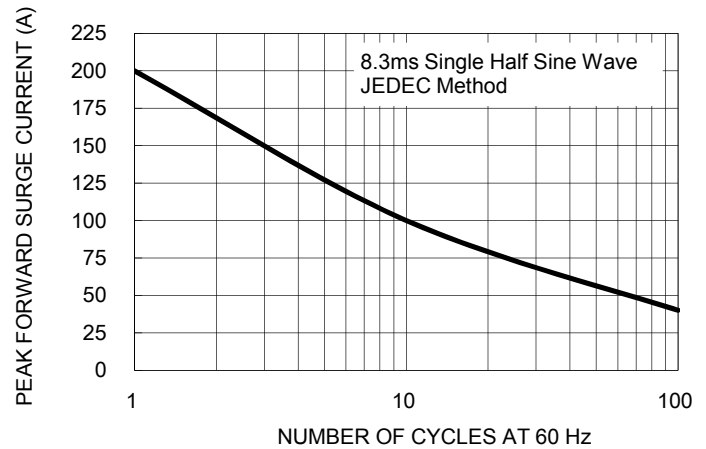


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

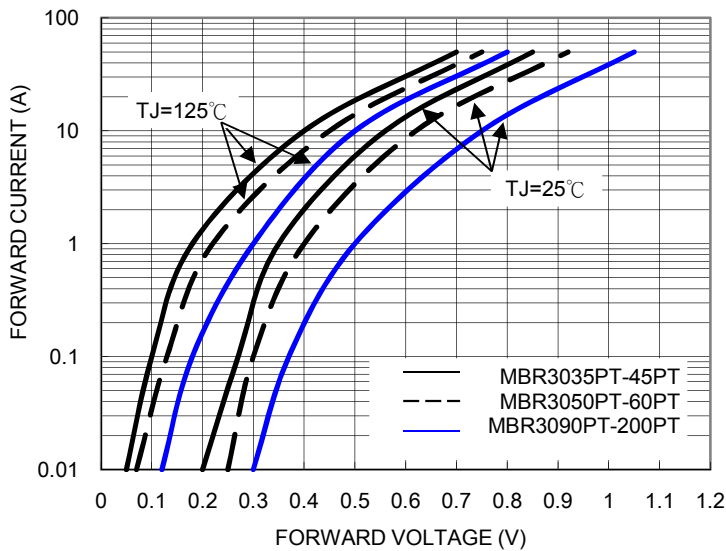


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

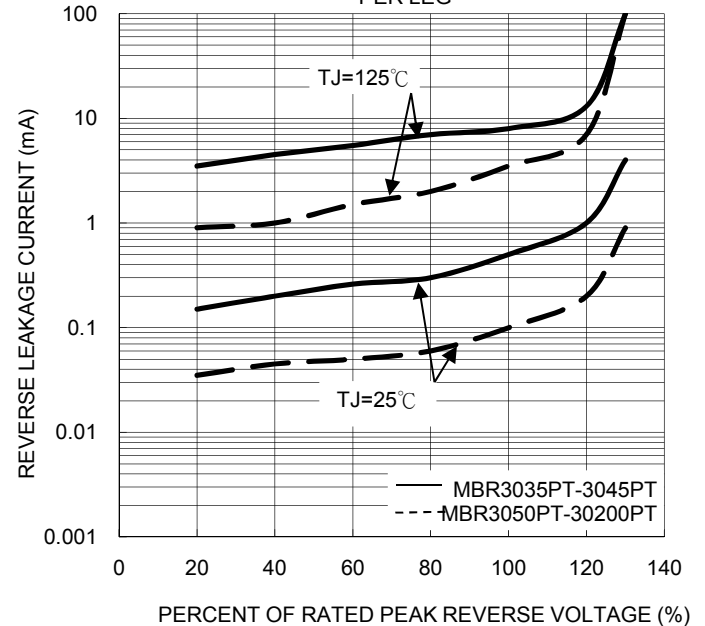


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG

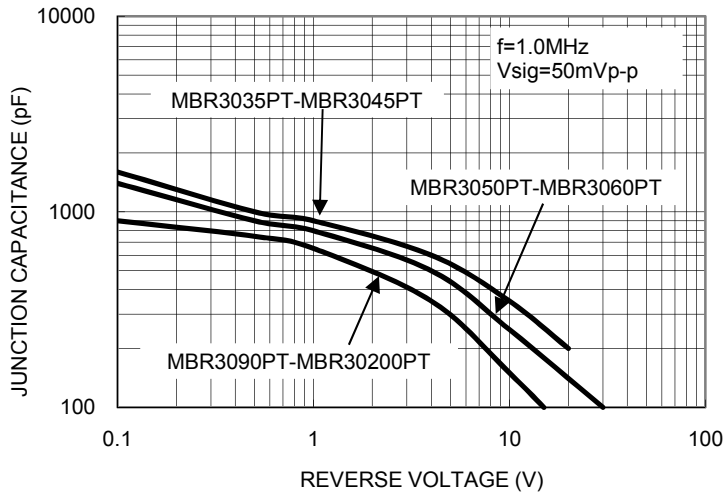
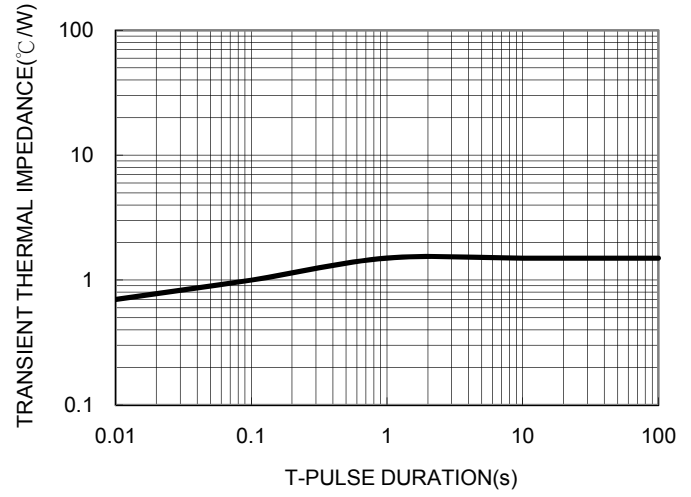
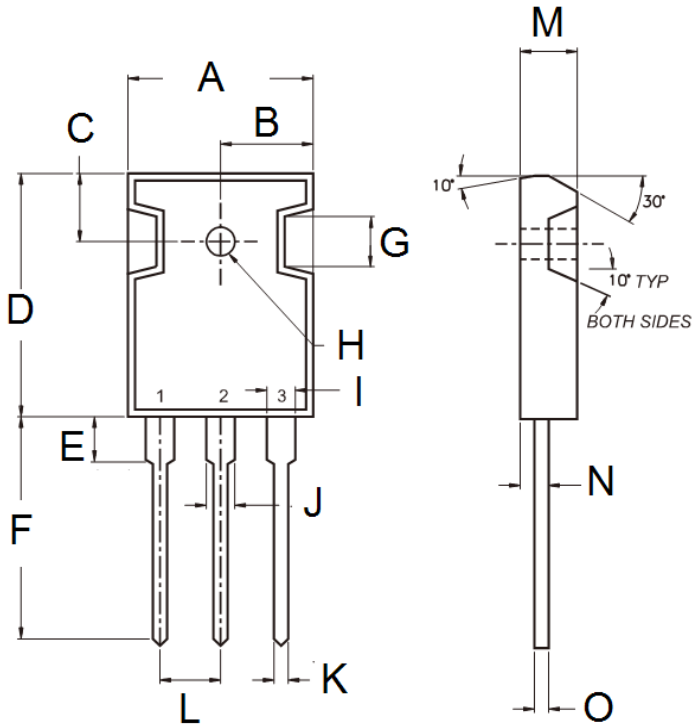


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG



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

Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf, assumes no responsibility or liability for any errors inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Taiwan Semiconductor:

[MBR30100PT](#) [MBR3035PT](#) [MBR3045PT](#) [MBR3050PT](#) [MBR3060PT](#) [MBR3090PT](#) [MBR30150PT C0](#)
[MBR30200PT C0](#) [MBR3060PT C0](#) [MBR3045PT C0](#) [MBR3035PT C0](#) [MBR3050PT C0](#) [MBR30200PTHC0](#)
[MBR3045PTHC0](#) [MBR30100PT C0](#) [MBR30200PT C0G](#) [MBR30100PT C0G](#) [MBR30150PT C0G](#) [MBR3045PT C0G](#)
[MBR3060PT C0G](#)