SEMICONDUCTOR

# LL60, LL60P

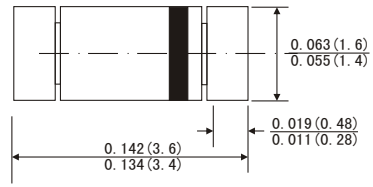
## SMALL SIGNAL SCHOTTKY DIODES

## FEATURES

- Metal-on-silicon junction, majority carrier conduction
- High current capability, Low forward voltage drop
- Extremely low reverse current IR
- Ultra speed switching characteristics
- Small temperature coefficient of forward characteristics
- Satisfactory wave detection efficiency
- For use in recorder, TV ,radio and telephone as detectors
- Super high speed switching cirits, small current rectifier
- High temperature soldering guaranteed:260℃/10 seconds at terminals
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



MiniMELF




Dimensions in inches and (millimeters)

## MECHANICAL DATA

- Case: MiniMELF glass case(SOD-80 )
- Polarity: Color band denotes cathode end
- Weight: Approx. 0.05 gram

## ABSOLUTE RATINGS(LIMITING VALUES)

| Symblos | Parameters | | Value | | Units |
|---|---|---|---|---|---|
| | | | LL60 | LL60P | |
| $V_{RRM}$ | Repetitive Peak Reverse Voltage | | 40 | 40 | Volts |
| IF | Forward Continuous Current | $T_A$=25˚C | 30 | 50 | mA |
| $I_{FSM}$ | Peak Forward Surge Current(t=1s) | | 150 | 400 | mA |
| $T_{STG}/T_J$ | Storage and junction Temperature Range | | -55 to+125 | | ℃ |
| $T_L$ | Maximum Lead Temperature for Soldering during 10s at 4mm from Case | | 260 | | ℃ |

## ELECTRICAL CHARACTERISTICS

| Symblos | Parameters | Test Conditions | | Value | | | Units |
|---|---|---|---|---|---|---|---|
| | | | | Min. | Typ. | Max. | |
| $V_F$ | Forward Voltage | $I_F$=1mA | LL60 | | 0.35 | 0.5 | Volts |
| | | | LL60P | | 0.26 | 0.5 | |
| | | $I_F$=30mA | LL60 | | 0.70 | 1.0 | |
| | | $I_F$=200mA | LL60P | | 0.70 | 1.0 | |
| $I_R$ | Reverse Current | $V_R$=15V | LL60 | | 1.0 | 5.0 | mA |
| | | | LL60P | | 5.0 | 10.0 | |
| $C_J$ | Junction Capacitance | $V_R$=1V f=1MHz | LL60 | | 4.0 | | pF |
| | | $V_R$=10V f=1MHz | LL60P | | 10.0 | | |
| h | Detection Efficiency(See diagram 4) | $V_I$=3V f=30MHz $C_L$=10pF $R_L$=3.8kΩ | | | 60 | | % |
| $t_{rr}$ | Reverse Recovery time | $I_F$=$I_R$=1mA Irr=1mA Rc=100Ω | | | | 1 | ns |
| $R_{\theta JA}$ | Junction Ambient Thermal Resistance | | | | 400 | | ˚C/W |

# RATINGS AND CHARACTERISTIC CURVES LL60

FIG.1-FORWARD CURRENT VERSUS FORWARD VOLTAGE (TYPICAL VALUES)

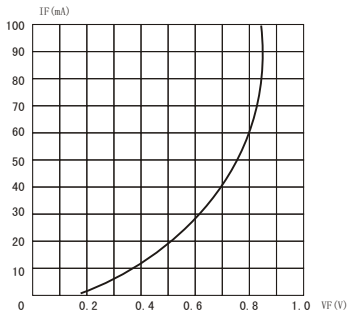



FIG.2-REVERSE CURRENT VERSUS CONTINUOUS REVERSE VOLTAGE

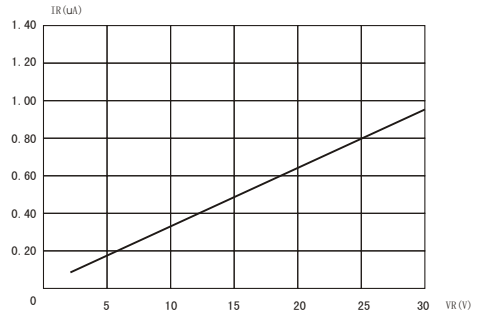



FIG.3-JUNCTION CAPACITANCE VERSUS CONTINUOUS REVERSE APPLIED VOLTAGE

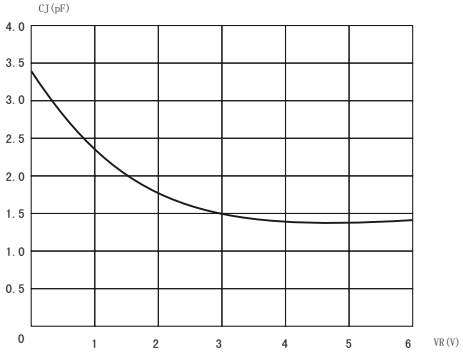
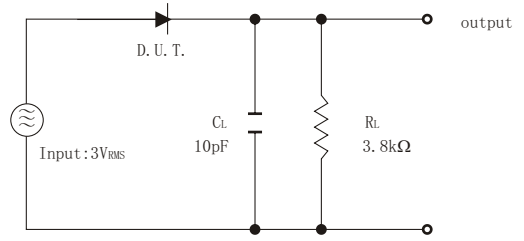



FIG.4-DETECTION EFFICIENCY MEASUREMENT CIRCUIT



# RATINGS AND CHARACTERISTICS CURVES LL60P

FIG.1-FORWARD CURRENT VERSUS FORWARD VOLTAGE (TYPICAL VALUES)

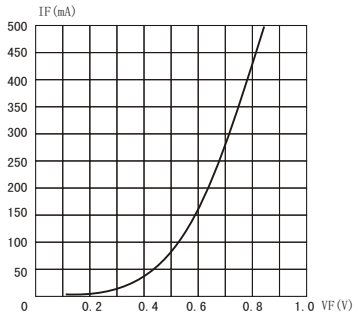



FIG.2-REVERSE CURRENT VERSUS CONTINUOUS REVERSE VOLTAGE

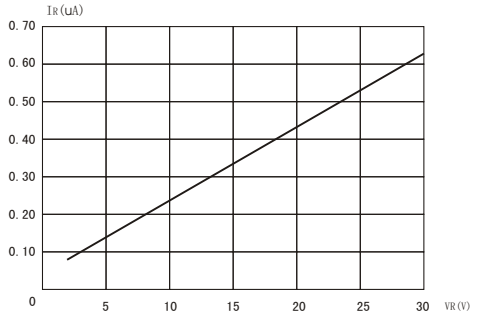



FIG.3-JUNCTION CAPACITANCE VERSUS CONTINUOUS REVERSE APPLIED VOLTAGE

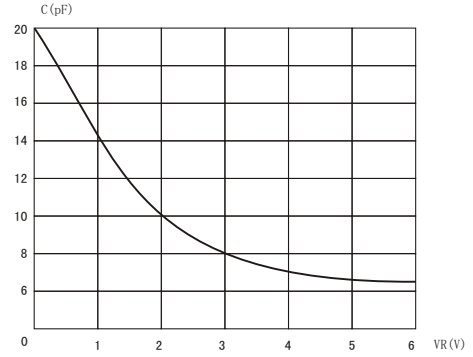



FIG.4-DETECTION EFFICIENCY MEASUREMENT CIRCUIT

