

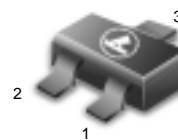
Common Anode Silicon Dual Switching diodes

These Common Anode Silicon Epitaxial Planar Dual Diodes are designed for use in ultra high speed switching applications. These devices are housed in the SC-59 package which is designed for low power surface mount applications.

- Fast t_{rr} , < 10 ns
- Low C_D , < 15 pF
- Available in 8 mm Tape and Reel
- Pb-Free Package is available

LM1MA151WAT1
LM1MA152WAT1

SC-59 PACKAGE
COMMON ANODE
DUAL SWITCHING DIODES
40/80 V-100mA
SURFACE MOUNT



CASE 318D-03, STYLE5
SC-59

ORDERING INFORMATION

| Device* | Package | Shipping |
|----------------------------|---------|----------------|
| LM1MA151WAT1 | SC-59 | 3000/Tape&Reel |
| LM1MA151WAT1G (Pb-Free) | SC-59 | 3000/Tape&Reel |
| LM1MA152WAT1 | SC-59 | 3000/Tape&Reel |
| LM1MA152WAT1G (Pb-Free) | SC-59 | 3000/Tape&Reel |

*Replace "T1" with "T3" in the Device Number to Order the 13inch/10,000 unit Reel.

MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$)

| Rating | Symbol | Value | Unit | |
|----------------------------|--------------|-----------------|------|------|
| Reverse Voltage | LM1MA151WAT1 | V_R | 40 | Vdc |
| | LM1MA152WAT1 | | 80 | |
| Peak Reverse Voltage | LM1MA151WAT1 | V_{RM} | 40 | Vdc |
| | LM1MA152WAT1 | | 80 | |
| Forward Current | Single | I_F | 100 | mAdc |
| | Dual | | 150 | |
| Peak Forward Current | Single | I_{FM} | 225 | mAdc |
| | Dual | | 340 | |
| Peak Forward Surge Current | Single | $I_{FSM}^{(1)}$ | 500 | mAdc |
| | Dual | | 750 | |

THERMAL CHARACTERISTICS

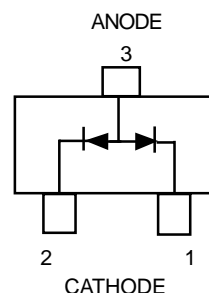
| Rating | Symbo | IMax | Unit |
|----------------------|-----------|-------------|------------------|
| Power Dissipation | P_D | 200 | mW |
| Junction Temperature | T_J | 150 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

| Characteristic | Symbol | Condition | Min | Max | Unit | |
|---------------------------------|----------------|---|--------------------------|-----|------|-----------------|
| Reverse Voltage Leakage Current | LM1MA151WAT1 | I_R | $V_R = 35\text{ V}$ | — | 0.1 | μAdc |
| | LM1MA152WAT1 | | $V_R = 75\text{ V}$ | — | 0.1 | |
| Forward Voltage | V_F | $I_F = 100\text{ mA}$ | — | 1.2 | Vdc | |
| Reverse Breakdown Voltage | LM1MA151WAT1 | V_R | $I_R = 100\ \mu\text{A}$ | 40 | — | Vdc |
| | LM1MA152WAT1 | | | 80 | — | |
| Diode Capacitance | C_D | $V_R = 0, f = 1.0\text{ MHz}$ | — | 15 | pF | |
| Reverse Recovery Time | $t_{rr}^{(2)}$ | $I_F = 10\text{ mA}, V_R = 6.0\text{ V}, R_L = 100\ \Omega, I_{rr} = 0.1 I_R$ | — | 10 | ns | |

1. $t = 1\text{ SEC}$

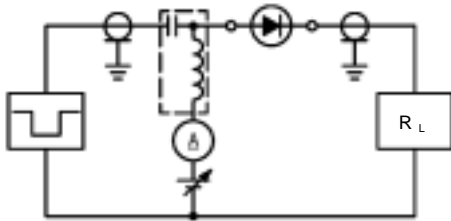
2. t_{rr} Test Circuit



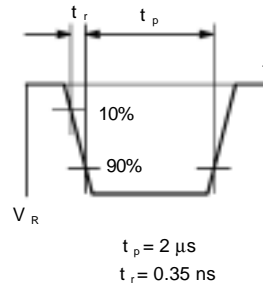
CATHODE

LM1MA151WAT1 LM1MA152WAT1

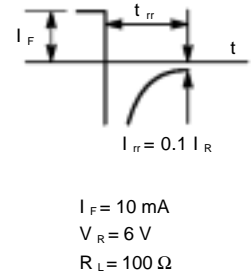
RECOVERY TIME EQUIVALENT TEST CIRCUIT



INPUT PULSE

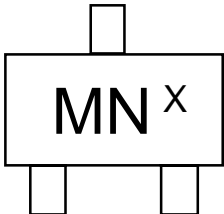


OUTPUT PULSE



DEVICE MARKING—EXAMPLE

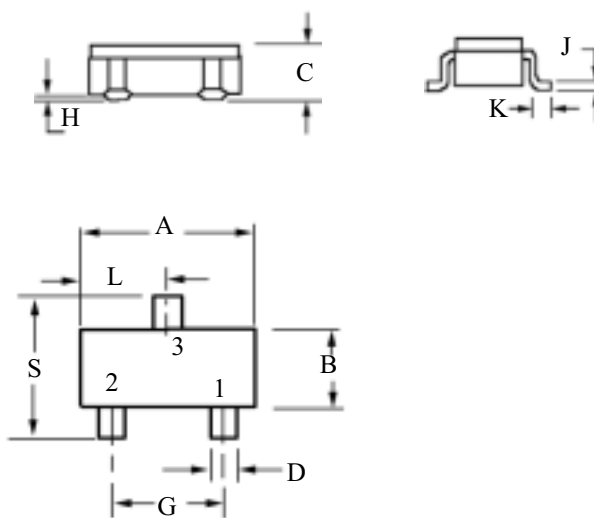
| Marking Symbol | | |
|----------------|-------|-------|
| Type No. | 151WA | 152WA |
| Symbol | MN | MO |



The "X" represents a smaller alpha digit Date Code. The Date Code indicates the actual month in which the part was manufactured.

LM1MA151WAT1 LM1MA152WAT1

SC-59



| DIN | MILLIMETERS | | INCHES | |
|-----|-------------|-------|--------|---------|
| | MIN | MAX | MIN | MAX |
| A | 2.70 | 3.10 | 0.1063 | 0.1220 |
| B | 1.3 | 1.70 | 0.0512 | 0.0669 |
| C | 1.00 | 1.30 | 0.0394 | 0.0511 |
| D | 0.35 | 0.50 | 0.0138 | 0.0196 |
| G | 1.70 | 2.10 | 0.0670 | 0.0826 |
| H | 0.0130 | 0.100 | 0.0005 | 0.00040 |
| J | 0.1 | 0.26 | 0.0040 | 0.0102 |
| K | 0.20 | 0.60 | 0.0079 | 0.0236 |
| L | 1.25 | 1.65 | 0.0493 | 0.0649 |
| S | 2.50 | 3.00 | 0.0985 | 0.1181 |