

## Switchmode Full Plastic Dual Schottky Barrier Power Rectifiers

Using the Schottky Barrier principle with high temperature operation metal. The proprietary barrier technology allows for reliable operation up to 150°C junction temperature. Typical application are in switching Mode Power Supplies such as adaptors, Photovoltaic Solar cell protection, free-wheeling and polarity protection diodes.

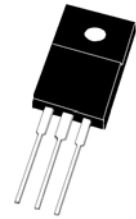
### Features

- \* Ultra Low Forward Voltage.
- \* Low Switching noise.
- \* High Current Capacity
- \* Low Power Loss & High efficiency.
- \* 150°C Operating Junction Temperature
- \* Low Stored Charge Majority Carrier Conduction.
- \* Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-0
- \* *Pb free*
- \* *In compliance with EU RoHs directives*



### SCHOTTKY BARRIER RECTIFIERS

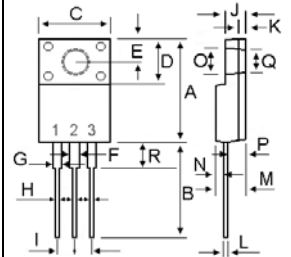
**10 AMPERES  
60 VOLTS**



**ITO-220AB**

### MAXIMUM RATINGS

| Characteristic   | Symbol                          | S10M60F     | Unit |
|--|---------------------------------|-------------|------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                 | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 60          | V    |
| RMS Reverse Voltage  | $V_{R(RMS)}$                    | 42          | V    |
| Average Rectifier Forward Current ( per diode )<br>Total Device (Rated $V_R$ ),                        | $I_{F(AV)}$                     | 5<br>10     | A    |
| Peak Repetitive Forward Current<br>(Rate $V_R$ , Square Wave, 20kHz)                                   | $I_{FM}$                        | 10          | A    |
| Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfwave, single phase, 60Hz) | $I_{FSM}$                       | 150         | A    |
| Operating and Storage Junction Temperature Range   | $T_J, T_{stg}$                  | -65 to +150 | °C   |



| 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  |

### THERMAL RESISTANCES

|   |                 |    |      |
|---|-----------------|----|------|
| Typical Thermal Resistance junction to body | $R_{\theta jc}$ | 10 | °C/w |
|---|-----------------|----|------|

### ELECTRICAL CHARACTERISTICS

| Characteristic   | Symbol | Min. | Typ. | Max. | Unit |
|--|--------|------|------|------|------|
| Maximum Instantaneous Forward Voltage<br>( $I_F = 5.0$ Amp $T_C = 25^\circ C$ )<br>( $I_F = 5.0$ Amp $T_C = 125^\circ C$ )     | $V_F$  | ---  | 0.54 | 0.57 | V    |
| Maximum Instantaneous Reverse Current<br>( Rated DC Voltage, $T_C = 25^\circ C$ )<br>( Rated DC Voltage, $T_C = 125^\circ C$ ) | $I_R$  | ---  | 0.05 | 0.1  | mA   |

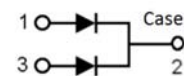


FIG-1 FORWARD CURRENT DERATING CURVE

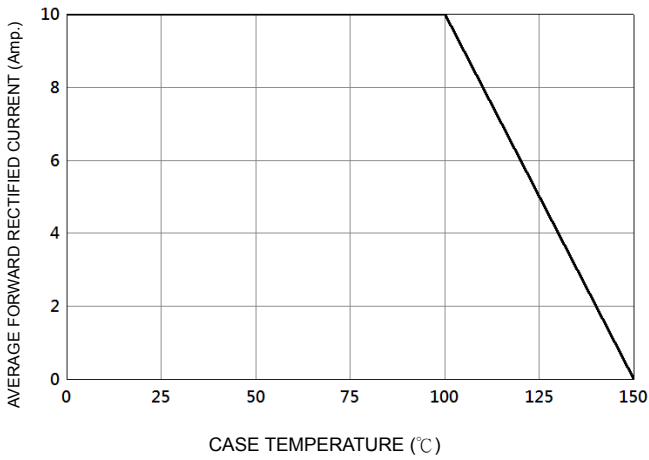


FIG-2 TYPICAL FORWARD CHARACTERISTICS

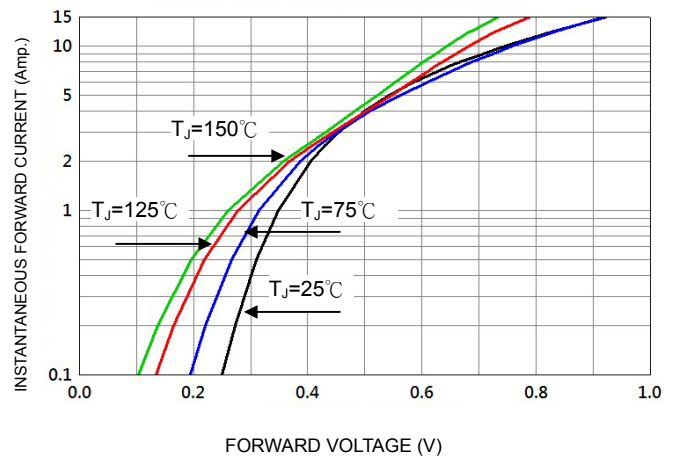


FIG-3 TYPICAL REVERSE CHARACTERISTICS

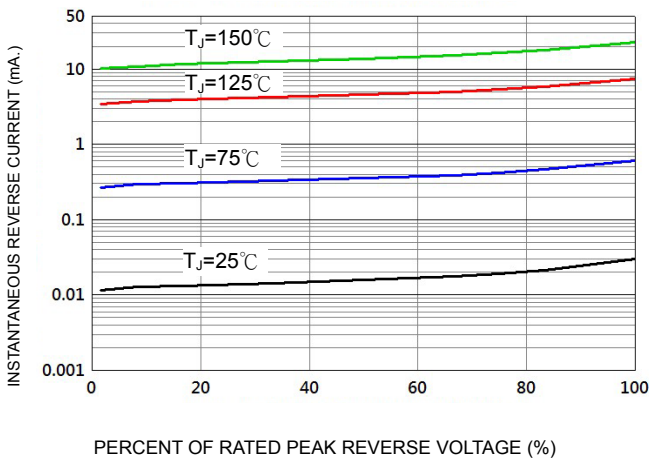


FIG-4 TYPICAL JUNCTION CAPACITANCE

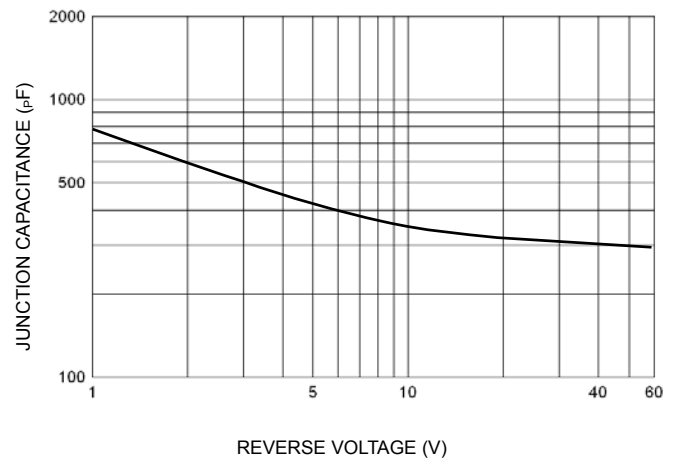
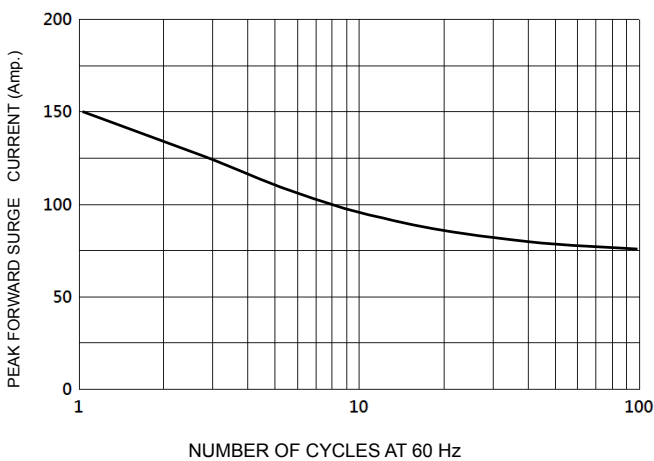


FIG-5 PEAK FORWARD SURGE CURRENT



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