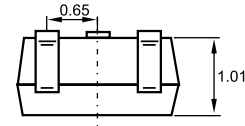
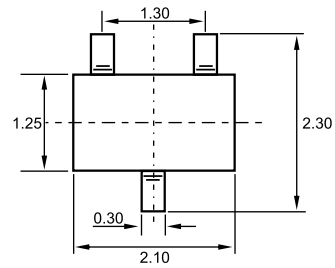


SOT-323



Dimensions in inches and (millimeters)

Features

- ✧ Fast $t_{rr} < 3.0\text{ns}$.
- ✧ Low $C_D, < 2.0\text{pF}$.
- ✧ Pb/RoHS free .

Applications

- ✧ For high speed switching applications.

Ordering Information

Type No.	Marking	Package Code
M1MA141K	MH	SOT-323
M1MA142K	MI	SOT-323

MAXIMUM RATING @ $T_a=25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Limits	Unit	
Peak reverse voltage	M1MA141K M1MA142K	V_{RM}	40 80	V
Reverse voltage	M1MA141K M1MA142K	V_R	40 80	V
Peak forward Current(max.)		I_{FM}	225	mA
Forward output Current		I_F	100	mA
Peak Forward Surge Current (1s)		I_{FSM}	500	mA
Power Dissipation		P_d	150	mW
Junction temperature		T_j	150	$^\circ\text{C}$
Storage temperature range		T_{stg}	-55-+150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Reverse Breakdown voltage	M1MA141K M1MA142K	V_R	$I_R=100\mu\text{A}$	40 80	V
Reverse current	M1MA141K M1MA142K	I_R	$V_R=35\text{V}$ $V_R=75\text{V}$	0.1	μA
Forward voltage		V_F	$I_F=100\text{mA}$	1.2	V
Diode capacitance		C_D	$V_R=0\text{V}, f=1\text{MHz}$	2.0	pF
Reverse recovery time		t_{rr}	$V_R=6\text{V}, I_F=10\text{mA},$ $R_L=100\Omega, I_{rr}=0.1I_R$	3.0	ns

TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

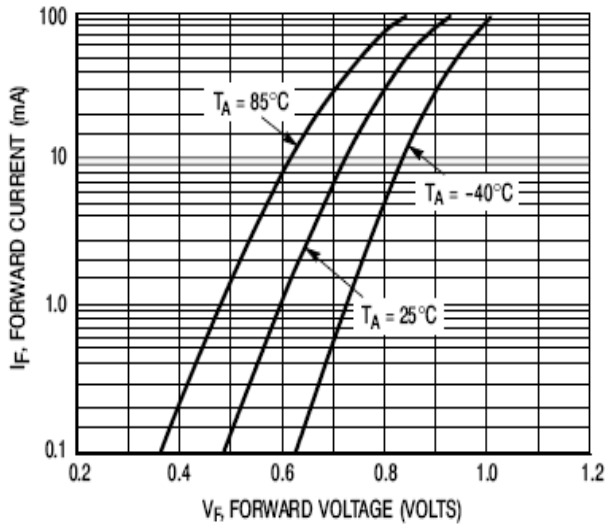


Figure 2. Forward Voltage

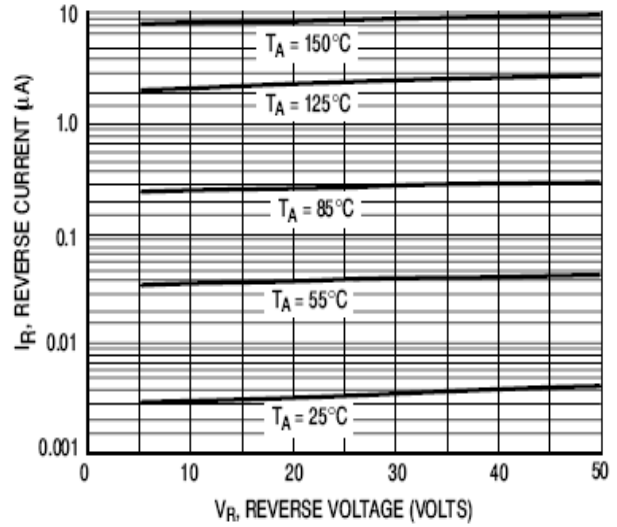


Figure 3. Reverse Current

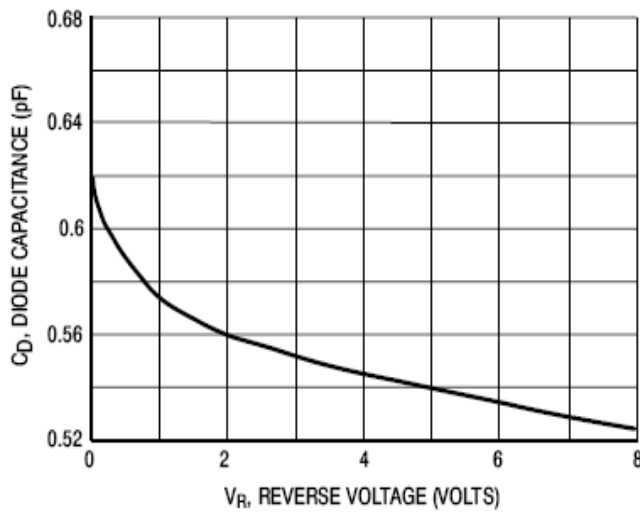


Figure 4. Diode Capacitance