

# RF Instrument Amplifier

TVA-82-213

50Ω

0.8 to 21 GHz



CASE STYLE: AP1602

## The Big Deal

- Ultra wide frequency range, 0.8-21 GHz
- Excellent Isolation, 75 dB typical
- Self Contained Power Supply with selectable 110 or 220 volts AC supply
- Thermally self Protected

## Product Overview

The TVA-82-213 is an instrument amplifier that covers an exceptionally wide range of frequencies while affording convenience, portability, and ease of use.

## Key Features

Feature	Advantages
Ultra Wide Frequency Range	Covers broadcast cable relay, fixed microwave, radar and satellite services
Self Powered	An internal power supply means that only one unit need be transported.
Warning System	Over temperature warning and automatic shut down are safety features to provide a long operating life.
Carrying Handle	A single strap carrying handle provides a means for conveniently transporting the unit

### Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.  
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.  
C. The parts covered by this specification document 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](http://www.minicircuits.com/MCLStore/terms.jsp)



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### Features

- Instrument model with built-in power supply 110/220 VAC
- High output IP3, 33 dBm typ.
- Rugged case with handle and adapter caddy
- Unconditional stable
- Thermally self protected, LED indicator
- Good matching at input and output
- Withstands open short load at 1 dB comp. point output power
- Excellent isolation, 75 dB typ.

### Applications

- Lab use
- Wideband test instrumentation



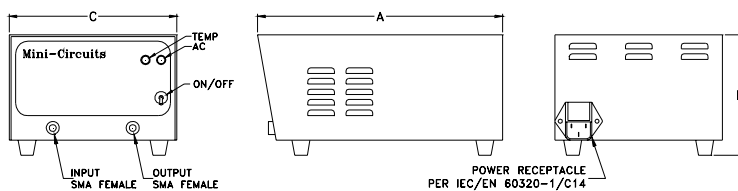
CASE STYLE: AP1602			
Connectors	Model	Price	Qty.
SMA	TVA-82-213	\$2495.00 ea.	(1-9)

### Electrical Specifications at 25°C, unless otherwise noted

Parameter	Condition (GHz)	Min	Typ.	Max.	Units
Frequency Range		0.8	—	21	GHz
Gain	0.8 - 21	20	25	—	dB
Gain Flatness	0.8 - 21	—	±2.0	—	dB
Output Power at 1dB compression	0.8 - 21	—	24	—	dBm
Noise Figure	0.8 - 21	—	3.0	5.5	dB
Output third order intercept point	0.8 - 21	—	+33	—	dBm
Input VSWR	0.8 - 21	—	1.35	—	:1
Output VSWR	0.8 - 21	—	1.40	—	:1
AC Supply Voltage	0.8 - 21	—	110/220	—	V

Note: Keep area adjacent to the louvers clear to allow free air flow.

### Outline Drawing



### Maximum Ratings

Parameter	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 Dimensions (inch/mm)

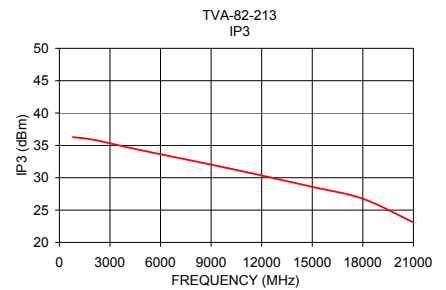
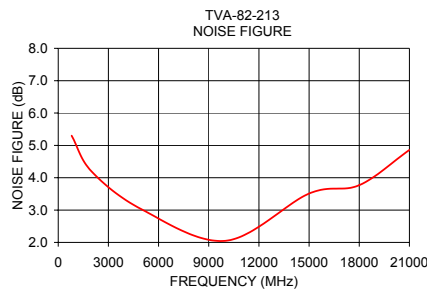
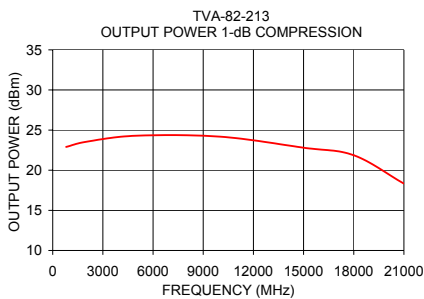
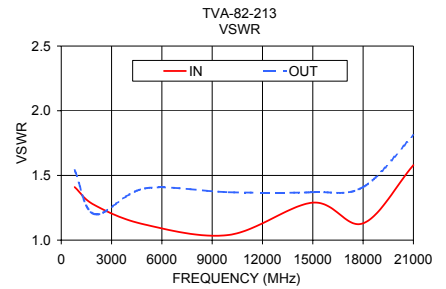
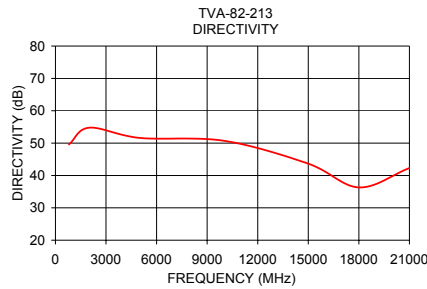
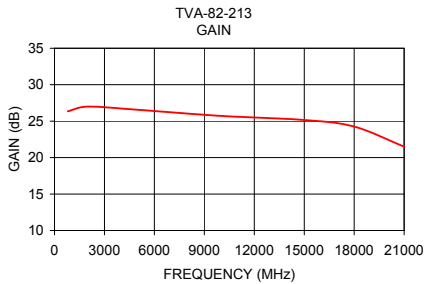
A	B	C	D	wt
9.8	4.8	6.7	--	grams
248.9	121.9	170.2	--	1700

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FREQUENCY (MHz)	GAIN (dB)	DIRECTIVITY (dB)	VSWR (:1)		NOISE FIGURE (dB)	POUT at 1 dB COMPR. (dBm)	IP3 (dBm)
			IN	OUT			
800.00	26.35	49.59	1.41	1.54	5.30	22.90	36.27
2000.00	27.00	54.77	1.27	1.20	4.19	23.54	35.88
5000.00	26.56	51.61	1.12	1.40	3.02	24.30	34.17
10000.00	25.72	50.73	1.04	1.37	2.05	24.18	31.48
15000.00	25.16	43.64	1.29	1.37	3.51	22.81	28.59
18000.00	24.25	36.32	1.13	1.41	3.77	21.86	26.75
21000.00	21.50	42.30	1.58	1.81	4.86	18.33	23.11



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