

# Coaxial High Power Amplifier

## ZVE-3W-83+

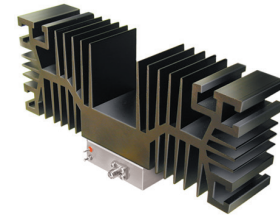
50Ω 3W 2000 to 8000 MHz

### Features

- High power, 3 Watt
- Wideband, 2000 to 8000 MHz
- Low noise figure, 5.8 dB typ.
- High IP3, +42 dBm typ.
- High dynamic range
- High gain, 35 dB typ. and good directivity, 35 dB typ.
- Internal voltage regulated for 13 to 18 VDC

### Applications

- Satellite communications
- Line-of-sight transmitters
- Signal generators
- Spread-spectrum communication



CASE STYLE: BN1327

Connectors Model  
SMA ZVE-3W-83+

### +RoHS Compliant

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

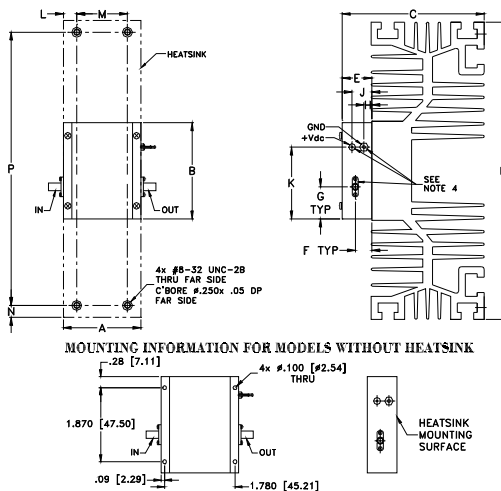
### Electrical Specifications

Parameter	Min.	Typ.	Max.	Units
Frequency Range	2000		8000	MHz
Gain	30		40	dB
Gain Flatness		±1.15	±2.0	dB
Output Power at 1dB compression <sup>1</sup>	+31.5	+33		dBm
Saturated Output Power at 3dB compression <sup>1</sup>	+33.5	+35		dBm
Noise Figure		5.8		dB
Output third order intercept point		+42		dBm
Input VSWR		1.5		:1
Output VSWR		1.4		:1
DC Supply Voltage		15		V
Supply Current <sup>2</sup>			1.5	A

1. At 25°C operating temperature

2. IF Voltage set below 15 VDC, current may go up to 2A/max.

### Outline Drawing



### Maximum Ratings<sup>5</sup>

Parameter	Ratings
Operating Base Plate Temperature <sup>3</sup>	-40°C to 85°C
Storage Temperature	-55°C to 125°C
DC Voltage	+18V
Input RF Power <sup>4</sup> (no damage)	+20 dBm

3. Base plate is interface of amplifier body to heat sink.

4. With no load derate max. input power by 20 dB.

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

### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	wt
1.960	2.430	3.6	7.5	.74	.42	.81	.20	.49	1.81	0.355	1.250	.30	6.900	grams*
49.78	61.72	91.44	190.50	18.80	10.67	20.57	5.08	12.45	45.97	9.02	31.75	7.62	175.26	875

\*120 grams without heatsink

### Notes

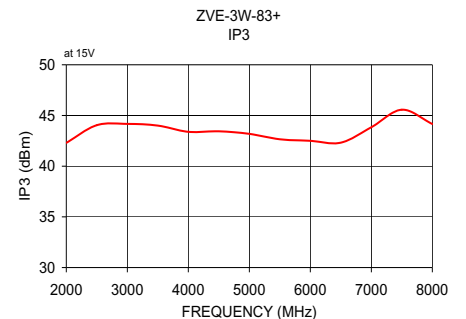
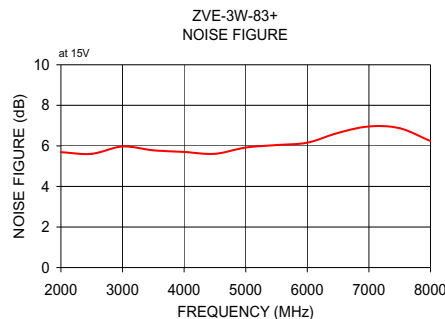
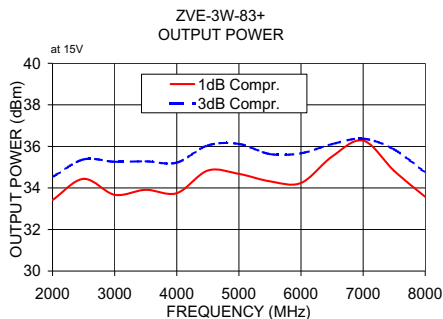
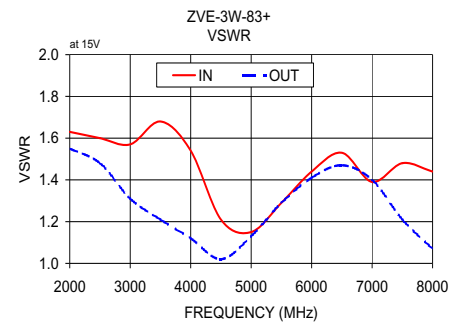
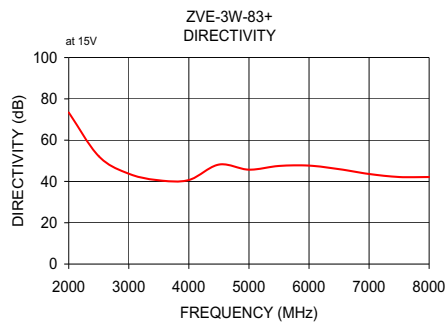
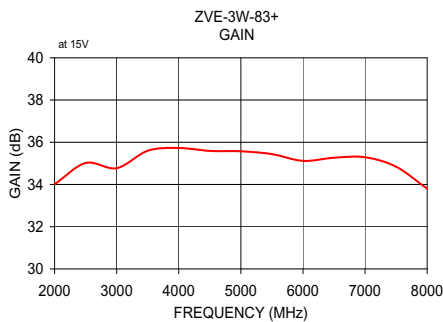
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ZVE-3W-83+  
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WZ/CP/AM  
160902  
Page 1 of 2

FREQUENCY (MHz)	GAIN (dB)	DIRECTIVITY (dB)	VSWR (:1)		NOISE FIGURE (dB)	POUT (dBm) at 15V		OUTPUT IP3 (dBm)
	15V	15V	IN	OUT		1 dB Compr.	3 dB Compr.	15V
2000.00	34.01	73.37	1.63	1.55	5.69	33.42	34.53	42.30
2500.00	35.02	52.19	1.60	1.48	5.61	34.44	35.37	44.04
3000.00	34.77	43.74	1.57	1.31	5.97	33.67	35.26	44.17
3500.00	35.60	40.56	1.68	1.21	5.78	33.91	35.28	44.00
4000.00	35.73	40.67	1.54	1.12	5.70	33.75	35.22	43.39
4500.00	35.59	48.18	1.21	1.02	5.61	34.84	36.05	43.44
5000.00	35.57	45.70	1.15	1.13	5.92	34.68	36.12	43.19
5500.00	35.44	47.51	1.29	1.29	6.04	34.32	35.63	42.65
6000.00	35.12	47.69	1.44	1.41	6.16	34.24	35.67	42.50
6500.00	35.27	45.95	1.53	1.47	6.64	35.51	36.11	42.32
7000.00	35.29	43.62	1.39	1.40	6.96	36.28	36.37	43.84
7500.00	34.84	42.16	1.48	1.21	6.87	34.82	35.85	45.57
8000.00	33.80	42.17	1.44	1.07	6.24	33.57	34.75	44.16



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