

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_L	f_U	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

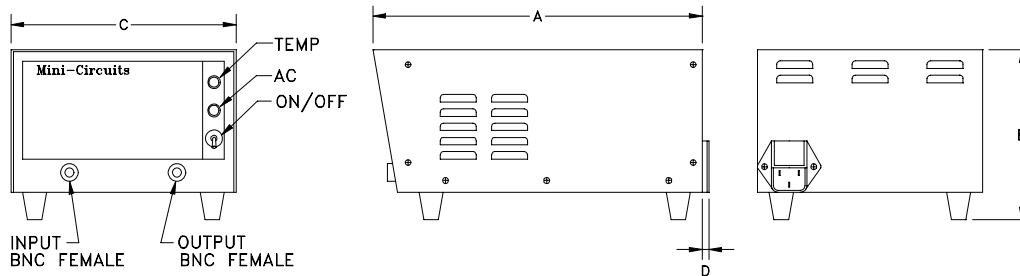
Maximum Ratings

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

For detailed performance specs & shopping online see web site

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IF/RF MICROWAVE COMPONENTS

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp.

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

