

〈SMALL-SIGNAL DIODE〉

MC2831

FOR HIGH SPEED SWITCHING APPLICATION
SILICON EPITAXIAL TYPE

DESCRIPTION

MC2831 is a super mini package plastic seal type 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

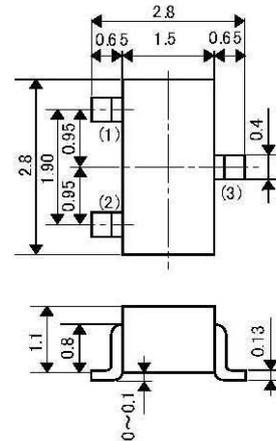
- Small pin capacitance
- Quick switching time
- Small outline package for mounting
- High voltage
- Super mini package for mounting

APPLICATION

For general high speed switching of audio machine, VCR.

OUTLINE DRAWING

Unit:mm



TERMINAL CONNECTOR

- ① : CATHODE
- ② : NC
- ③ : ANODE

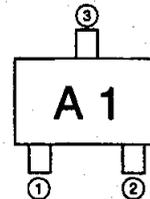
EIAJ : SC-59

JEDEC : TO-236 resemblance

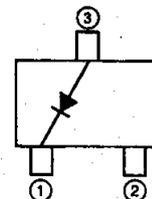
Note)

The dimension without tolerance represent central value.

MARKING



INTERNAL CONNECTION



MAXIMUM RATINGS (Ta=25°C)

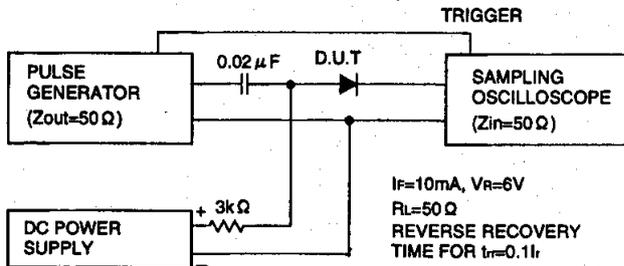
Symbol	Parameter	Rated	Unit
V _{RM}	Peak reverse voltage	75	V
V _R	DC reverse voltage	50	V
I _{FSM}	Surge current(1 μs)	4	A
I _{FM}	Peak forward current	300	mA
I _O	Average rectification current	100	mA
P _T	Total allowable dissipation(Ta=25°C)	150	mW
T _J	Junction temperature	+125	°C
T _{stg}	Storage temperature	-55 to +125	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C)

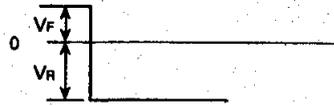
Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
V _{F1}	Forward voltage	I _F = 10mA		0.77	0.9	V
V _{F2}	Forward voltage	I _F = 50mA		0.90	1.0	V
V _{F3}	Forward voltage	I _F = 100mA		0.95	1.2	V
I _R	Reverse current	V _R = 50V			0.1	μA
C _i	Pin capacitance	V _R = 0, f = 1MHz		2.8	4.0	pF
t _{rr}	Reverse recovery time	(Refer to test circuit)			4.0	ns

FOR HIGH SPEED SWITCHING APPLICATION
SILICON EPITAXIAL TYPE

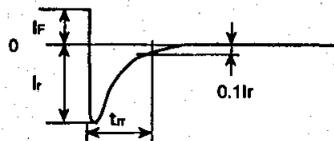
REVERSE RECOVERY TIME(t_{rr})TEST CIRCUIT



● INPUT VOLTAGE WAVE FORM

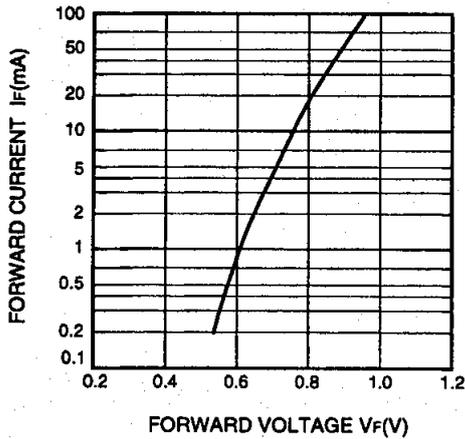


● CURRENT WAVE FORM IN DIODE

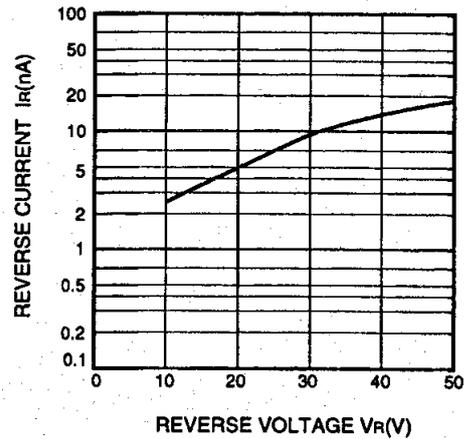


TYPICAL CHARACTERISTICS

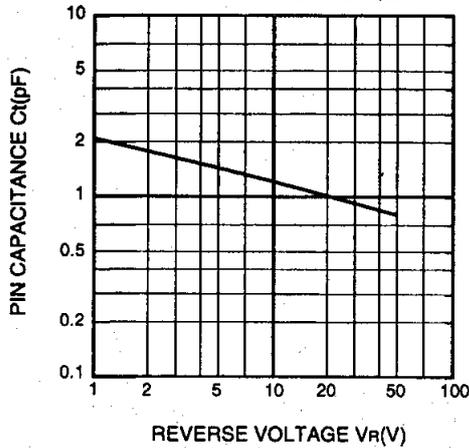
FORWARD CURRENT
VS. FORWARD VOLTAGE



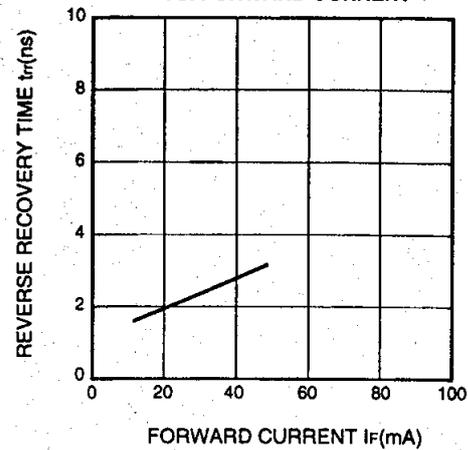
REVERSE CURRENT
VS. REVERSE VOLTAGE



PIN CAPACITANCE
VS. REVERSE VOLTAGE



REVERSE RECOVERY TIME
VS. FORWARD CURRENT



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