



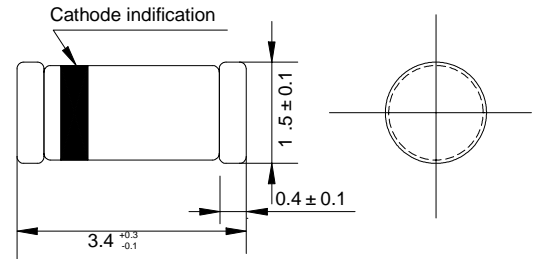
**VOLTAGE RANGE: 40 – 20 V**

**CURRENT: 400 mA**

### Features

- ◇ For general purpose applications
- ◇ Metal silicon schottky barrier device which is protected by a PN junction guard ring. The low forward voltage drop and fast switching make it ideal for protection of MOS devices, steering, biasing and coupling diodes for fast switching and low logic level applications

### MINI-MELF



Dimensions in millimeters

### Mechanical Data

- ◇ Case: JEDEC MINI-MELF
- ◇ Polarity: Color band denotes cathode end
- ◇ Weight: Approx. 0.031 gram

### ABSOLUTE RATINGS(LIMITING VALUES)

|  | Symbols    | LL103A            | LL103B | LL103C | UNITS |
|--|------------|-------------------|--------|--------|-------|
| Peak reverse voltage                   | $V_{RRM}$  | 40                | 30     | 20     | V     |
| Power dissipation (Infinite Heat Sink) | $P_{tot}$  | 400 <sup>1)</sup> |        |        | mW    |
| Single cycle surge 60Hz sine wave      | $I_{FSM}$  | 15                |        |        | A     |
| Forward continuous current             | $I_{(AV)}$ | 200               |        |        | mA    |
| Junction temperature                   | $T_J$      | 125               |        |        | °C    |
| Storage temperature range              | $T_{STG}$  | -55 ---+ 150      |        |        | °C    |

1)Valid provided that leads at a distance of 4mm from case are kept at ambient temperature

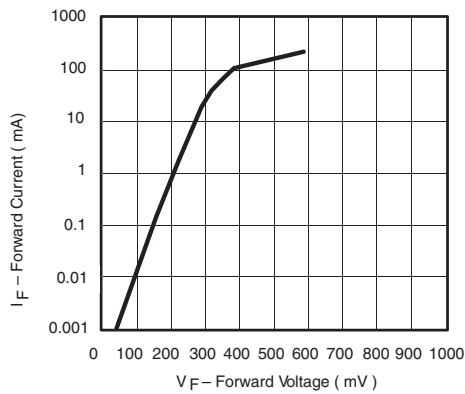
### ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified)

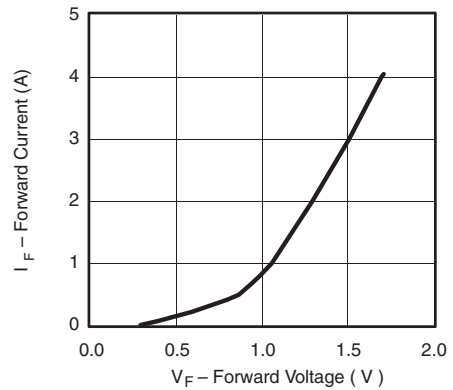
|   | Symbols   | Min.            | Typ.           | Max.        | UNITS   |
|---|---|-----------------|----------------|-------------|---------|
| Reverse breakdown voltage @ $I_R=50 \mu A$                    | LL103A<br>LL103B<br>LL103C                                  | $V_R$           | 40<br>30<br>20 | -<br>-<br>- | V       |
| Leakage current @ $V_R=50V$                                   | LL103A, $V_R=30V$<br>LL103B, $V_R=20V$<br>LL103C, $V_R=10V$ | $I_R$           | -<br>-<br>-    | 5.0         | $\mu A$ |
| Forward voltage drop @ $I_F=20mA$<br>$I_F=200mA$              |   | $V_F$           | -<br>-         | 0.37<br>0.6 | V       |
| Junction capacitance @ $V_R=0V, f=1MHz$                       |   | $C_J$           | -              | 50          | pF      |
| Reverse recovery time @ $I_F=I_R=50mA$ , recover to 0.1 $I_R$ |   | $t_{rr}$        | -              | 10          | ns      |
| Thermal resistance junction to ambient air                    |   | $R_{\theta JA}$ | -              | 250         | K/W     |

## Ratings AND Characteristic Curves

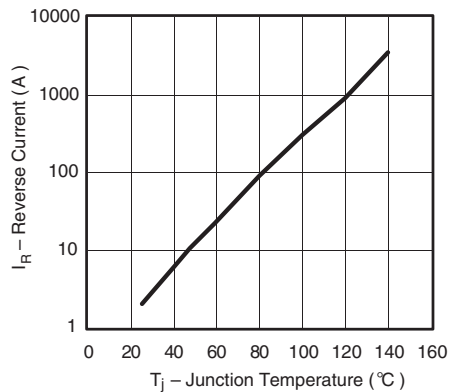
**FIG.1 – TYPICAL VARIATION OF FWD. CURRENT VS FWD. VOLTAGE FOR PRIMARY CONDUCTION THROUGH THE SCHOTTKY BARRIER**



**FIG.2 – TYPICAL FORWARD CONDUCTION CURVE OF COMBINATION SCHOTTKY BARRIER AND PN JUNCTION GUARD RING**



**FIG.3 – TYPICAL VARIATION OF REVERSE CURRENT AT VARIATION TEMPERATURES**



**FIG.4 – TYPICAL CAPACITANCE CURVE AS A JUNCTION OF REVERSE VOLTAGE**

