
HSM198S

Silicon Schottky Barrier Diode for Various Detector,
High speed switching

HITACHI

ADE-208-090B (Z)
Preliminary
Rev. 2
Jun. 1993

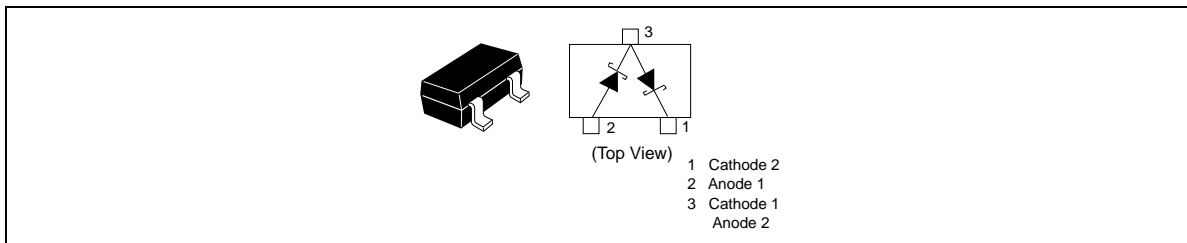
Features

- 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



HSM198S

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 (Ta = 25°C)*1

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Forward voltage	V_F	—	—	1.1	V	$I_F = 5\text{mA}$
Reverse current	I_R	—	—	70	μA	$V_R = 6\text{V}$
Forward current	I_F	4.5	—	—	mA	$V_F = 1\text{V}$
Capacitance	C	—	—	1.5	pF	$V_R = 1\text{V}, f = 1\text{MHz}$
Capacitance deviation	ΔV_F	—	—	10	mV	$I_F = 5\text{mA}$
Rectifier efficiency	η	70	—	—	%	$V_{in} = 2V_{rms}, f = 40\text{MHz},$ $R_L = 5k\Omega, C_L = 20\text{pF}$
ESD Capability	—	30	—	—	V	*2C = 200pF, Both forward and reverse direction 1 pulse

Notes: 1. Per one device

2. Failure Criterion; $I_R \geq 140 \mu\text{A}$ at $V_R = 6\text{V}$

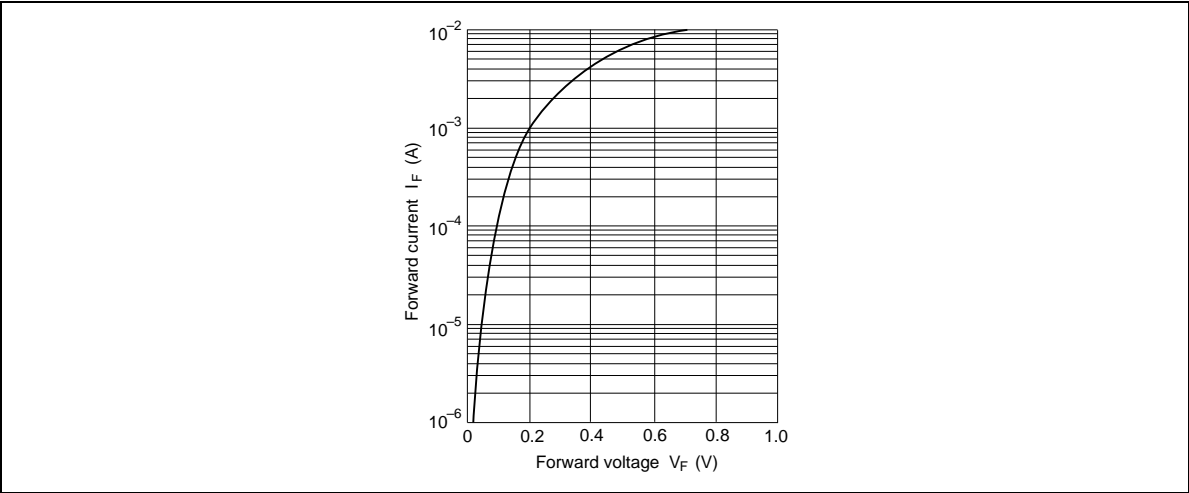


Fig.1 Forward current Vs. Forward voltage

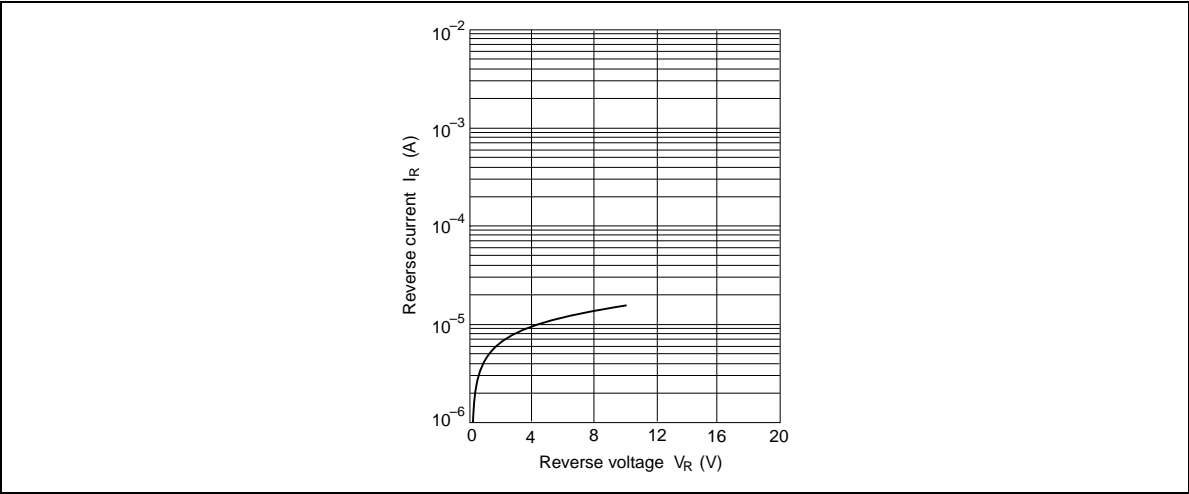


Fig.2 Reverse current Vs. Reverse voltage

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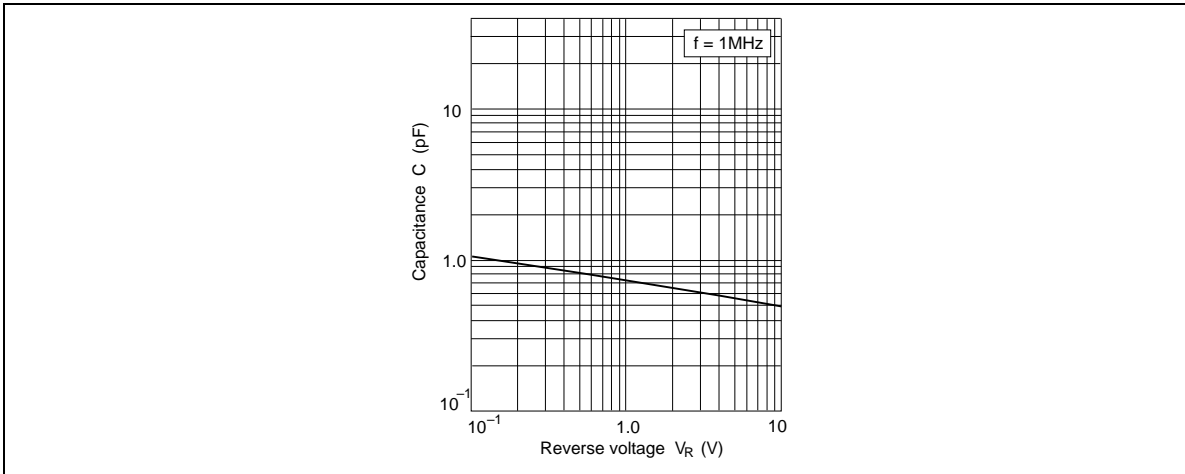


Fig.3 Capacitance Vs. Reverse voltage

Package Dimensions

