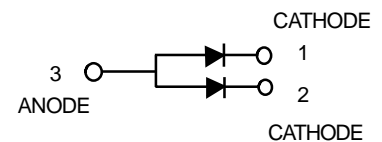
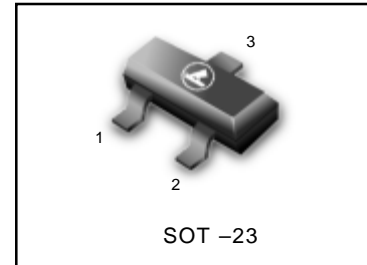


Ultra High Speed Switching Application

L1SS181LT1G
S-L1SS181LT1G

- 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.
- S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.



Driver Marking

L1SS181LT1G = A3

Maximum Ratings ($T_A = 25^\circ C$)

| Characteristic | Symbol | Rating | Unit |
|--------------------------------|-----------|----------|------------|
| Maximum (peak) reverse voltage | V_{RM} | 85 | V |
| Reverse voltage | V_R | 80 | V |
| Maximum (peak) forward current | I_{FM} | 300 * | mA |
| Average forward current | I_O | 100 * | mA |
| Surge current (10ms) | I_{FSM} | 2 * | A |
| Power dissipation | P | 150 | mW |
| Junction temperature | T_j | 125 | $^\circ C$ |
| Storage temperature range | T_{stg} | -55~+125 | $^\circ C$ |

* : Unit rating. Total rating = Unit rating \times 1.5.

Electrical Characteristics ($T_A = 25^\circ C$)

| Characteristic | Symbol | Test Circuit | Test Condition | Min | Typ. | Max | Unit |
|-----------------------|------------|--------------|----------------------|-----|------|------|---------|
| Forward voltage | $V_{F(1)}$ | — | $I_F = 1mA$ | — | 0.61 | — | V |
| | $V_{F(2)}$ | — | $I_F = 10mA$ | — | 0.74 | — | |
| | $V_{F(3)}$ | — | $I_F = 100mA$ | — | 0.90 | 1.20 | |
| Reverse current | $I_{R(1)}$ | — | $V_R = 30V$ | — | — | 0.1 | μA |
| | $I_{R(2)}$ | — | $V_R = 80V$ | — | — | 0.5 | |
| Total capacitance | C_T | — | $V_R = 0, f = 1MHz$ | — | 2.2 | 4.0 | pF |
| Reverse recovery time | t_{rr} | — | $I_F = 10mA$ (Fig.5) | — | 1.6 | 4.0 | ns |

Ordering Information

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

L1SS181LT1G,S-L1SS181LT1G

Electrical characteristic curves

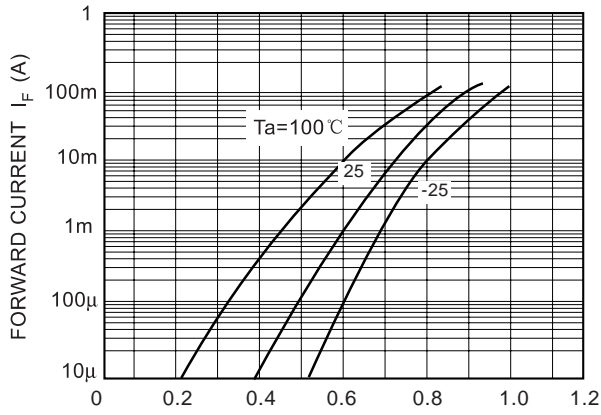


Fig.1 FORWARD VOLTAGE V_F (V)

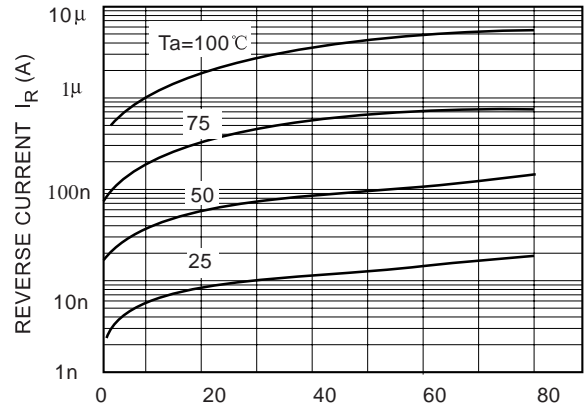


Fig.2 REVERSE VOLTAGE V_R (V)

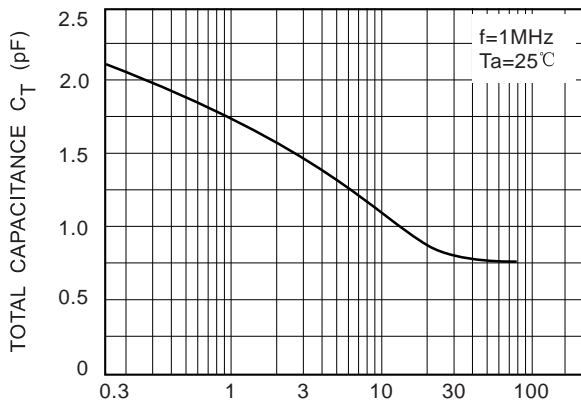


Fig.3 REVERSE VOLTAGE V_R (V)

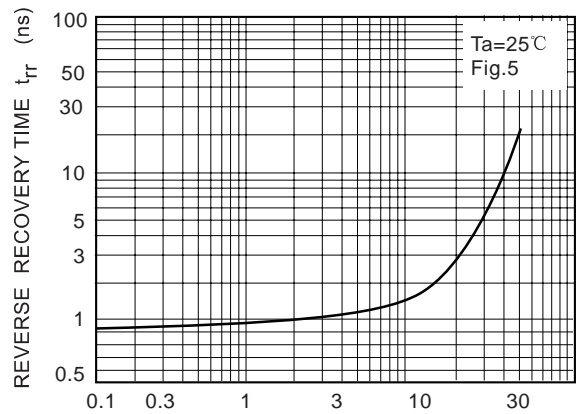


Fig.4 FORWARD CURRENT I_F (mA)

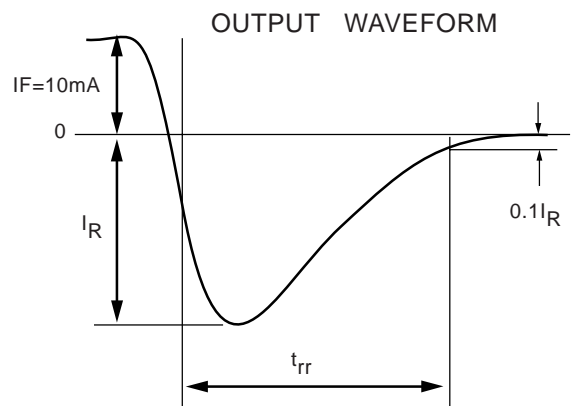
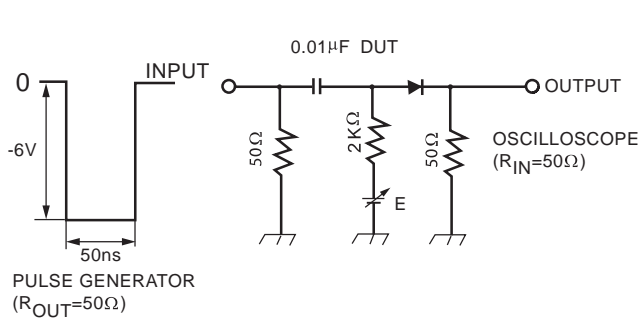


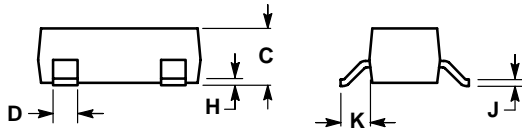
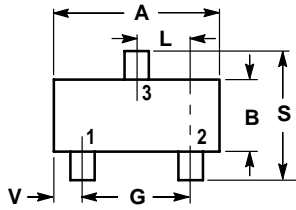
Fig.5 Reverse recovery time (t_{rr}) test circuit

L1SS181LT1G,S-L1SS181LT1G

SOT-23

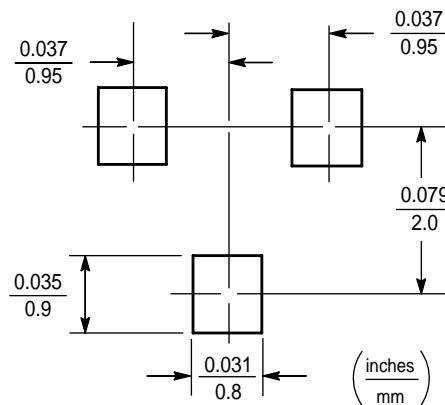
NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M,1982
2. CONTROLLING DIMENSION: INCH.



| DIM | INCHES | | MILLIMETERS | |
|-----|--------|--------|-------------|-------|
| | MIN | MAX | MIN | MAX |
| A | 0.1102 | 0.1197 | 2.80 | 3.04 |
| B | 0.0472 | 0.0551 | 1.20 | 1.40 |
| C | 0.0350 | 0.0440 | 0.89 | 1.11 |
| D | 0.0150 | 0.0200 | 0.37 | 0.50 |
| G | 0.0701 | 0.0807 | 1.78 | 2.04 |
| H | 0.0005 | 0.0040 | 0.013 | 0.100 |
| J | 0.0034 | 0.0070 | 0.085 | 0.177 |
| K | 0.0140 | 0.0285 | 0.35 | 0.69 |
| L | 0.0350 | 0.0401 | 0.89 | 1.02 |
| S | 0.0830 | 0.1039 | 2.10 | 2.64 |
| V | 0.0177 | 0.0236 | 0.45 | 0.60 |

- PIN 1. BASE
 2. EMITTER
 3. COLLECTOR



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[1SS400CST2RA](#) [SDAA13](#) [SHN2D02FUTW1T1G](#) [LS4151GS08](#) [FC903-TR-E](#) [1N4449](#) [1N456A](#) [1N4934-E3/73](#) [1N914B](#) [1N914BTR](#)
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