

To all our customers

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

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Keep safety first in your circuit designs!

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# 1SS120

Silicon Epitaxial Planar Diode for High Speed Switching

# RENESAS

ADE-208-167C (Z)

Rev.3  
Oct. 2000

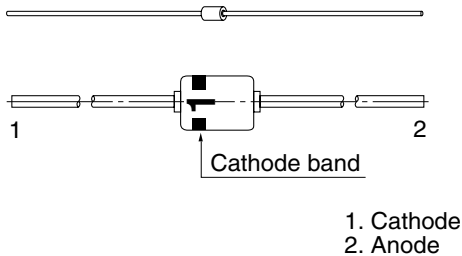
## Features

- Low capacitance. ( $C = 3.0 \text{ pF max}$ )
- Short reverse recovery time. ( $t_r = 3.5 \text{ ns max}$ )
- Small glass package (MHD) enables easy mounting and high reliability.

## Ordering Information

Type No.	Cathode band	Mark	Package Code
1SS120	Light Blue	1	MHD

## Pin Arrangement



## Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Peak reverse voltage	$V_{RM}$	70	V
Reverse voltage	$V_R$	60	V
Average rectified current	$I_O$	150	mA
Peak forward current	$I_{FM}$	450	mA
Non-Repetitive peak forward surge current	$I_{FSM}^*$	1	A
Power dissipation	Pd	250	mW
Junction temperature	Tj	175	°C
Storage temperature	Tstg	-65 to +175	°C

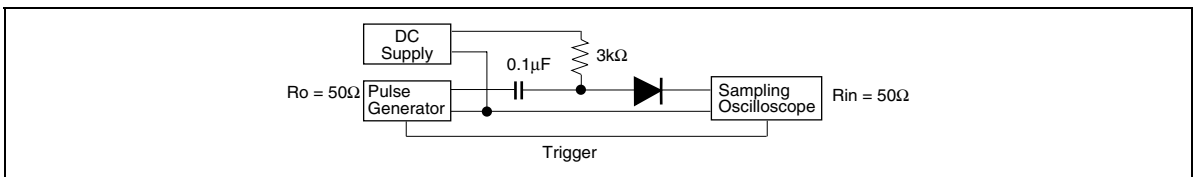
Note: Within 1s forward surge current.

## Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Forward voltage	$V_F$	—	—	0.8	V	$I_F = 10 \text{ mA}$
Reverse current	$I_R$	—	—	0.1	$\mu\text{A}$	$V_R = 60 \text{ V}$
Capacitance	C	—	—	3.0	pF	$V_R = 1 \text{ V}, f = 1 \text{ MHz}$
Reverse recovery time	$t_{rr}^*$	—	—	3.5	ns	$I_F = 10 \text{ mA}, V_R = 6 \text{ V}, R_L = 50 \Omega$

Note: Reverse recovery time test circuit



Main Characteristic

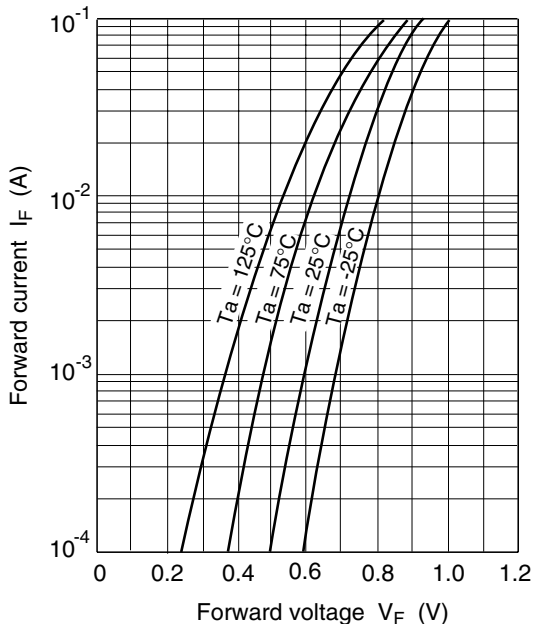


Fig.1 Forward current Vs. Forward voltage

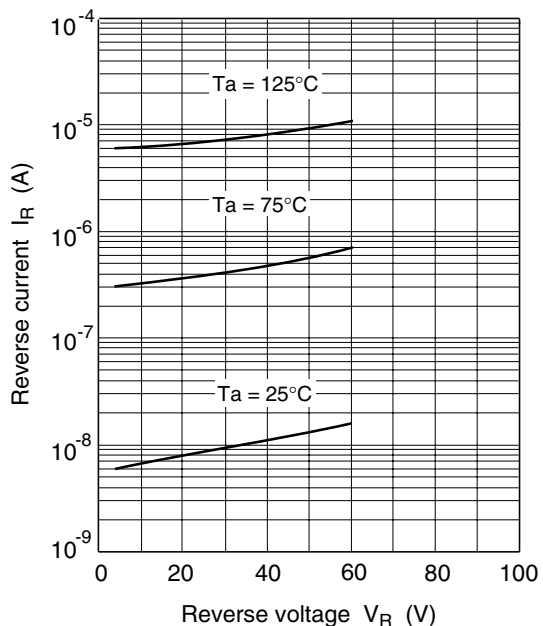


Fig.2 Reverse current Vs. Reverse voltage

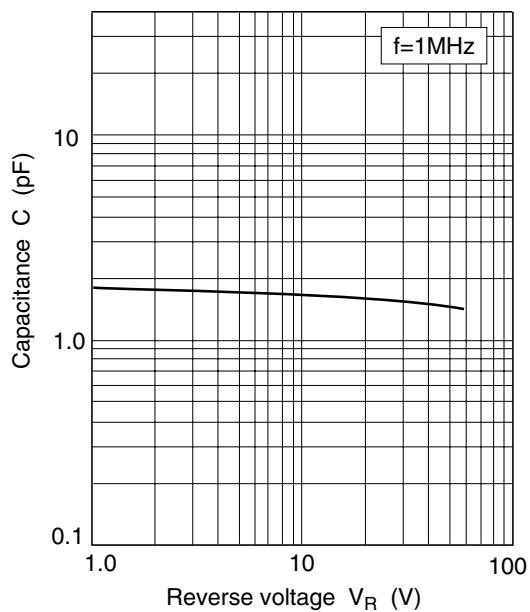
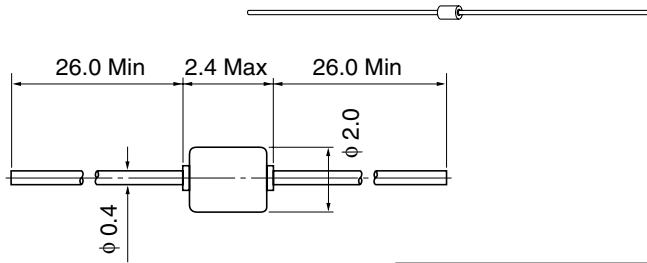


Fig.3 Capacitance Vs. Reverse voltage

## Package Dimensions

Unit: mm



Hitachi Code	MHD
JEDEC	Conforms
EIAJ	—
Mass (reference value)	0.084 g

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