

HSM198S

Silicon Schottky Barrier Diode for Various Detector,
High speed switching

HITACHI

ADE-208-090B (Z)

Rev. 2

Jun. 1993

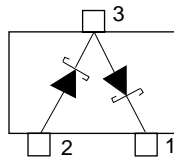
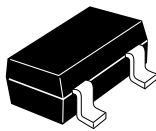
Features

- 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



(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 (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	—	—	%	$V_{in} = 2\text{Vrms}, f = 40\text{MHz},$ $R_L = 5\text{k}\Omega, C_L = 20\text{pF}$
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 $V_R = 6\text{V}$

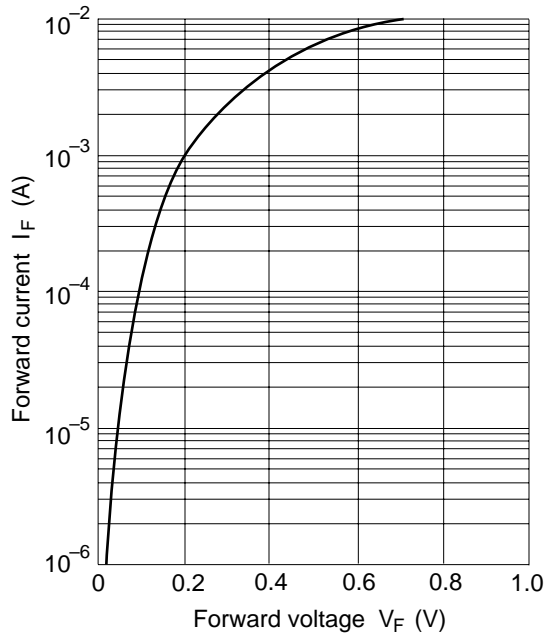


Fig.1 Forward current Vs. Forward voltage

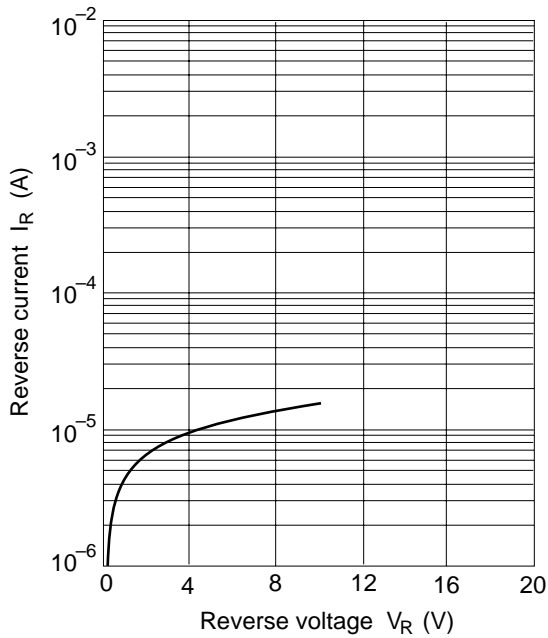


Fig.2 Reverse current Vs. Reverse voltage

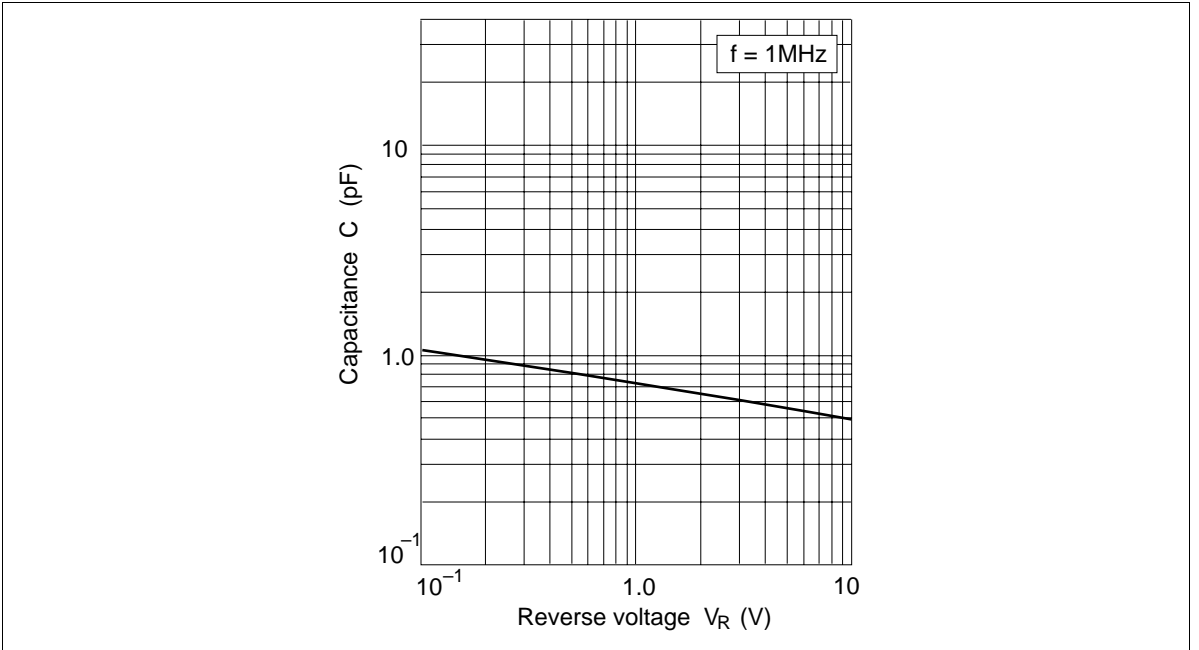
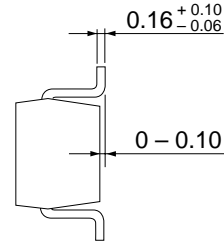
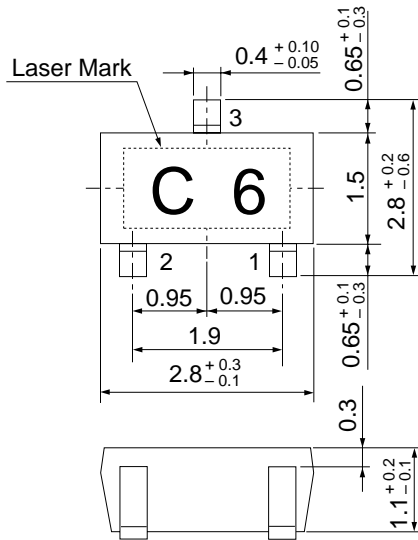


Fig.3 Capacitance Vs. Reverse voltage

Package Dimensions

Unit: mm



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

HITACHI Code	MPAK(1)
JEDEC Code	—
EIAJ Code	SC-59A
Weight (g)	0.011

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