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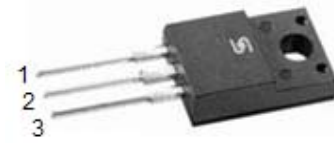
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



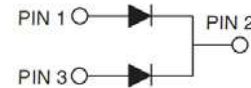
## Dual Common Cathode Schottky Rectifier

### 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



ITO-220AB



### MECHANICAL DATA

**Case:** ITO-220AB

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:** 5 in-lbs maximum

**Weight:** 1.7 g (approximately)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

| PARAMETER  | SYMBOL             | MBRF30L120CT |      | UNIT |
|--|--------------------|--------------|------|------|
| Maximum repetitive peak reverse voltage  | V <sub>RRM</sub>   | 120          |      | V    |
| Maximum RMS voltage  | V <sub>RMS</sub>   | 84           |      | V    |
| Maximum DC blocking voltage  | V <sub>DC</sub>    | 120          |      | V    |
| Maximum average forward rectified current  | I <sub>F(AV)</sub> | 30           |      | A    |
| Peak repetitive forward current<br>(Rated VR, Square wave, 20KHz)  | I <sub>FRM</sub>   | 30           |      | A    |
| Peak forward surge current, 8.3 ms single half sine-wave<br>superimposed on rated load   | I <sub>FSM</sub>   | 200          |      | A    |
| Peak repetitive reverse surge current (Note 1)   | I <sub>RRM</sub>   | 1            |      | A    |
| Maximum instantaneous forward voltage (Note 2)<br>I <sub>F</sub> = 15A, T <sub>J</sub> =25°C<br>I <sub>F</sub> = 15A, T <sub>J</sub> =125°C<br>I <sub>F</sub> = 30A, T <sub>J</sub> =25°C<br>I <sub>F</sub> = 30A, T <sub>J</sub> =125°C | V <sub>F</sub>     | TYP          | MAX  | V    |
|  |                    | 0.81         | 0.88 |      |
|  |                    | 0.66         | 0.75 |      |
|  |                    | 0.89         | 0.95 |      |
|  |                    | 0.76         | 0.82 |      |
| Maximum reverse current @ rated VR<br>T <sub>J</sub> =25 °C<br>T <sub>J</sub> =125 °C  | I <sub>R</sub>     | TYP          | MAX  | mA   |
|  |                    | 1.1          | 20   |      |
|  |                    | 1.7          | 25   |      |
| Voltage rate of change (Rated V <sub>R</sub> )   | dV/dt              | 10000        |      | V/μs |
| Typical thermal resistance   | R <sub>θJC</sub>   | 5            |      | °C/W |
| Operating junction temperature range   | T <sub>J</sub>     | - 55 to +150 |      | °C   |
| Storage temperature range  | T <sub>STG</sub>   | - 55 to +150 |      | °C   |

Note 1: tp = 2.0 μs, 1.0KHz

Note 2: Pulse test with PW=300μs, 1% duty cycle

| ORDERING INFORMATION |                    |              |                     |           |           |
|----------------------|--------------------|--------------|---------------------|-----------|-----------|
| PART NO.             | AEC-Q101 QUALIFIED | PACKING CODE | GREEN COMPOUND CODE | PACKAGE   | PACKING   |
| MBRF30L120CT         | Prefix "H"         | C0           | Suffix "G"          | ITO-220AB | 50 / Tube |

| EXAMPLE          |              |                    |              |                     |                    |
|------------------|--------------|--------------------|--------------|---------------------|--------------------|
| PREFERRED P/N    | PART NO.     | AEC-Q101 QUALIFIED | PACKING CODE | GREEN COMPOUND CODE | DESCRIPTION        |
| MBRF30L120CT C0  | MBRF30L120CT |                    | C0           |                     |                    |
| MBRF30L120CT C0G | MBRF30L120CT |                    | C0           | G                   | Green compound     |
| MBRF30L120CTHC0  | MBRF30L120CT | H                  | C0           |                     | AEC-Q101 qualified |

**RATINGS AND CHARACTERISTICS CURVES**

(TA=25°C unless otherwise noted)

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

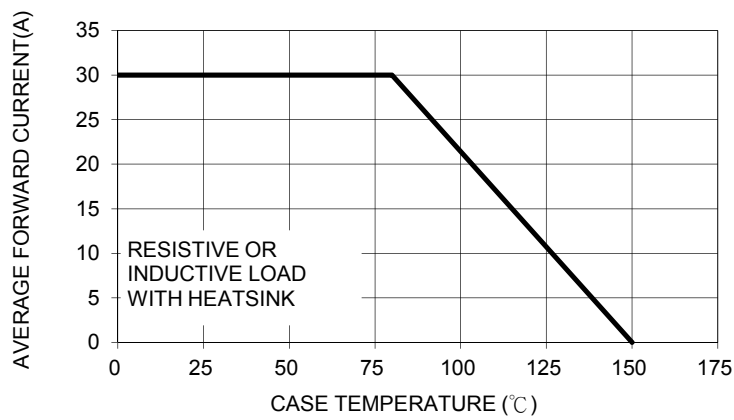


FIG. 2 MAXIMUM FORWARD SURGE CURRENT

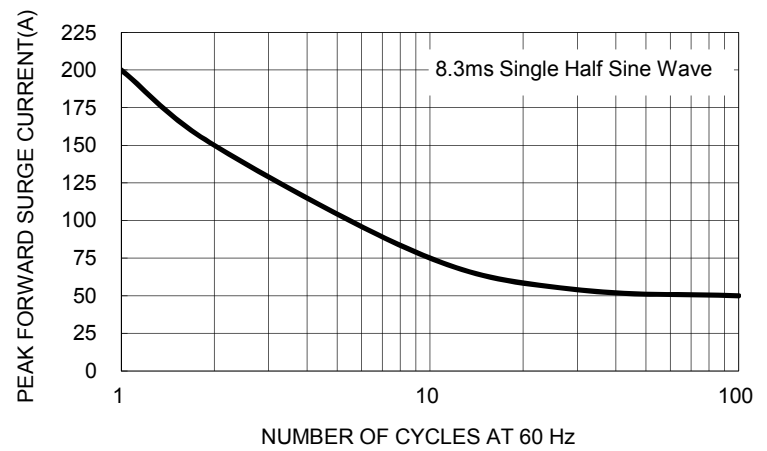


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

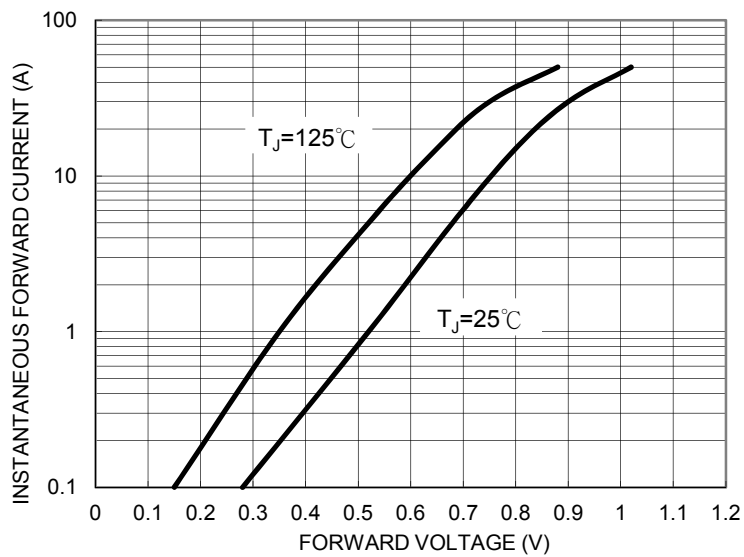


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

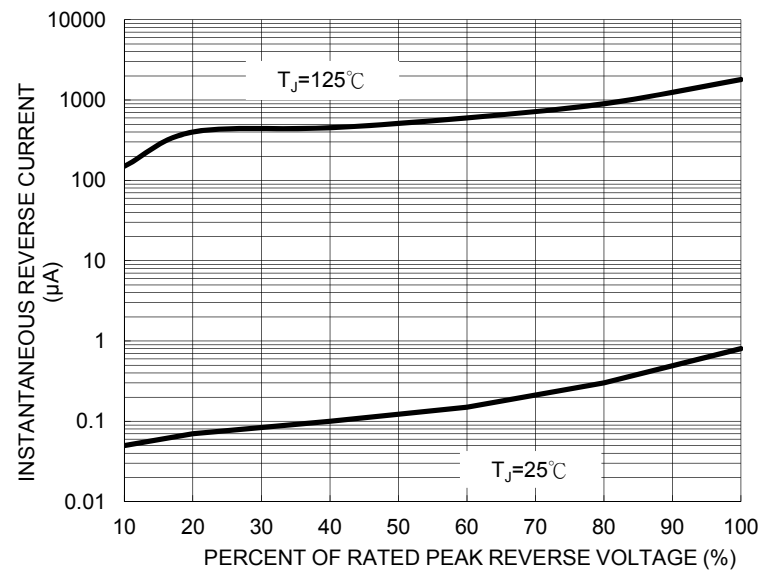


FIG. 5 TYPICAL JUNCTION CAPACITANCE

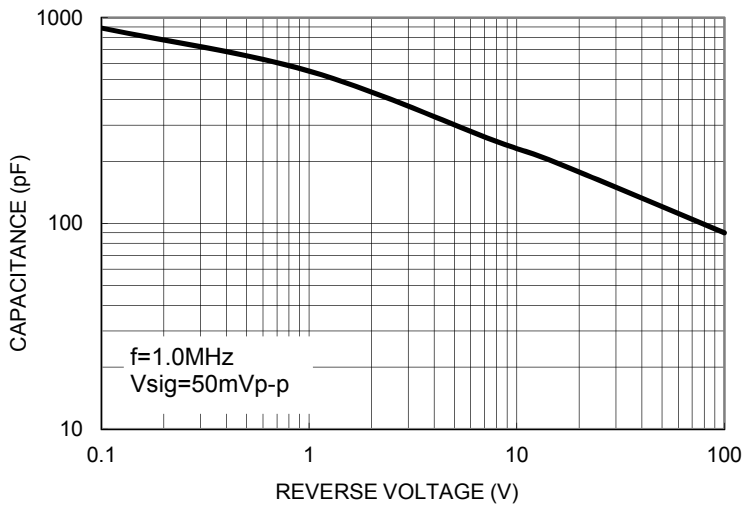
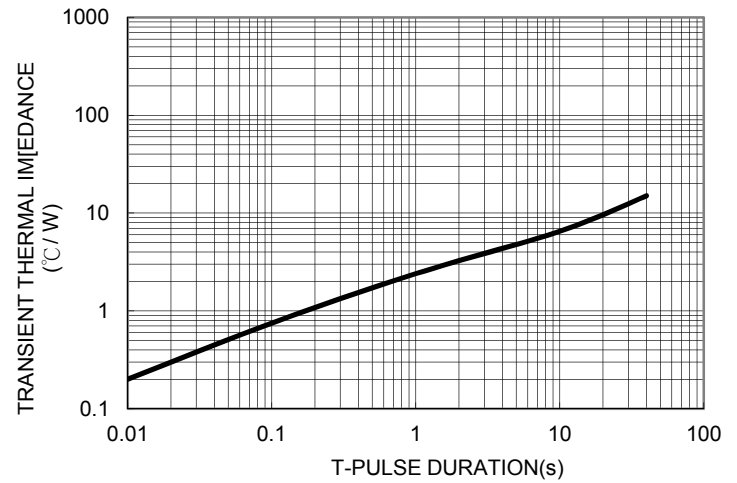
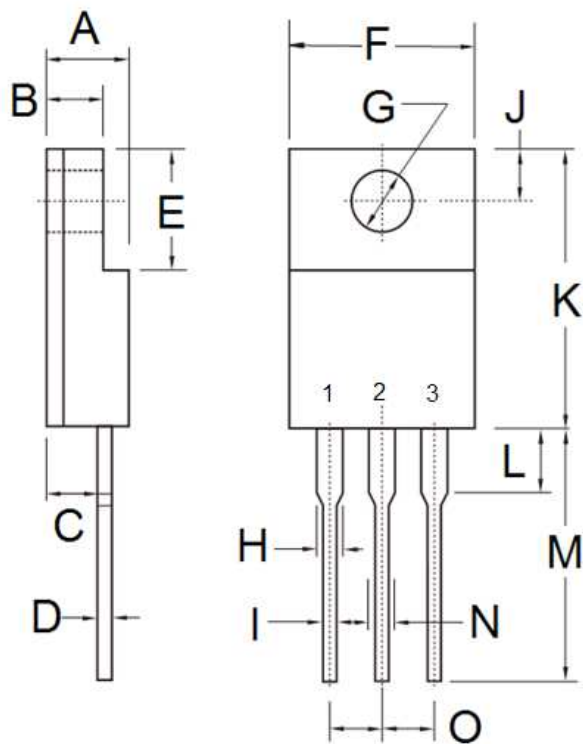


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE



**PACKAGE OUTLINE DIMENSIONS**



| DIM. | Unit (mm) |       | Unit (inch) |       |
|------|-----------|-------|-------------|-------|
|      | Min       | Max   | Min         | Max   |
| A    | 4.30      | 4.70  | 0.169       | 0.185 |
| B    | 2.50      | 3.16  | 0.098       | 0.124 |
| C    | 2.30      | 2.96  | 0.091       | 0.117 |
| D    | 0.46      | 0.76  | 0.018       | 0.030 |
| E    | 6.30      | 6.90  | 0.248       | 0.272 |
| F    | 9.60      | 10.30 | 0.378       | 0.406 |
| G    | 3.00      | 3.40  | 0.118       | 0.134 |
| H    | 0.95      | 1.45  | 0.037       | 0.057 |
| I    | 0.50      | 0.90  | 0.020       | 0.035 |
| J    | 2.40      | 3.20  | 0.094       | 0.126 |
| K    | 14.80     | 15.50 | 0.583       | 0.610 |
| L    | -         | 4.10  | -           | 0.161 |
| M    | 12.60     | 13.80 | 0.496       | 0.543 |
| N    | -         | 1.80  | -           | 0.071 |
| O    | 2.41      | 2.67  | 0.095       | 0.105 |

**MARKING DIAGRAM**



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

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