

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(2pieces), it is most suitable for high speed switching application and limited clipper application.

FEATURE

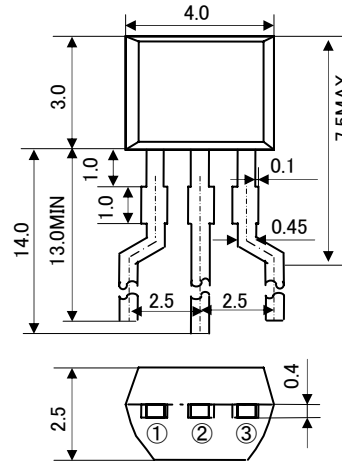
- Small pin capacitance
- Small outline package for mounting
- Quick switching time
- Good two elements characteristics

APPLICATION

For high speed switching of audio machine, VTR.

OUTLINEDRAWING

Unit : mm



JEITA: —

JEDEC: —

TERMINAL CONNECTER

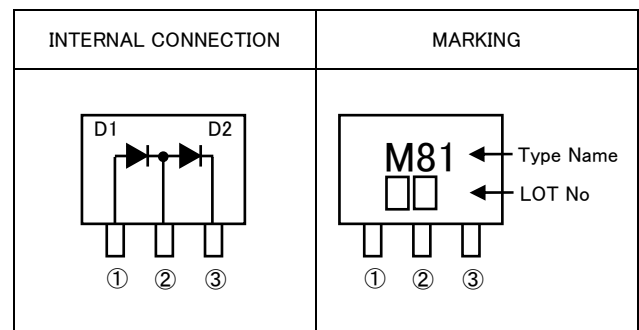
①: ANODE 1

②: CATHODE1+ ANODE 2

③: CATHODE 2

MAXIMUM RATINGS (Ta=25°C)

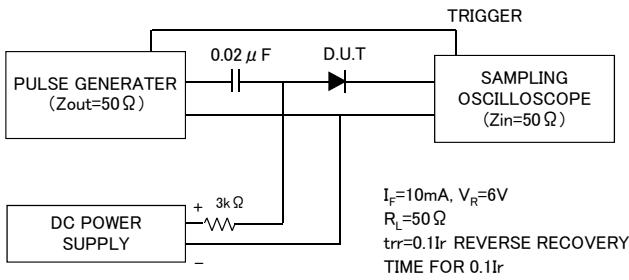
Symbol	Parameter	Ratings	Unit
V_{RM}	Peak reverse voltage	75	V
V_R	DC reverse voltage	50	V
I_{FSM}	Surge current (1 μ s)	4	A
I_{FM}	Peak forward current	300	mA
I_O	Average rectification current	100	mA
P_T	Total allowance dissipation	450	mW
T_j	Junction temperature	+125	°C
Tstg	Storage temperature	-55~+125	°C



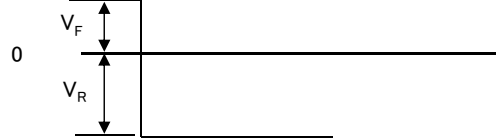
ELECTRICAL CHARACTERISTICS (Ta=25°C)

Parameter	Symbol	Test conditions	Limits			Unit
			Min	Typ	Max	
Forward voltage	V_{F1}	$I_F=10mA$	-	0.68	0.9	V
	V_{F2}	$I_F=50mA$	-	0.82	1.0	
	V_{F3}	$I_F=100mA$	-	0.92	1.2	
Reverse current	I_R	$V_R=50V$	-	-	0.1	μ A
Pin capacitance	C_t	$V_R=0V, f=1MHz$	-	1.2	4.0	pF
Reverse recovery time	trr	(Refer to test circuit)	-	-	4.0	ns

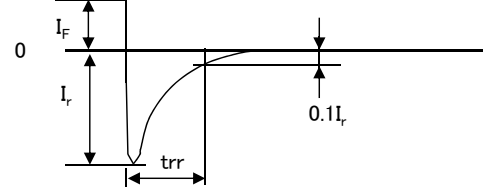
REVERSE RECOVERY TIME(t_{rr})TEST CIRCUIT



● INPUT VOLTAGE WAVE FORM

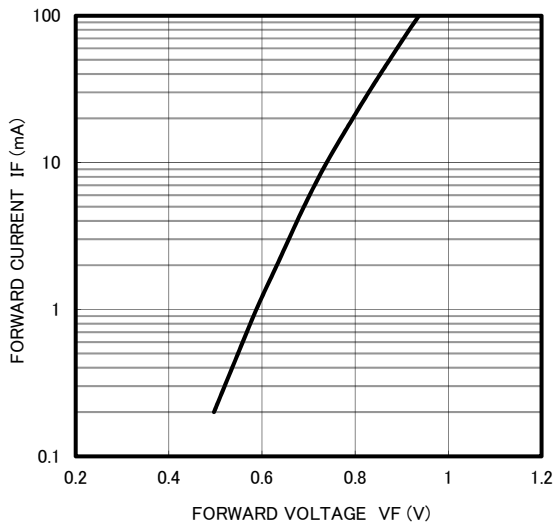


● CURRENT WAVE FORM IN DIODE

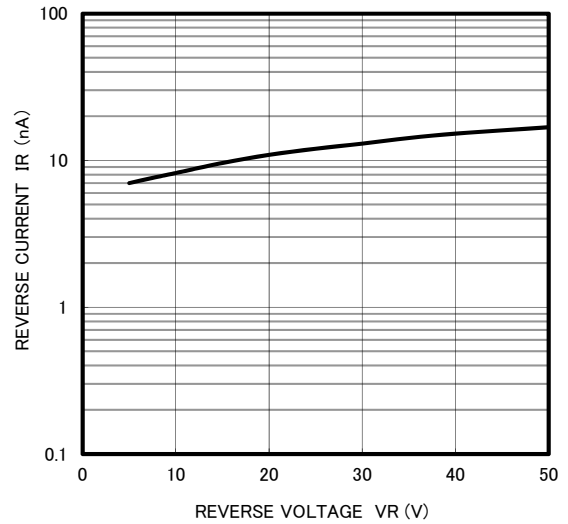


TYPICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

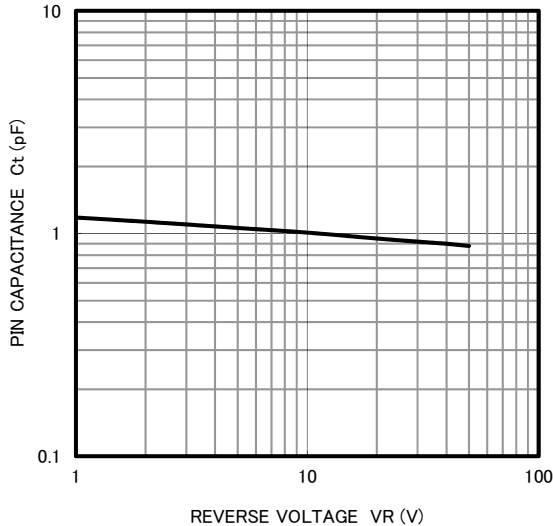
FORWARD CURRENT VS. FORWARD VOLTAGE



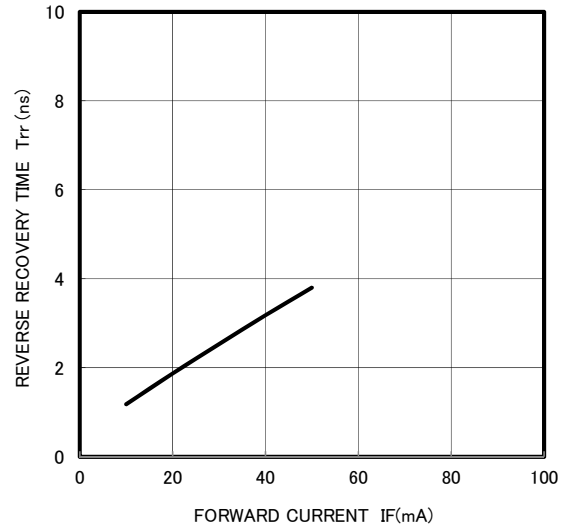
REVERSE CURRENT VS. REVERSE VOLTAGE



PIN CAPACITANCE VS. REVERSE VOLTAGE



REVERSE RECOVERY TIME VS. FORWARD CURRENT





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