

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.

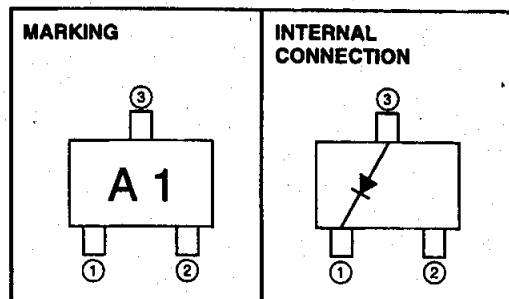
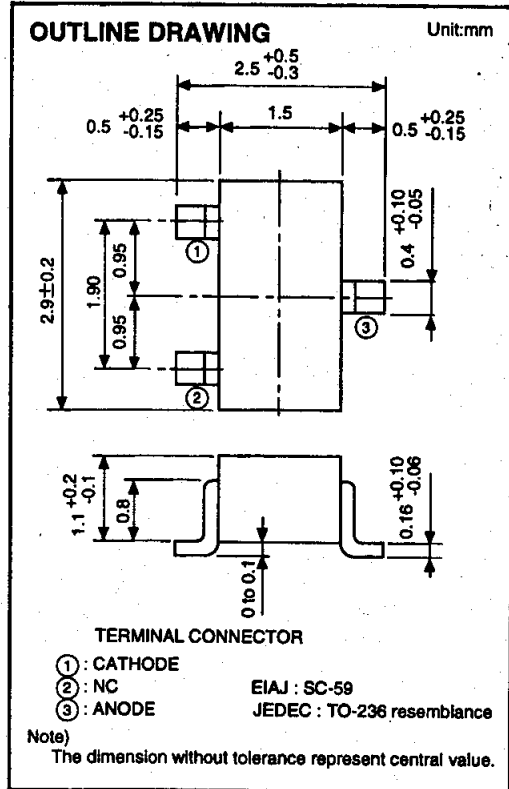
Due to the small pin capacitance, short switching time (reverse recovery time), it is most suitable for high speed switching application and limiter, clipper application.

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.



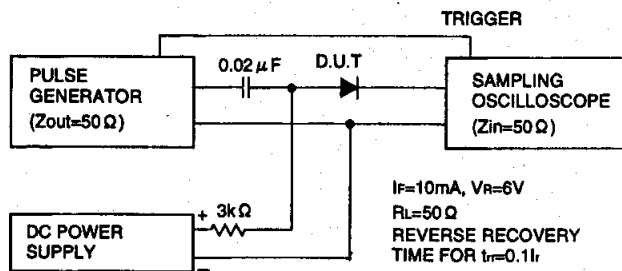
MAXIMUM RATINGS (Ta=25°C)

Symbol	Parameter	Ratings	Unit
V _{RM}	Peak reverse voltage	75	V
V _R	DC reverse voltage	50	V
I _{FSM}	Surge current(1 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

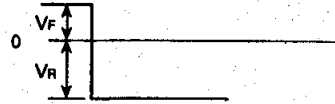
ELECTRICAL CHARACTERISTICS (Ta=25°C)

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

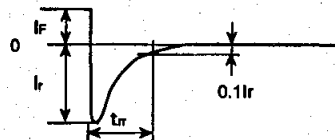
REVERSE RECOVERY TIME(t_{rr})TEST CIRCUIT



● INPUT VOLTAGE WAVE FORM

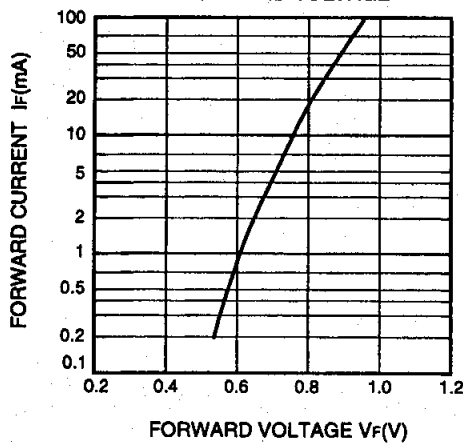


● CURRENT WAVE FORM IN DIODE

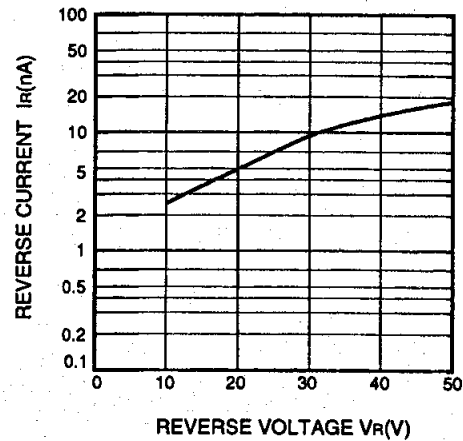


TYPICAL CHARACTERISTICS

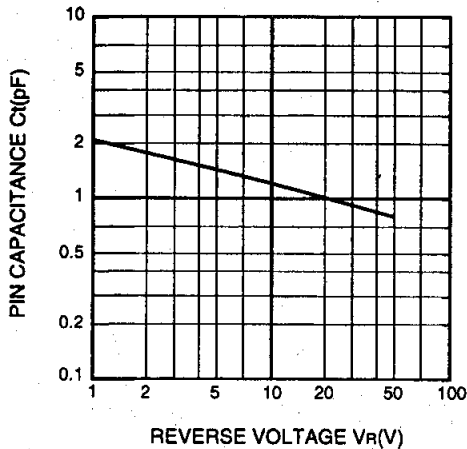
FORWARD CURRENT VS. FORWARD VOLTAGE



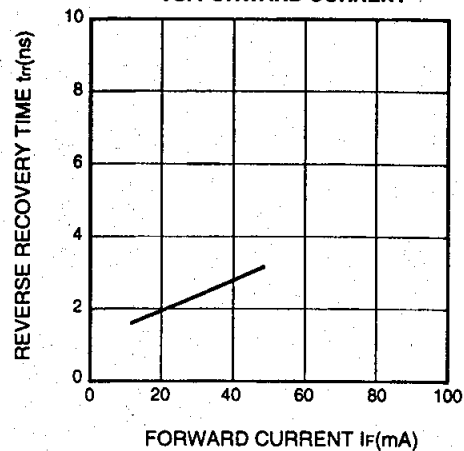
REVERSE CURRENT VS. REVERSE VOLTAGE



PIN CAPACITANCE VS. REVERSE VOLTAGE



REVERSE RECOVERY TIME VS. FORWARD CURRENT



The logo for IDC Isahaya Electronics Corporation features the letters 'IDC' in a stylized blue font with a red triangle above the 'I', followed by the words 'ISAHAYA ELECTRONICS CORPORATION' in a black, italicized serif font.

<http://www.idc-com.co.jp>
6-41, TSUKUBA, ISAHAYA, NAGASAKI, 854-0065, JAPAN

Keep safety in your circuit designs !

Isahaya Electronics Corporation puts the maximum effort into making semiconductor products better and more reliable, but there is always the possibility that trouble may occur with them. Trouble with semiconductors may lead to personal injury, fire or property damage. Remember to give consideration to safety when making your circuit designs, with appropriate measures such as (i) placement of substitutive, auxiliary circuits, (ii) use of non-flammable material or (iii) prevention against any malfunction or mishap.

Notes regarding these materials

·These materials are intended as reference to assist out customers in the selection of the Isahaya semiconductor product best suited to the customer's application, they do not convey any license under any intellectual property rights, or any other rights, belonging to Isahaya Electronics Corporation or a third party.
·Isahaya Electronics Corporation assumes no responsibility for any damage, or infringement of any third-party rights, originating in the use of any product data, diagrams, charts or circuit application examples contained in the materials.
·All information contained in these materials, including product data, diagrams and charts, represent information on products at the time of publication of these materials, and are subject to change by Isahaya Electronics Corporation without notice due to product improvements or other reasons. It is therefore recommended that customers contact Isahaya Electronics Corporation or authorized Isahaya Semiconductor product distributor for the latest product information before purchasing a product listed herein.
·The prior written approval of Isahaya Electronics Corporation is necessary to reprint or reproduce in whole or in part these materials.
·If these products or technologies are subject to the Japanese export control restrictions, they must be exported under a license from the Japanese government and cannot be imported into a country other than the approved destination. Any diversion or reexport contrary to the export control laws and regulations of Japan and/or the country of destination is prohibited.
·Please contact Isahaya Electronics Corporation or an authorized Isahaya Semiconductor product distributor for further details on these materials or the products contained therein.
