

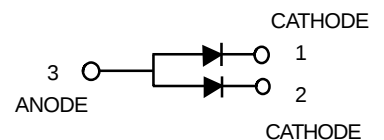
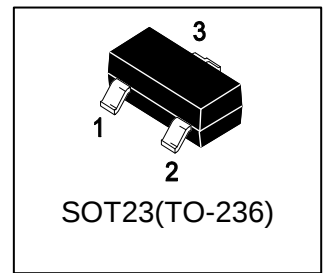
# L1SS181LT1G

## S-L1SS181LT1G

Ultra High Speed Switching Application

### 1. FEATURES

- Low forward voltage :  $V_F(3) = 0.92V$  (typ.)
- Fast reverse recovery time :  $t_{rr} = 1.6ns$  (typ.)
- Small total capacitance :  $C_T = 2.2pF$  (typ.)
- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.



### 2. DEVICE MARKING AND RESISTOR VALUES

| Device      | Marking | Shipping        |
|-------------|---------|-----------------|
| L1SS181LT1G | A3      | 3000/Tape&Reel  |
| L1SS181LT3G | A3      | 10000/Tape&Reel |

### 3. MAXIMUM RATINGS( $T_a = 25^\circ C$ )

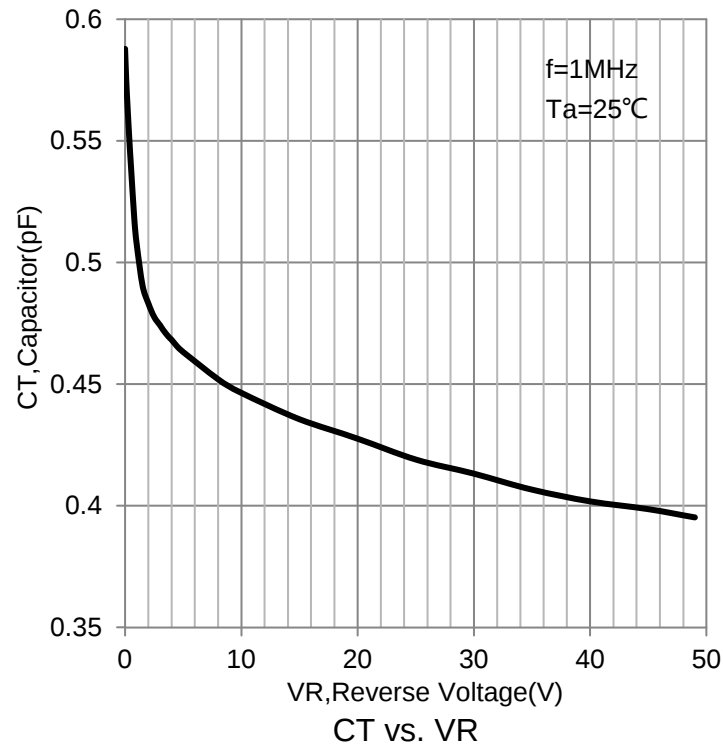
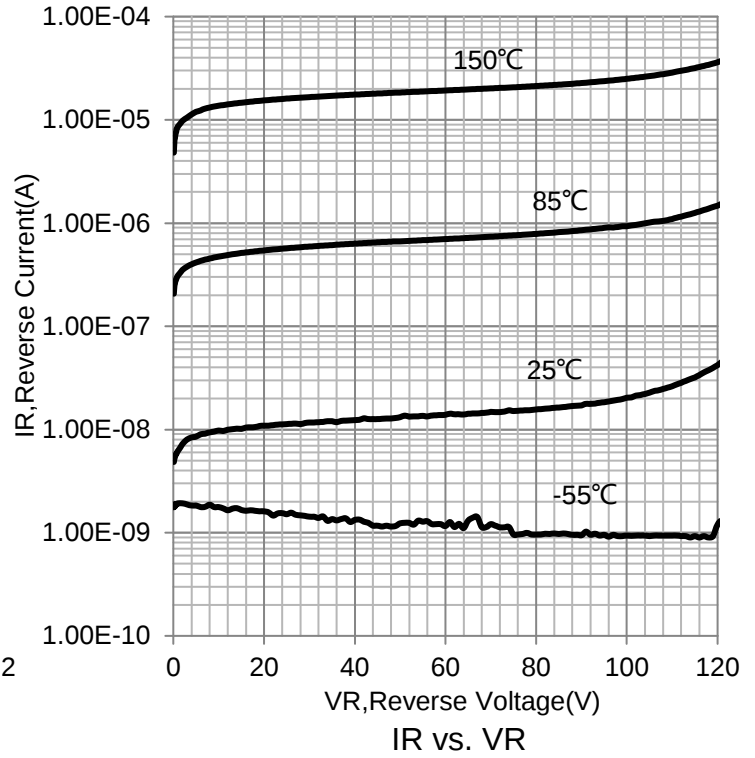
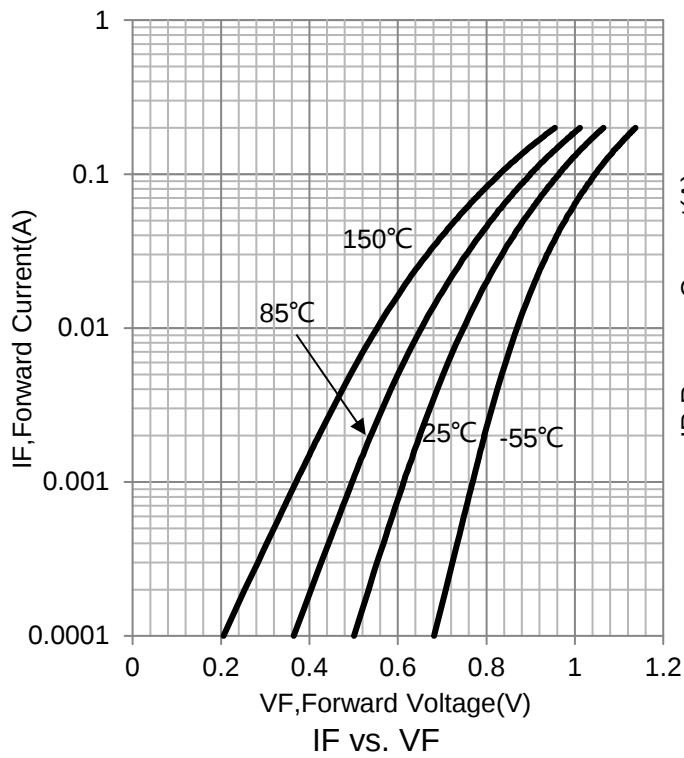
| Parameter                      | Symbol | Limits      | Unit       |
|--------------------------------|--------|-------------|------------|
| Maximum (peak) reverse voltage | VRM    | 85          | V          |
| Reverse voltage                | VR     | 80          | V          |
| Maximum (peak) forward current | IFM    | 300(Note 1) | mA         |
| Average forward current        | IO     | 100(Note 1) | mA         |
| Surge current (10ms)           | IFSM   | 2(Note 1)   | A          |
| Power dissipation              | P      | 150         | mW         |
| Junction temperature           | Tj     | 125         | $^\circ C$ |
| Storage temperature range      | Tstg   | -55 to +125 | $^\circ C$ |

1. Unit rating. Total rating = Unit rating  $\times$  1.5.

### 4. ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ C$ )

| CHARACTERISTICS                              | Symbol | Min | Typ. | Max | Unit    |
|----------------------------------------------|--------|-----|------|-----|---------|
| Forward voltage<br>( $I_F = 1mA$ )           | VF     | -   | 0.61 | -   | V       |
| ( $I_F = 10mA$ )                             |        | -   | 0.74 | -   |         |
| ( $I_F = 100mA$ )                            |        | -   | 0.9  | 1.2 |         |
| Reverse current<br>( $V_R = 30V$ )           | IR     | -   | -    | 0.1 | $\mu A$ |
| ( $V_R = 80V$ )                              |        | -   | -    | 0.5 |         |
| Total capacitance<br>( $f = 1MHz, V_R = 0$ ) | CT     | -   | 2.2  | 4   | pF      |
| Reverse Recovery Time<br>( $I_F = 10mA$ )    | Trr    | -   | 1.6  | 4   | nS      |

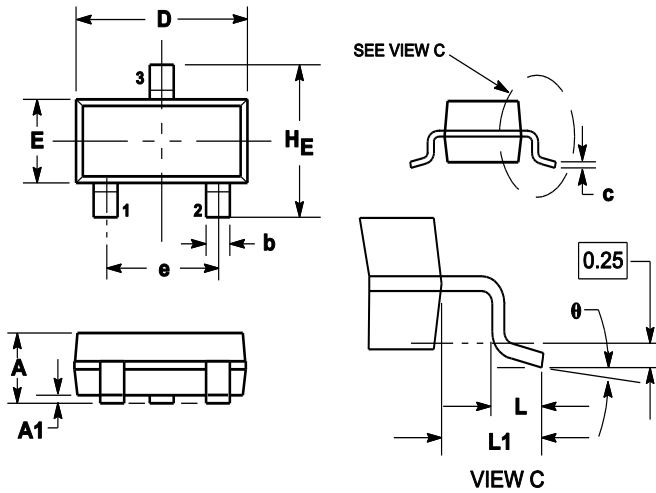
## 5.ELECTRICAL CHARACTERISTICS CURVES



## 6.OUTLINE AND DIMENSIONS

Notes:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.



| DIM            | MILLIMETERS |      |      | INCHES |       |       |
|----------------|-------------|------|------|--------|-------|-------|
|                | MIN         | NOM  | MAX  | MIN    | NOM   | MAX   |
| A              | 0.89        | 1    | 1.11 | 0.035  | 0.04  | 0.044 |
| A1             | 0.01        | 0.06 | 0.1  | 0.001  | 0.002 | 0.004 |
| b              | 0.37        | 0.44 | 0.5  | 0.015  | 0.018 | 0.02  |
| c              | 0.09        | 0.13 | 0.18 | 0.003  | 0.005 | 0.007 |
| D              | 2.80        | 2.9  | 3.04 | 0.11   | 0.114 | 0.12  |
| E              | 1.20        | 1.3  | 1.4  | 0.047  | 0.051 | 0.055 |
| e              | 1.78        | 1.9  | 2.04 | 0.07   | 0.075 | 0.081 |
| L              | 0.10        | 0.2  | 0.3  | 0.004  | 0.008 | 0.012 |
| L1             | 0.35        | 0.54 | 0.69 | 0.014  | 0.021 | 0.029 |
| H <sub>E</sub> | 2.10        | 2.4  | 2.64 | 0.083  | 0.094 | 0.104 |
| θ              | 0°          | ---  | 10°  | 0°     | ---   | 10°   |

## 7.SOLDERING FOOTPRINT

