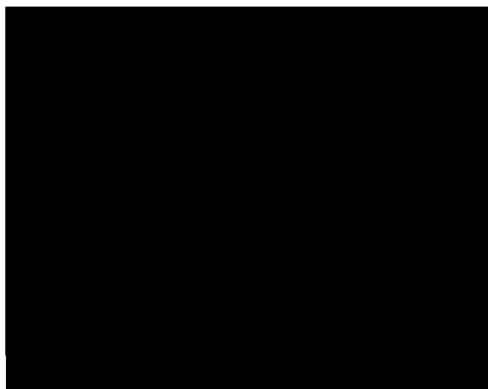


Description

The RCV5602 is a lightwave receiver for OC-1 and OC-3.

Features

- Complied with SONET/SDH standard
- InGaAs PIN-PD
- Operation from 20Mb/s to 200Mb/s at 1.3 μm or 1.55 μm wavelength
- Wide dynamic range: 27 dB
- ECL level
- Hermetically sealed, 20-pin DIP
- Loss-of-signal (LOS) indicator



Absolute Maximum Ratings

Item	Symbol	Rated Value	Units
Operating case temperature	T_{opr}	-40 to 85 (0 to 65) *	$^{\circ}\text{C}$
Storage case temperature	T_{stg}	-40 to 85	$^{\circ}\text{C}$
Operating wavelength range	λ	1.1 to 1.57	μm
Supply voltages	V_{CC}	5.5	V
	V_{EE}	-15	
Lead soldering temperature	T_s	250	$^{\circ}\text{C}$
Lead soldering time	—	10	sec

* Specification depends upon the part number.

Optical Characteristics ($\lambda = 1.3 \mu\text{m}$, Over operating temperature range)

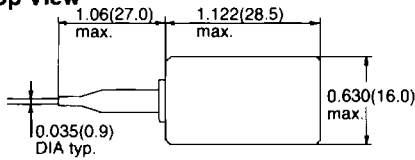
Item	Symbol	Min	Typ	Max	Units	Test Conditions
Minimum received power	P_{inmin}	—	-38	-34	dBm	156Mb/s, $2^{23} - 1$ NRZ, 10^{-10} BER
Maximum received power	P_{inmax}	-7	—	—	dBm	$2^{23} - 1$ NRZ, 10^{-10} BER
Flag switching level					dBm	156Mb/s, $2^{23} - 1$ NRZ
Decreasing light input	—	-53	-40	-36		
Increasing light input	—	-52	-38.7	-35.2		

Electrical Characteristics (Over operating temperature range)

Item	Symbol	Min	Typ	Max	Units	Test Conditions
DC power supply voltage	V_{CC}	4.75	5.0	5.5	V	
	V_{EE}	-4.75	-5.2	-5.5		
DC power supply current	I_{CC}	—	—	95	mA	$V_{CC} = 5.0\text{ V}$, without output drive current
	I_{EE}	—	—	1		$V_{EE} = -5.2\text{ V}$
Output rise and fall times	t_r, t_f	—	—	1.4	ns	20 to 80% (peak)
Output data voltage					V	50Ω load to $(V_{CC} - 2)\text{ V}$
Low	V_{OL}	$V_{CC}-1.810$	—	$V_{CC}-1.620$		
High	V_{OH}	$V_{CC}-1.025$	—	$V_{CC}-0.880$		
Output flag voltage					V	50Ω load to $(V_{CC} - 2)\text{ V}$
Low	V_{FL}	$V_{CC}-1.810$	—	$V_{CC}-1.620$		
High	V_{FH}	$V_{CC}-1.025$	—	$V_{CC}-0.880$		

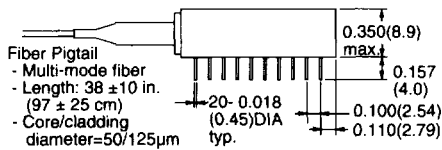
Outline Drawings and Pin Descriptions

Top View

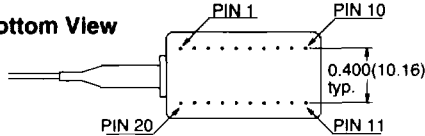


Tolerance: $\pm 0.005\text{ in.}$ ($\pm 0.127\text{ mm}$)
Dimension: inch (mm)

Side View



Bottom View



Pin:	Description
1:	No user connection
2:	No user connection
3:	No user connection
4:	No user connection
5:	No user connection
6:	Ground
7:	Data
8:	Ground
9:	Data
10:	-5.2V
11:	+5V
12:	Flag *
13:	Ground
14:	Flag *
15:	Ground
16:	No user connection
17:	No user connection
18:	No user connection
19:	No user connection
20:	No user connection

* Flag goes to P-ECL high level at the presence of optical signal input.

Ordering Information

Operating case temperature (°C)	Connector	Part Number
0 to 65	FC-PC	RCV5602FN
0 to 65	ST *	RCV5602GN
0 to 65	SC	RCV5602HN
-40 to 85	FC-PC	RCV5602FH
-40 to 85	ST *	RCV5602GH
-40 to 85	SC	RCV5602HH

* ST is a registered trademarks of AT&T.

HITACHI®

Hitachi America, Ltd. • 2000 Sierra Point Pkwy. • Brisbane, CA 94005-1835 • (415) 589-8300

Part
2 371

2