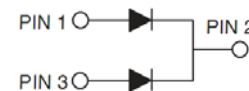


## 25A, 35V - 150V Dual Common Cathode Schottky Rectifiers

### 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


**ITO-220AB**


### MECHANICAL DATA

**Case:** ITO-220AB

Molding compound, UL flammability classification rating 94V-0

Part no. with suffix "H" means AEC-Q101 qualified

Packing code with suffix "G" means green compound (halogen-free)

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

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             | MBRF<br>2535<br>CT     | MBRF<br>2545<br>CT     | MBRF<br>2550<br>CT | MBRF<br>2560<br>CT           | MBRF<br>2590<br>CT | MBRF<br>25100<br>CT          | MBRF<br>25150<br>CT | UNIT |
| Maximum repetitive peak reverse voltage                                                                                                                                                                                                  | V <sub>RRM</sub>   | 35                     | 45                     | 50                 | 60                           | 90                 | 100                          | 150                 | V    |
| Maximum RMS voltage                                                                                                                                                                                                                      | V <sub>RMS</sub>   | 24                     | 31                     | 35                 | 42                           | 63                 | 70                           | 105                 | V    |
| Maximum DC blocking voltage                                                                                                                                                                                                              | V <sub>DC</sub>    | 35                     | 45                     | 50                 | 60                           | 90                 | 100                          | 150                 | V    |
| Maximum average forward rectified current                                                                                                                                                                                                | I <sub>F(AV)</sub> | 25                     |                        |                    |                              |                    |                              |                     | A    |
| Peak repetitive forward current<br>(Rated V <sub>R</sub> , Square wave, 20KHz)                                                                                                                                                           | I <sub>FRM</sub>   | 25                     |                        |                    |                              |                    |                              |                     | A    |
| Peak forward surge current, 8.3 ms single half sine-wave<br>superimposed on rated load                                                                                                                                                   | I <sub>FSM</sub>   | 200                    |                        |                    |                              |                    |                              |                     | A    |
| Maximum instantaneous forward voltage (Note 1)<br>I <sub>F</sub> =12.5A, T <sub>J</sub> =25°C<br>I <sub>F</sub> =12.5A, T <sub>J</sub> =125°C<br>I <sub>F</sub> =25A, T <sub>J</sub> =25°C<br>I <sub>F</sub> =25A, T <sub>J</sub> =125°C | V <sub>F</sub>     | -<br>-<br>0.82<br>0.73 | 0.75<br>0.65<br>-<br>- |                    | 0.85<br>0.75<br>0.92<br>0.88 |                    | 0.95<br>0.92<br>1.02<br>0.98 |                     | V    |
| Maximum reverse current @ rated V <sub>R</sub><br>T <sub>J</sub> =25°C<br>T <sub>J</sub> =125°C                                                                                                                                          | I <sub>R</sub>     | 2                      |                        |                    |                              | 0.1                |                              |                     | mA   |
|                                                                                                                                                                                                                                          |                    | 15                     |                        | 10                 |                              | 7.5      5         |                              |                     |      |
| Voltage rate of change (Rated V <sub>R</sub> )                                                                                                                                                                                           | dV/dt              | 10000                  |                        |                    |                              |                    |                              |                     | V/μs |
| Typical thermal resistance                                                                                                                                                                                                               | R <sub>θJC</sub>   | 1                      |                        |                    |                              |                    |                              |                     | °C/W |
|                                                                                                                                                                                                                                          | R <sub>θJA</sub>   | 8                      |                        |                    |                              |                    |                              |                     |      |
| 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: Pulse test with PW=300μs, 1% duty cycle

| ORDERING INFORMATION   |                 |              |                         |           |           |
|------------------------|-----------------|--------------|-------------------------|-----------|-----------|
| PART NO.               | PART NO. SUFFIX | PACKING CODE | PACKING CODE SUFFIX (*) | PACKAGE   | PACKING   |
| MBRF25xxCT<br>(Note 1) | H               | C0           | G                       | ITO-220AB | 50 / Tube |

Note 1: "xx" defines voltage from 35V (MBRF2535CT) to 150V (MBRF25150CT)

\*: Optional available

| EXAMPLE        |            |                 |              |                     |                                      |
|----------------|------------|-----------------|--------------|---------------------|--------------------------------------|
| PREFERRED P/N  | PART NO.   | PART NO. SUFFIX | PACKING CODE | PACKING CODE SUFFIX | DESCRIPTION                          |
| MBRF2560CTHC0G | MBRF2560CT | H               | C0           | G                   | AEC-Q101 qualified<br>Green compound |

## RATINGS AND CHARACTERISTICS CURVES

( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

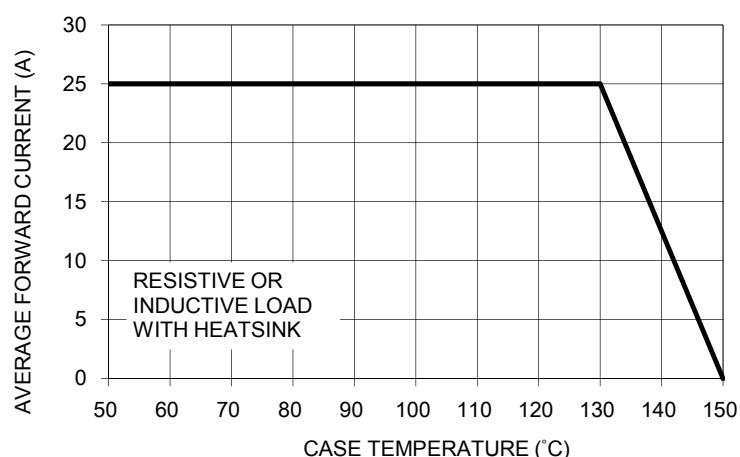


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG



FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

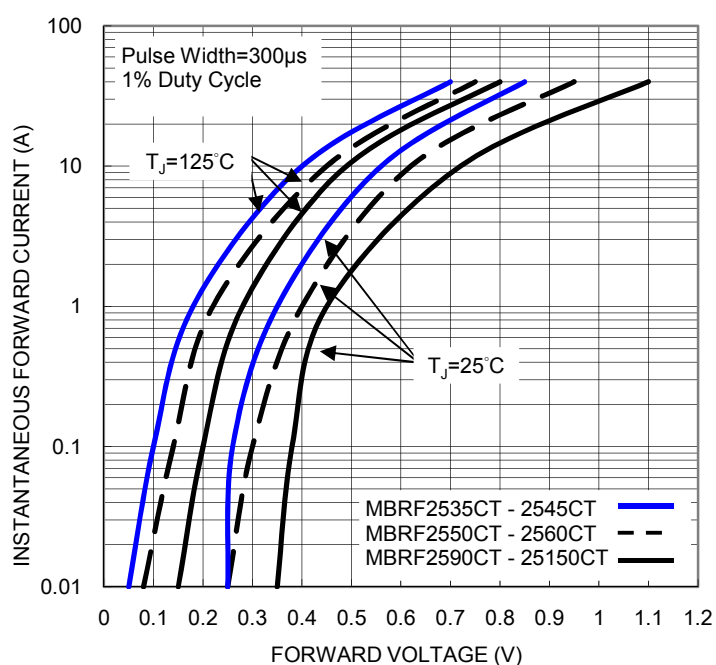


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

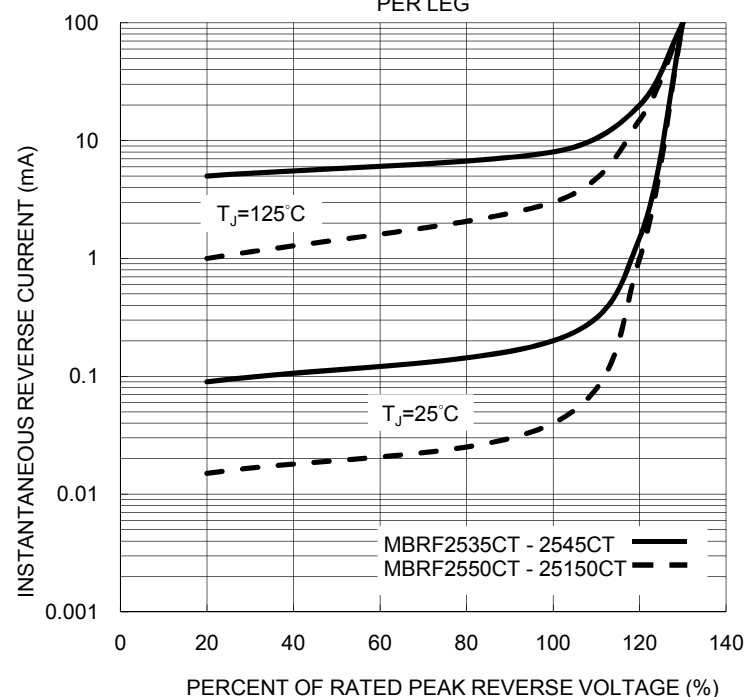


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG

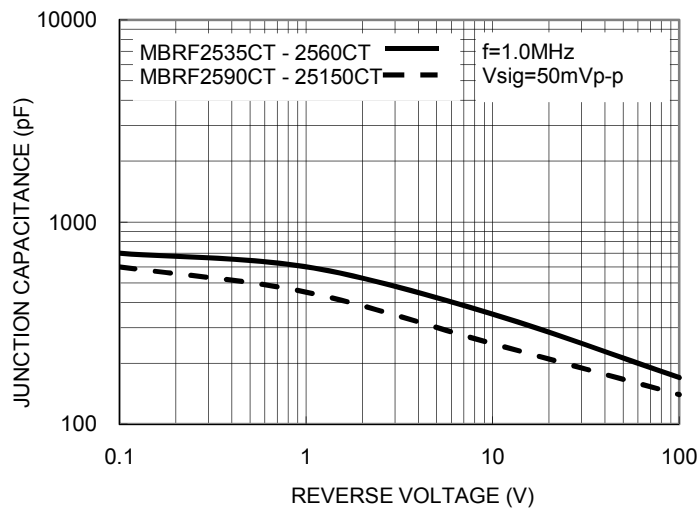
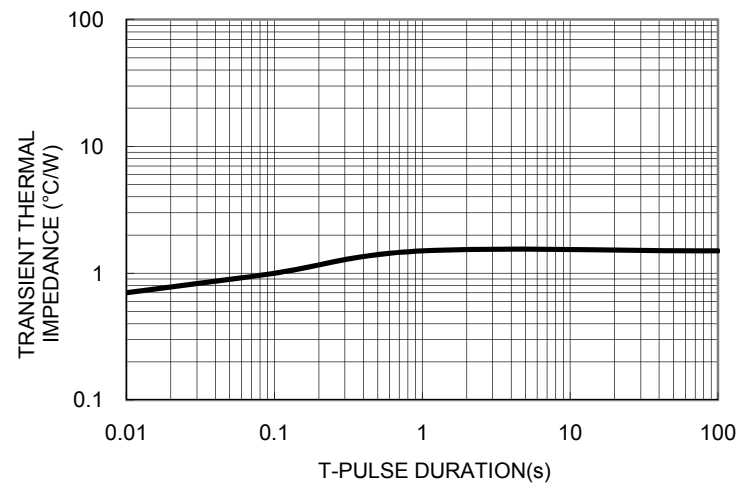
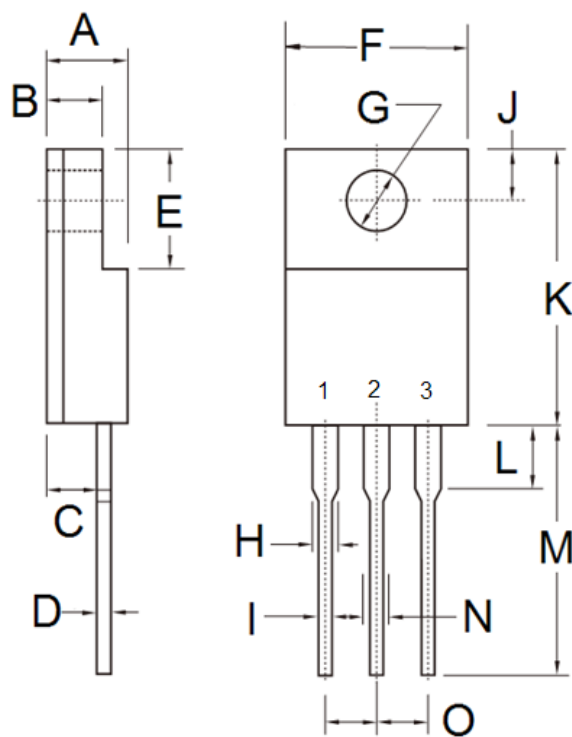


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG



## PACKAGE OUTLINE DIMENSIONS

### ITO-220AB



| 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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