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Renesas Technology Corp.
Customer Support Dept.
April 1, 2003

Cautions

Keep safety first in your circuit designs!

1. Renesas Technology 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 due consideration to safety when making your circuit designs, with appropriate measures such as (i) placement of substitutive, auxiliary circuits, (ii) use of nonflammable material or (iii) prevention against any malfunction or mishap.

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HSM198S

Silicon Schottky Barrier Diode for Various Detector



ADE-208-090C (Z)

Rev. 3
Oct. 2001

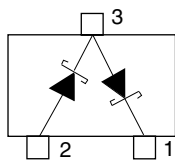
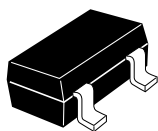
Features

- Detection efficiency is very good.
- Small temperature coefficient.
- HSM198S which is interconnected in series configuration is designed for balanced mixer use.
- MPAK package is suitable for high density surface mounting and high speed assembly.

Ordering Information

Type No.	Laser Mark	Package Code
HSM198S	C6	MPAK

Pin Arrangement



(Top View)

- 1. Cathode 2
- 2. Anode 1
- 3. Cathode 1
Anode 2

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V_R	10	V
Average forward current	I_O^*	30	mA
Junction temperature	Tj	125	°C
Storage temperature	Tstg	−55 to +125	°C

Note: Two device total

Electrical Characteristics *¹

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Forward voltage	V_F	—	—	1.1	V	$I_F = 5 \text{ mA}$
Forward current	I_F	4.5	—	—	mA	$V_F = 1 \text{ V}$
Reverse current	I_R	—	—	70	μA	$V_R = 6 \text{ V}$
Capacitance	C	—	—	1.5	pF	$V_R = 1 \text{ V}$, $f = 1 \text{ MHz}$
Capacitance deviation	ΔV_F	—	—	10	mV	$I_F = 5 \text{ mA}$
ESD Capability * ²	—	30	—	—	V	C = 200 pF, R = 0 Ω, Both forward and reverse direction 1 pulse

Notes: 1. Per one device

2. Failure Criterriion; $I_R > 140 \text{ μA}$ at $V_R = 6 \text{ V}$

Main Characteristic

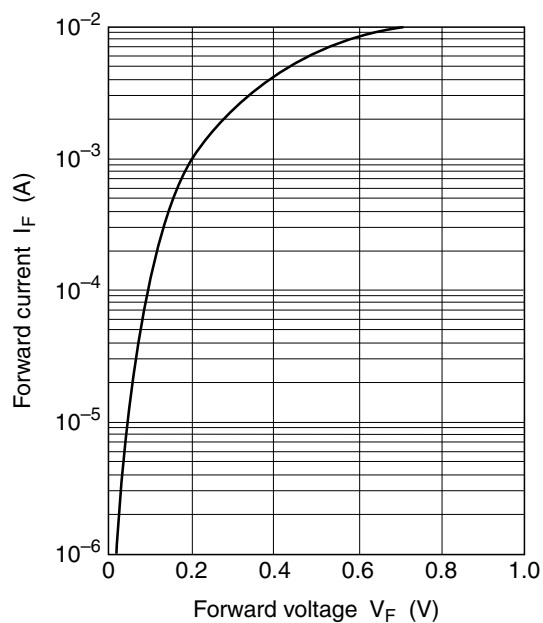


Fig.1 Forward current vs. Forward voltage

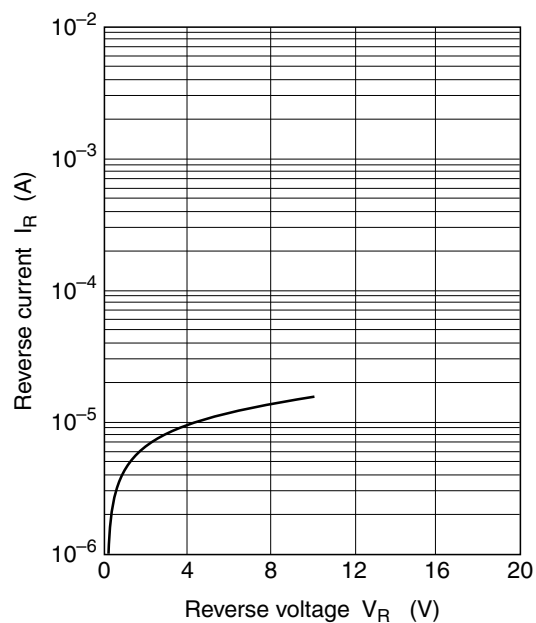


Fig.2 Reverse current vs. Reverse voltage

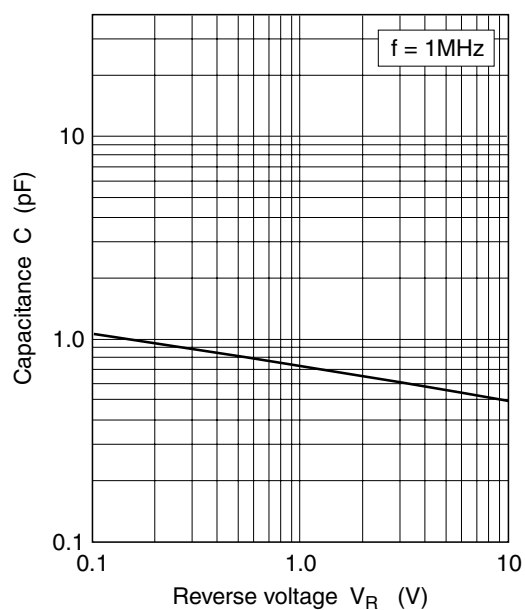
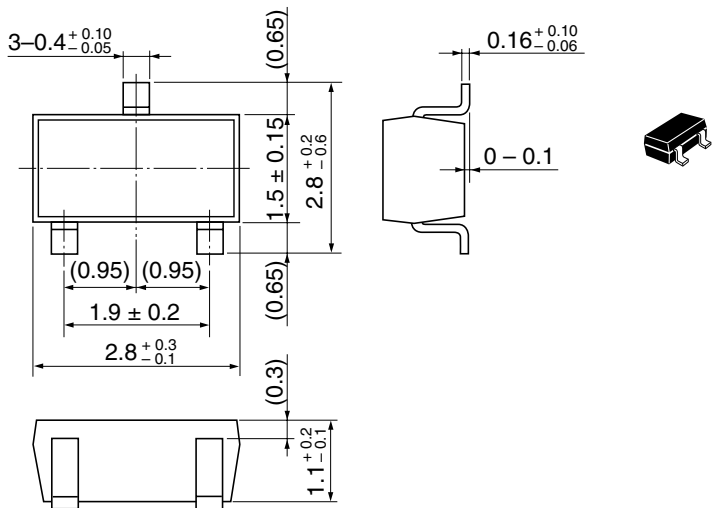


Fig.3 Capacitance vs. Reverse voltage

Package Dimensions

As of July, 2001
Unit: mm



Hitachi Code	MPAK(D)
JEDEC	—
JEITA	Conforms
Mass (reference value)	0.011 g

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