

# MC971

FOR HIGH SPEED SWITCHING APPLICATION  
SILICON EPITAXIAL TYPE(COMMON CATHODE)

## DESCRIPTION

MC971 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, short switching time (reverse recovery time), It is most suitable for high speed switching application and limiter, clipper application.

## FEATURE

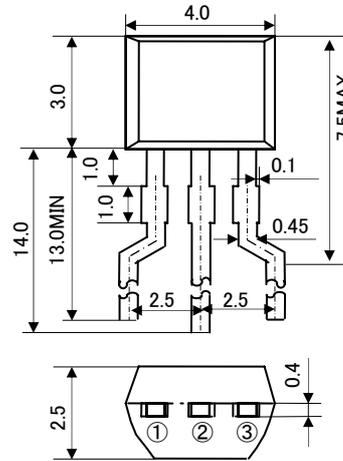
- Small pin capacitance
- Quick switching time
- High voltage
- Good two element characteristics
- Double and mini package for mounting

## APPLICATION

For general high speed switching of audio machine, VTR.

## OUTLINEDRAWING

Unit : mm



JEITA: —

JEDEC: —

TERMINAL CONNECTER

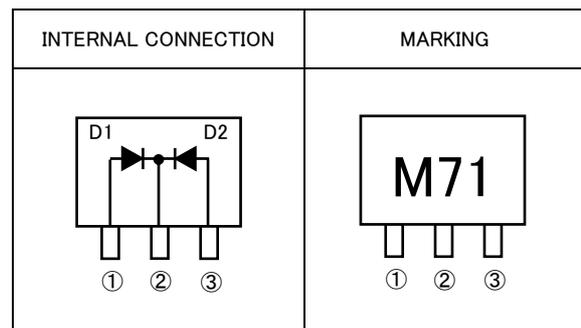
①: ANODE 1

②: CATHODE (COMMON)

③: ANODE 2

## MAXIMUM RATINGS (Ta=25°C)

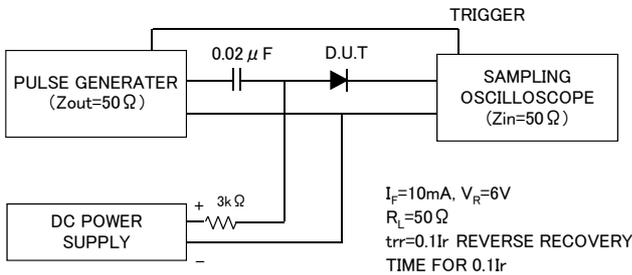
Symbol	Parameter	Ratings	Unit
$V_{RM}$	Peak reverse voltage	75	V
$V_R$	DC reverse voltage	50	V
$I_{FSM}$	Surge current (1 $\mu$ s)	4	A
$I_{FM}$	Peak forward current	300	mA
$I_O$	Average rectification current	100	mA
$P_T$	Total allowance dissipation	450	mW
$T_j$	Junction temperature	+125	°C
Tstg	Storage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



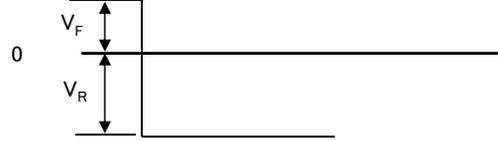
## ELECTRICAL CHARACTERISTICS (Ta=25°C)

Parameter	Symbol	Test conditions	Limits			Unit
			Min	Typ	Max	
Forward voltage	$V_{F1}$	$I_F=10mA$	-	0.72	0.9	V
	$V_{F2}$	$I_F=50mA$	-	0.85	1.0	
	$V_{F3}$	$I_F=100mA$	-	0.90	1.2	
Reverse current	$I_R$	$V_R=50V$	-	-	0.1	$\mu$ A
Pin capacitance	$C_t$	$V_R=0V, f=1MHz$	-	1.0	4.0	pF
Reverse recovery time	trr	(Refer to test circuit)	-	-	3.0	ns

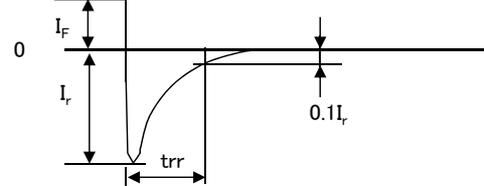
REVERSE RECOVERY TIME( $t_{rr}$ )TEST CIRCUIT



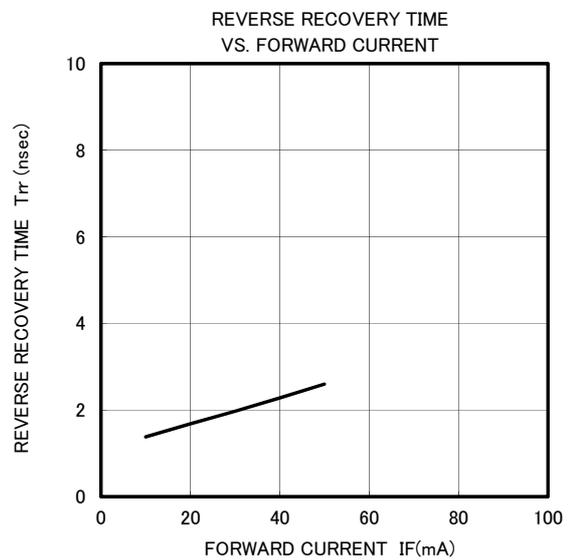
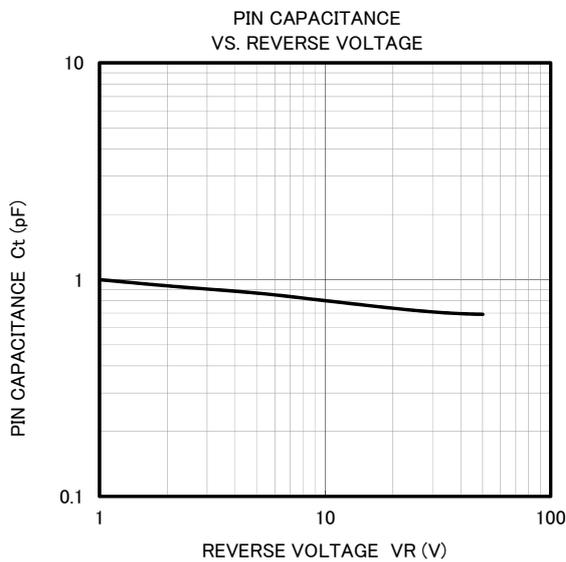
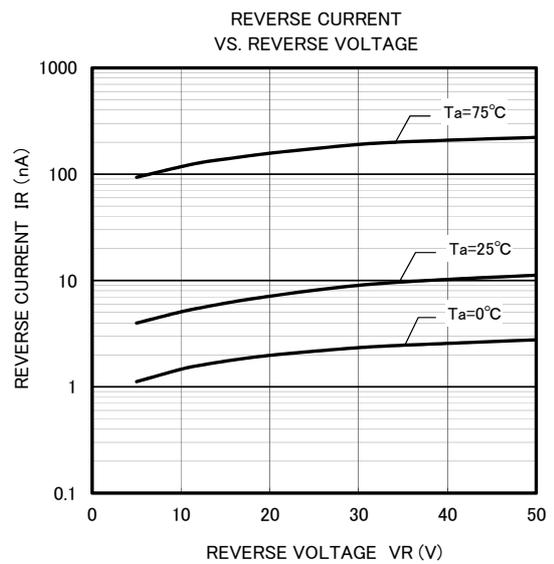
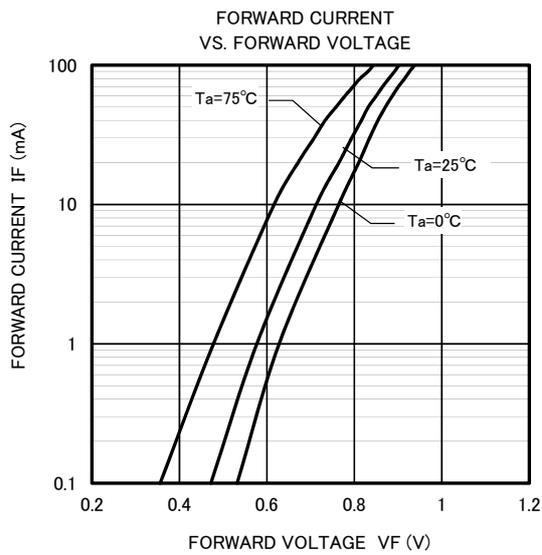
● INPUT VOLTAGE WAVE FORM



● CURRENT WAVE FORM IN DIODE



TYPICAL CHARACTERISTICS





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