

## Single Silicon Switching Diodes

These Silicon Epitaxial Planar 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.

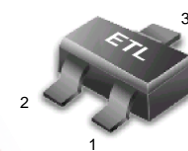
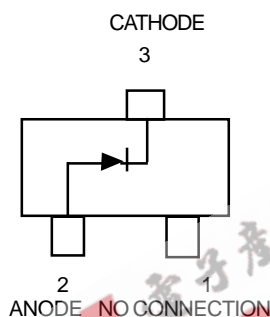
- Fast  $t_{rr}$ , < 3.0 ns
- Low  $C_D$ , < 2.0 pF
- Available in 8 mm Tape and Reel

Use M1MA151/2KT1 to order the 7 inch/3000 unit reel.

Use M1MA151/2KT3 to order the 13 inch/10,000 unit reel.

**M1MA151KT1**  
**M1MA152KT1**

**SC-59 PACKAGE**  
**SINGLE SILICON**  
**SWITCHING DIODES**  
**40/80 V-100mA**  
**SURFACE MOUNT**



CASE 318D-03, STYLE2  
SC-59

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

Rating	Symbol	Value	Unit
Reverse Voltage	M1MA151KT1	$V_R$	40 Vdc
	M1MA152KT1		80
Peak Reverse Voltage	M1MA151KT1	$V_{RM}$	40 Vdc
	M1MA152KT1		80
Forward Current	$I_F$	100	mAdc
Peak Forward Current	$I_{FM}$	225	mAdc
Peak Forward Surge Current	$I_{FSM}^{(1)}$	500	mAdc

### THERMAL CHARACTERISTICS

Rating	Symbol	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 ( $T_A = 25^\circ\text{C}$ )

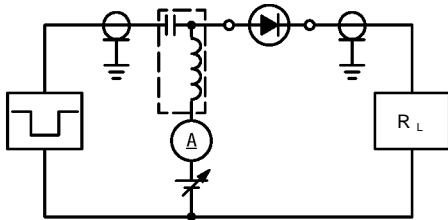
Characteristic	Symbol	Condition	Min	Max	Unit	
Reverse Voltage Leakage Current	M1MA151KT1	$I_R$	$V_R = 35\text{ V}$	—	0.1 $\mu\text{Adc}$	
	M1MA152KT1		$V_R = 75\text{ V}$	—	0.1	
Forward Voltage	$V_F$	$I_F = 100\text{ mA}$	—	1.2	Vdc	
Reverse Breakdown Voltage	M1MA151KT1	$V_R$	$I_R = 100\ \mu\text{A}$	40	—	Vdc
	M1MA152KT1			80	—	
Diode Capacitance	$C_D$	$V_R = 0, f = 1.0\text{ MHz}$	—	2.0	pF	
Reverse Recovery Time	$t_{rr}^{(2)}$	$I_F = 10\text{ mA}, V_R = 6.0\text{ V},$ $R_L = 100\ \Omega, I_{rr} = 0.1 I_R$	—	3.0	ns	

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

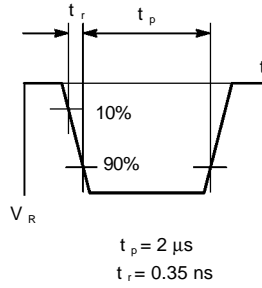
2.  $t_{rr}$  Test Circuit

### M1MA151KT1 M1MA152KT1

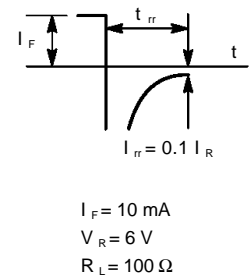
#### RECOVERY TIME EQUIVALENT TEST CIRCUIT



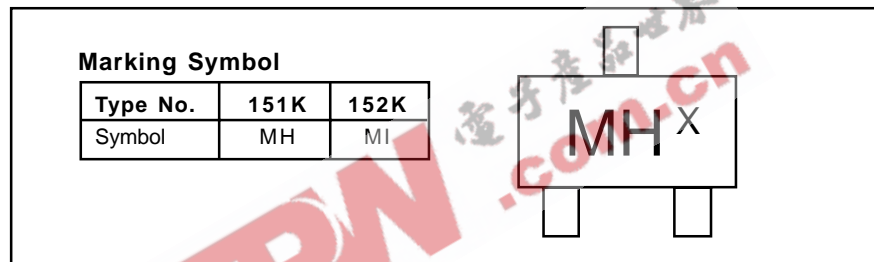
#### INPUT PULSE



#### OUTPUT PULSE



#### DEVICE MARKING—EXAMPLE



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