



GF2045M-P150

Preliminary

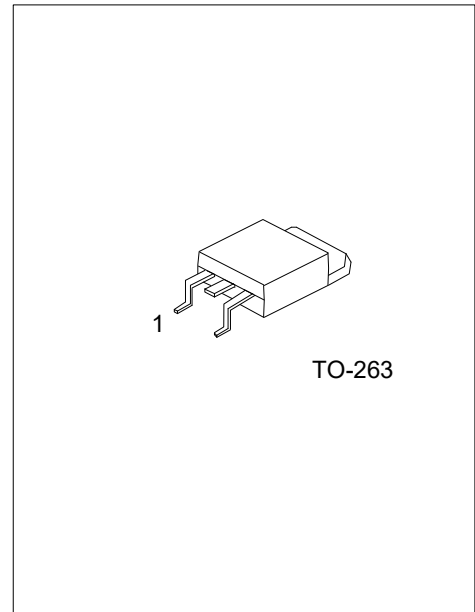
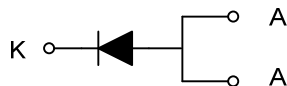
DIODE

PHOTOVOLTAIC BYPASS SCHOTTKY BARRIER RECTIFIER

FEATURES

- * High frequency operation
- * Low forward voltage drop
- * High purity, high temperature epoxy encapsulation forenhanced mechanical strength and moisture resistance
- * Guard ring for enhanced ruggedness and long term reliability

SYMBOL



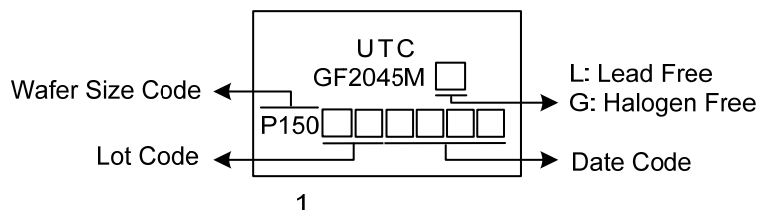
ORDERING INFORMATION

| Ordering Number | | Package | Pin Assignment | | | Packing |
|---------------------|---------------------|---------|----------------|---|---|-----------|
| Lead Free | Halogen Free | | 1 | 2 | 3 | |
| GF2045ML-P150-TQ2-T | GF2045MG-P150-TQ2-T | TO-263 | A | K | A | Tube |
| GF2045ML-P150-TQ2-R | GF2045MG-P150-TQ2-R | TO-263 | A | K | A | Tape Reel |

Note: Pin Assignment: A: Anode K: Cathode

| | |
|---|---|
| <p>GF2045MG-P150-TQ2-T</p> <p>(1) Packing Type (2) Package Type (3) Wafer Size Code (4) Green Package</p> | <p>(1) T: Tube, R: Tape Reel (2) TQ2: TO-263 (3) P150 (4) G: Halogen Free and Lead Free, L: Lead Free</p> |
|---|---|

MARKING



■ ABSOLUTE MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitance load, derate current by 20%.

| PARAMETER | SYMBOL | RATINGS | UNIT |
|--|-----------|-----------------|--------------------|
| DC Blocking Voltage | V_{RM} | 45 | V |
| Working Peak Reverse Voltage | V_{RWM} | 45 | V |
| Peak Repetitive Reverse Voltage | V_{RRM} | 45 | V |
| Average Rectified Output Current @ 60Hz Half Sine Wave, 1 Cycle, $T_A=25^{\circ}\text{C}$ | I_O | 20 | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load | I_{FSM} | 600 | A |
| Operating Junction Temperature | T_J | $-55 \sim +125$ | $^{\circ}\text{C}$ |
| Storage Temperature | T_{STG} | $-55 \sim +125$ | $^{\circ}\text{C}$ |

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ THERMAL CHARACTERISTICS (PER LEG)

| PARAMETER | SYMBOL | RATINGS | UNIT |
|----------------------------|---------------|---------|-----------------------------|
| Typical Thermal Resistance | θ_{JC} | 2.0 | $^{\circ}\text{C}/\text{W}$ |

■ ELECTRICAL CHARACTERISTICS (PER LEG) ($T_A=25^{\circ}\text{C}$ unless otherwise specified.)

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|--|-------------|---|-----|-----|------|---------------|
| Reverse Breakdown Voltage | $V_{(BR)R}$ | $I_R=0.50\text{mA}$ | 45 | | | V |
| Maximum Instantaneous Forward Voltage Drop per Diode ($T_J=25^{\circ}\text{C}$) | V_F | $I_F=20\text{A}$ | | | 0.53 | V |
| Leakage Current | I_R | $V_R=45\text{V}, T_J=25^{\circ}\text{C}$ | | | 200 | μA |
| | | $V_R=45\text{V}, T_J=100^{\circ}\text{C}$ | | | 20 | mA |

Note: Pulse Test: Pulse width $\leq 300\mu\text{s}$, Duty cycle $\leq 2\%$.

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