

Surface Mount Switching Diode

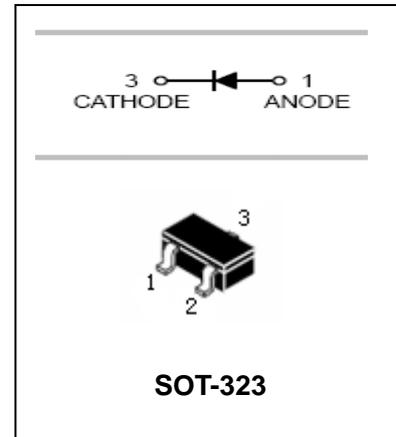
M1MA174

FEATURES

- Fast $t_{rr} < 4.0\text{ns}$.
- Low $C_D, < 1.0\text{pF}$.
- Pb-free packages are available.



Lead-free



APPLICATIONS

- For high speed switching applications.

ORDERING INFORMATION

Type No.	Marking	Package Code
M1MA174	J6	SOT-323

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

Parameter	Symbol	Limits	Unit
Continuous reverse voltage	V_R	100	V
Forward output Current	I_F	200	mA
Peak Forward Surge Current (10 μs)	I_{FSM}	500	mA
Power Dissipation	P_d	200	mW
Thermal resistance, junction to ambient	$R_{\theta JA}$	625	$^\circ\text{C}/\text{W}$
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 to +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	$V_{(BR)}$	$I_R=100\mu\text{A}$	100		V
Reverse current	I_R	$V_R=20\text{V}$ $V_R=75\text{V}$		25 5.0	nA μA
Forward voltage	V_F	$I_F=10\text{mA}$		1.0	V
Diode capacitance	C_D	$V_R=0\text{V}, f=1\text{MHz}$		4.0	pF
Reverse recovery time	t_{rr}	$I_F=I_R=10\text{mA}$		4.0	ns

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

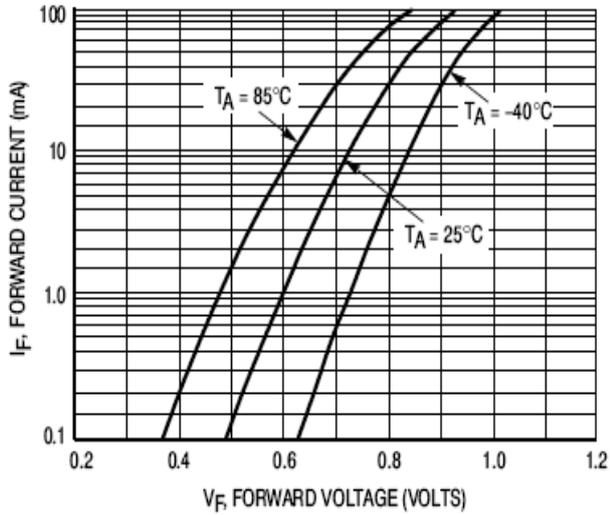


Figure 2. Forward Voltage

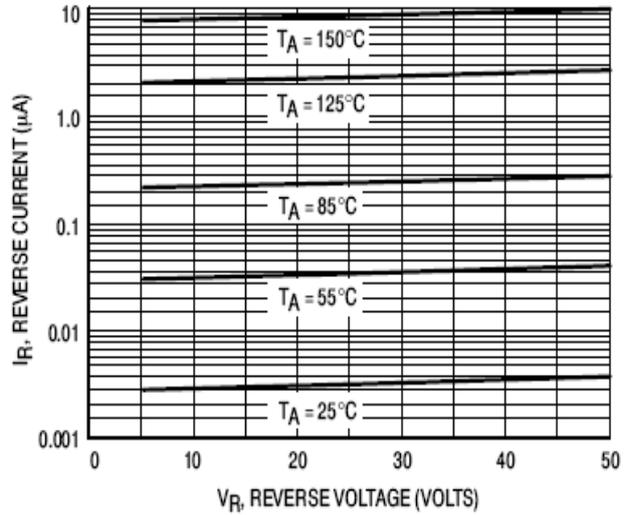


Figure 3. Leakage Current

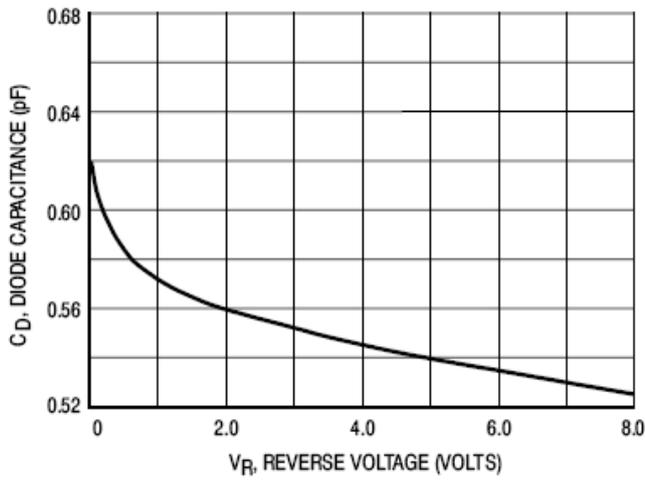


Figure 4. Capacitance

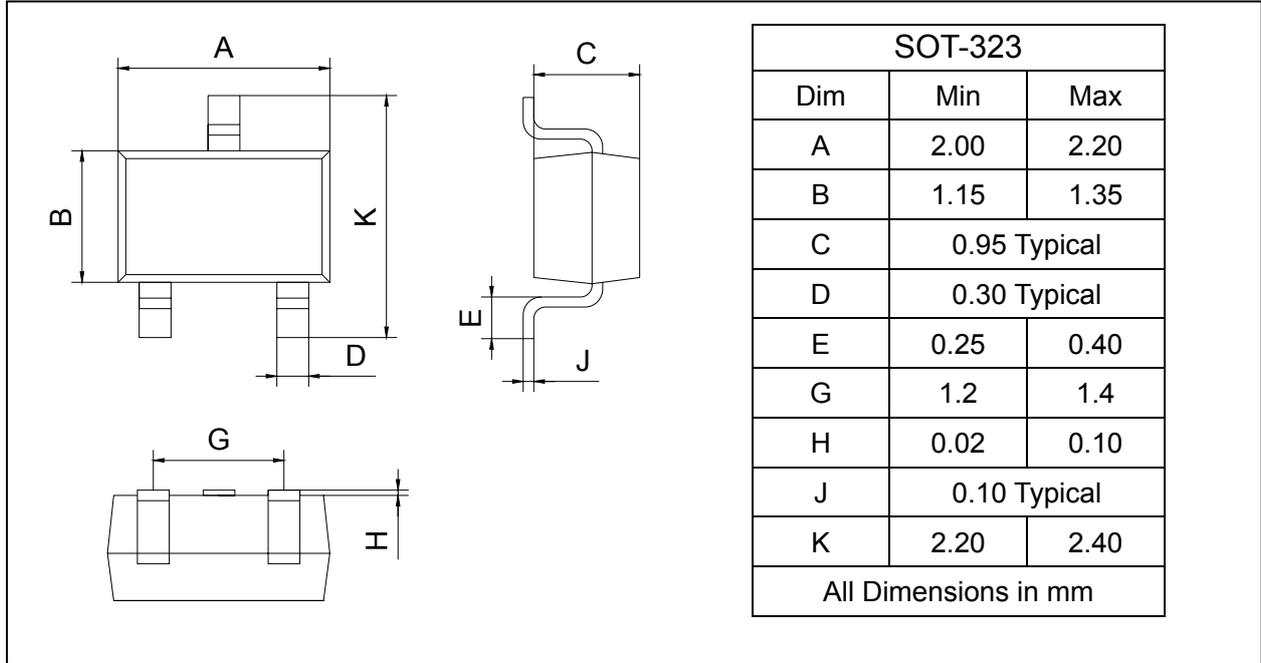
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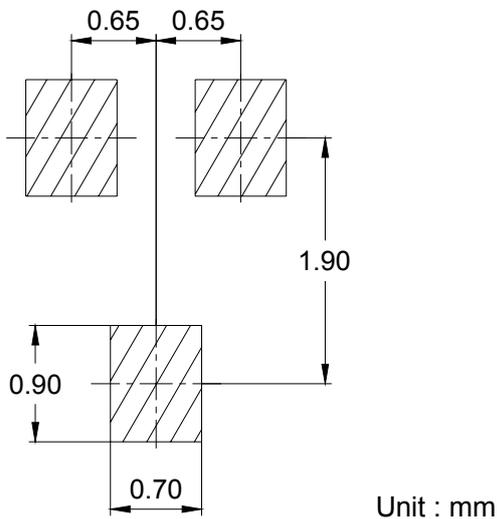
PACKAGE OUTLINE

Plastic surface mounted package

SOT-323



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
M1MA174	SOT-323	3000/Tape&Reel