

Common Anode Silicon Dual Switching diodes

These Common Cathode Silicon Epitaxial Planar Dual Diodes are designed for use in ultra high speed switching applications. These devices are housed in the SOT-23 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 M1MA151/2WKLT1 to order the 7 inch/3000 unit reel.

Use M1MA151/2WKLT3 to order the 13 inch/10,000 unit reel.

- Pb-Free Package May be Available. The G-Suffix Denotes a Pb-Free Lead Finish

ORDERING INFORMATION

Device	Package	Shipping
M1MA151WKLT1G	SOT-23	3000/Tape & Reel
M1MA152WKLT1G	SOT-23	3000/Tape & Reel
M1MA151WKLT1	SOT-23	3000/Tape & Reel
M1MA152WKLT1	SOT-23	3000/Tape & Reel

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

Rating	Symbol	Value	Unit	
Reverse Voltage	M1MA151WKLT1	V_R	40	Vdc
	M1MA152WKLT1		80	
Peak Reverse Voltage	M1MA151WKLT1	V_{RM}	40	Vdc
	M1MA152WKLT1		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 ($T_A = 25^\circ\text{C}$)

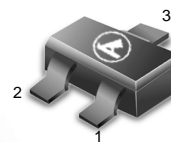
Characteristic	Symbol	Condition	Min	Max	Unit	
Reverse Voltage Leakage Current	M1MA151WKLT1	I_R	$V_R = 35\text{ V}$	—	0.1	μAdc
	M1MA152WKLT1		$V_R = 75\text{ V}$	—	0.1	
Forward Voltage	V_F	$I_F = 100\text{ mA}$	—	1.2	Vdc	
Reverse Breakdown Voltage	M1MA151WKLT1	V_R	$I_R = 100\ \mu\text{A}$	40	—	Vdc
	M1MA152WKLT1			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. $t = 1\text{ SEC}$

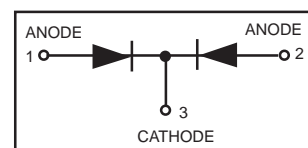
2. t_{rr} Test Circuit

M1MA151WKLT1
M1MA152WKLT1

SOT-23 PACKAGE
COMMON CATHODE
DUAL SWITCHING DIODES
40/80 V-100mA
SURFACE MOUNT

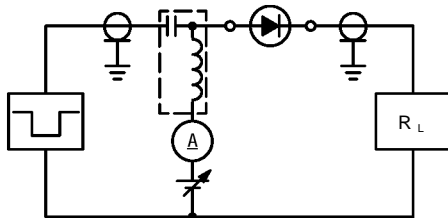


SOT-23

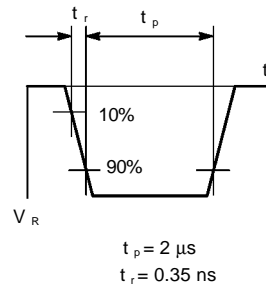


M1MA151WKLT1 M1MA152WKLT1

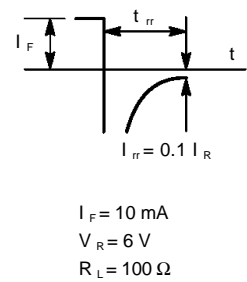
RECOVERY TIME EQUIVALENT TEST CIRCUIT



INPUT PULSE

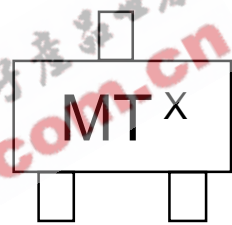


OUTPUT PULSE



DEVICE MARKING—EXAMPLE

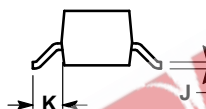
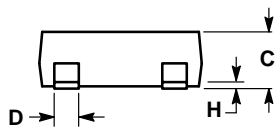
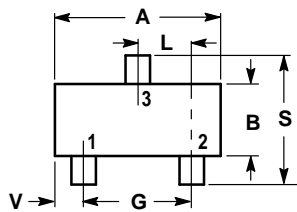
Marking Symbol		
Type No.	151WK	152WK
Symbol	MT	MU



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

M1MA151WKLT1 M1MA152WKLT1

SOT-23



NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.1102	0.1197	2.80	3.04
B	0.0472	0.0551	1.20	1.40
C	0.0350	0.0440	0.89	1.11
D	0.0150	0.0200	0.37	0.50
G	0.0701	0.0807	1.78	2.04
H	0.0005	0.0040	0.013	0.100
J	0.0034	0.0070	0.085	0.177
K	0.0140	0.0285	0.35	0.69
L	0.0350	0.0401	0.89	1.02
S	0.0830	0.1039	2.10	2.64
V	0.0177	0.0236	0.45	0.60

- PIN 1. BASE
 2. EMITTER
 3. COLLECTOR

