

# Common Anode Silicon Dual Switching Diode

This Common Anode Silicon Epitaxial Planar Dual Diode is designed for use in ultra high speed switching applications. This device is housed in the SC-70 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 LM1MA141/2WAT1 to order the 7 inch/3000 unit reel.

Use LM1MA141/2WAT3 to order the 13 inch/10,000 unit reel.

## DEVICE MARKING

LM1MA141WAT1 = MN LM1MA142WAT2=MO

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

Rating	Symbol	Value	Unit
Reverse Voltage	LM1MA141WAT1 LM1MA142WAT1	$V_R$ 80	$V_{dc}$
Peak Reverse Voltage	LM1MA141WAT1 LM1MA142WAT1	$V_{RM}$ 80	$V_{dc}$
Forward Current	Single Dual	$I_F$ 150	mAdc
Peak Forward Current	Single Dual	$I_{FM}$ 340	mAdc
Peak Forward Surge Current	Single Dual	$I_{FSM}^{(1)}$ 750	mAdc

## THERMAL CHARACTERISTICS

Rating	Symbol	Max	Unit
Power Dissipation	$P_D$	150	mW
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 ~ +150	$^\circ\text{C}$

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

Characteristic	Symbol	Condition	Min	Max	Unit
Reverse Voltage Leakage Current	LM1MA141WAT1 LM1MA142WAT1	$V_R = 35\text{ V}$ $V_R = 75\text{ V}$	—	0.1	$\mu\text{Adc}$
Forward Voltage	$V_F$	$I_F = 100\text{ mA}$	—	1.2	Vdc
Reverse Breakdown Voltage	LM1MA141WAT1 LM1MA142WAT1	$I_R = 100\text{ }\mu\text{A}$	40 80	—	Vdc
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.  $t = 1\text{ SEC}$

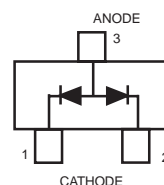
2.  $t_{rr}$  Test Circuit

**LM1MA141WAT1**  
**LM1MA142WAT1**

**SC-70/SOT-323 PACKAGE**  
**COMMON ANODE**  
**DUAL SWITCHING DIODE**  
**40/80 V-100 mA**  
**SURFACE MOUNT**



CASE 419-04, STYLE 4  
SOT-323 / SC - 70



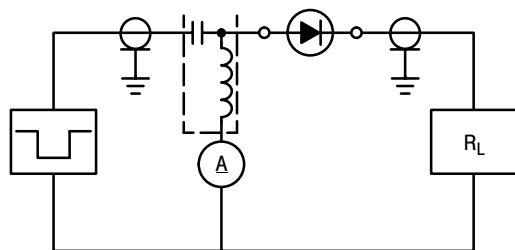
Marking Symbol  
Type No. 141WA 142WA  
Symbol MN MO



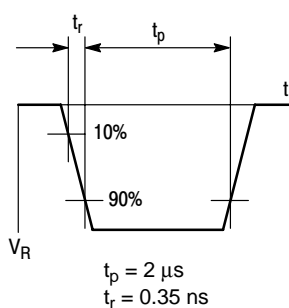
The "X" represents a smaller alpha digit Date Code. The Date Code indicates the actual month in which the part was manufactured.

## LM1MA141WAT1 LM1MA142WAT1

### RECOVERY TIME EQUIVALENT TEST CIRCUIT



### INPUT PULSE



### OUTPUT PULSE

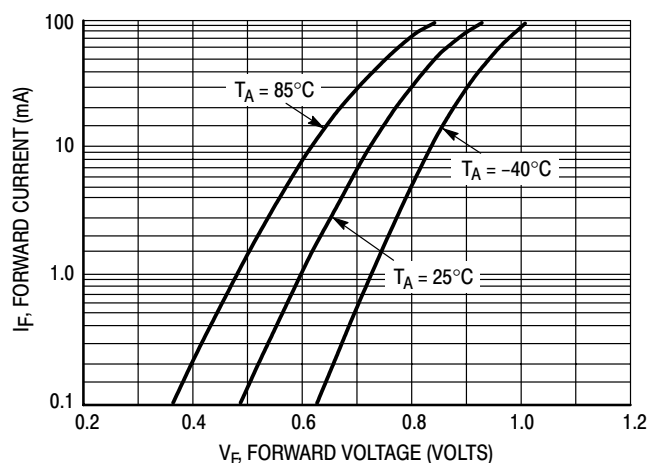
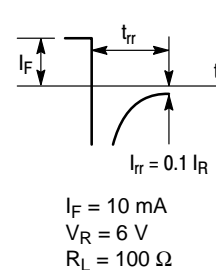


Figure 1. Forward Voltage

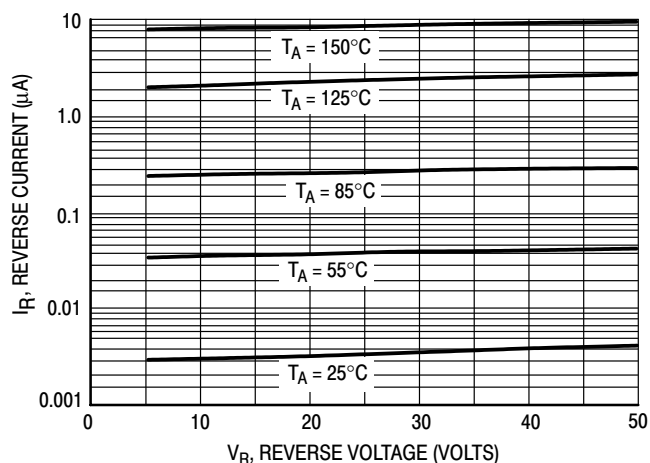


Figure 2. Reverse Current

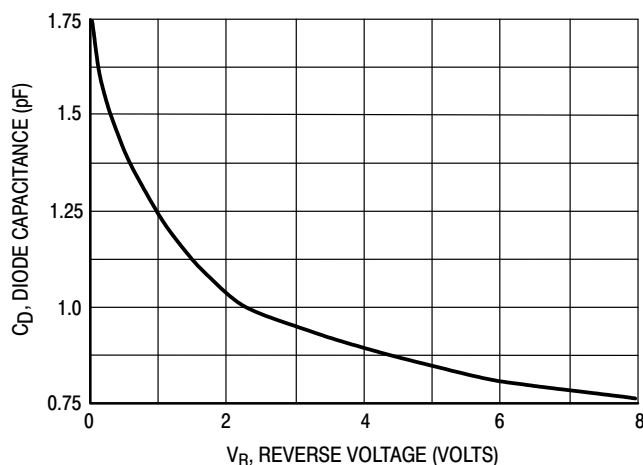


Figure 3. Diode Capacitance