

HSM198S

Silicon Schottky Barrier Diode

for Various Detector, High speed switching

HITACHI

Preliminary

Rev.2

Jun. 1993

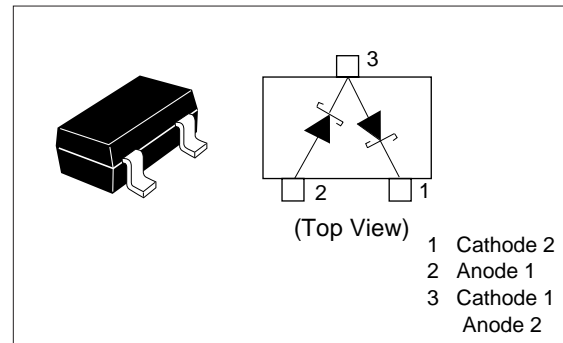
Features

- 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	C 6	MPAK

Pin Arrangement



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	T_j	125	°C
Storage temperature	T_{stg}	-55 to +125	°C

* Two device total

Electrical Characteristics (Ta = 25°C) *

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	—	—	%	$V_{in} = 2 \text{ V}_{rms}, f = 40 \text{ MHz}$ $R_L = 5 \text{ k}\Omega, C_L = 20 \text{ pF}$
ESD Capability	—	30	—	—	V	** C=200pF, Both forward and reverse direction 1 pulse

* Per one device

** Failure Criterrion ; $I_R \geq 140 \mu\text{A}$ at $V_R = 6\text{V}$

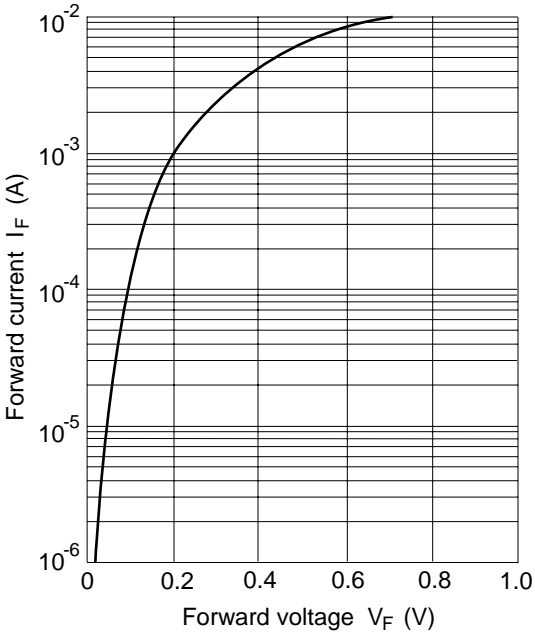


Fig.1 Forward current Vs. Forward voltage

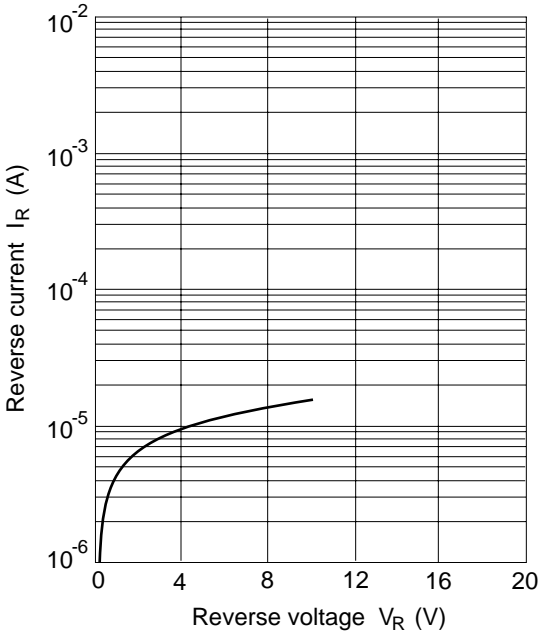


Fig.2 Reverse current Vs. Reverse voltage

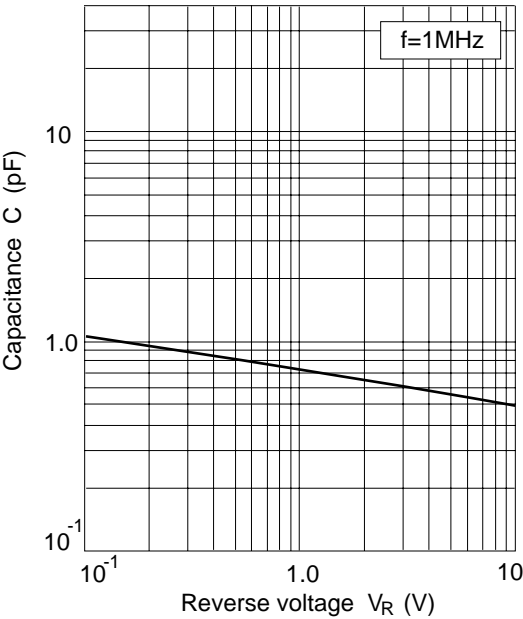


Fig.3 Capacitance Vs. Reverse voltage

Package Dimensions

Unit: mm

