

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

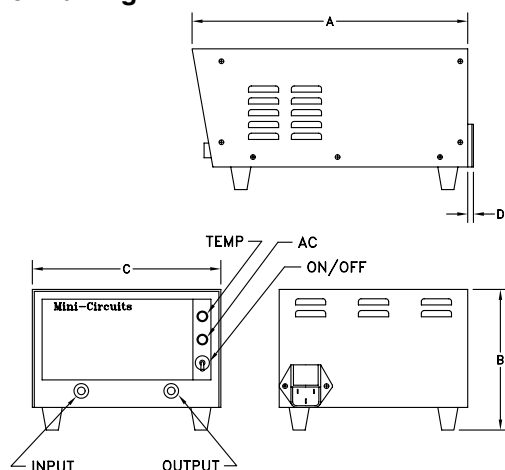
3. Open load is not recommended, potentially can cause damage. With no load derate max input power by 20 dB

## Maximum Ratings

Operating Temperature 0°C to 55°C

Storage Temperature -40°C to 70°C

## 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.



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REV. OR  
M98211  
TIA-1000-1R8  
051208  
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

