

Coaxial

# RF Instrument Amplifier

TVA-82-213A+

50Ω

0.8 to 21 GHz

## Features

- Instrument model with built-in power supply 110/220 VAC
- High output IP3, 30 dBm typ.
- 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, 70 dB typ.
- CE marked

## Applications

- Lab use
- Wideband test instrumentation



CASE STYLE: PJ2059

Connectors	Model
SMA	TVA-82-213A+

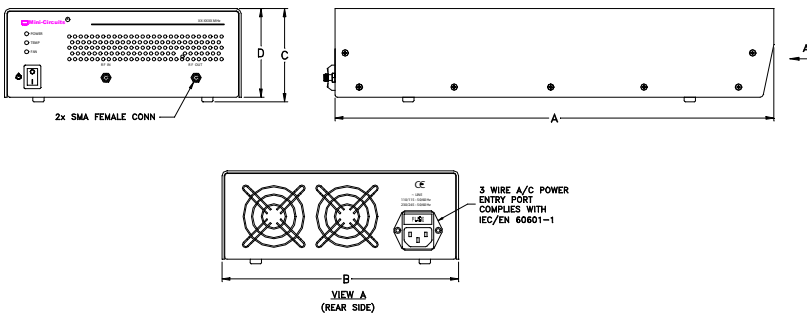
**+RoHS Compliant**  
 The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

## 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	18	25	—	dB
Gain Flatness	0.8 - 21	—	±3.0	—	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	—	+30	—	dBm
Input VSWR	0.8 - 21	—	1.35	—	:1
Output VSWR	0.8 - 21	—	1.40	—	:1
AC Supply Voltage	47 - 63 Hz	85	110/220	265	V

Note: Keep area adjacent to the airvents 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
Input RF Power (no damage)	+4dBm

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

## Outline Dimensions (inch/mm)

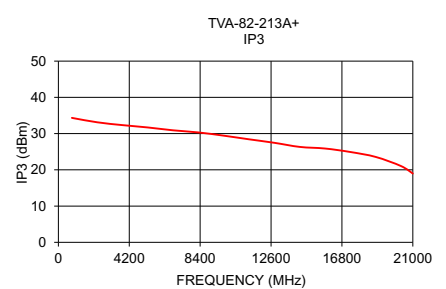
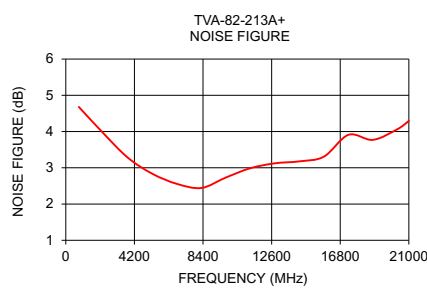
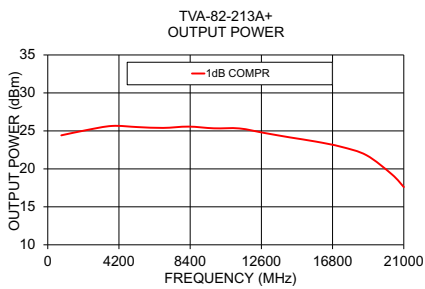
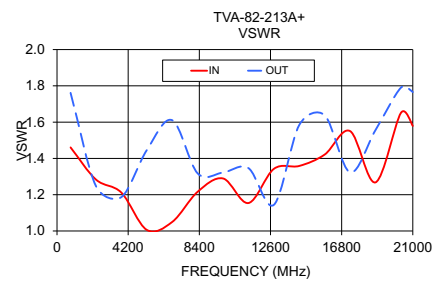
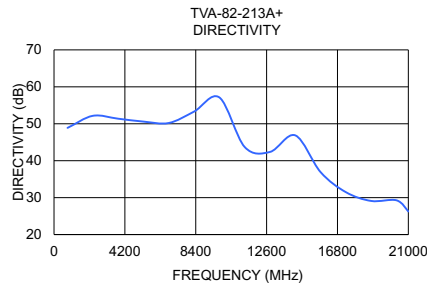
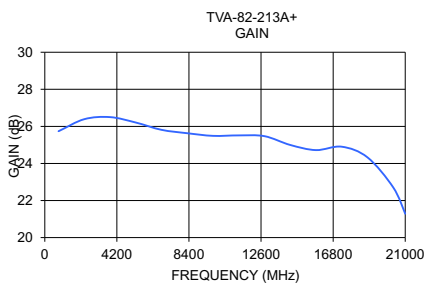
A	B	C	D	WT.
15.35	8.27	3.25	3.09	GRAM
389.89	210.06	82.55	78.49	2490

### Notes

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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FREQUENCY (MHz)	GAIN (dB)	DIRECTIVITY (dB)	VSWR (:1)		POUT at 1 dB COMPR. (dBm)	NOISE FIGURE (dB)	IP3 (dBm)
			IN	OUT			
800	25.74	48.88	1.46	1.76	24.42	4.68	34.34
2300	26.39	52.15	1.28	1.25	25.11	3.95	33.12
3800	26.50	51.37	1.21	1.19	25.65	3.28	32.34
5300	26.21	50.58	1.01	1.45	25.50	2.83	31.69
6800	25.81	50.20	1.05	1.61	25.39	2.56	30.90
8300	25.63	53.29	1.22	1.32	25.56	2.44	30.32
9800	25.49	57.12	1.29	1.32	25.34	2.73	29.43
11300	25.51	43.71	1.15	1.35	25.32	2.99	28.42
12800	25.47	42.37	1.34	1.14	24.72	3.12	27.46
14300	25.00	46.85	1.36	1.58	24.14	3.18	26.33
15800	24.72	36.90	1.42	1.64	23.60	3.31	25.88
17300	24.90	31.47	1.55	1.32	22.91	3.91	24.92
18800	24.33	29.10	1.27	1.56	21.80	3.77	23.56
20300	22.71	29.27	1.65	1.79	19.27	4.07	21.05
21000	21.29	26.25	1.58	1.77	17.60	4.29	18.98



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