

AD14109A 10Gbit/s APD Receiver Module

May, 2003

FEATURES

- Optical sensitivity: -26dBm (typ., VR=Optimum, BER=10⁻¹²)
- Optical overload: -7dBm (min., VR=VR_{Pmin}, 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

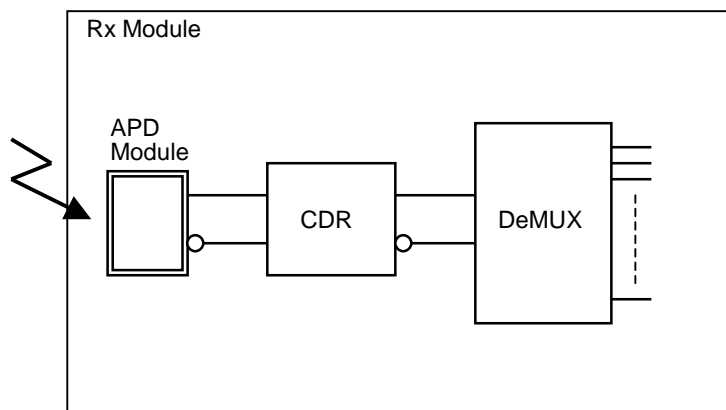


Figure 1. Typical Application

FUNCTIONAL BLOCK DIAGRAM

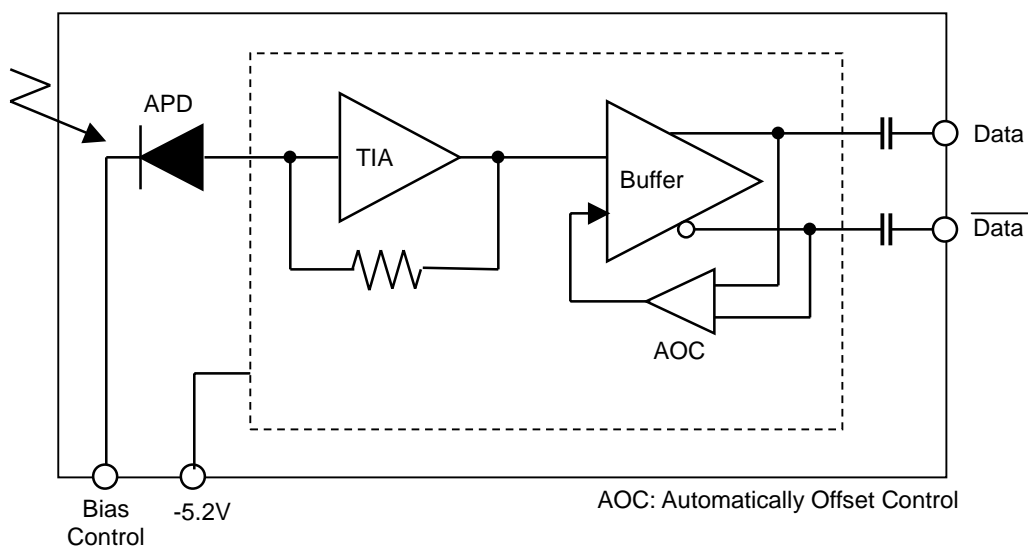


Figure 2. Functional Block Diagram

AD14109A 10Gbit/s APD Receiver Module

May, 2003

OPTICAL and ELECTRICAL CHARACTERISTICS

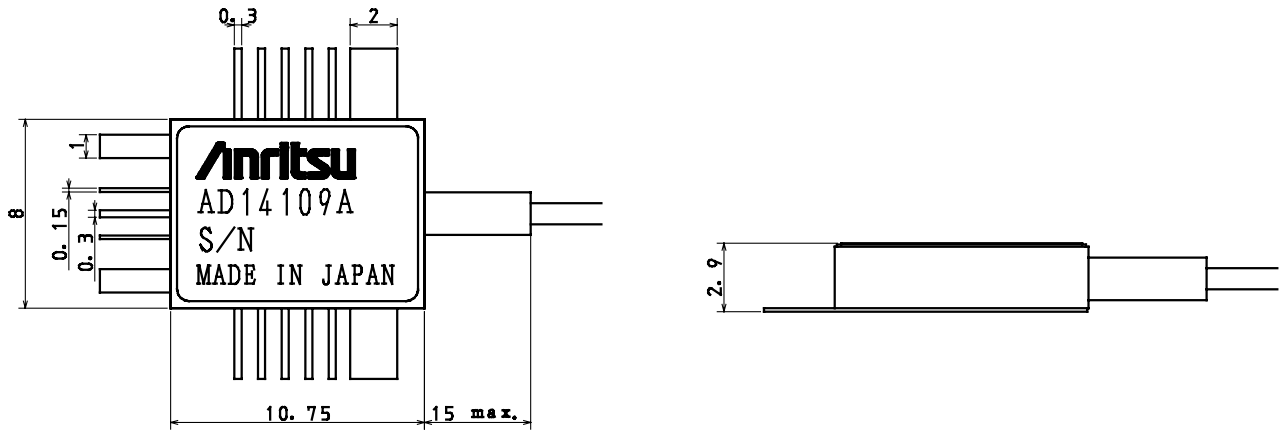
(Tc=25°C, λ=1550nm)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Optical wavelength	λ		1300	1550	1600	nm
Optical sensitivity	P _{min}	ER=13dB, BER=10 ⁻¹² , VR = optimum, 10Gbit/s		-26	-25	dBm
Optical overload	P _{max}	ER=13dB, BER=10 ⁻¹² , VR =VR _{Pmin} , 10Gbit/s	-7	-5		dBm
TIA supply voltage	V _{EE}		-5.46	-5.2	-4.94	V
APD breakdown voltage	VB	V _{Anode} - V _{Cathode}	20	28	35	V
TIA supply current	I _{EE}			90		mA
APD Responsivity	η	Tc=25°C, λ=1550nm		0.7		A/W
APD dark current	I _d			1	5	nA
Transimpedance	Z _T	1GHz, Single-end	0.75	1.1		kΩ
-3dB Bandwidth	f _{-3dBH}	Referred to 1GHz	7.5	8		GHz
Low frequency cutoff	f _{-3dBL}	Referred to 1GHz			100	kHz

*1: APD Cathode voltage is nominally -3.8V

Table 1. Characteristics

PACKAGE OUTLINE



Dimensions in mm

This technical information is a category of Export-Controlled Technologies by Japanese and/or U.S. Export Control Laws and Orders. So, it cannot be re-supplied nor transferred to any non-resident/foreign country without a prior written consent of Anritsu Corporation. Besides, this technical information is prohibited to be used for the application of Weapons of Mass Destruction or any other military activities.