

AD14113A 10Gbit/s PIN Receiver Module

May, 2003

FEATURES

- Optical sensitivity: -21dBm (typ., ER=13dB, BER=10⁻¹²)
- Optical overload: +2dBm (typ., ER=13dB, BER=10⁻¹²)
- 50Ω, AC-coupled CML differential outputs
- Single-mode fiber
- Incorporated offset control circuit

APPLICATIONS

- Optical receivers for SDH/SONET(STM-64/OC-192) systems

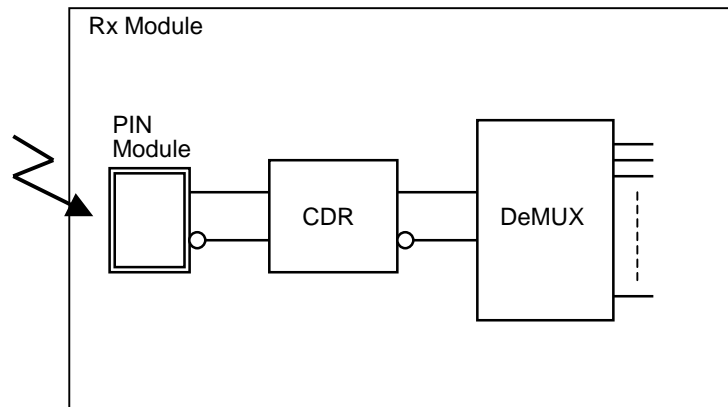


Figure 1. Typical Application

FUNCTIONAL BLOCK DIAGRAM

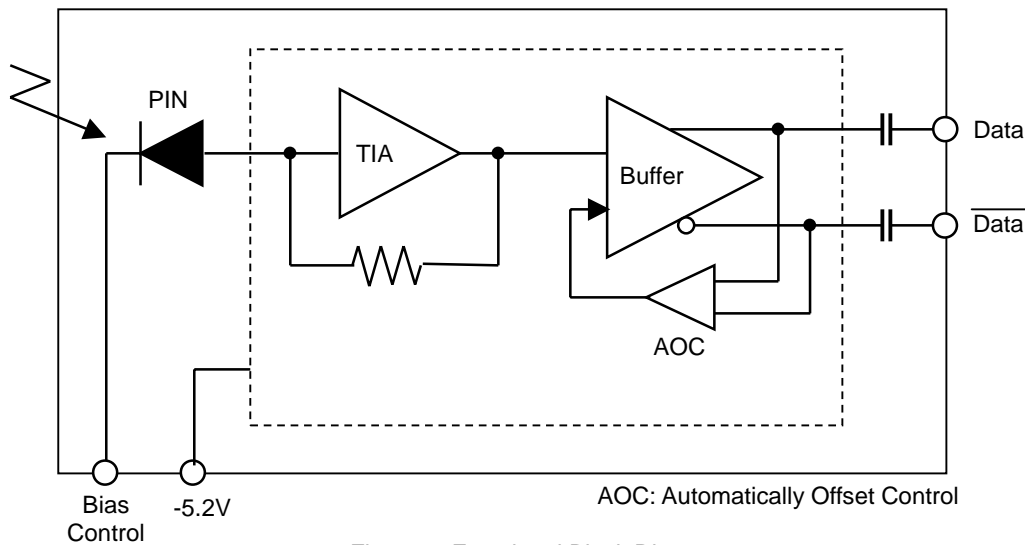


Figure 2. Functional Block Diagram

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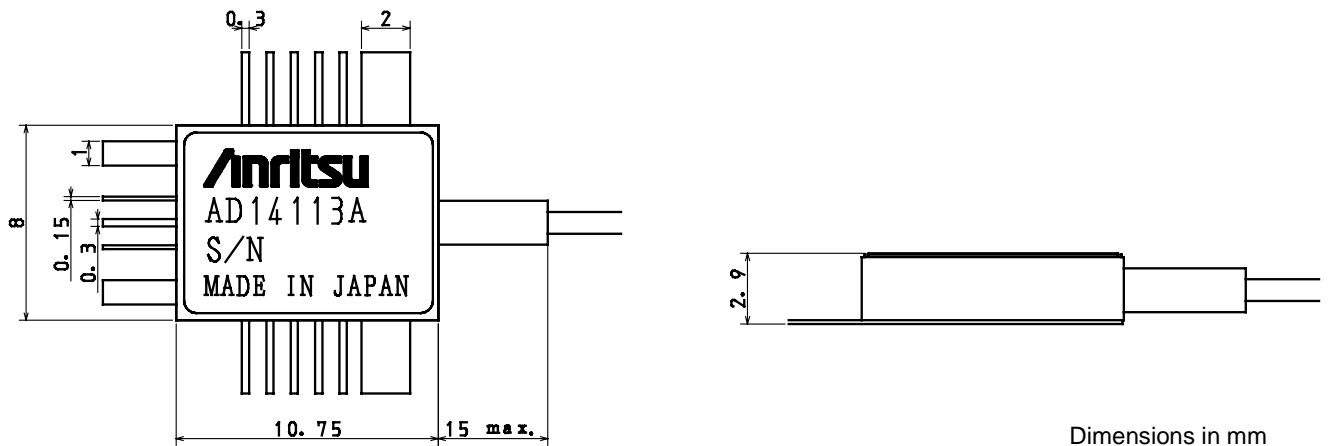
■OPTICAL and ELECTRICAL CHARACTERISTICS

(Tc=25°C, λ=1550nm)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Optical wavelength	λ		1300	1550	1600	nm
Optical Sensitivity	P _{min}	ER=13dB, BER=10 ⁻¹² PRBS=2 ³¹ -1, 10.7Gbit/s, NRZ		-21	-19	dBm
Optical overload	P _{max}	ER=13dB, BER=10 ⁻¹² PRBS=2 ³¹ -1, 10.7Gbit/s, NRZ	0	+2		dBm
TIA supply voltage	V _{EE}		-5.46	-5.2	-4.94	V
PIN Reverse voltage	V _{APD}		0		5	V
TIA supply Current	I _{EE}			90		mA
PIN Responsivity	η	Tc=25°C, λ=1550nm	0.9	0.95		A/W
PIN dark current	I _d			1	5	nA
Transimpedance	Z _T	1GHz, Single-end	0.75	1.1		kΩ
-3dB Bandwidth	f _{-3dB}	Referred to 1GHz	7.5	8		GHz
Low frequency cutoff	f _{-3dB} BL	Referred to 1GHz			100	kHz

Table 1. Characteristics

■PACKAGE OUTLINE



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