

Common Cathode Silicon Dual Switching Diode

LM1MA141WK
LM1MA142WK

This Common Cathode Silicon Epitaxial Planar Dual Diode is designed for use in ultra high speed switching applications. This device is housed in the SOT-323 package which is designed for low power surface mount applications.

- Fast t_{rr} , < 3.0 ns
- Low C_D , < 2.0 pF
- We declare that the material of product compliance with RoHS requirements.
Pb-Free package is available
RoHS product for packing code suffix "G"
Halogen free product for packing code suffix "H"
- Moisture Sensitivity Level 1

Marking : LM1MA141WK:MT LM1MA142WK :MU

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

Rating	Symbol	Value	Unit	
Reverse Voltage	LM1MA141WK	V_R	40	V_{dc}
	LM1MA142WK		80	
Peak Reverse Voltage	LM1MA141WK	V_{RM}	40	V_{dc}
	LM1MA142WK		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	Symbol	Max	Unit
Power Dissipation	P_D	150	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 ~ +150	$^\circ\text{C}$

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

Characteristic	Symbol	Condition	Min	Max	Unit	
Reverse Voltage Leakage Current	LM1MA141WK	I_R	$V_R = 35\text{ V}$	—	0.1	μAdc
	LM1MA142WK		$V_R = 75\text{ V}$	—	0.1	
Forward Voltage		V_F	$I_F = 100\text{ mA}$	—	1.2	Vdc
Reverse Breakdown Voltage	LM1MA141WK	V_R	$I_R = 100\ \mu\text{A}$	40	—	Vdc
	LM1MA142WK			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

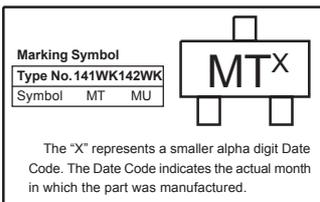
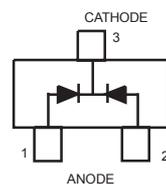
1. $t = 1\text{ SEC}$

2. t_{rr} Test Circuit

SOT-323 PACKAGE
COMMON CATHODE
DUAL SWITCHING DIODE
40/80 V-100 mA
SURFACE MOUNT



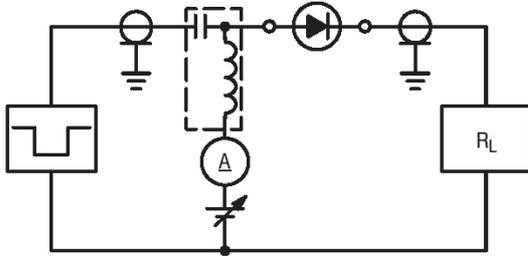
SOT-323 / SC - 70



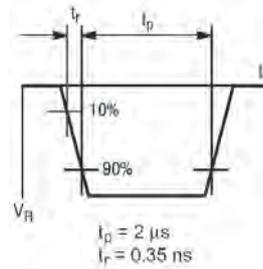
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RECOVERY TIME EQUIVALENT TEST CIRCUIT



INPUT PULSE



OUTPUT PULSE

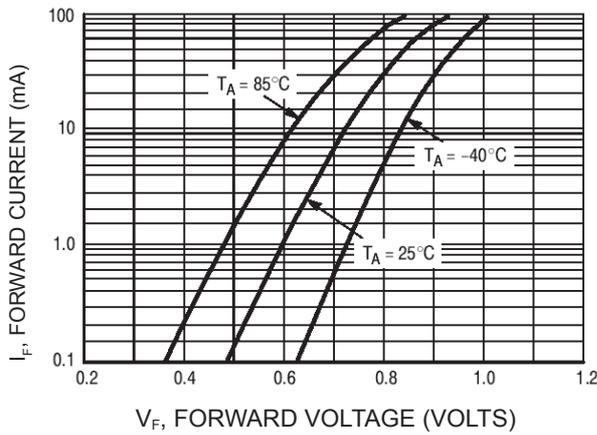
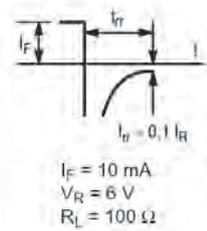


Figure 1. Forward Voltage

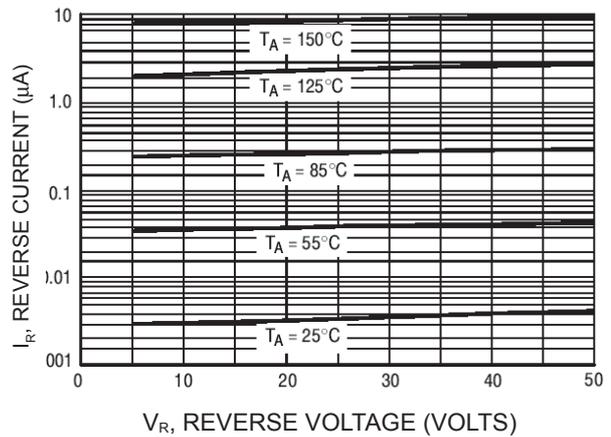


Figure 2. Reverse Current

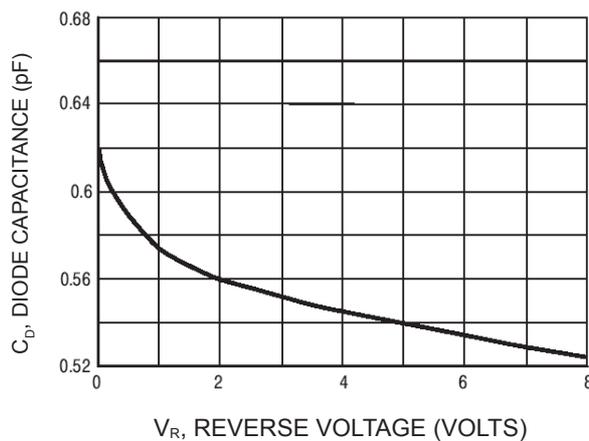
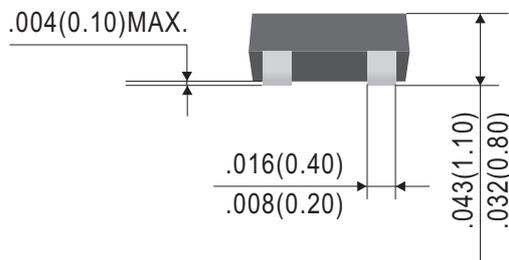
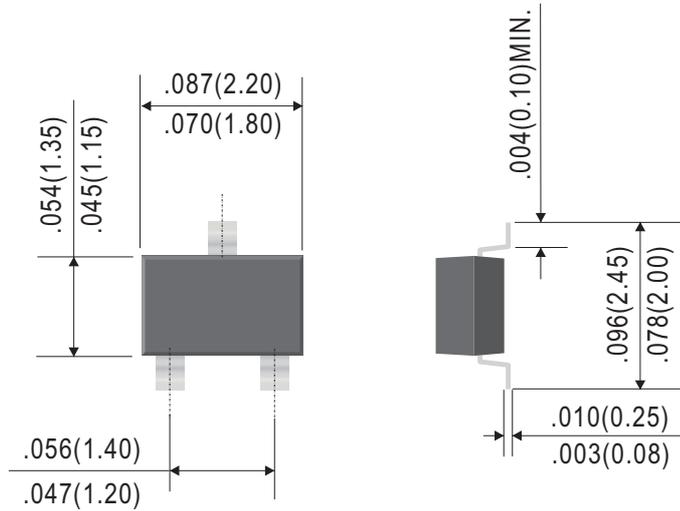


Figure 3. Diode Capacitance

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Dual Switching Diode**

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SOT-323



Dimensions in inches and (millimeters)

