〈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 limitter ,clipper application.

FEATURE

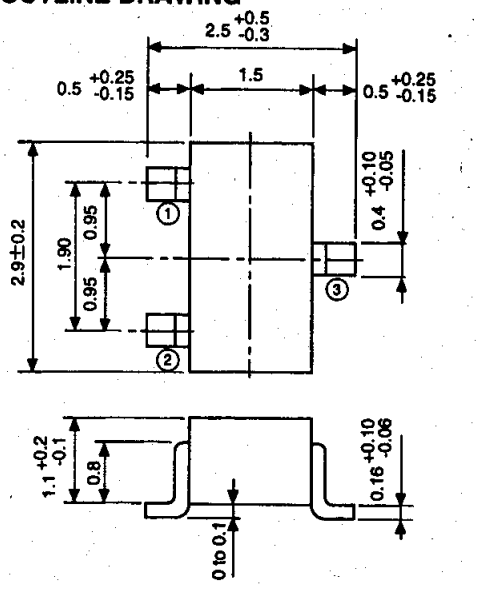
- Small pin capacitance
- Quick switching time
- Small outline package for mounting
- High voltage
- Super mini package for mounting

APPLICATION

For general high speed switching of audio machine,VCR.

OUTLINE DRAWING

Unit:mm



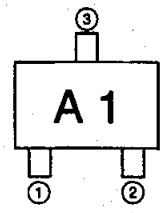
TERMINAL CONNECTOR

① : CATHODE
② : NC
③ : ANODE

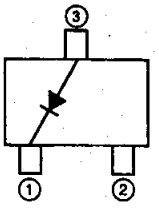
EIAJ : SC-59
JEDEC : TO-236 resemblance

Note)
The dimension without tolerance represent central value.

MARKING



INTERNAL CONNECTION



MAXIMUM RATINGS (Ta=25℃)

Symbol	Parameter	Ratings	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℃)	150	mW
T_j	Junction temperature	+125	℃
T_{stg}	Storage temperature	-55 to +125	℃

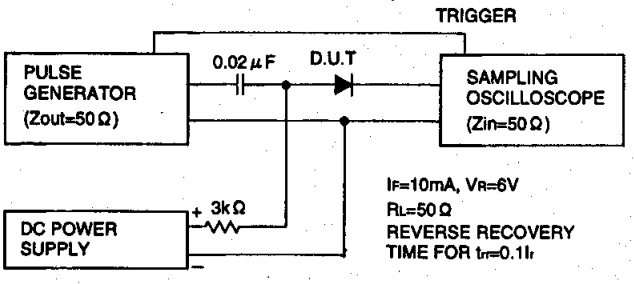
ELECTRICAL CHARACTERISTICS (Ta=25℃)

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_t	Pin capacitance	V_R =0,f=1MHz		2.8	4.0	pF
t_{rr}	Reverse recovery time	(Refer to test circuit)			4.0	ns

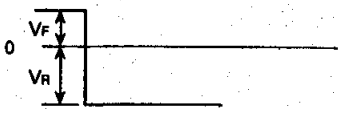
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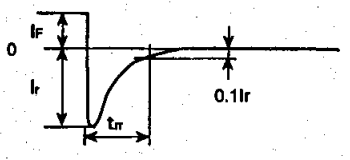
REVERSE RECOVERY TIME(t_{rr})TEST CIRCUIT



●INPUT VOLTAGE WAVE FORM

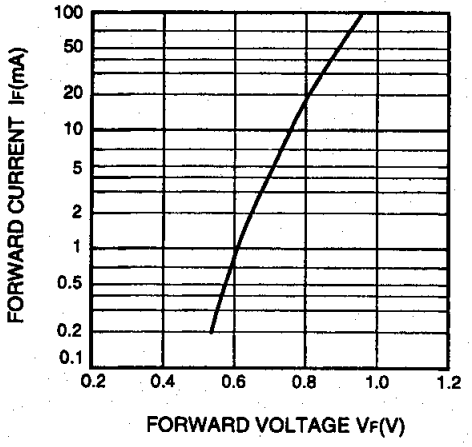


●CURRENT WAVE FORM IN DIODE

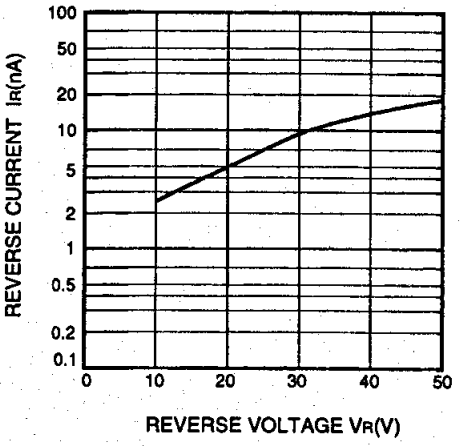


TYPICAL CHARACTERISTICS

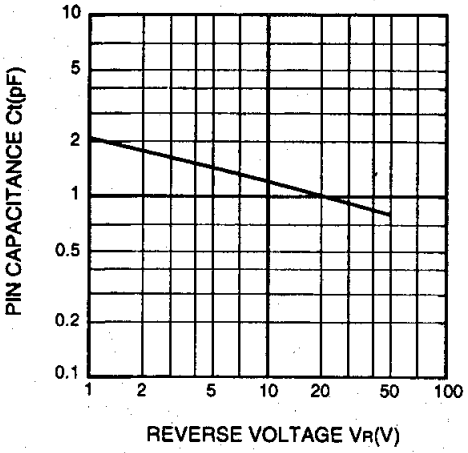
FORWARD CURRENT VS.FORWARD VOLTAGE



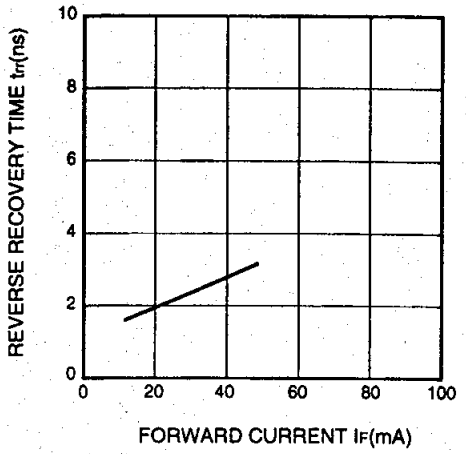
REVERSE CURRENT VS.REVERSE VOLTAGE



PIN CAPACITANCE VS. REVERSE VOLTAGE



REVERSE RECOVERY TIME VS. FORWARD CURRENT



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