

<Diode>

# MC981

For High Speed Switching Application  
Silicon Epitaxial Type (Series Type)

## DESCRIPTION

MC981 is a small type resin sealed silicon epitaxial type double diode. It is especially designed for high speed switching application.

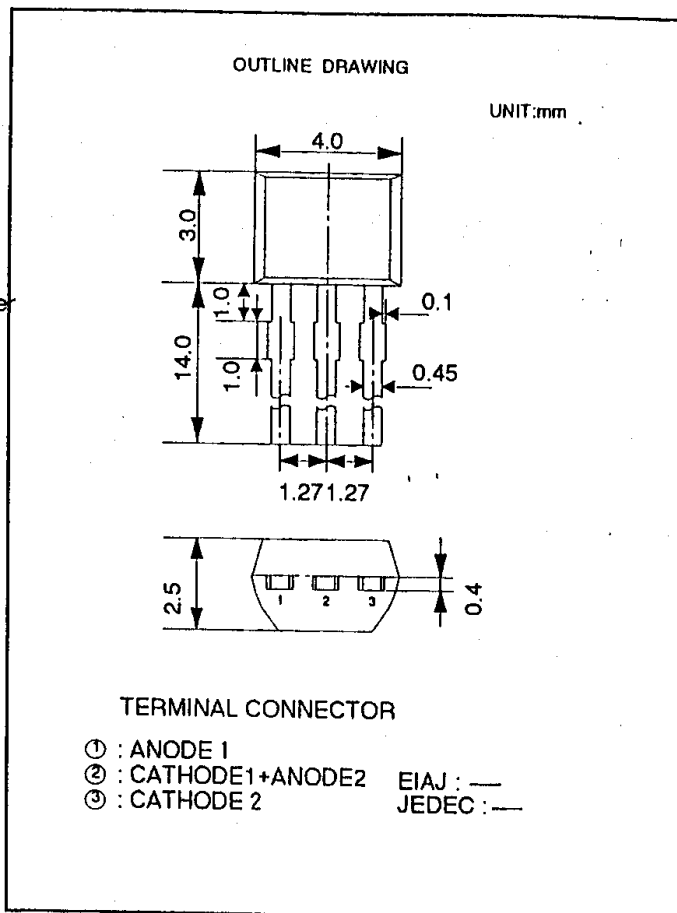
Due to the small pin capacitance (2 pieces), it is most suitable for high speed switching application and limited clipper application.

## FEATURE

- Small pin capacitance
- Small outline package for mounting
- Quick switching time
- Good two elements characteristics

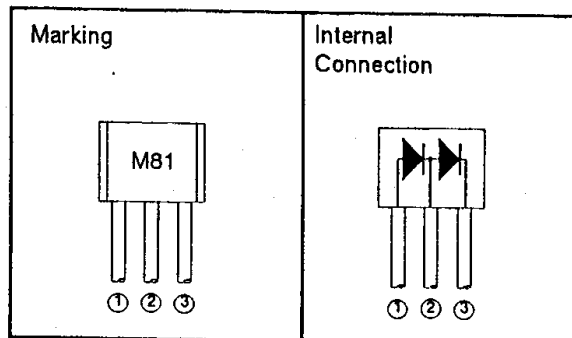
## APPLICATION

For high speed switching of audio machine, VCR.



## MAXIMUM RATINGS (Ta=25°C)

SYMBOL	PARAMETER	RATINGS	UNIT
V <sub>RM</sub>	Peak reverse voltage	75	V
V <sub>R</sub>	DC reverse voltage	50	V
I <sub>FSM</sub>	Surge current(1 μS)	4	A
I <sub>FM</sub>	Peak forward current	300	mA
I <sub>O</sub>	Average rectification current	100	mA
P <sub>T</sub>	Total allowable dissipation	450	mW
T <sub>J</sub>	Junction temperature	+125	°C
T <sub>stg</sub>	Storage temperature	-55to+125	°C



## ELECTRICAL CHARACTERISTICS (Ta=25°C)

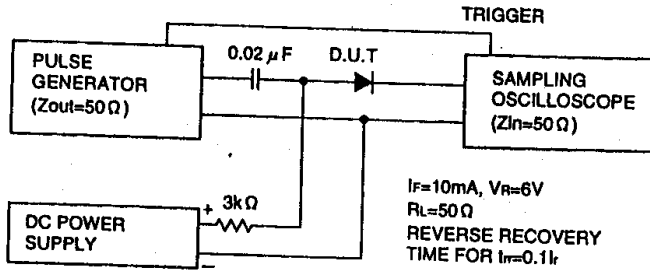
SYMBOL	PARAMETER	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
V <sub>F1</sub>	Forward voltage	I <sub>F</sub> =10mA		0.68	0.9	V
V <sub>F2</sub>	Forward voltage	I <sub>F</sub> =50mA		0.82	1.0	V
V <sub>F3</sub>	Forward voltage	I <sub>F</sub> =100mA		0.92	1.2	V
I <sub>R</sub>	Reverse current	V <sub>R</sub> =50V			0.1	μA
C <sub>t</sub>	Pin capacitance	V <sub>R</sub> =0, f=1MHz		1.2	4.0	pF
t <sub>tr</sub>		(measurement circuit reference)			4.0	ns

<Diode>

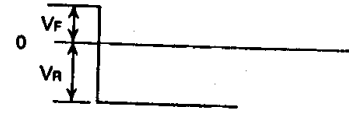
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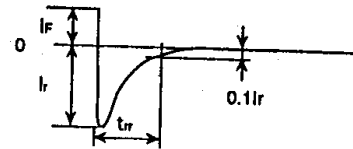
## REVERSE RECOVERY TIME( $t_{rr}$ )TEST CIRCUIT



● INPUT VOLTAGE WAVE FORM

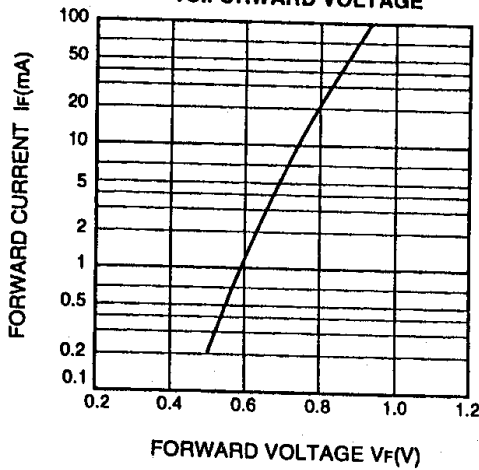


● CURRENT WAVE FORM IN DIODE

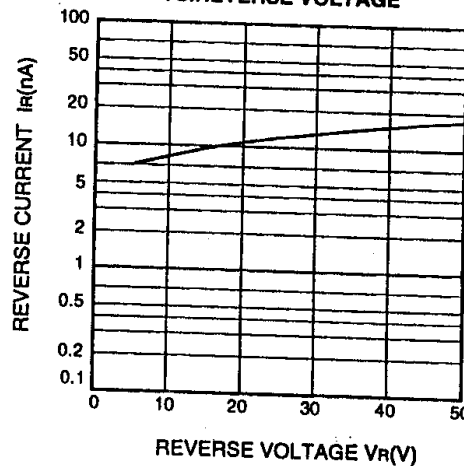


## TYPICAL CHARACTERISTICS

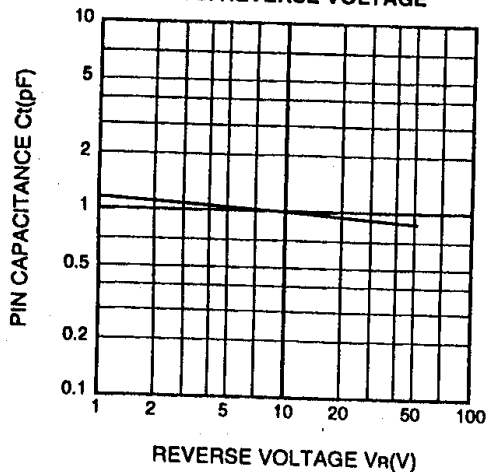
FORWARD CURRENT VS. FORWARD VOLTAGE



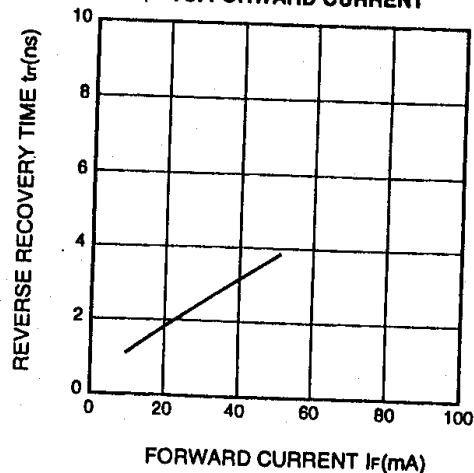
REVERSE CURRENT VS. REVERSE VOLTAGE



PIN CAPACITANCE VS. REVERSE VOLTAGE



REVERSE RECOVERY TIME VS. FORWARD CURRENT



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