

Coaxial

# RF Instrument Amplifier

TIA-1000-1R8

50Ω High Power 0.50 to 1000 MHz

## Features

- instrument model with built-in power supply, 110V/220V operation
- high power output at 3.5dB compression, 37dBm typ.
- high gain, 38 dB typ.
- high reverse isolation, 80 dB typ.
- 100% burn-in at +25°C, 48 hrs
- thermally self-protected, LED indicator
- protected by US Patent 5,101,171 and 6,943,629

## Applications

- testing
- laboratory use



CASE STYLE: AP175

Connectors	Model	Price	Qty.
BNC	TIA-1000-1R8	\$1,495.00 ea.	(1-9)

Add-2 to model for 220V operation

## RF Instrument Amplifier Electrical Specifications

MODEL NO.	FREQUENCY (MHz)		GAIN (dB)		MAXIMUM POWER (dBm)			DYNAMIC RANGE		VSWR (:1)		AC POWER		
	f <sub>L</sub>	f <sub>U</sub>	Min.	Flatness Max.	Output (1 dB Compr.) Typ.	Min.	Input (no damage)	NF (dB) Typ.	IP3 (dBm) Typ.	In	Out	Volt (V)	Freq. Hz	VA Max.
TIA-1000-1R8	0.50	1000	35	±2.0	+35	+32	+7	8*	+45	1.9	2.5	110	50/60	140

\* Noise Figure above 400MHz, At low frequency, NF increases to 16 dB typ.

1. Gain and maximum output power specified at 25°C±5°C, over temperature, specifications degrade approximately 1dB, gain flatness ± 2.5 dB maximum.

2. VSWR specified at 340-1000 MHz

3. Open load is not recommended, potentially can cause damage. With no load derate max input power by 20 dB

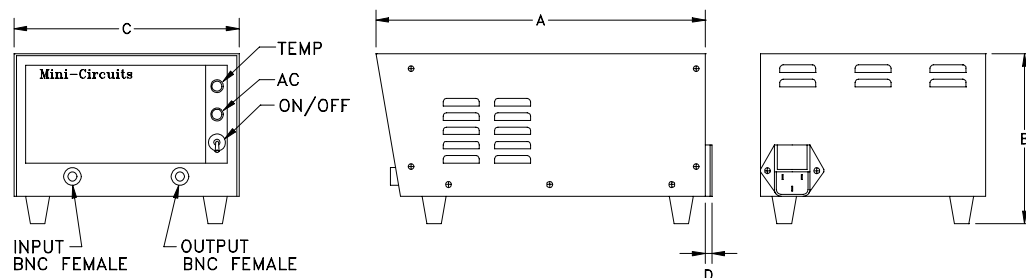
## Maximum Ratings

Operating Temperature 0°C to 55°C

Storage Temperature -40°C to 70°C

Permanent damage may occur if any of these limits are exceeded.

## Outline Drawing



## Outline Dimensions (inch/mm)

A	B	C	D	wt
9.8	5.0	6.7	0.2	grams
248.92	127.00	170.18	5.08	3500

Keep area adjacent to fan and louvers clear to permit air flow to pass.  
Caution: Do not insert anything especially conductors or fingers into case opening. Physical injury, shock or death may occur.

**Mini-Circuits®**  
ISO 9001 ISO 14001 AS 9100 CERTIFIED

minicircuits.com

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs &amp; shopping online see Mini-Circuits web site

The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: [www.minicircuits.com](http://www.minicircuits.com)

IF/RF MICROWAVE COMPONENTS

REV. OR  
M98211  
TIA-1000-1R8  
071226  
Page 1 of 2

## Typical Performance Data/Curves

## TIA-1000-1R8

FREQUENCY (MHz)	GAIN (dB)	DIRECTIVITY (dB)	VSWR (:1)		NOISE FIGURE (dB)	POUT at 1 dB COMPR. (dBm)
	110V	110V	IN	OUT	110V	110V
0.50	40.65	56.72	1.42	2.89	—	36.10
12.60	40.48	58.36	1.20	1.36	17.34	36.62
99.50	40.98	50.05	1.23	2.26	14.13	36.19
207.60	40.33	51.07	1.27	2.61	10.29	34.61
332.20	39.43	47.81	1.25	1.67	8.38	33.50
500.00	41.26	41.27	1.03	1.29	7.60	33.68
600.90	41.12	46.09	1.10	1.30	7.43	34.12
693.40	40.22	37.38	1.35	1.86	7.22	34.10
816.50	39.40	40.92	1.46	1.27	7.20	34.08
1000.00	39.47	38.45	1.30	1.48	7.30	33.50

