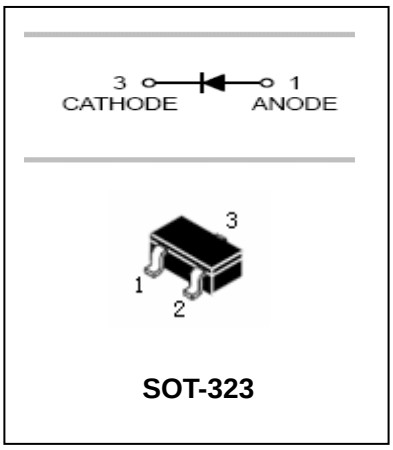
Surface Mount Switching Diode **M1MA141K/M1MA142K**

FEATURES

- Fast t_{rr}<3.0ns.
- Low C_D,<2.0pF.
- 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 @ Ta=25℃ 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	℃
Storage temperature range		T_{stg}	-55-+150	℃

ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

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

Surface Mount Switching Diode **M1MA141K/M1MA142K**

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

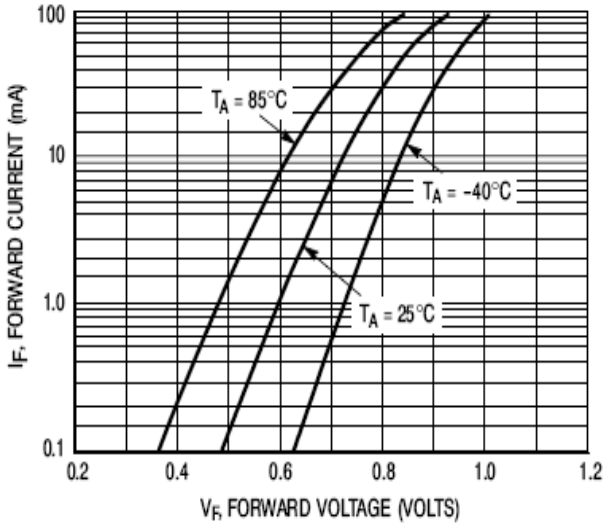


Figure 2. Forward Voltage

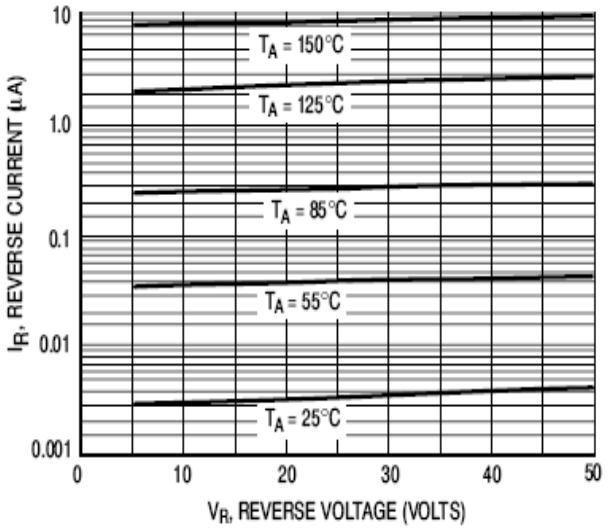


Figure 3. Reverse Current

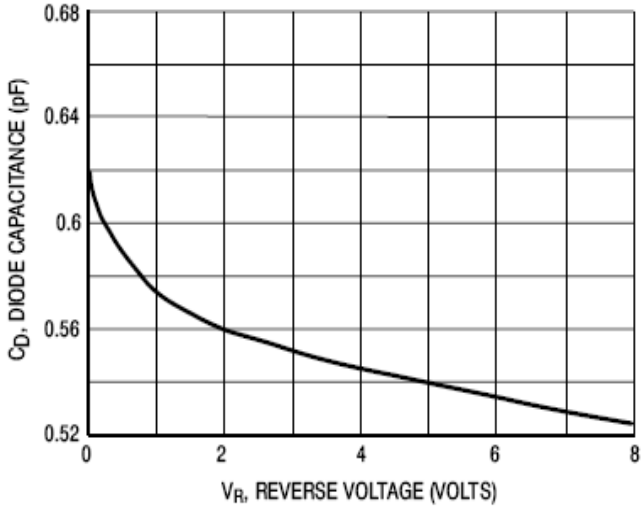
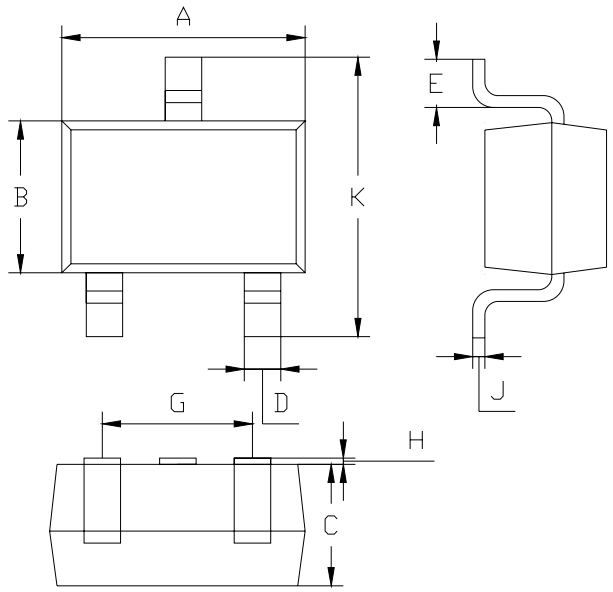


Figure 4. Diode Capacitance

Surface Mount Switching Diode **M1MA141K/M1MA142K**

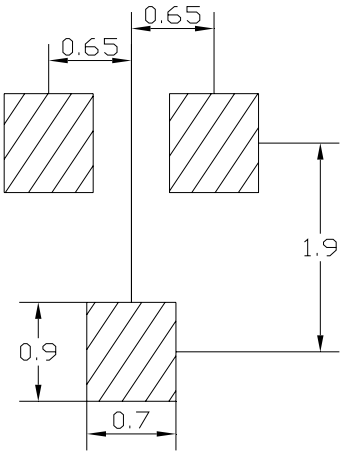
PACKAGE OUTLINE

Plastic surface mounted package SOT-323



SOT-323		
Dim	Min	Max
A	1.8	2.2
B	1.15	1.35
C	1.0Typical	
D	0.15	0.35
E	0.25	0.40
G	1.2	1.4
H	0.02	0.1
J	0.1Typical	
K	2.1	2.3
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

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