



COAXIAL

High Power Amplifier

ZVE-3W-83+ ZVE-3W-83X+

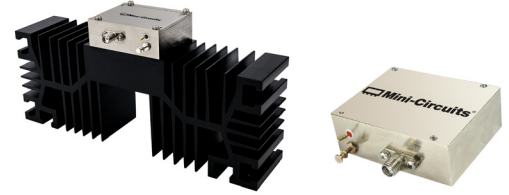
50Ω 3W 2000 to 8000 MHz

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 communications



Generic photo used for illustration purposes only

Model No.	ZVE-3W-83+	ZVE-3W-83X+▲
Option	With heatsink	Without heatsink
Case Style	BN1327	
Connectors	SMA	

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

ELECTRICAL SPECIFICATIONS

Parameter	Condition (MHz)	ZVE-3W-83+ ZVE-3W-83X+▲			Units
		Min.	Typ.	Max.	
Frequency Range		2000		8000	MHz
Gain	2000 - 8000	30	—	40	dB
Gain Flatness	2000 - 8000	—	±1.15	±2.0	dB
Output Power at 1dB Compression ¹	2000 - 8000	+31.5	+33	—	dBm
Output Power at 3 dB Compression ¹	2000 - 8000	+33.5	+35	—	dBm
Output IP3	2000 - 8000	—	+42	—	dBm
Input VSWR	2000 - 8000	—	1.5	—	:1
Output VSWR	2000 - 8000	—	1.4	—	:1
Noise Figure	2000 - 8000	—	5.8	—	dB
DC Supply Voltage		—	15	—	V
Supply Current ²		—	—	1.5	A

1. At 25°C operating temperature
2. IF Voltage set below 15 VDC, current may go up to 2A/max.

▲ Heat sink and fan not included. Alternative heat sinking and heat removal must be provided by the user to limit maximum base-plate temperature to 85°C, in order to ensure proper performance. For reference, this requires thermal resistance of user's external heat sink to be 2°C/W max.

MAXIMUM RATINGS⁵

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

3. With no load derate max. input power by 20 dB.
4. Base plate is interface of amplifier body to heat sink.
5. Permanent damage may occur if any of these limits are exceeded.



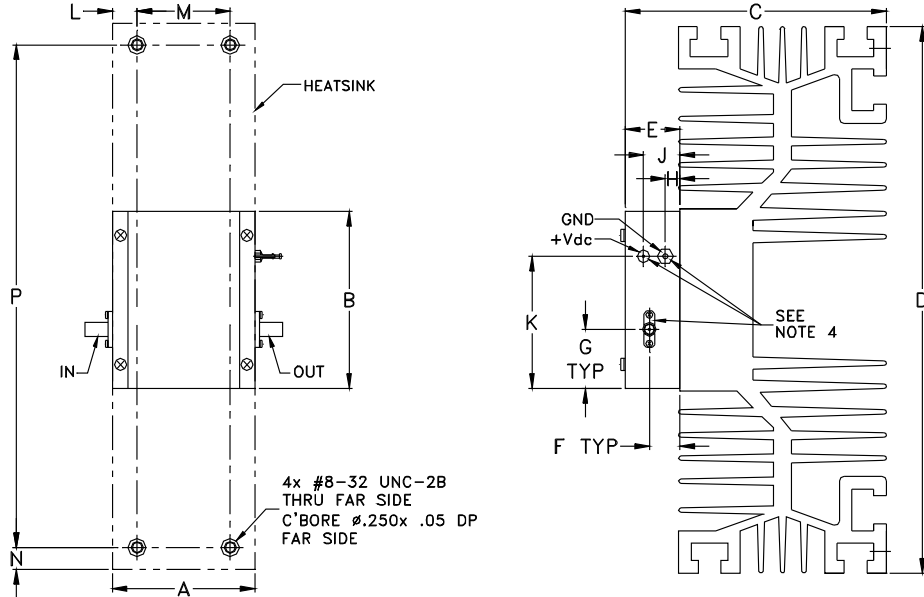


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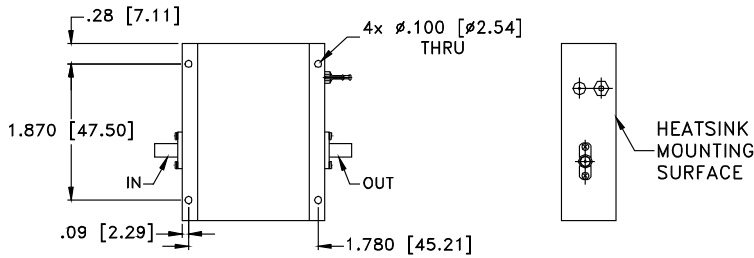
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OUTLINE DRAWING FOR MODELS WITH HEATSINK (ZVE-3W-83+)



MOUNTING INFORMATION FOR MODELS WITHOUT HEATSINK (ZVE-3W-83X+)



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





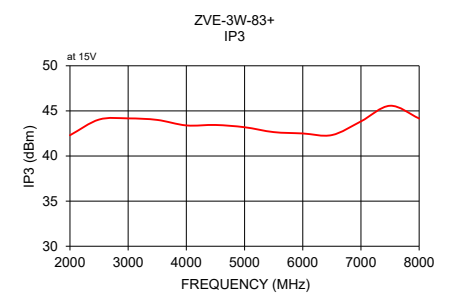
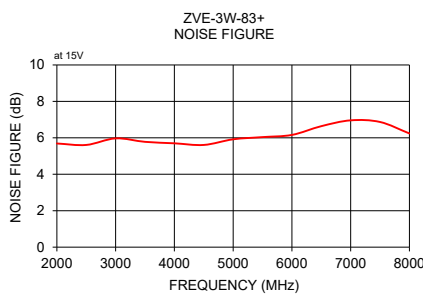
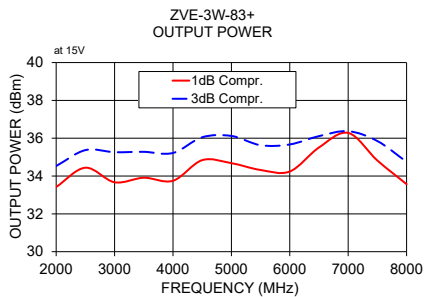
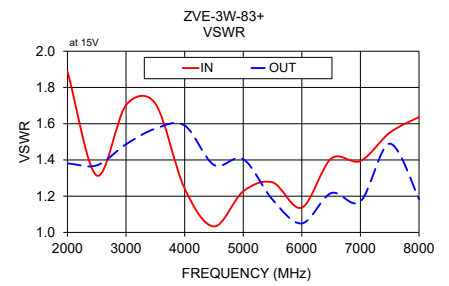
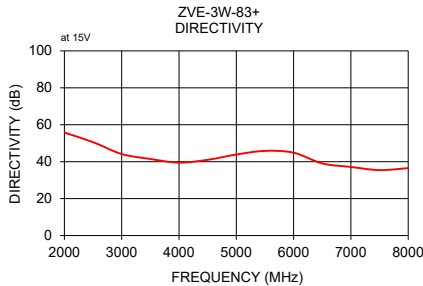
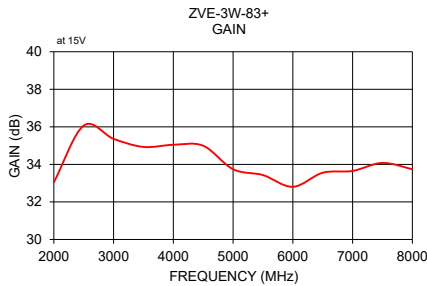
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TYPICAL PERFORMANCE DATA/CURVES

Frequency (MHz)	Gain (dB)	Directivity (dB)	VSWR (:1)		Pout at 1 dB Compr. (dBm)	Pout at 3 dB Compr. (dBm)	Noise Figure (dB)	OIP3 (dBm)
	15V	15V	IN	OUT	15V	15V	15V	15V
2000.00	33.04	55.76	1.89	1.38	33.42	34.53	5.69	42.30
2500.00	36.07	50.59	1.31	1.37	34.44	35.37	5.61	44.04
3000.00	35.36	44.15	1.70	1.49	33.67	35.26	5.97	44.17
3500.00	34.93	41.47	1.71	1.57	33.91	35.28	5.78	44.00
4000.00	35.04	39.47	1.24	1.59	33.75	35.22	5.70	43.39
4500.00	34.99	41.02	1.03	1.37	34.84	36.05	5.61	43.44
5000.00	33.74	43.87	1.23	1.40	34.68	36.12	5.92	43.19
5500.00	33.43	45.85	1.28	1.18	34.32	35.63	6.04	42.65
6000.00	32.80	44.87	1.14	1.05	34.24	35.67	6.16	42.50
6500.00	33.55	39.05	1.41	1.22	35.51	36.11	6.64	42.32
7000.00	33.65	37.15	1.39	1.17	36.28	36.37	6.96	43.84
7500.00	34.08	35.44	1.55	1.49	34.82	35.85	6.87	45.57
8000.00	33.74	36.53	1.64	1.18	33.57	34.75	6.24	44.16



- 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.
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