Common Anode Silicon Dual Switching Diodes

DESCRIPTION

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.

Features

- Fast t_{rr}, < 10 ns
- Low C_D, < 15 pF
- We declare that the material of product is ROHS compliant

LM1MA152WALT1G

SOT–23

MAXIMUM RATINGS (T_A = 25°C)

Rating	Symbol	Value	Unit
Reverse Voltage	V_R	80	Vdc
Peak Reverse Voltage	V_{RM}	80	Vdc
Forward Current	I_F	150	mAdc
Peak Forward Current	I_{FM}	340	mAdc
Peak Forward Surge Current	I_{FSM} (Note 1)	750	mAdc

THERMAL CHARACTERISTICS

Rating	Symbol	Max	Unit
Power Dissipation	P_D	225	mW
Junction Temperature	T_J	150	°C
Storage Temperature	T_{stg}	−55 to +150	°C

1. t = 1 SEC

3 ANODE

2 CATHODE 1

ORDERING INFORMATION

Device	Marking	Shipping
LM1MA152WALT1G	MO	3000/Tape & Reel
LM1MA152WALT3G	MO	10000/Tape & Reel

ELECTRICAL CHARACTERISTICS (T_A = 25°C)

Characteristic	Symbol	Condition	Min	Max	Unit
Forward Voltage	V_F	I_F = 100 mA	–	1.2	Vdc
Reverse Breakdown Voltage	V_R	I_R = 100 μA	80	–	Vdc
Diode Capacitance	C_D	V_R = 0, f = 1.0 MHz	–	15	pF
Reverse Recovery Time (Figure 1)	t_{rr} (Note 2)	I_F = 10 mA, V_R = 6.0 V, R_L = 100 Ω, I_{rr} = 0.1 I_R	–	10	ns

2. t_{rr} Test Circuit

RECOVERY TIME EQUIVALENT TEST CIRCUIT

INPUT PULSE

t_p = 2 μs
t_r = 0.35 ns

OUTPUT PULSE

I_{rr} = 0.1 I_R

I_F = 10 mA
V_R = 6 V
R_L = 100 Ω
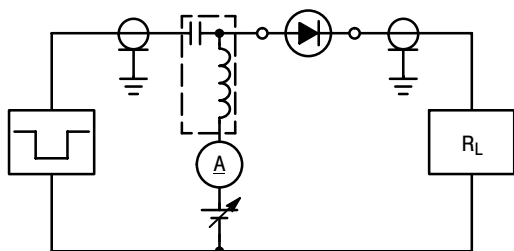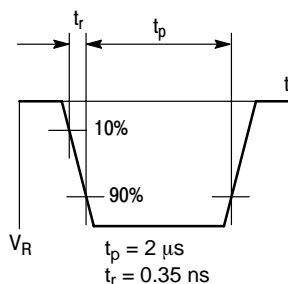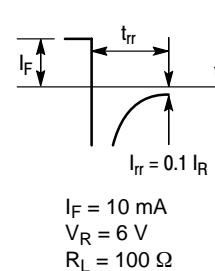
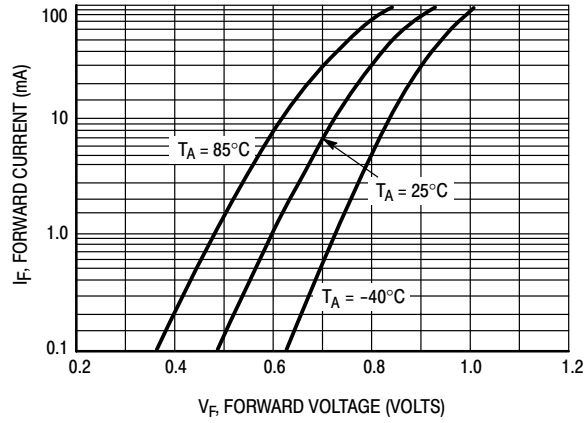**Figure 1. Reverse Recovery Time Equivalent Test Circuit**

LM1MA152WALT1G

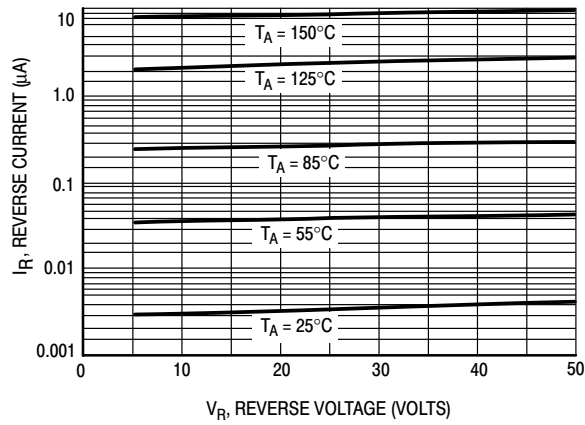
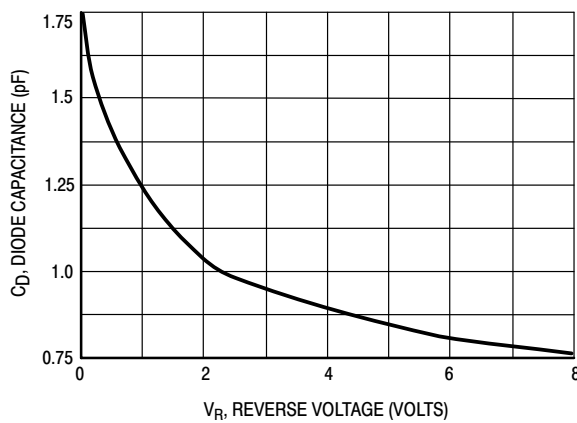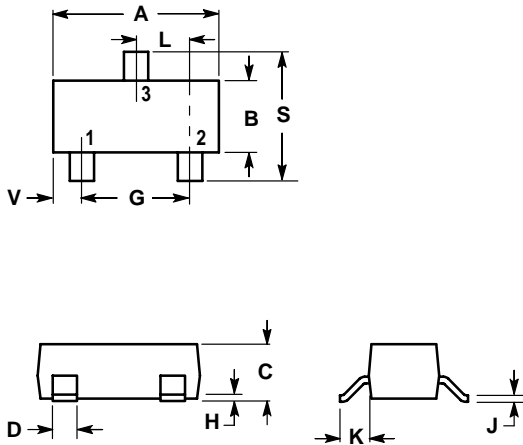**Figure 2. Forward Voltage**

Figure 3. Leakage Current

Figure 4. Capacitance

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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

$\left(\dfrac{inches}{mm}\right)$