

Features

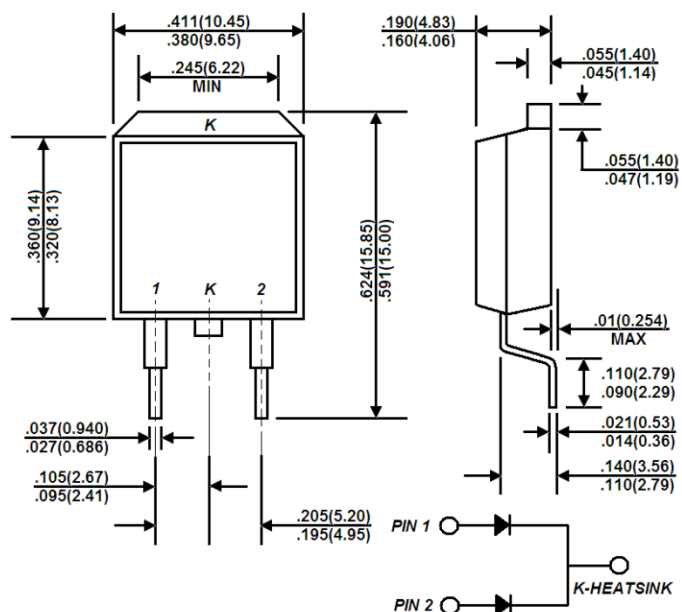
- * Low power loss, high efficiency
- * Ideal for automated placement
- * Guard-ring for overvoltage protection
- * High surge current capability
- * Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC



RoHS
COMPLIANT

Package Outline Dimensions in inches (millimeters)

D²PAK:



Mechanical Data

- * Cases: TO-263AB Molded plastic
- * Molding compound, UL flammability classification rating 94V-0
- * Terminal: Matte tin plated leads, solderable per JESD22-B102 Meet JESD 201 class 1A whisker test
- * Polarity: As marked

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| Type Number | Symbol | MBRS 2035 CT | MBRS 2045 CT | MBRS 2050 CT | MBRS 2060 CT | MBRS 2090 CT | MBRS 20100 CT | MBRS 20150 CT | Unit | |
|--|----------------------------------|------------------------------|--------------|------------------------------|--------------|------------------------------|---------------|------------------------------|------|------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 35 | 45 | 50 | 60 | 90 | 100 | 150 | V | |
| Maximum RMS Voltage | V_{RMS} | 24 | 31 | 35 | 42 | 63 | 70 | 105 | V | |
| Maximum D.C Blocking Voltage | V_{DC} | 35 | 45 | 50 | 60 | 90 | 100 | 150 | V | |
| Maximum Average Forward Rectified Current | $I_{F(AV)}$ | 20 | | | | | | | A | |
| Peak repetitive forward current (Rated VR, Square Wave, 20KHz) | I_{FRM} | 20 | | | | | | | A | |
| Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load(JEDEC method) | I_{FSM} | 150 | | | | | | | A | |
| Peak repetitive reverse surge current (Note 1) | I_{RRM} | 1 | 0.5 | | | | | A | | |
| Maximum instantaneous forward voltage (Note 2) IF= 10 A, T _J =25°C IF= 10 A, T _J =125°C IF= 20 A, T _J =25°C IF= 20 A, T _J =125°C | V_F | 0.70 0.57 0.84 0.72 | | 0.80 0.70 0.95 0.85 | | 0.85 0.75 0.95 0.85 | | 0.99 0.87 1.23 1.10 | V | |
| Maximum reverse current @ rated VR T _J =25 °C T _J =125 °C | I_R | 0.1 | | | | | | | mA | |
| | | 15 | 10 | 5 | | | | | | |
| Voltage rate of change (Rated VR) | dV/dt | 10000 | | | | | | | V/μs | |
| Typical Thermal Resistance | $R_{θJC}$ | 1.5 | | | | 2.0 | | | | °C/W |
| Operating and Storage Temperature Range | T _J /T _{STG} | -55 to +150 | | | | | | | °C | |

Note:1、 Note 1: tp = 2.0 μs, 1.0KHz 2、 Pulse test with PW=300μs, 1% duty cycle

Ratings and Characteristic Curves

FIG. 1 FORWARD CURRENT DERATING CURVE

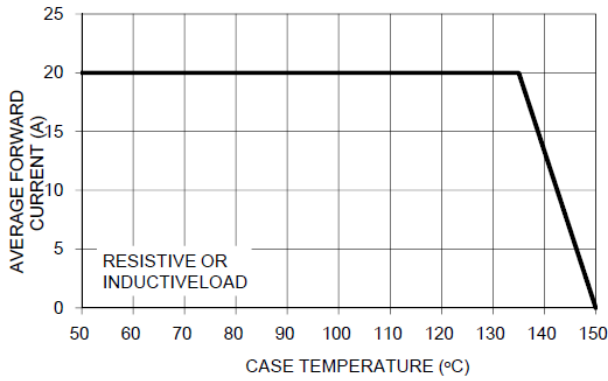


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

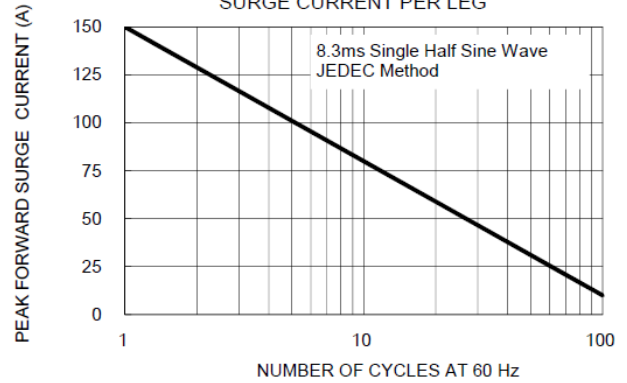


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

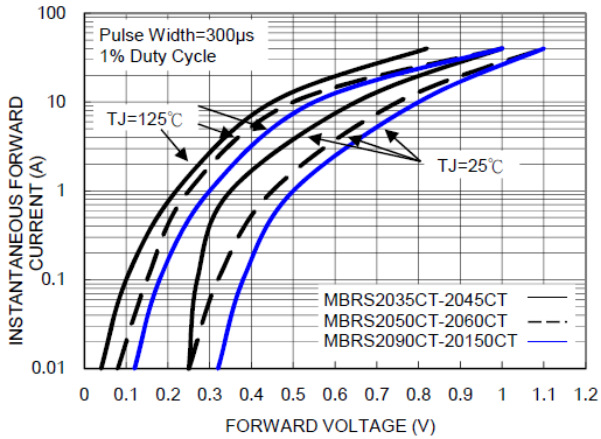


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

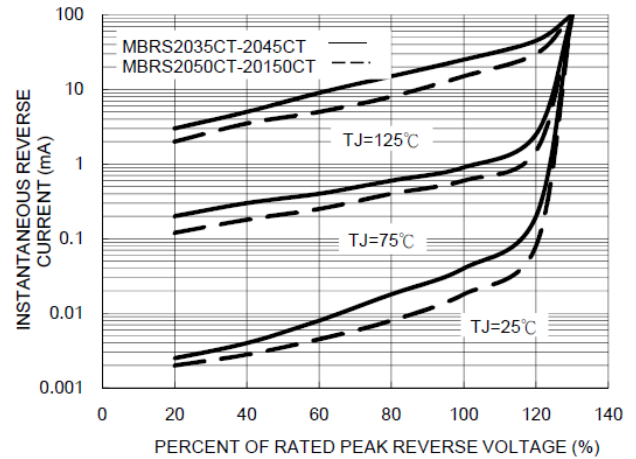


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG

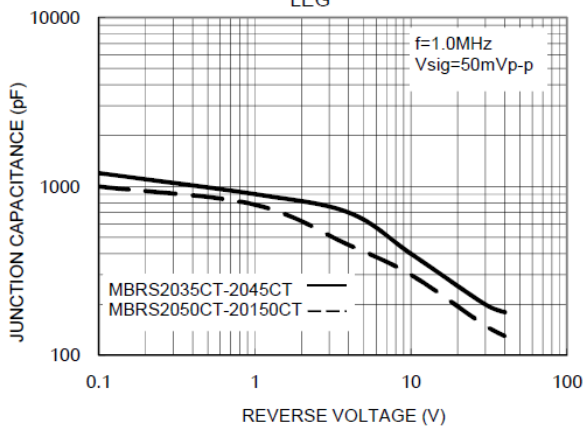
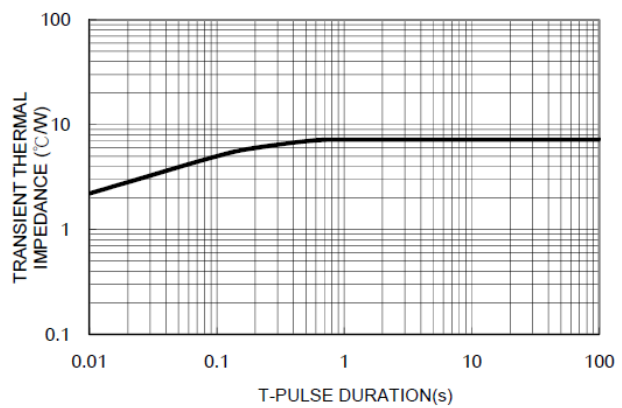


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG





MBRS2035CT THRU MBRS20150CT

Dual Common Cathode Schottky Rectifiers

Ordering Information

| Part No. | Package | Packing |
|------------------------|----------|------------|
| MBRS2035CT~MBRS20150CT | TO-263AB | 50pcs/Tube |