

### SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

**REVERSE VOLTAGE: 20 - 100 V**  
**CURRENT: 1.0 A**

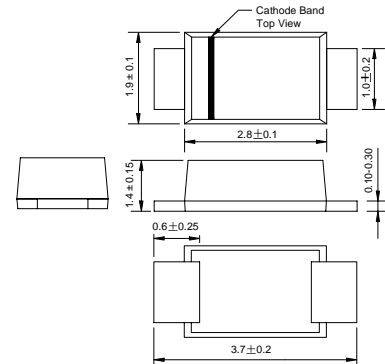
#### FEATURES

- Low forward surge current
- Ideal for surface mouted applications
- Low leakage current

#### MECHANICAL DATA

- Case:JEDEC SOD-123FL,molded plastic over passivated chip
- Terminals:Solder Plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.0008 ounces, 0.022 gram
- Mounting position: Any

#### SOD - 123FL



Dimensions in millimeters

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 ambient temperature unless otherwise specified.  
Single hase,half wave,60Hz,resistive or inductive load.For capacive load,derate current by 20%.

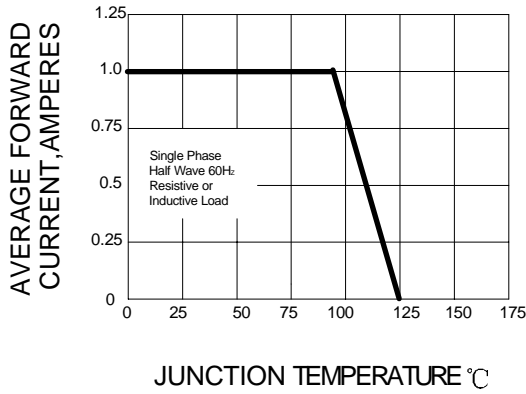
#### ELECTRICAL CHARACTERISTICS

|   |            | MBRX<br>120    | MBRX<br>130 | MBRX<br>140 | MBRX<br>160 | MBRX<br>180 | MBRX<br>1A0 | UNITS |
|---|------------|----------------|-------------|-------------|-------------|-------------|-------------|-------|
| Device marking code   |            | S2             | S3          | S4          | S6          | S8          | SA          |       |
| Maximum recurrent peak reverse voltage  | $V_{RRM}$  | 20             | 30          | 40          | 60          | 80          | 100         | V     |
| Maximum RMS voltage   | $V_{RMS}$  | 14             | 21          | 28          | 42          | 56          | 70          | V     |
| Maximum DC blocking voltage   | $V_{DC}$   | 20             | 30          | 40          | 60          | 80          | 100         | V     |
| Maximum average forward<br>rectified current $T_J=90$                                   | $I_{(AV)}$ | 1.0            |             |             |             |             |             | A     |
| Peak forward surge current 8.3ms single<br>half-sine-wave superimposed<br>on rated load | $I_{FSM}$  | 20             |             |             |             |             |             | A     |
| Maximum instantaneous @ $I_{FM}=1.0A$<br>forward voltage                                | $V_F$      | 0.50           | 0.55        |             | 0.72        | 0.85        |             | V     |
| Repetitive peak reverse current<br>at rated DC blocking voltage                         | $I_R$      | 0.3            |             |             |             |             |             | m A   |
| Typical junction capacitance  | $C_J$      | 30             |             |             |             |             |             | p F   |
| Operating temperature range   | $T_J$      | - 55 --- + 125 |             |             |             |             |             |       |
| Storage temperature range   | $T_{STG}$  | - 55 --- + 150 |             |             |             |             |             |       |

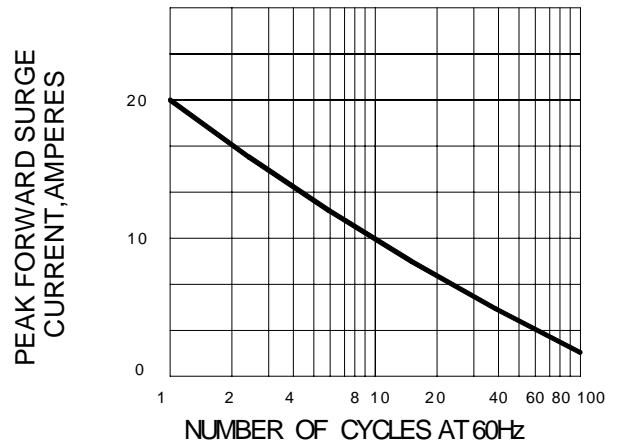
NOTE1.Measured at f=1.0MHz, $V_R=4.0V$

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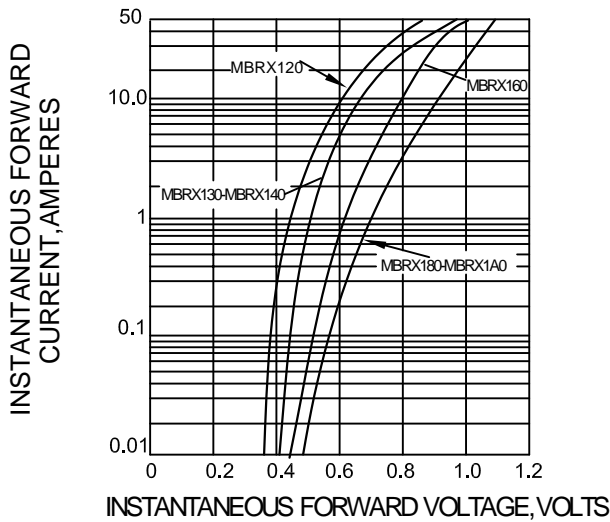
**FIG.1 – FORWARD DERATING CURVE**



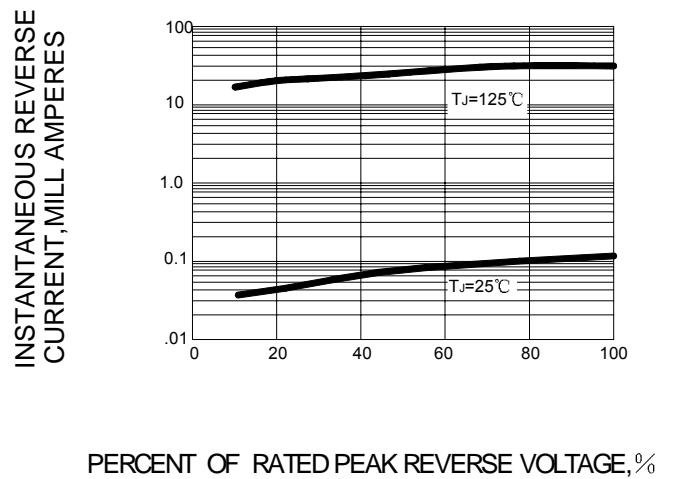
**FIG.2– PEAK FORWARD SURGE CURRENT**



**FIG.3 – TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 – TYPICAL REVERSE CHARACTERISTICS**



**FIG.5-TYPICAL JUNCTION CAPACITANCE**

