

Surface Mount Switching Diode

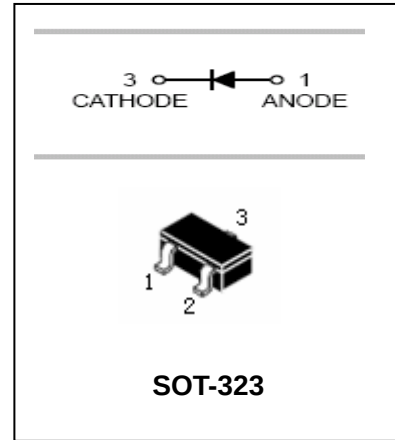
M1MA141K/M1MA142K

FEATURES

- Fast $t_{rr} < 3.0\text{ns}$.
- Low $C_D, < 2.0\text{pF}$.
- Pb-free packages are available.



Lead-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	V_{RM}	40 80	V
Reverse voltage	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	V_R	$I_R = 100\mu\text{A}$	40 80		V
Reverse current	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

Surface Mount Switching Diode

M1MA141K/M1MA142K

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

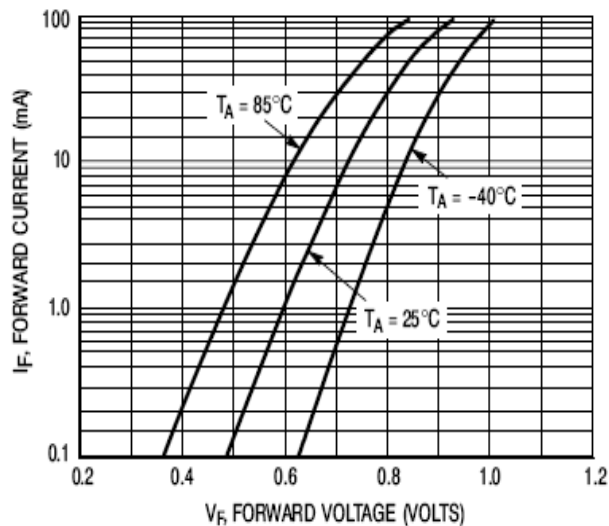


Figure 2. Forward Voltage

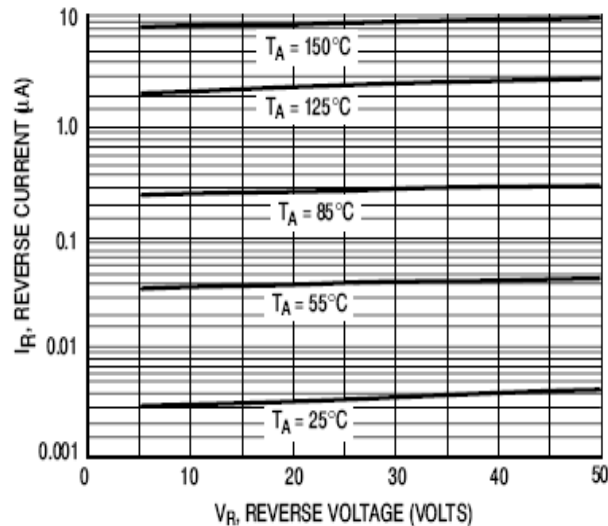


Figure 3. Reverse Current

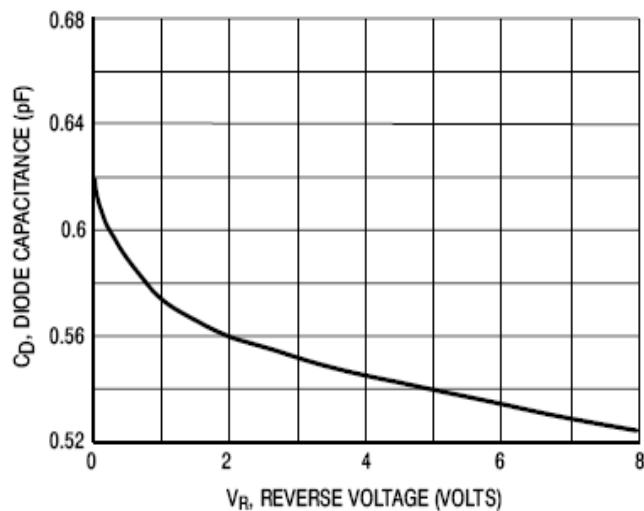


Figure 4. Diode Capacitance

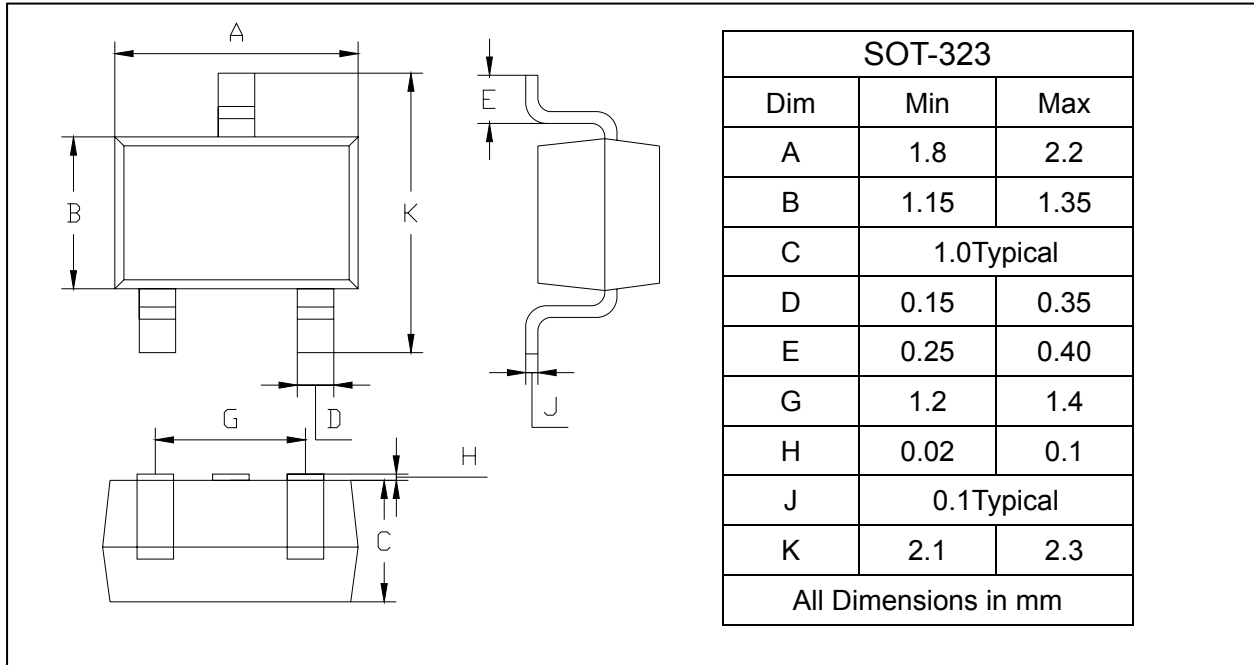
Surface Mount Switching Diode

M1MA141K/M1MA142K

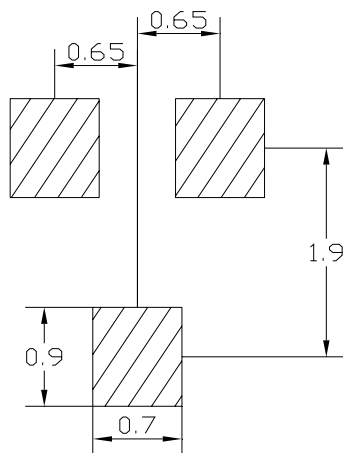
PACKAGE OUTLINE

Plastic surface mounted package

SOT-323



SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
M1MA141K/M1MA142K	SOT-323	3000/Tape&Reel