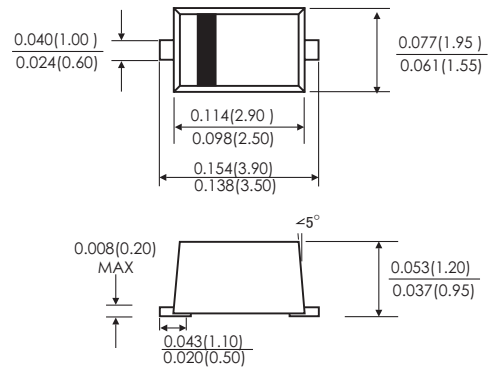


## FEATURES

- Small power mold type (PMDU)
- High reliability
- Ultra low  $V_f$



## SOD-123FL



## MECHANICAL DATA

- Case: SOD-123FL molded plastic body
- Lead Finish: 100% Matte Sn (Tin)
- Polarity: color band denotes cathode end
- Mounting Position: Any

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified ,Single phase ,half wave ,resistive or inductive load. For capacitive load, derate by 20%.)

|  | Symbols                            | B23                       |      |      | Unit    |
|--|------------------------------------|---------------------------|------|------|---------|
| Maximum repetitive peak reverse voltage  | $V_{RRM}$                          | 25                        |      |      | Volts   |
| Maximum RMS voltage  | $V_{RMS}$                          | 18                        |      |      | Volts   |
| Maximum DC blocking voltage  | $V_{DC}$                           | 25                        |      |      | Volts   |
| Maximum average forward rectified current (See Fig. 1)   | $I(AV)$                            | 1.0                       |      |      | Amp     |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | $I_{FSM}$                          | 30                        |      |      | Amps    |
| Operating junction temperature range   | $T_J$                              | -40 to +125               |      |      | °C      |
| Storage temperature range  | $T_{STG}$                          | -40 to +125               |      |      | °C      |
| Typical thermal resistance   | $R_{\theta JA}$<br>$R_{\theta JL}$ | 206<br>118                |      |      | °C/W    |
|  | Symbols                            | Test condition            | TYP. | MAX. | Unit    |
| Forward voltage  | $V_F$                              | $I_F=0.5A$                | 0.28 | 0.32 | Volts   |
|  |                                    | $I_F=1A$                  | 0.31 | 0.35 |         |
|  |                                    | $I_F=2A$                  | 0.36 | 0.41 |         |
| Leakage current  | $I_R$                              | $V_R=25V, T_A=25^\circ C$ | 180  | 600  | $\mu A$ |

# RATINGS AND CHARACTERISTIC CURVES B23

FIG.1-FORWARD CURRENT DERATING CURVE

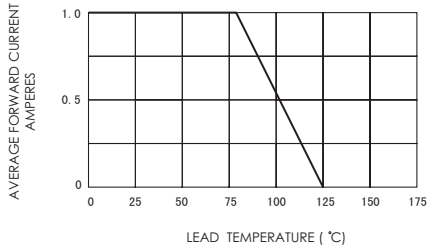


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

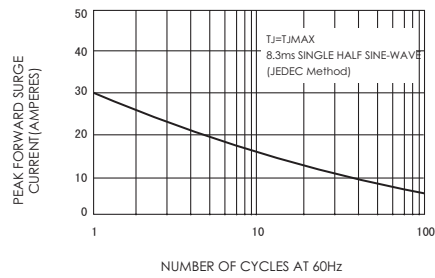


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

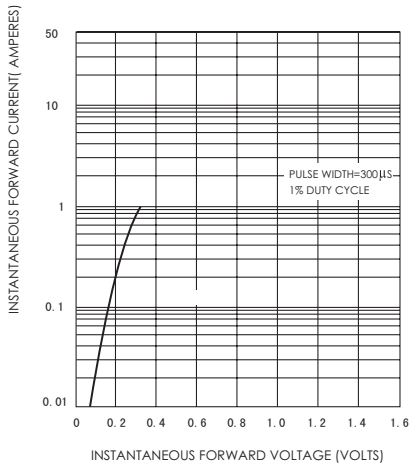


FIG.4-TYPICAL REVERSE CHARACTERISTICS

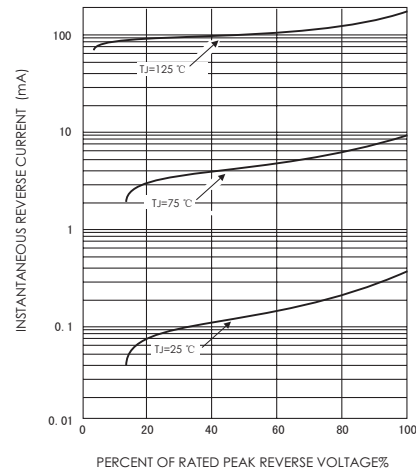


FIG.5-TYPICAL JUNCTION CAPACITANCE

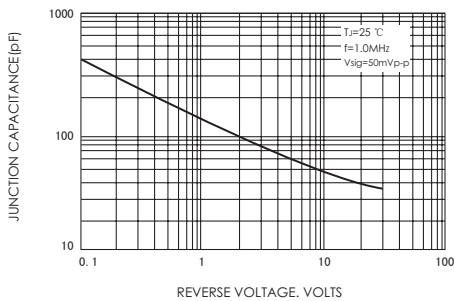


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

