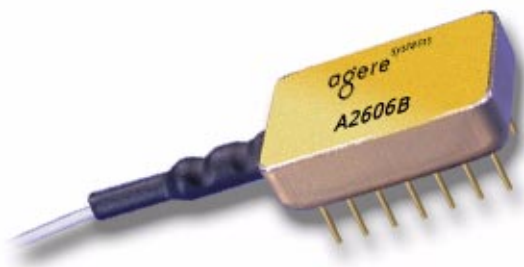


## 2606B Return-Path Photodiode Receiver Module



### Features

- 5 MHz—200 MHz frequency range
- Flat response to  $\pm 0.5$  dB
- High optical responsivity
- Ultra low optical return loss
- $75 \Omega$  impedance-matched

### Applications

- Return-path CATV receivers

### Description

The 2606B CATV return-path photodiode module is a critical component for the delivery of high-performance interactive services for today's two-way fiber-optic networks. These modules utilize PIN InGaAs photodiodes in robust 14-pin DIL packages that exhibit excellent sensitivity, low noise, and exceptional linearity in return-path optical links. The module incorporates a patented impedance-matching circuit, which optimizes very low noise gain in optical broadband receivers.

### Pin Information

Table 1. Pin Descriptions

Pin No.	Description
1	2606A/B
2	Ground
3	Ground
4	Ground
5	Ground
6	Ground
7	Open
8	Open
9	RF Out
10	Ground
11	Bias
12	Ground
13	Open
14	Ground

## Absolute Maximum Ratings

Stresses in excess of the absolute maximum ratings can cause permanent damage to the device. These are absolute stress ratings only. Functional operation of the device is not implied at these or any other conditions in excess of those given in the operational sections of the data sheet. Exposure to absolute maximum ratings for extended periods can adversely affect device reliability.

Parameter	Symbol	Min	Max	Unit
Operating Temperature Range	TOP	-40	85	°C
Storage Temperature Range	Tstg	-40	85	°C
Optical Input Power	PIN	—	2 (for continuous operation)	mW
dc Bias Voltage	VPD	—	20	V

## Characteristics

**Table 2. Electrical/Optical Characteristics**

Parameter	Symbol	Min	Typ	Max	Unit
Optical Return Loss	RL	45	—	—	dB
Optical Wavelength Range	$\lambda$	—	1310 $\pm$ 10	—	nm
Responsivity	—	—	>0.85 at 1310 nm, >0.95 at 1550 nm	—	mA/mW mA/mW
Bias Voltage	—	—	15 (nominal)	—	V

**Table 3. RF Characteristics**

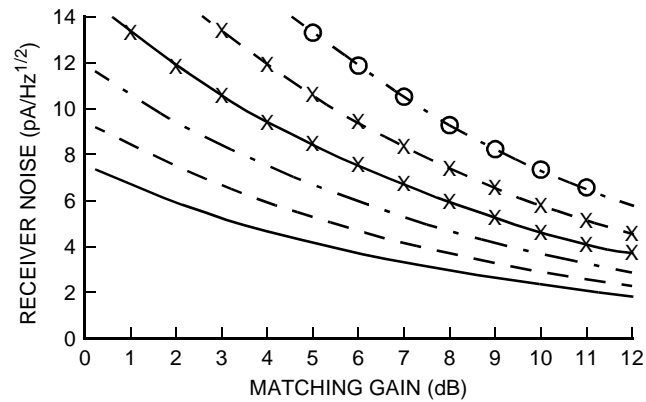
Parameter	Symbol	Min	Typ	Max	Unit
Frequency Range	F	5	—	200	MHz
Gain <sup>1</sup>	G	—	8	—	dB
Flatness <sup>2</sup>	—	—	$\pm$ 0.5	—	dB
Second-Order Distortion <sup>3</sup>	CSO	—	-65	—	dBc
Third-Order Distortion	CTB	—	-75	—	dBc

1. Current gain of internal transformer.

2. Measured into 75  $\Omega$  load.

3. Two laser test. Each laser has 40% modulation index. Total received optical power is 0 dBm.

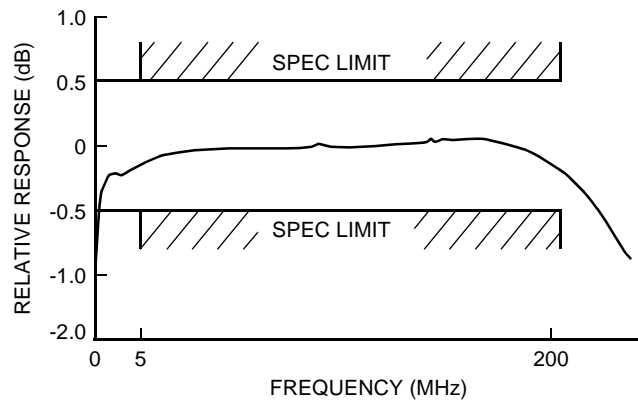
Characteristics Curves



KEY					
—	NF = 0 dB	- - -	NF = 2 dB	- - -	NF = 4 dB
-x-x-	NF = 6 dB	-x-x-	NF = 8 dB	-o-o-	NF = 10 dB

1-1182 (F)

Figure 1. Receiver Noise

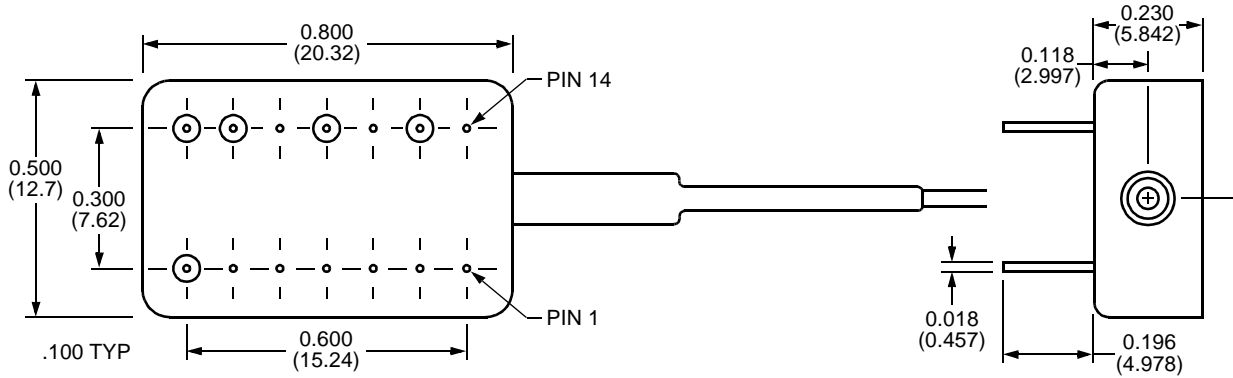


1-1184(F)

Figure 2. Frequency Response

### Outline Diagram

Dimensions are in inches and (millimeters).



1-1183(F)

### Ordering Information

Table 4. Ordering Information\*

Device Code	Description	Connector	Pigtail	Comcode
2606B	Return-Path Photodiode Receiver Module	None	Single mode, 9 μm/125 μm; 2 m—3 m	108867300

\* Other options available. For additional ordering information, please contact an account manager at OPTO West, Agere Systems Inc., 1-800-362-3891 (for sales staff, please press option 2).

For additional information, contact your Agere Systems Account Manager or the following:

INTERNET: <http://www.agere.com>

E-MAIL: [docmaster@micro.lucent.com](mailto:docmaster@micro.lucent.com)

N. AMERICA: Agere Systems Inc., 555 Union Boulevard, Room 30L-15P-BA, Allentown, PA 18109-3286  
1-800-372-2447, FAX 610-712-4106 (In CANADA: 1-800-553-2448, FAX 610-712-4106)

ASIA PACIFIC: Agere Systems Singapore Pte. Ltd., 77 Science Park Drive, #03-18 Cintech III, Singapore 118256  
Tel. (65) 778 8833, FAX (65) 777 7495

CHINA: Agere Systems (Shanghai) Co., Ltd., 33/F Jin Mao Tower, 88 Century Boulevard Pudong, Shanghai 200121 PRC  
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Tel. (81) 3 5421 1600, FAX (81) 3 5421 1700

EUROPE: Data Requests: DATALINE: Tel. (44) 7000 582 368, FAX (44) 1189 328 148  
Technical Inquiries: OPTOELECTRONICS MARKETING: (44) 1344 865 900 (Ascot UK)

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