

## AH14149A

### Wideband Low Noise Amplifier

#### Features

- Wideband : 50kHz - 10GHz typ.
- Low noise : NF 4dB typ.
- Low power consumption : 0.5W typ.
- Small size : 34mm x 30mm x 9.5mm

#### Applications

- R&D of optical communication
- Evaluation of high speed devices



#### Absolute Maximum Ratings

Items	Conditions	Ratings		Units
		min.	max.	
Input voltage			1	Vp-p
Supply voltage	+5V		+5.5	V
	-5V	-5.5		V
Operating temperature		0	+50	°C
Storage temperature		-20	+85	°C

#### Specifications

Ta=25°C, V+=+5V, V-=-5V, Zin=50 ohms, Zout=50 ohms

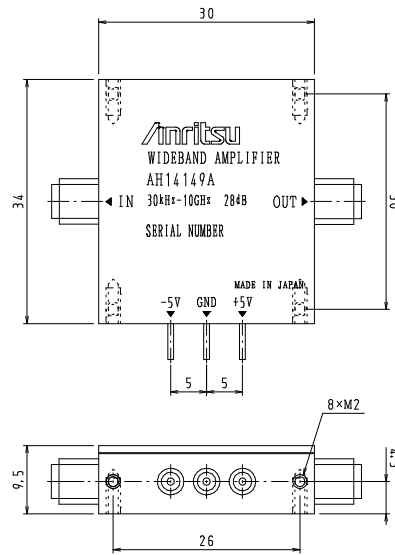
Items	Conditions	Units	Specifications		
			min.	typ.	max.
Bandwidth	-3dB from 1GHz point	kHz		50	100
		GHz	9	10	
Voltage gain	@ 1GHz	dB	25	28	
Gain flatness	1MHz - 7.5GHz	dB			±1.5
Noise figure	1GHz - 10GHz	dB		4.0	5.0
Group delay	45MHz - 10GHz	ps			±150
Tr / Tf	10% - 90% *1	ps		35	
Overshoot		%			10
Output voltage amplitude	100mVp-p Input	Vp-p	1.2	1.5	
Input return loss	< 10GHz	dB	6		
Output return loss	< 10GHz	dB	10		
Supply current	+5V	mA		90	100
	-5V	mA		5	10
Output polarity				Invert	

\*1  $T_r, T_f = (T_m^2 - T_s^2 - T_i^2)^{1/2}$

Tm: Value measured with oscilloscope, Ts: Tr and Tf of oscilloscope,

Ti: Tr and Tf of signal generator

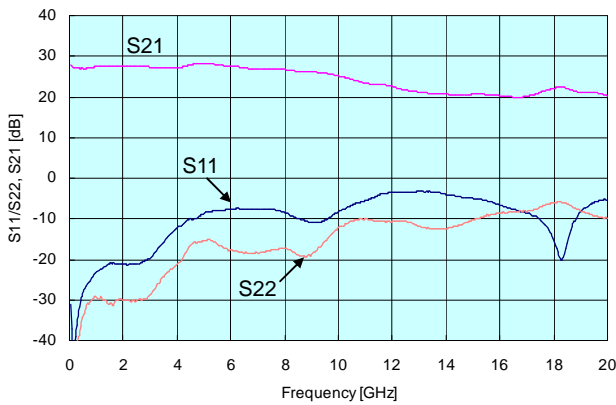
## Dimensions



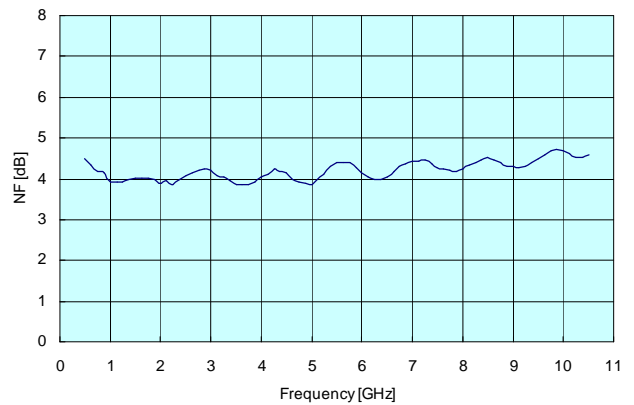
Connectors: K-F Units: mm

## Electrical Characteristics

### S-parameters

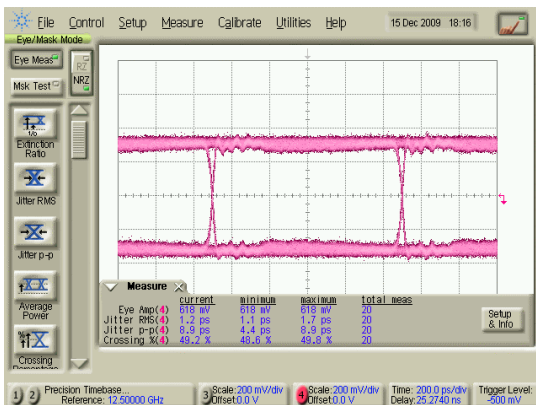


### Noise figure



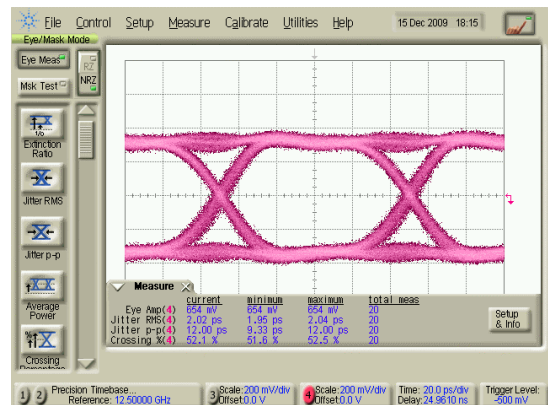
### Eye diagram

Bit rate:1Gbit/s



V:200mV/div H:200ps/div

Bit rate:10Gbit/s



V:200mV/div H:20ps/div

Please consult Anritsu Corporation If the products are used in the high reliability system. Specifications are subject to change without notice.

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