

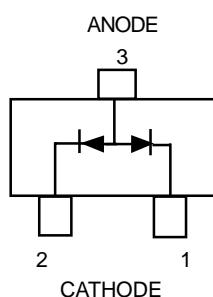
# Common Anode Silicon Dual Switching diodes

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

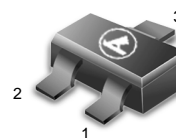
Use M1MA151/2WAT1 to order the 7 inch/3000 unit reel.

Use M1MA151/2WAT3 to order the 13 inch/10,000 unit reel.



**M1MA151WAT1**  
**M1MA152WAT1**

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



**CASE 318D-03, STYLE5**  
**SC-59**

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

| Rating                     |             | Symbol          | Value | Unit |
|----------------------------|-------------|-----------------|-------|------|
| Reverse Voltage            | M1MA151WAT1 | $V_R$           | 40    | Vdc  |
|                            | M1MA152WAT1 |                 | 80    |      |
| Peak Reverse Voltage       | M1MA151WAT1 | $V_{RM}$        | 40    | Vdc  |
|                            | M1MA152WAT1 |                 | 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 ( $T_A = 25^\circ\text{C}$ )

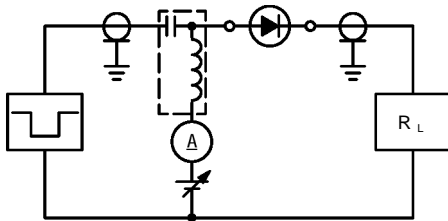
| Characteristic                  | Symbol         | Condition  | Min                      | Max | Unit                |
|---------------------------------|----------------|--|--------------------------|-----|---------------------|
| Reverse Voltage Leakage Current | M1MA151WAT1    | $I_R$  | $V_R = 35\text{ V}$      | —   | 0.1 $\mu\text{Adc}$ |
|                                 | M1MA152WAT1    |  | $V_R = 75\text{ V}$      | —   | 0.1                 |
| Forward Voltage                 | $V_F$          | $I_F = 100\text{ mA}$  | —                        | 1.2 | Vdc                 |
| Reverse Breakdown Voltage       | M1MA151WAT1    | $V_R$  | $I_R = 100\ \mu\text{A}$ | 40  | —                   |
|                                 | M1MA152WAT1    |  |                          | 80  | —                   |
| Diode Capacitance               | $C_D$          | $V_R = 0, f = 1.0\text{ MHz}$  | —                        | 15  | pF                  |
| Reverse Recovery Time           | $t_{rr}^{(2)}$ | $I_F = 10\text{ mA}, V_R = 6.0\text{ V},$<br>$R_L = 100\ \Omega, I_{rr} = 0.1 I_R$ | —                        | 10  | ns                  |

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

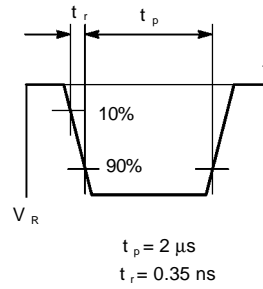
2.  $t_{rr}$  Test Circuit

**M1MA151WAT1 M1MA152WAT1**

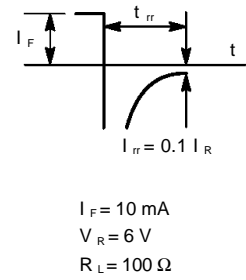
**RECOVERY TIME EQUIVALENT TEST CIRCUIT**



**INPUT PULSE**

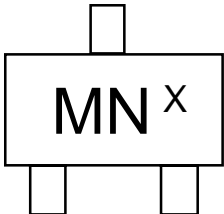


**OUTPUT PULSE**



**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.