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April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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Not recommended
for new design

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HSS4148

Silicon Epitaxial Planar Diode for Various Detector,
Modulator, Demodulator

REJ03G0404-0100

Rev.1.00

Sep 17, 2004

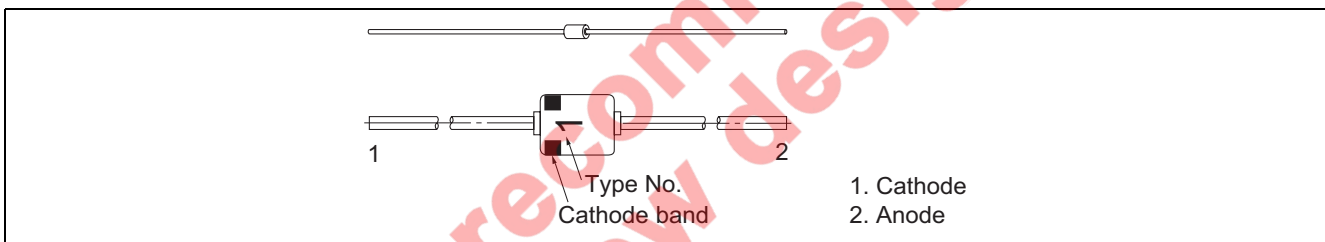
Features

- Low capacitance. ($C = 4.0$ pF max)
- Short reverse recovery time. ($t_{rr} = 4.0$ ns max)
- Suitable for 5mm-pitch high speed automatic insertion.

Ordering Information

Type No.	Cathode band	Mark	Package Code
HSS4148	Black	1	MHD

Pin Arrangement



Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Peak reverse voltage	V_{RM}	100	V
Reverse voltage	V_R	75	V
Average rectified current	I_O	150	mA
Peak forward surge current	I_{FM}	450	mA
Non-Repetitive peak forward surge current	I_{FSM}^{*1}	1	A
Junction temperature	T_J	175	°C
Storage temperature	T_{stg}	-65 to +175	°C

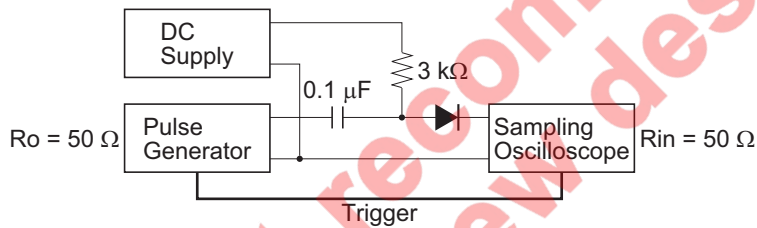
Note: 1. Forward Surge within one second duration

Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Forward voltage	V_F	—	—	1.0	V	$I_F = 10 \text{ mA}$
Reverse current	I_R	—	—	25	nA	$V_R = 20 \text{ V}$
Capacitance	C	—	—	4.0	pF	$V_R = 0 \text{ V}, f = 1 \text{ MHz}$
Reverse recovery time	t_{rr}^{*1}	—	—	4.0	ns	$I_F = 10 \text{ mA}, V_R = 6 \text{ V}, I_{rr} = 1 \text{ mA}, R_L = 100 \Omega$

Note: 1. Reverse recovery time test circuit



Thermal Characteristics

Item	Typ	Unit
Rth(j-a)	(300) ^{*1}	°C/W

Note: 1. Reference only.

Main Characteristic

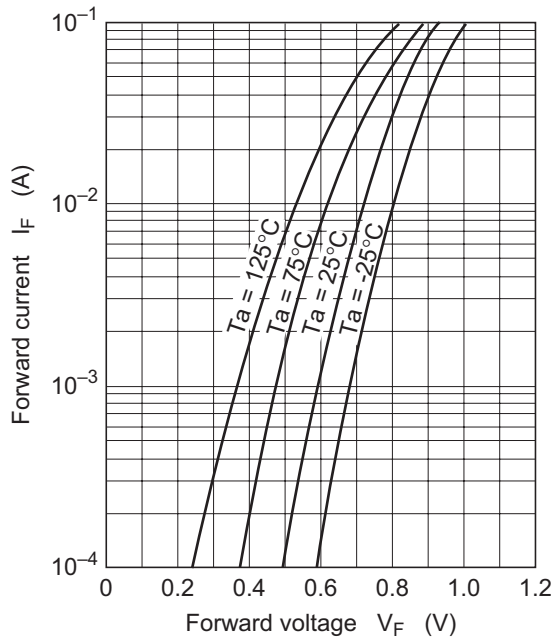


Fig.1 Forward current vs. Forward voltage

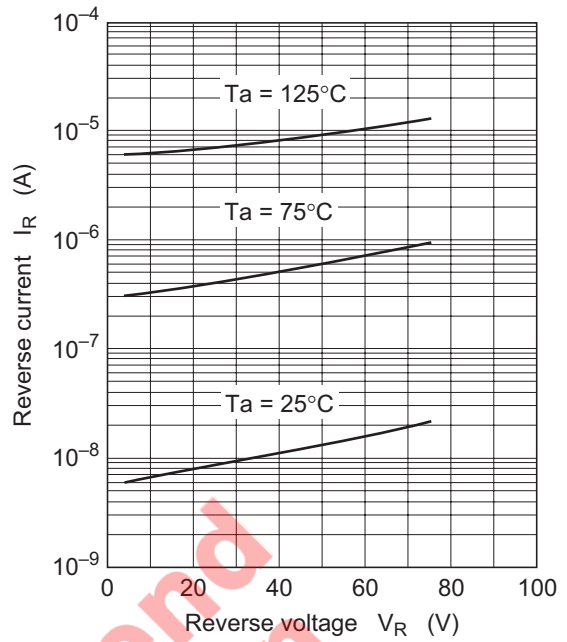


Fig.2 Reverse current vs. Reverse voltage

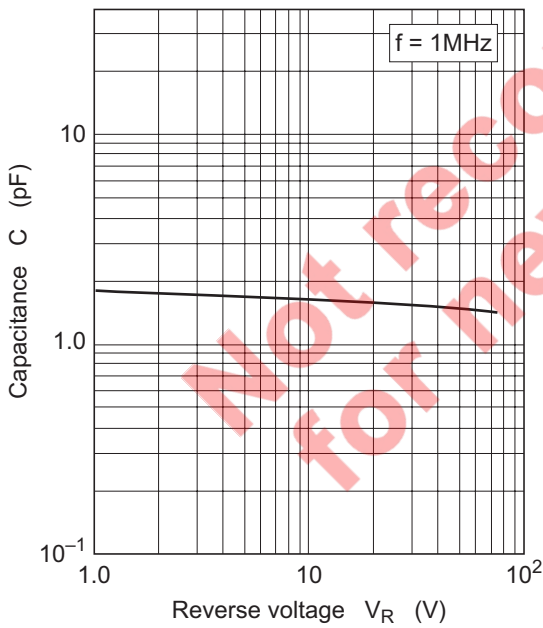
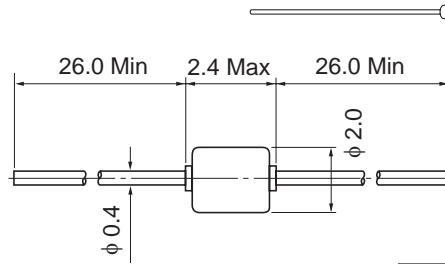


Fig.3 Capacitance vs. Reverse voltage

Package Dimensions

As of January, 2003
Unit: mm

Package Code	MHD
JEDEC	Conforms
JEITA	—
Mass (reference value)	0.084 g

Not recommend
for new design

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Renesas Technology America, Inc.
450 Holger Way, San Jose, CA 95134-1368, U.S.A
Tel: <1> (408) 382-7500, Fax: <1> (408) 382-7501

Renesas Technology Europe Limited
Dukes Meadow, Millboard Road, Bourne End, Buckinghamshire, SL8 5FH, U.K.
Tel: <44> (1628) 585-100, Fax: <44> (1628) 585-900

Renesas Technology Hong Kong Ltd.
7th Floor, North Tower, World Finance Centre, Harbour City, 1 Canton Road, Tsimshatsui, Kowloon, Hong Kong
Tel: <852> 2265-6688, Fax: <852> 2730-6071

Renesas Technology Taiwan Co., Ltd.
10th Floor, No.99, Fushing North Road, Taipei, Taiwan
Tel: <886> (2) 2715-2888, Fax: <886> (2) 2713-2999

Renesas Technology (Shanghai) Co., Ltd.
Unit2607 Ruijing Building, No.205 Maoming Road (S), Shanghai 200020, China
Tel: <86> (21) 6472-1001, Fax: <86> (21) 6415-2952

Renesas Technology Singapore Pte. Ltd.
1 Harbour Front Avenue, #06-10, Keppel Bay Tower, Singapore 098632
Tel: <65> 6213-0200, Fax: <65> 6278-8001