# SAMYANG ELECTRONICS

**LL5817 --- LL5819**

## SCHOTTKY BARRIER RECTIFIER

**VOLTAGE RANGE: 20 --- 40 V**
**CURRENT: 1.0 A**

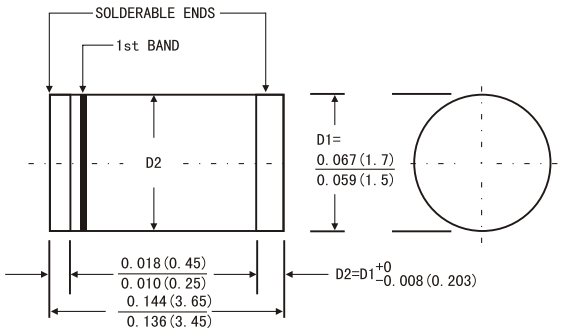
### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- For surface mount applications
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,Low forward voltage drop
- High surge capability
- For use in low voltage ,high frequency inverters, free wheeling ,and polarity protection applications
- High temperature soldering guaranteed:260℃/10 seconds at terminals
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

### MECHANICAL DATA

- *Case*: JEDEC Mini MELF(DO-213AA) molded plastic body
- *Terminals*: Solder Plated, solderable per MIL-STD-750,method 2026
- *Polarity*: Color band denotes cathode end
- *Mounting Position*: Any
- *Weight*: 0.0005ounce, 0.015 gram

MiniMELF(DO-213AA)




Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

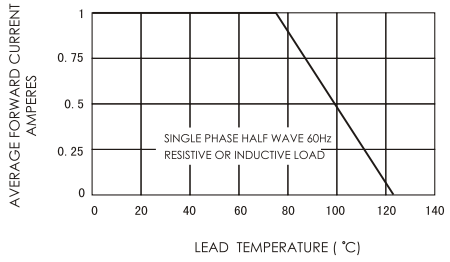
Ratings at 25 C ambient temperature unless otherwise specified.

Single phase,half wave,60 Hz,resistive or inductive load. For capacitive load,derate by 20%.

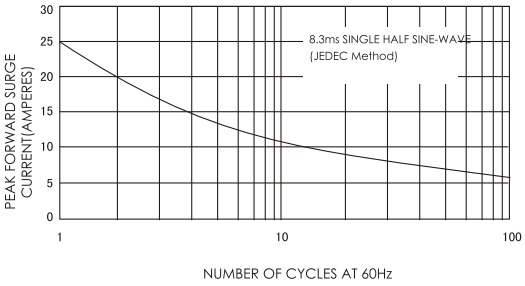
| | Symbols | LL 5817 | LL 5818 | LL 5819 | Units |
|---|---|---|---|---|---|
| Maximum repetitive peak reverse voltage | $V_{RRM}$ | 20 | 30 | 40 | Volts |
| Maximum RMS voltage | $V_{RMS}$ | 14 | 21 | 28 | Volts |
| Maximum DC blocking voltage | $V_{DC}$ | 20 | 30 | 40 | Volts |
| Maximum average forward rectified current 0.375"(9.5mm)lead length (see Fig. 1 ) | $I_{(AV)}$ | 1.0 | | | Amp |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) at $T_L$=70℃ | $I_{FSM}$ | 25.0 | | | Amps |
| Maximum instantaneous forward voltage at 1.0 A(Note 1 )<br>Maximum instantaneous forward voltage at 3.1 A(Note 1 ) | $V_F$<br>$V_F$ | 0.450<br>0.750 | 0.550<br>0.875 | 0.600<br>0.900 | Volts<br>Volts |
| Maximum instantaneous reverse current at rated DC blocking voltage(Note 1) $T_A$=25℃ | $I_R$ | 0.5 | | | mA |
| Maximum instantaneous reverse current at rated DC blocking voltage(Note 1) $T_A$=100℃ | $I_R$ | 10.0 | | | mA |
| Typical junction capacitance(Note 2) | $C_J$ | 80.0 | | | PF |
| Typical thermal resistance (Note 3) | $R_{\theta JA}$ | 75.0 | | | ℃/W |
| Typical thermal resistance (Note 4) | $R_{\theta JL}$ | 30.0 | | | ℃/W |
| Operating junction and storage temperature range | $T_J/T_{STG}$ | -55 to +125 | | | ℃ |

NOTE: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
2. Thermal resistance from junction to ambient.

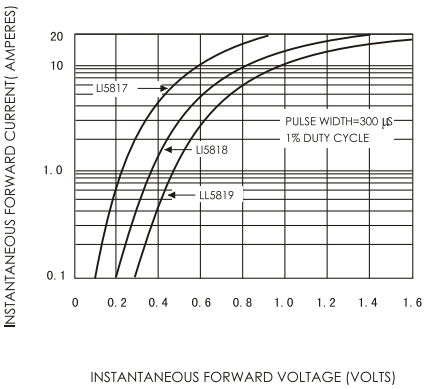
## FIG.1-FORWARD CURRENT DERATING CURVE



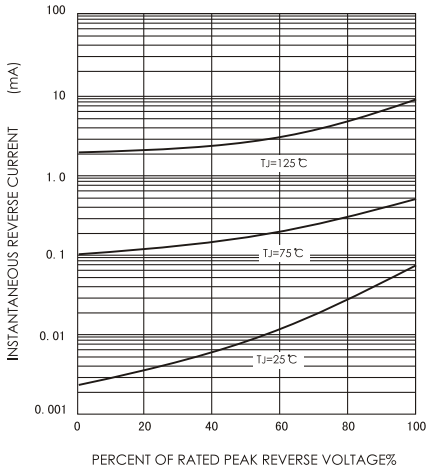

## FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT




## FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS




## FIG.4-TYPICAL REVERSE CHARACTERISTICS




## FIG.5-TYPICAL JUNCTION CAPACITANCE

