

<Diode>

# MC2854

For High Speed Switching Application  
Silicon Epitaxial Type Ultra Super Mini

## DESCRIPTION

MC2854 is a super mini silicon epitaxial type diode, 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

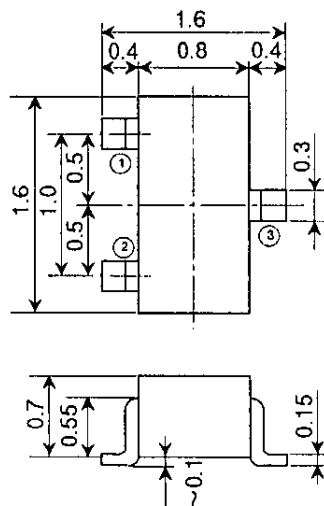
- Small pin capacitance
- Quick switching time
- Small outline package for mounting
- High voltage
- Super mini package for easy mounting

## APPLICATION

For general high speed switching of audio machine, VCR.

## OUTLINE DRAWING

UNIT:mm



Terminal Connector

- ① : NC  
② : ANODE  
③ : CATHODE
- EIAJ : -  
JEDEC : -

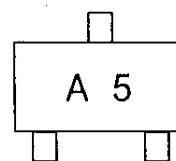
Note)

The dimension without tolerance represent central value.

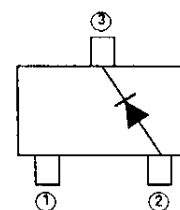
## MAXIMUM RATINGS (Ta=25°C)

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	125	mW
T <sub>j</sub>	Junction temperature	+125	°C
T <sub>stg</sub>	Storage temperature	-55 to +125	°C

## MARKING



## INTERNAL CONNECTION



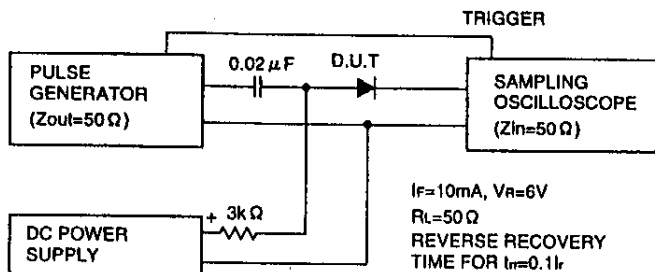
## ELECTRICAL CHARACTERISTICS (Ta=25°C)

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		1.3	4.0	pF
t <sub>rr</sub>	Reverse recovery time	(Refer to test circuit)			4.0	ns

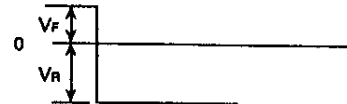
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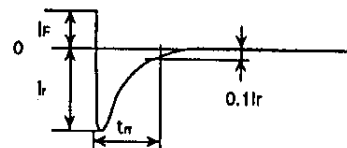
## REVERSE RECOVERY TIME( $t_{rr}$ )TEST CIRCUIT



● INPUT VOLTAGE WAVE FORM

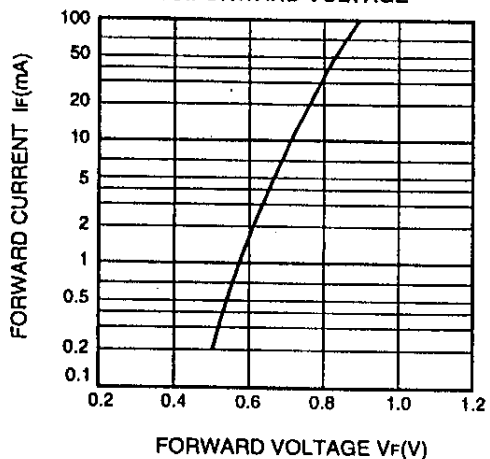


● CURRENT WAVE FORM IN DIODE

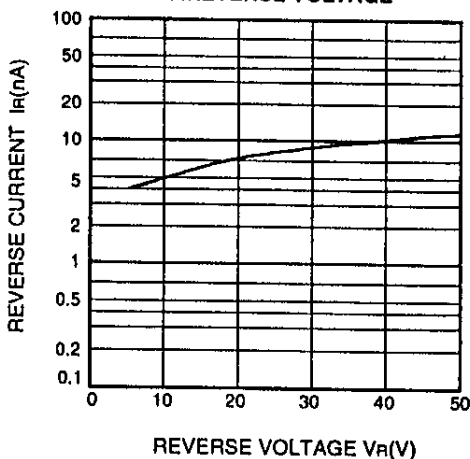


## TYPICAL CHARACTERISTICS

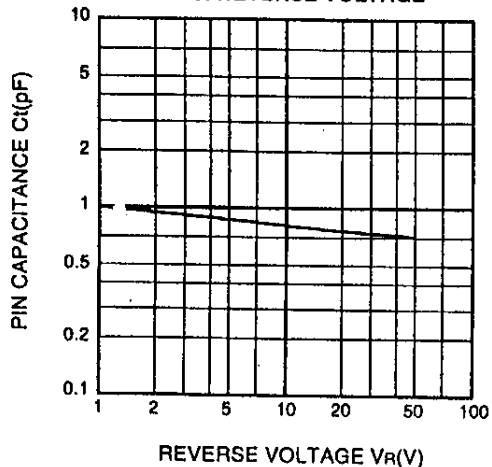
FORWARD CURRENT VS. FORWARD VOLTAGE



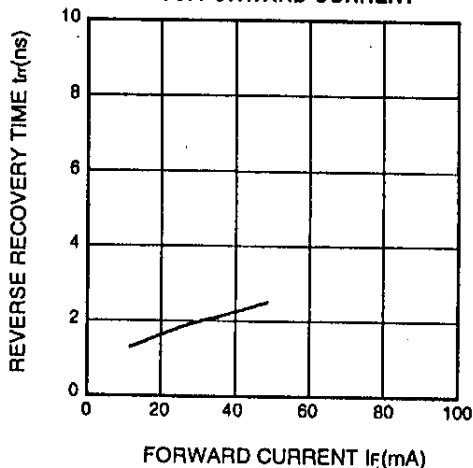
REVERSE CURRENT VS. REVERSE VOLTAGE



PIN CAPACITANCE VS. REVERSE VOLTAGE



REVERSE RECOVERY TIME VS. FORWARD CURRENT



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