

## Switchmode Full Plastic Dual Schottky Barrier Power Rectifiers

Using the Schottky Barrier principle with a Refractory metal capable of high temperature operation metal. The proprietary barrier technology allows for reliable operation up to 175°C junction temperature. Typical application are in switching Mode Power Supplies such as adaptors, DC/DC converters, free-wheeling and polarity protection diodes.

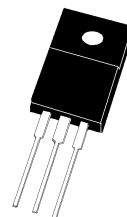
### Features

- \* Low Forward Voltage.
- \* Low Switching noise.
- \* High Current Capacity
- \* Guarantee Reverse Avalanche.
- \* Guard-Ring for Stress Protection.
- \* Low Power Loss & High efficiency.
- \* 175°C Operating Junction Temperature
- \* Low Stored Charge Majority Carrier Conduction.
- \* Plastic Material used Carries Underwriters Laboratory
- \* Flammability Classification 94V-O
- \* **Pb free**
- \* **In compliance with EU RoHs directives**

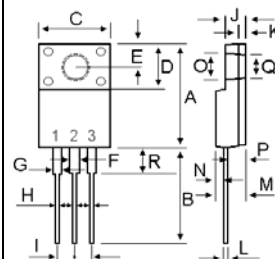


### SCHOTTKY BARRIER RECTIFIERS

**20 AMPERES  
200 VOLTS**



ITO-220AB



### MAXIMUM RATINGS

| Characteristic   | Symbol                          | MBREF20200CL | Unit             |
|--|---------------------------------|--------------|------------------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                       | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 200          | V                |
| RMS Reverse Voltage  | $V_{R(RMS)}$                    | 140          | V                |
| Average Rectifier Forward Current (per diode)<br>Total Device (Rated $V_R$ ), $T_C=125^\circ\text{C}$        | $I_{F(AV)}$                     | 10<br>20     | A                |
| Peak Repetitive Forward Current<br>(Rate $V_R$ , Square Wave, 20kHz)   | $I_{FM}$                        | 20           | A                |
| Non-Repetitive Peak Surge Current (Surge applied<br>at rate load conditions halfwave, single phase,<br>60Hz) | $I_{FSM}$                       | 150          | A                |
| Operating and Storage Junction Temperature Range   | $T_J, T_{stg}$                  | -65 to +175  | $^\circ\text{C}$ |

### THERMAL RESISTANCES

|   |                 |     |                           |
|---|-----------------|-----|---------------------------|
| Typical Thermal Resistance junction to case | $R_{\theta jc}$ | 3.6 | $^\circ\text{C}/\text{w}$ |
|---|-----------------|-----|---------------------------|

### ELECTRICAL CHARACTERISTICS

| Characteristic   | Symbol | Min. | Typ.         | Max.        | Unit |
|--|--------|------|--------------|-------------|------|
| Maximum Instantaneous Forward Voltage<br>( $I_F=10.0\text{ Amp } T_C=25^\circ\text{C}$ )<br>( $I_F=10.0\text{ Amp } T_C=125^\circ\text{C}$ ) | $V_F$  | ---  | 0.84<br>0.72 | 0.90<br>--- | V    |
| Maximum Instantaneous Reverse Current<br>(Rated DC Voltage, $T_C=25^\circ\text{C}$ )<br>(Rated DC Voltage, $T_C=125^\circ\text{C}$ )         | $I_R$  | ---  | 0.08<br>10   | 0.1<br>---  | mA   |

| DIM | MILLIMETERS |       |
|-----|-------------|-------|
|     | MIN         | MAX   |
| A   | 14.80       | 16.10 |
| B   | 12.65       | 13.80 |
| C   | 9.85        | 10.36 |
| D   | 4.60        | 6.80  |
| E   | 2.50        | 3.50  |
| F   | 1.00        | 1.45  |
| G   | 1.00        | 1.45  |
| H   | 0.30        | 0.90  |
| I   | 2.40        | 2.70  |
| J   | 2.34        | 3.30  |
| K   | 0.55        | 1.30  |
| L   | 0.36        | 0.80  |
| M   | 4.20        | 4.90  |
| N   | 1.10        | 1.80  |
| O   | 2.90        | 3.50  |
| P   | 2.50        | 3.15  |
| Q   | 2.90        | 3.50  |
| R   | 3.10        | 4.85  |

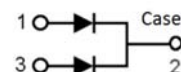


FIG-1 FORWARD CURRENT DERATING CURVE

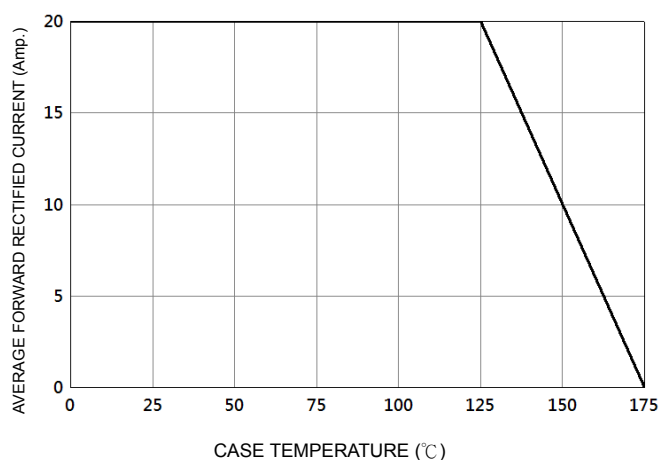


FIG-2 TYPICAL FORWARD CHARACTERISTICS

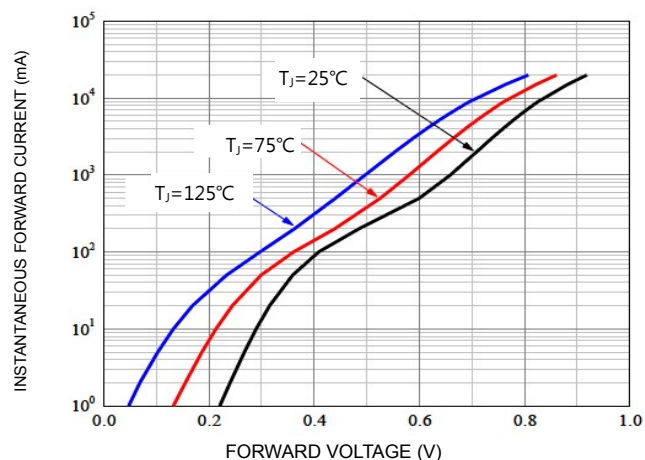


FIG-3 TYPICAL REVERSE CHARACTERISTICS

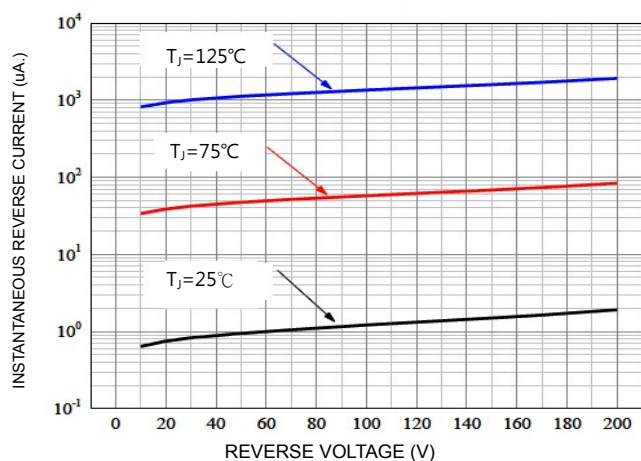


FIG-4 TYPICAL JUNCTION CAPACITANCE

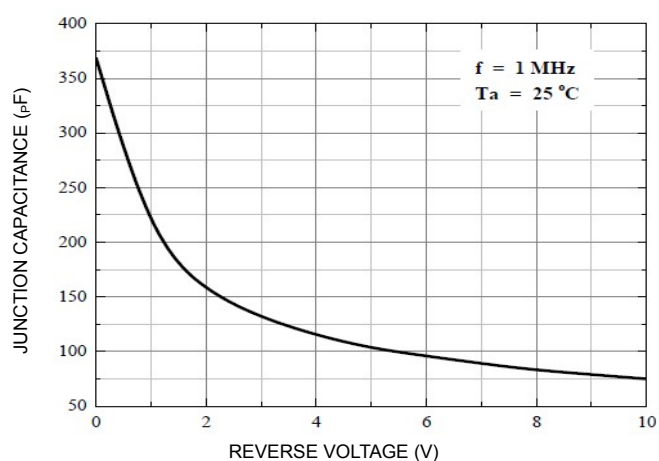
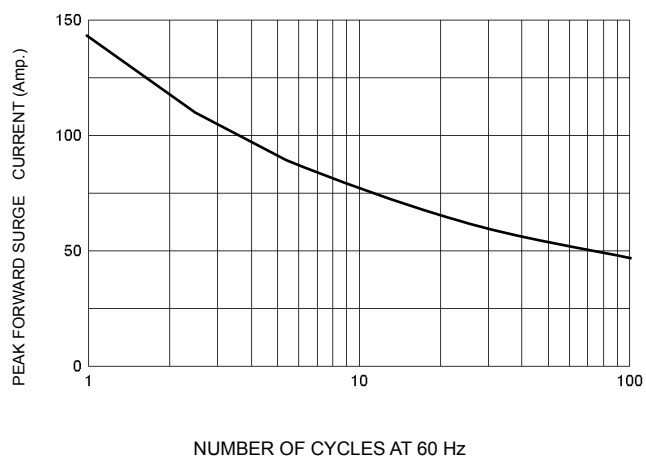


FIG-5 PEAK FORWARD SURGE CURRENT



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