

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.

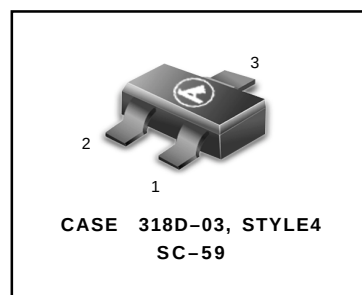
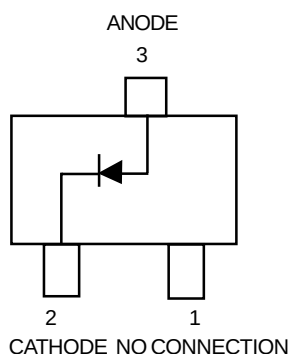
- Fast t_{rr} , < 3.0 ns
- Low C_D , < 2.0 pF
- Available in 8 mm Tape and Reel

Use M1MA151/2AT1 to order the 7 inch/3000 unit reel.

Use M1MA151/2AT3 to order the 13 inch/10,000 unit reel.

M1MA151AT1
M1MA152AT1

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



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

Rating	Symbol	Value	Unit
Reverse Voltage	M1MA151AT1 M1MA152AT1	V_R 40 80	Vdc
Peak Reverse Voltage	M1MA151AT1 M1MA152AT1	V_{RM} 40 80	Vdc
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	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 ($T_A = 25^\circ\text{C}$)

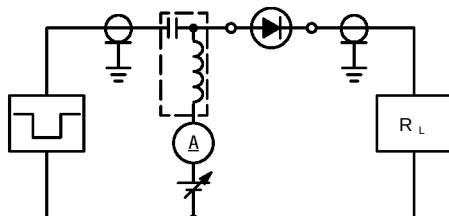
Characteristic	Symbol	Condition	Min	Max	Unit
Reverse Voltage Leakage Current	M1MA151AT1 M1MA152AT1	I_R $V_R = 35$ V $V_R = 75$ V	—	0.1 0.1	μAdc
Forward Voltage	V_F	$I_F = 100$ mA	—	1.2	Vdc
Reverse Breakdown Voltage	M1MA151AT1 M1MA152AT1	V_R $I_R = 100$ μA	40 80	—	Vdc
Diode Capacitance	C_D	$V_R = 0$, $f = 1.0$ MHz	—	2.0	pF
Reverse Recovery Time	$t_{rr}^{(2)}$	$I_F = 10$ mA, $V_R = 6.0$ V, $R_L = 100\Omega$, $I_{rr} = 0.1 I_R$	—	3.0	ns

1. $t = 1$ SEC

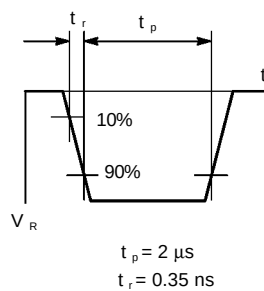
2. t_{rr} Test Circuit

M1MA151AT1 M1MA152AT1

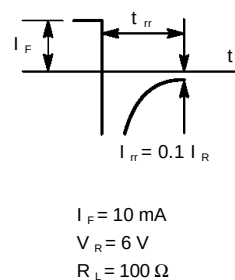
RECOVERY TIME EQUIVALENT TEST CIRCUIT



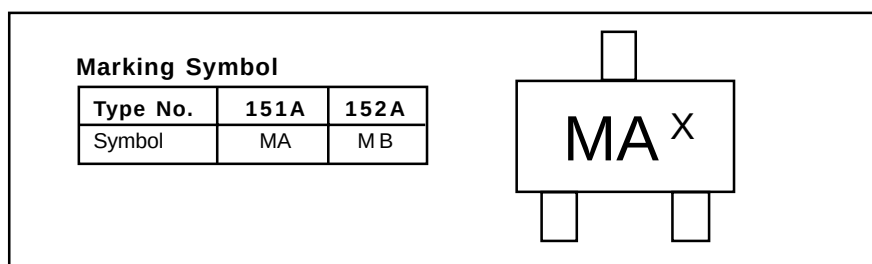
INPUT PULSE



OUTPUT PULSE



DEVICE MARKING



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