

**Dual Common Cathode Low VF Schottky**

**Reverse Voltage: 45V**  
**Forward Current: 20 Amp**

**Features**

- Low power loss, high efficiency
- Guardring for overvoltage protection
- High forward surge capability
- Halogen-free according to IEC 61249-2-21 definition
- Compliant to RoHS Directive 2011/65/EU

**Mechanical Data**
**Package:** ITO-220AB

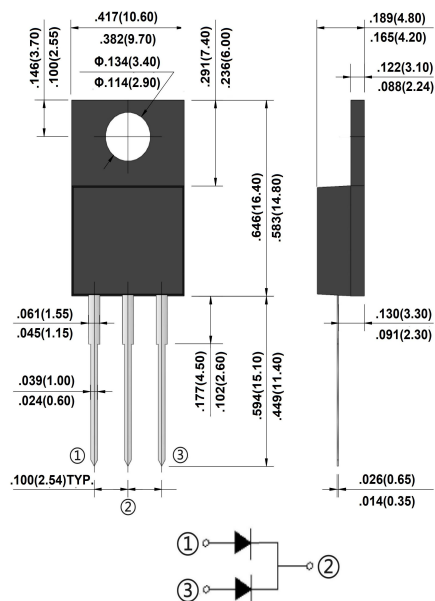
Molding compound meets UL 94 V-0 flammability rating

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

- **Polarity:** As marked

**Typical Applications**

- Switching mode power supply (SMPS)
- Adapters
- DC to DC converters

**ITO-220AB**


Package Outline Dimensions in Inches (Millimeters)

**Maximum Ratings and Electrical Characteristics**

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

| Parameter&Test Conditions                                                         |            | SYM.               | MBR20L45FCT | Unit |
|-----------------------------------------------------------------------------------|------------|--------------------|-------------|------|
| Device marking code                                                               |            |                    | MBR20L45FCT |      |
| Maximum Recurrent Peak Reverse Voltage                                            |            | V <sub>RRM</sub>   | 45          | V    |
| Maximum RMS Voltage                                                               |            | V <sub>RMS</sub>   | 31.5        | V    |
| Maximum DC Blocking Voltage                                                       |            | V <sub>DC</sub>    | 45          | V    |
| Average rectified output current @60Hz sine wave, Resistance load (FIG.1)         | Per Diode  | I <sub>O(AV)</sub> | 10.0        | A    |
|                                                                                   | Per Device |                    | 20.0        |      |
| Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed On Rated Load |            | I <sub>FSM</sub>   | 150         | A    |
| Maximum Thermal Resistance, Junction To Ambient                                   |            | R <sub>θJA</sub>   | 60          | °C/W |
| Operating junction range                                                          |            | T <sub>J</sub>     | -55 ~ +150  | °C   |
| Storage temperature range                                                         |            | T <sub>STG</sub>   | -55 ~ +150  | °C   |

**Electrical Characteristics** (Ta=25°C Unless otherwise specified)

| Parameter&Test Conditions                                         |                  | SYM.            | MBR20L45FCT | Unit |
|-------------------------------------------------------------------|------------------|-----------------|-------------|------|
| Maximum Instantaneous Forward Voltage per diode(Note1)            | IF=10A, TJ=25°C  | V <sub>FM</sub> | 0.50        | V    |
|                                                                   | IF=10A, TJ=125°C |                 | 0.46        |      |
|                                                                   | IF=20A, TJ=25°C  |                 | 0.65        |      |
|                                                                   | IF=20A, TJ=125°C |                 | 0.60        |      |
| Maximum DC reverse current at rated DC blocking voltage per diode | TA = 25°C        | I <sub>R</sub>  | 0.2         | mA   |
|                                                                   | TA = 125°C       |                 | 15          |      |

**Notes:**

1. Pulse test with PW=300μs, 2% duty cycle.
2. The typical data above is for reference only.

## Rating and Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED

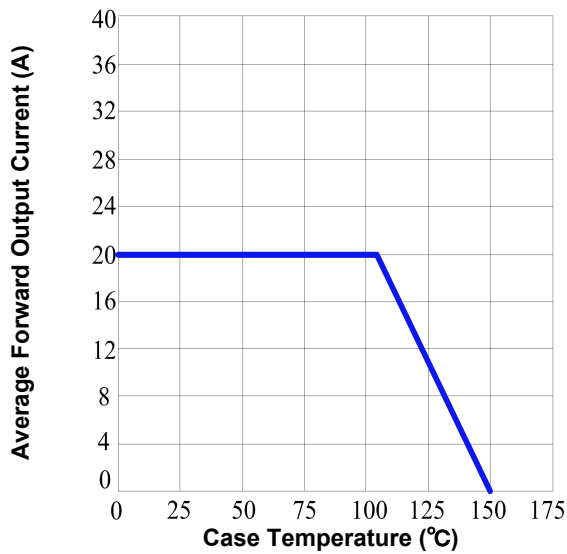


FIG. 2- -MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

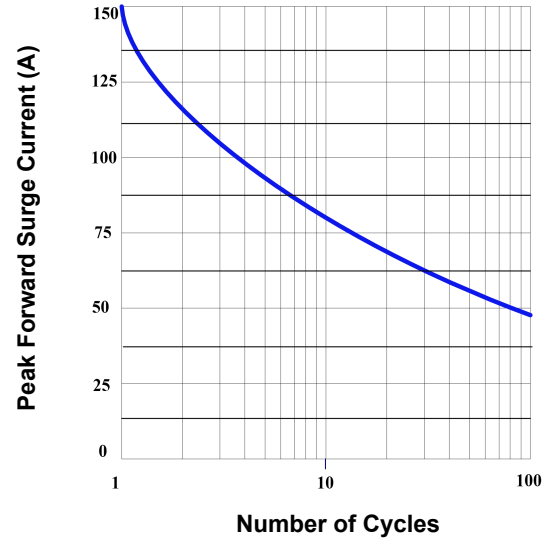


FIG. 3- TYPICAL FORWARD VOLTAGE

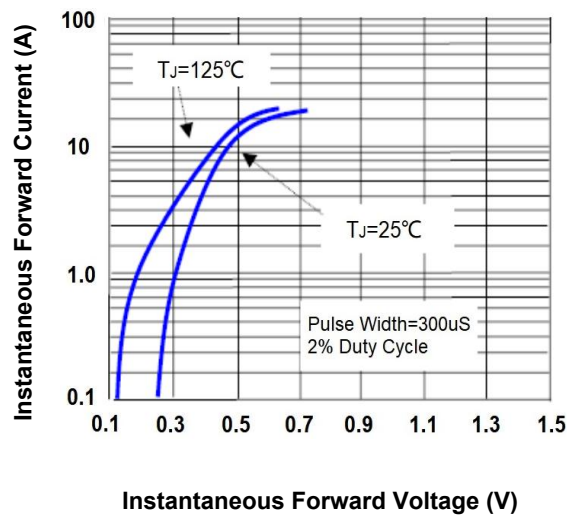
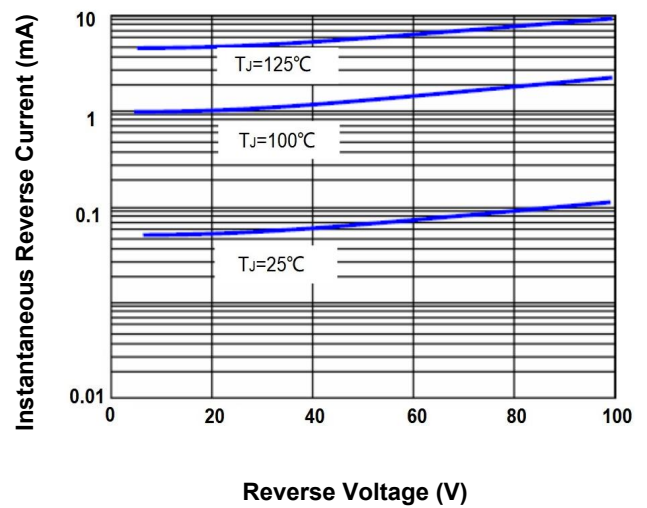


FIG. 4- TYPICAL REVERSE LEAKAGE



The curve above is for reference only.

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