



COAXIAL

Medium High Power Amplifier **ZVE-8G+** **ZVE-8GX+**

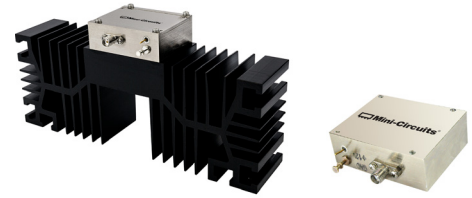
50Ω 2000 to 8000 MHz SMA Female

FEATURES

- Wideband, 2000 to 8000 MHz
- Low Noise, 4 dB Typ.
- High IP3, +40 dBm Typ.
- High Dynamic Range
- High Gain, 30 dB Min.

APPLICATIONS

- Satellite Communications
- Line-Of-Sight Transmitters
- Signal Generators
- Spread-Spectrum Communications



Generic photo used for illustration purposes only

Model No.	ZVE-8G+	ZVE-8GX+▲
Option	With Heatsink	Without Heatsink
Case Style	BN333	
Connectors	SMA female	

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

ELECTRICAL SPECIFICATIONS AT +25 °C

Parameter	Condition (MHz)	ZVE-8G+ ZVE-8GX+▲			Units
		Min.	Typ.	Max.	
Frequency Range		2000		8000	MHz
Gain	2000-8000	30			dB
Gain Flatness	2000-8000			2.0	dB
Input VSWR	2000-8000			2.0	:1
Output VSWR	2000-8000			2.0	:1
Output Power at 1 dB Compression	2000-8000	+30 ¹			dBm
Output IP3	2000-8000		+40		dBm
Noise Figure	2000-8000		4		dB
Device Operating Voltage			+12		V
Device Operating Current				1.2	A

1. At +25 °C; +30 dBm typ. at +54 °C ambient.
 Open load is not recommended, potentially can cause damage.
 With no load, derate maximum input power by +20 dBm.

▲To order without heatsink, add suffix X to model number. Alternative heat sinking and heat removal must be provided by the user to limit maximum baseplate temperature to +85 °C, in order to ensure proper performance. For reference, this requires thermal resistance of user's external heatsink to be 1.3 °C/W max.

ABSOLUTE MAXIMUM RATINGS

Parameter	Ratings
Operating Temperature	-55 °C to +54 °C
Storage Temperature	-65 °C to +150 °C
DC Voltage	+18 V
Input RF Power (No Damage)	+20 dBm

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





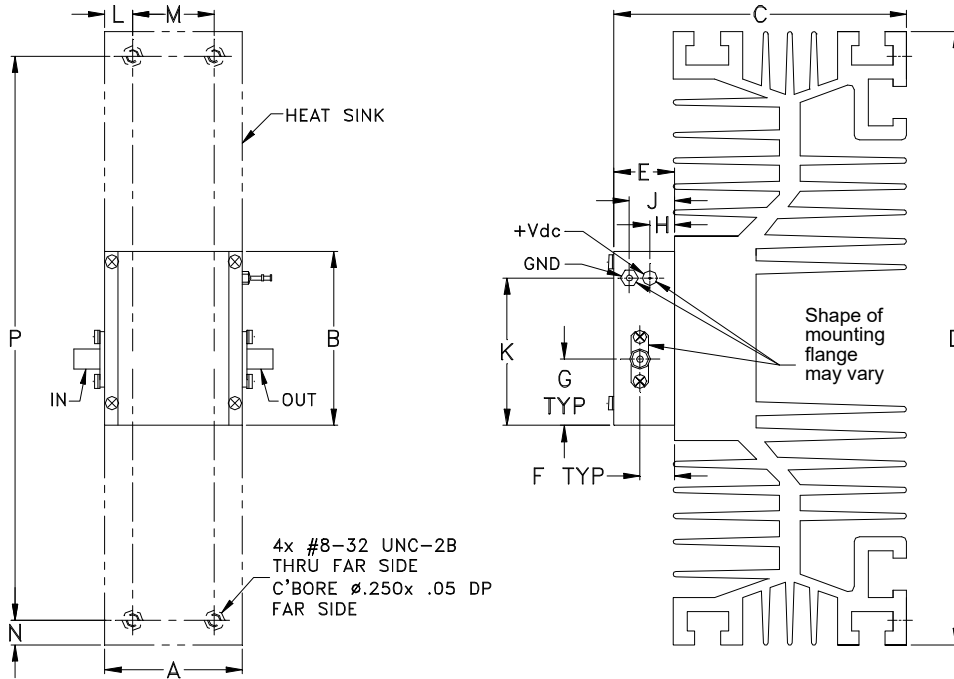
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Medium High Power Amplifier

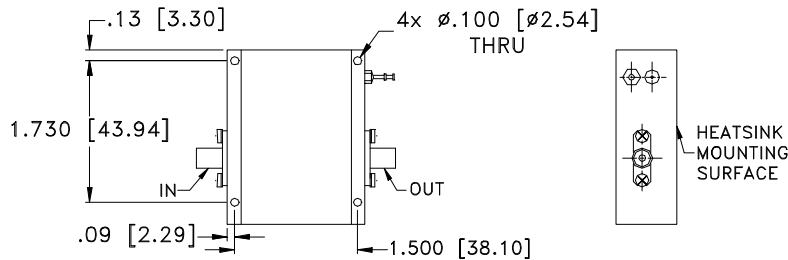
ZVE-8G+ ZVE-8GX+

50Ω 2000 to 8000 MHz SMA Female

OUTLINE DRAWING FOR MODELS WITH HEATSINK (ZVE-8G+)



MOUNTING INFORMATION FOR MODELS WITHOUT HEATSINK (ZVE-8GX+)



OUTLINE DIMENSIONS (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	wt
1.680	2.130	3.6	7.5	.74	.42	.81	.30	.55	1.80	.34	1.000	.30	6.900	grams*
42.67	54.10	91.44	190.50	18.80	10.67	20.57	7.62	13.97	45.72	8.64	25.40	7.62	175.26	700

*100 grams without heatsink





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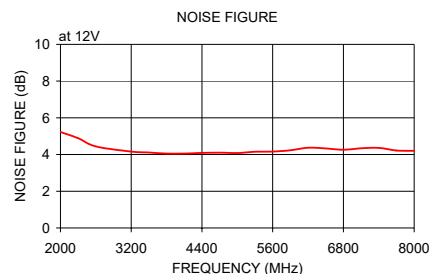
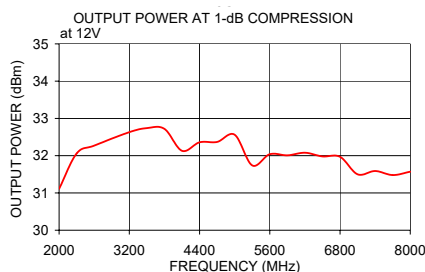
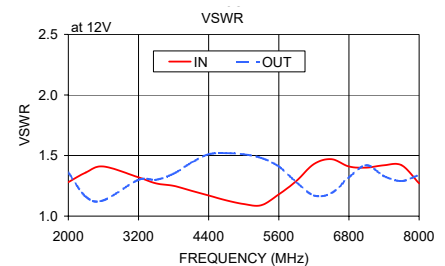
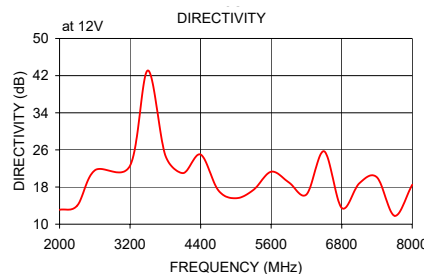
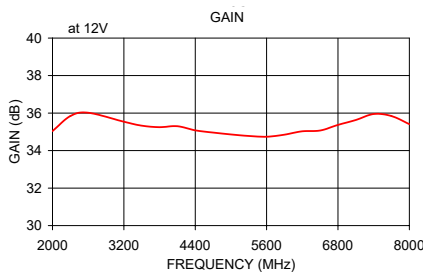
Medium High Power Amplifier

ZVE-8G+ ZVE-8GX+

50Ω 2000 to 8000 MHz SMA Female

TYPICAL PERFORMANCE DATA/CURVES

Frequency (MHz)	Gain (dB)	Directivity (dB)	VSWR (:1)		P _{OUT} at 1 dB Compr. (dBm)	Noise Figure (dB)
	+12 V	+12 V	IN	OUT	+12 V	+12 V
2000	35.04	13.10	1.28	1.36	31.11	5.23
2300	35.84	14.00	1.36	1.16	32.06	4.89
2600	36.02	21.60	1.41	1.13	32.27	4.44
3200	35.54	22.60	1.32	1.30	32.63	4.16
3500	35.33	43.10	1.27	1.30	32.74	4.11
3800	35.25	24.80	1.25	1.35	32.72	4.05
4100	35.30	21.00	1.21	1.44	32.13	4.05
4400	35.08	25.00	1.17	1.51	32.36	4.09
4700	34.96	17.30	1.13	1.52	32.37	4.10
5000	34.86	15.60	1.10	1.51	32.56	4.08
5300	34.78	17.40	1.09	1.48	31.74	4.15
5600	34.74	21.30	1.18	1.41	32.04	4.16
5900	34.85	19.00	1.29	1.28	32.01	4.23
6200	35.03	16.40	1.43	1.17	32.08	4.37
6500	35.07	25.70	1.47	1.19	31.98	4.33
6800	35.37	13.50	1.41	1.32	31.97	4.26
7100	35.63	18.80	1.40	1.42	31.50	4.34
7400	35.95	20.10	1.42	1.33	31.59	4.36
7700	35.84	11.80	1.42	1.29	31.48	4.22
8000	35.41	18.50	1.27	1.34	31.57	4.20



- NOTES**
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 - 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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Amplifier

ZVE-8G+

Typical Performance Data

FREQUENCY (MHz)	GAIN (dB) 12V	DIRECTIVITY (dB) 12V	VSWR IN (:1) 12V	VSWR OUT (:1) 12V	NOISE FIGURE (dB) 12V	Pout at 1dB Comp. (dBm) 12V
2000.0	35.04	13.08	1.28	1.36	5.23	31.11
2300.0	35.84	13.96	1.36	1.16	4.89	32.06
2600.0	36.02	21.59	1.41	1.13	4.44	32.27
3200.0	35.54	22.58	1.32	1.30	4.16	32.63
3500.0	35.33	43.10	1.27	1.30	4.11	32.74
3800.0	35.25	24.79	1.25	1.35	4.05	32.72
4100.0	35.30	21.03	1.21	1.44	4.05	32.13
4400.0	35.08	25.04	1.17	1.51	4.09	32.36
4700.0	34.96	17.32	1.13	1.52	4.10	32.37
5000.0	34.86	15.64	1.10	1.51	4.08	32.56
5300.0	34.78	17.37	1.09	1.48	4.15	31.74
5600.0	34.74	21.29	1.18	1.41	4.16	32.04
5900.0	34.85	18.96	1.29	1.28	4.23	32.01
6200.0	35.03	16.36	1.43	1.17	4.37	32.08
6500.0	35.07	25.71	1.47	1.19	4.33	31.98
6800.0	35.37	13.49	1.41	1.32	4.26	31.97
7100.0	35.63	18.78	1.40	1.42	4.34	31.50
7400.0	35.95	20.14	1.42	1.33	4.36	31.59
7700.0	35.84	11.80	1.42	1.29	4.22	31.48
8000.0	35.41	18.53	1.27	1.34	4.20	31.57

REV. X1
ZVE-8G+
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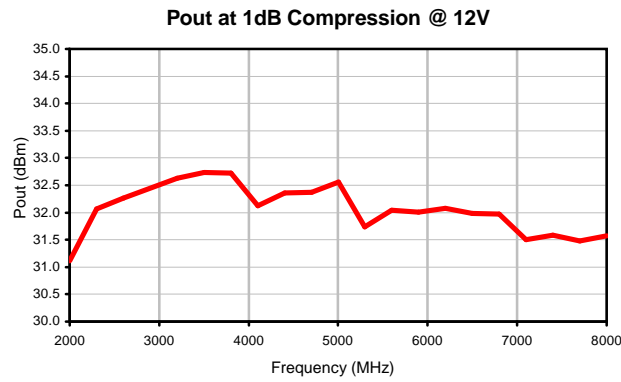
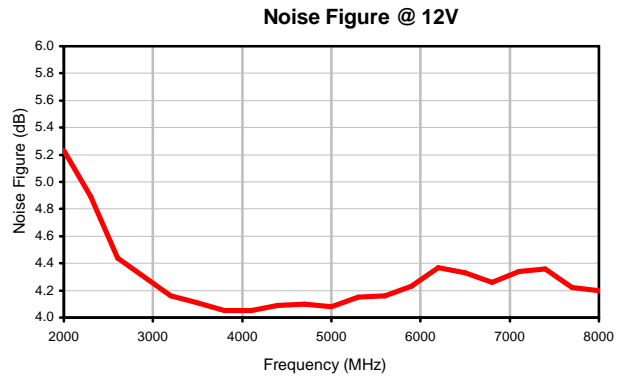
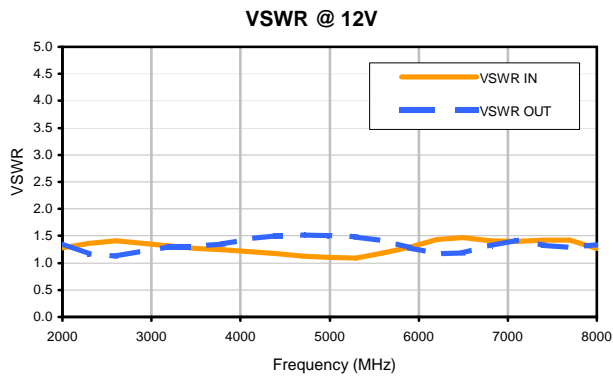
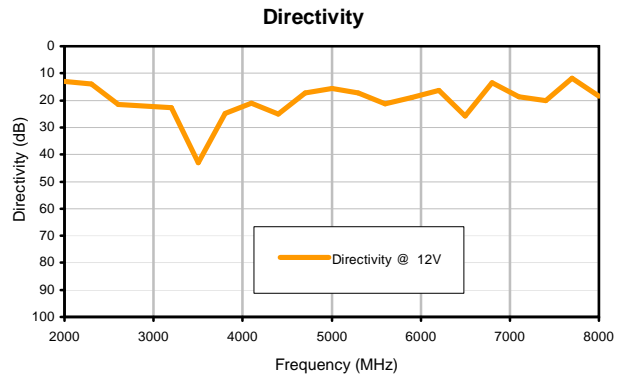
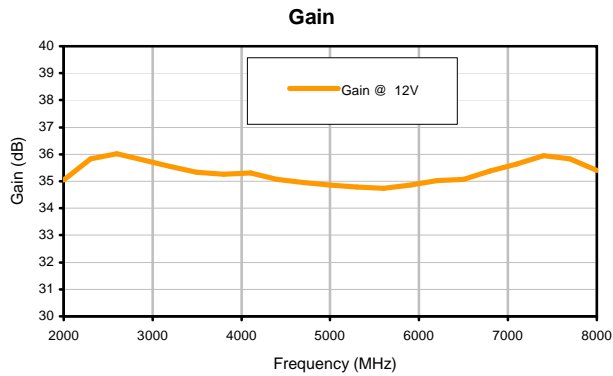
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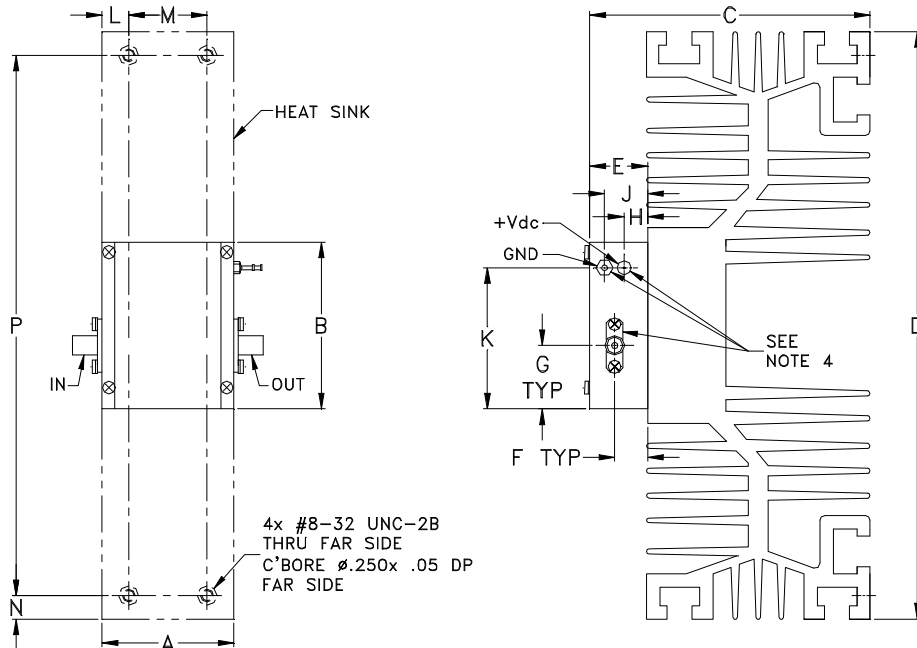
The Design Engineers Search Engine finds the model you need, Instantly • For detailed performance specs & shopping online see



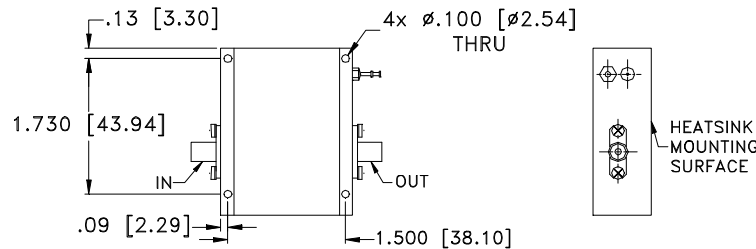
Typical Performance Curves



Outline Dimensions



MOUNTING INFORMATION FOR MODELS WITHOUT HEATSINK



CASE #	A	B	C	D	E	F	G	H	J	K	L
BN333	1.680 (42.67)	2.130 (54.10)	3.6 (91.44)	7.5 (190.50)	.74 (18.80)	.42 (10.67)	.81 (20.57)	.30 (7.62)	.55 (13.97)	1.80 (45.72)	.34 (8.64)

CASE #	M	N	P	WT. GRAM	WT. WITHOUT HEATSINK GRAM
BN333	1.000 (25.40)	.30 (7.62)	6.900 (175.26)	700	100

Dimensions are in inches (mm). Tolerances: 1Pl. + .1; 2Pl. + .03; 3 Pl. + .015

Notes:

1. Case material: Aluminum alloy.
2. Case finish: Nickel plate.
3. Heat sink finish: Black anodize.
4. Shape of mounting flange may vary.



INTERNET <http://www.minicircuits.com>

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Mini-Circuits ISO 9001 & ISO 14001 Certified



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-55° to 54° C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Stabilization Bake	(non-operating) 125°C, 24 hours	- - -
Burn-in at Elevated Temp.	(DC on) 160 hours at 85° C	MIL-STD-202, Method 108
Thermal Shock	-55° to 100°C, 5 cycles	MIL-STD-202, Method 107, Condition A, except 100°C