

# 1N4148

Silicon Epitaxial Planar Diode for Various Detector,  
Modulator, Demodulator

REJ03G0556-0500

Rev.5.00

Jul 19, 2006

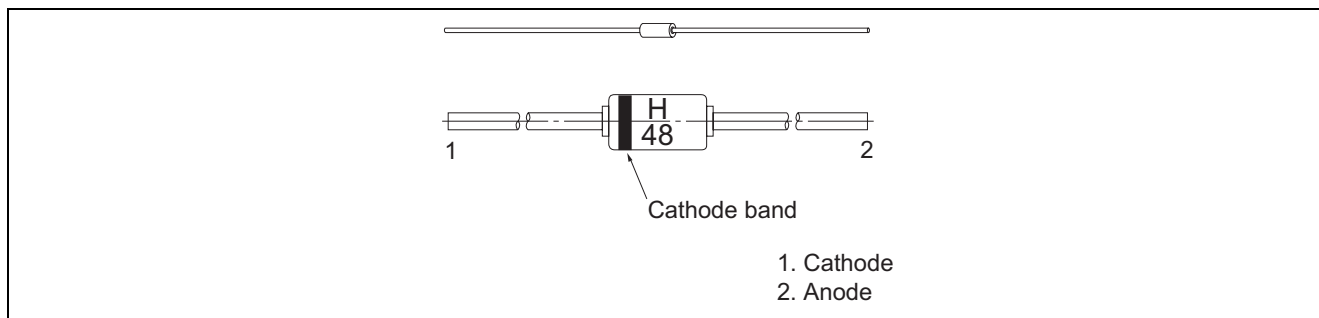
## Features

- Low capacitance. ( $C = 4.0$  pF max)
- Short reverse recovery time. ( $t_{rr} = 4.0$  ns max)
- High reliability with glass seal.

## Ordering Information

Type No.	Cathode band	Mark	Package Name	Package Code
1N4148	Black	H48	DO-35	GRZZ0002ZB-A

## Pin Arrangement



## Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Peak reverse voltage	$V_{RM}$	100	V
Reverse voltage	$V_R$	75	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	$P_d$	500	mW
Junction temperature	$T_j$	200	°C
Storage temperature	$T_{stg}$	-65 to +200	°C

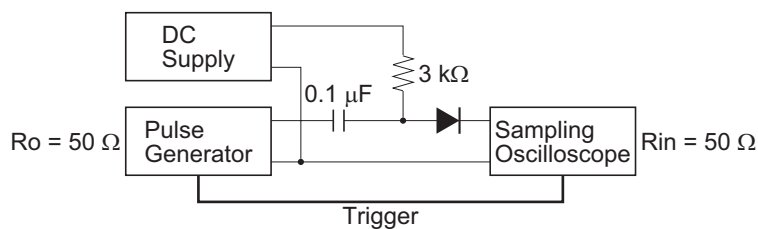
Note: Within 1s forward surge current.

## Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Forward voltage	$V_F$	—	—	1.0	V	$I_F = 10 \text{ mA}$
Reverse current	$I_R$	—	—	25	nA	$V_R = 20 \text{ V}$
Capacitance	$C$	—	—	4.0	pF	$V_R = 0 \text{ V}$ , $f = 1 \text{ MHz}$
Reverse recovery time	$t_{rr}^{*1}$	—	—	4.0	ns	$I_F = 10 \text{ mA}$ , $V_R = 6 \text{ V}$ , $I_{rr} = 1 \text{ mA}$ , $R_L = 100 \Omega$

Note: 1. Reverse recovery time test circuit



## Main Characteristic

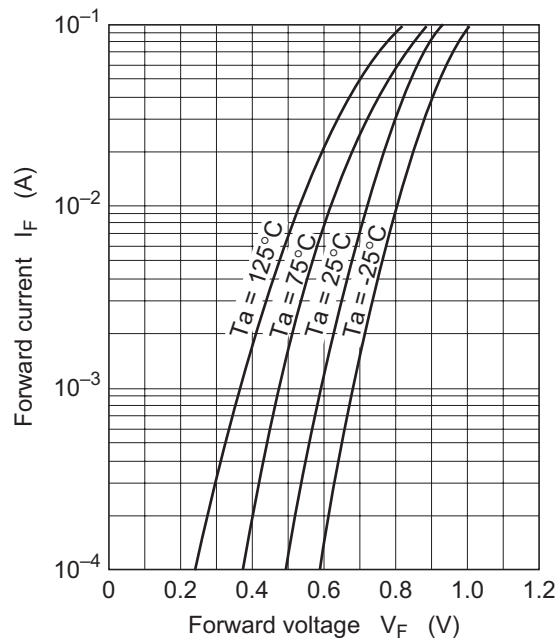


Fig.1 Forward current vs. Forward voltage

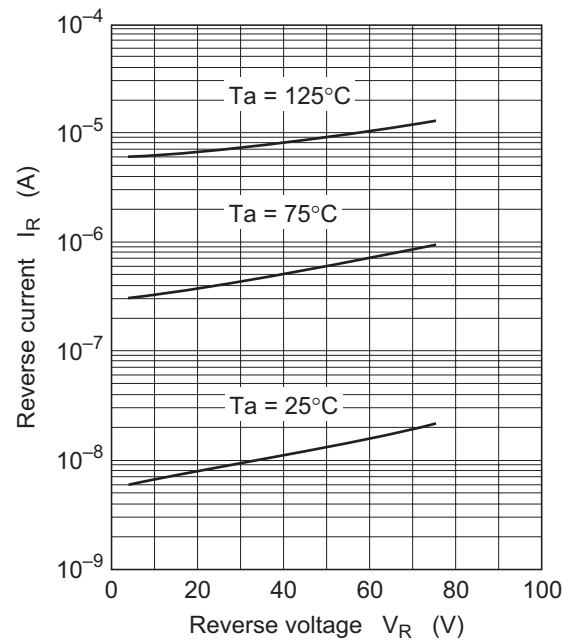


Fig.2 Reverse current vs. Reverse voltage

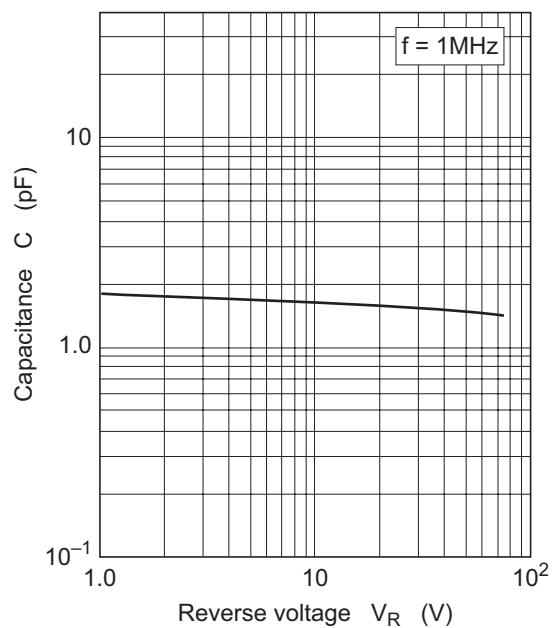
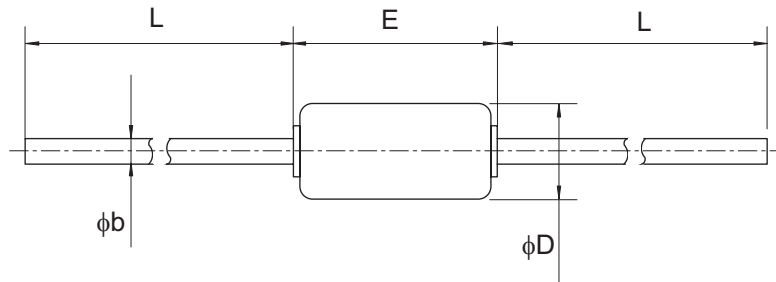


Fig.3 Capacitance vs. Reverse voltage

## Package Dimensions

Package Name	JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
DO-35	SC-40	GRZZ0002ZB-A	DO-35 / DO-35V	0.13g



Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
φb	-	0.5	-
φD	-	2.0	-
E	-	-	4.2
L	26.0	-	-

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