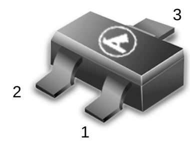
Common Anode Silicon Dual Switching diodes

M1MA151WALT1
M1MA152WALT1

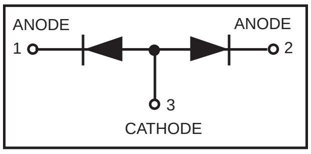
These Common Anode Silicon Epitaxial Planar Dual Diodes are designed for use in ultra high speed switching applications. These devices are housed in the SOT-23 package which is designed for low power surface mount applications.

- Fast t_{rr}, < 10 ns
- Low C_D, < 15 pF
- Available in 8 mm Tape and Reel
  Use M1MA151/2WALT1 to order the 7 inch/3000 unit reel.
  Use M1MA151/2WALT3 to order the 13 inch/10,000 unit reel.
- Pb−Free Package May be Available. The G−Suffix Denotes a Pb−Free Lead Finish

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



SOT-23



ORDERING INFORMATION

Device	Package	Shipping
M1MA151WALT1G	SOT–23	3000/Tape & Reel
M1MA152WALT1G	SOT–23	3000/Tape & Reel
M1MA151WALT1	SOT–23	3000/Tape & Reel
M1MA151WALT1	SOT–23	3000/Tape & Reel

MAXIMUM RATINGS (T_A = 25°C)

Rating		Symbol	Value	Unit
Reverse Voltage	M1MA151WALT1	V_R	40	Vdc
	M1MA152WALT1		80	
Peak Reverse Voltage	M1MA151WALT1	V_{RM}	40	Vdc
	M1MA152WALT1		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	lMax	Unit
Power Dissipation	P_D	200	mW
Junction Temperature	T_J	150	℃
Storage Temperature	T_{stg}	-55 to +150	℃

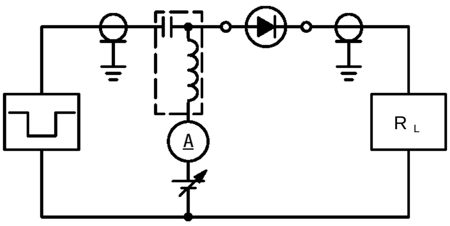
ELECTRICAL CHARACTERISTICS (T_A = 25°C)

Characteristic		Symbol	Condition	Min	Max	Unit
Reverse Voltage Leakage Current	M1MA151WALT1	I_R	V_R = 35 V	—	0.1	µAdc
	M1MA152WALT1		V_R = 75 V	—	0.1	
Forward Voltage		V_F	I_F = 100 mA	—	1.2	Vdc
Reverse Breakdown Voltage	M1MA151WALT1	V_R	I_R = 100 µA	40	—	Vdc
	M1MA152WALT1			80	—	
Diode Capacitance		C_D	V_R = 0, f = 1.0 MHz	—	15	pF
Reverse Recovery Time		t_{rr} (2)	I_F = 10 mA, V_R = 6.0 V, R_L = 100Ω, I_{rr} = 0.1 I_R	—	10	ns

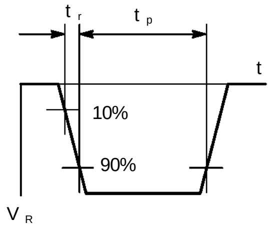
1. t = 1 SEC
2. t_{rr} Test Circuit

M1MA151WALT1 M1MA152WALT1

RECOVERY TIME EQUIVALENT TEST CIRCUIT

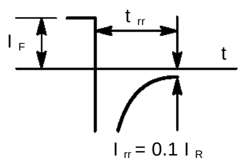


INPUT PULSE



$t_p = 2\ \mu s$
$t_r = 0.35\ ns$

OUTPUT PULSE

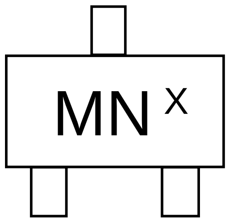


$I_F = 10\ mA$
$V_R = 6\ V$
$R_L = 100\ \Omega$

DEVICE MARKING—EXAMPLE

Marking Symbol

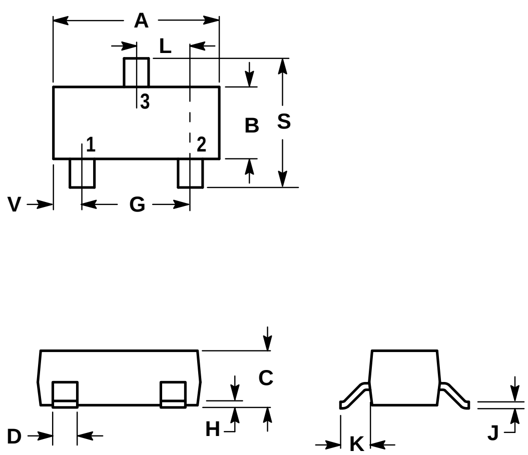
Type No.	151WA	152WA
Symbol	MN	MO



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

M1MA151WALT1 M1MA152WALT1

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