

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.

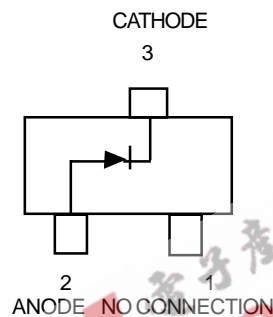
- Fast t_{rr} , < 3.0 ns
- Low C_D , < 2.0 pF
- Available in 8 mm Tape and Reel

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



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

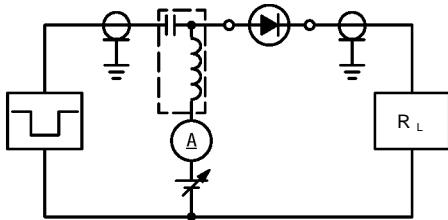
Characteristic	Symbol	Condition	Min	Max	Unit
Reverse Voltage Leakage Current	M1MA151KT1	I_R	$V_R = 35\text{ V}$	—	0.1 μAdc
	M1MA152KT1		$V_R = 75\text{ V}$	—	0.1
Forward Voltage	V_F	$I_F = 100\text{ mA}$	—	1.2	Vdc
Reverse Breakdown Voltage	M1MA151KT1	V_R	$I_R = 100\ \mu\text{A}$	40	—
	M1MA152KT1			80	—
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. $t = 1\text{ SEC}$

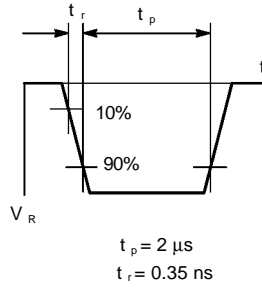
2. t_{rr} Test Circuit

M1MA151KT1 M1MA152KT1

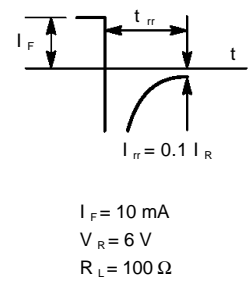
RECOVERY TIME EQUIVALENT TEST CIRCUIT



INPUT PULSE

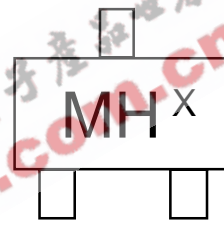


OUTPUT PULSE



DEVICE MARKING—EXAMPLE

Marking Symbol		
Type No.	151K	152K
Symbol	MH	MI



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