



COAXIAL

High Power Amplifier

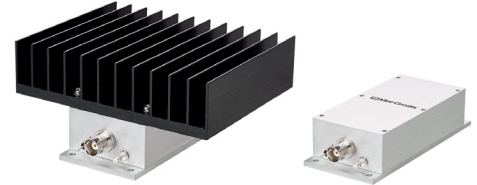
ZHL-1-2W+ ZHL-1-2WX+

Mini-Circuits

50Ω 2W 5 to 500 MHz

FEATURES

- Wideband, 5 to 500 MHz
- High Power Output, +33 dBm min.
- High Gain, +29 dB min.
- High IP3, +44 dBm typ.
- Good matching VSWR, 1.5:1



Generic photo used for illustration purposes only
Case Style: T35

APPLICATIONS

- VHF/UHF
- Instrumentation
- Laboratory

Connectors	Model No
BNC	ZHL-1-2W+ (shown)
BNC	ZHL-1-2WX+ (shown)
SMA	ZHL-1-2W-S+
SMA	ZHL-1-2WX-S+
N-TYPE	ZHL-1-2W-N+
N-TYPE	ZHL-1-2WX-N+

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

ELECTRICAL SPECIFICATIONS AT 25°C

Parameter	Condition (MHz)	ZHL-1-2W+ ZHL-1-2WX+ [▲]			Units
		Min.	Typ.	Max.	
Frequency Range		5	—	500	MHz
Gain	5-500	29	—	—	dB
Gain Flatness	5-500	—	—	±1.0	dB
Output Power at 1dB compression	5-500	+33		—	dBm
Noise Figure	5-500	—	7.0	—	dB
Output third order intercept point	5-500	—	+44	—	dBm
Input VSWR	5-500	—	1.5		:1
Output VSWR	5-500	—	1.5		:1
DC Supply Voltage		—	24	—	V
Supply Current		—	—	0.9	A

Open load is not recommended, potentially can cause damage.
With no load derate max. input power by 20 dB.

[▲] Heat sink 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 1.0°C/W max.

ABSOLUTE MAXIMUM RATINGS

Parameter	Ratings
Operating Temperature	-20°C to +65°C
Storage Temperature	-55°C to +100°C
DC Voltage	+25V
Input RF Power (no damage)	+10 dBm

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

REV. F
ECO-017840
ZHL-1-2W+
MCL NY
230516





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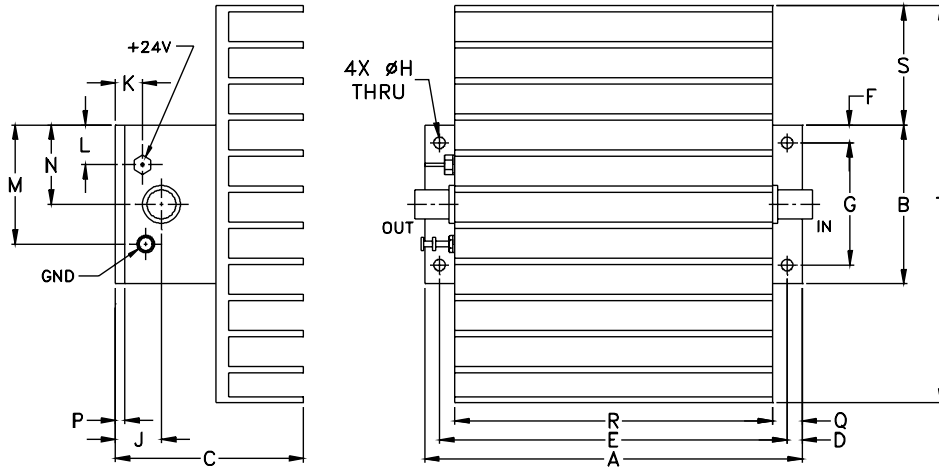
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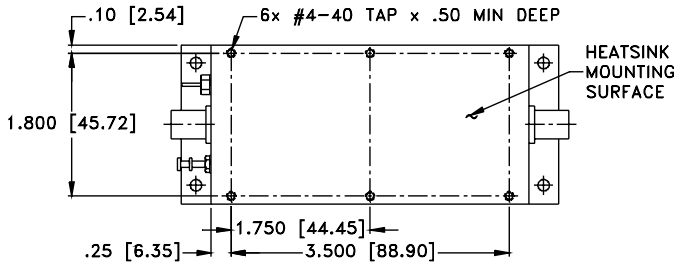
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OUTLINE DRAWING FOR MODELS WITH HEATSINK



MOUNTING INFORMATION FOR MODELS WITHOUT HEATSINK



OUTLINE DIMENSIONS (Inch mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	wt
4.75	2.00	2.37	.19	4.375	.23	1.540	.144	.58	.34	.50	1.50	1.00	.13	.38	4.00	1.50	5.0	grams*
120.65	50.80	60.20	4.83	111.13	5.84	39.12	3.66	14.73	8.64	12.70	38.10	25.40	3.30	9.65	101.60	38.10	127.00	700

*300 grams without heatsink



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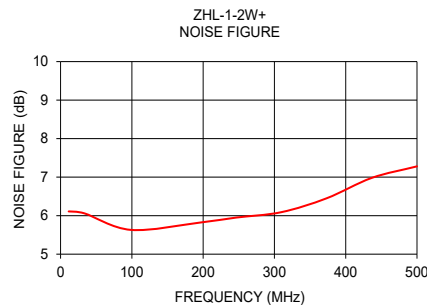
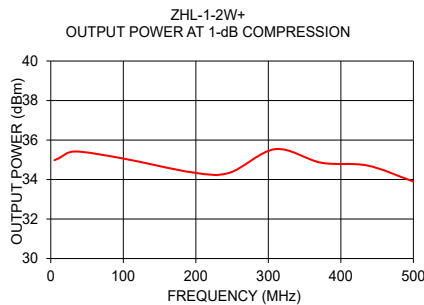
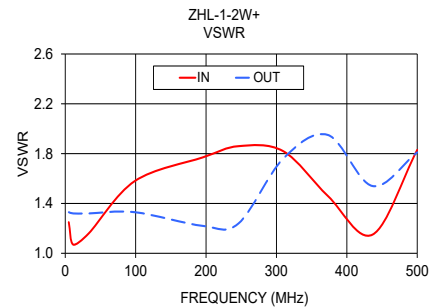
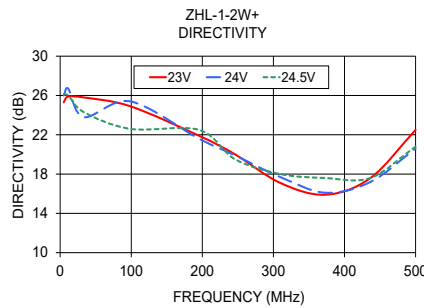
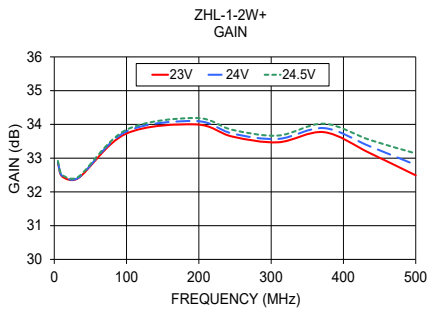
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TYPICAL PERFORMANCE DATA/CURVES

FREQUENCY (MHz)	GAIN (dB)			DIRECTIVITY (dB)			VSWR (:1)		NOISE FIGURE (dB)	P _{OUT} at 1 dB COMPR. (dBm)
	23V	24V	24.5V	23V	24V	24.5V	IN	OUT		
5.00	32.84	32.87	32.92	25.30	26.00	26.10	1.12	1.51		34.98
11.30	32.45	32.47	32.50	25.90	26.70	26.00	1.10	1.49	6.11	35.08
33.40	32.41	32.42	32.45	25.80	23.80	24.30	1.16	1.49	6.06	35.42
98.80	33.72	33.78	33.83	24.90	25.40	22.60	1.28	1.43	5.63	35.07
195.40	34.00	34.10	34.19	21.90	21.60	22.50	1.41	1.18	5.82	34.36
246.20	33.64	33.73	33.84	20.00	19.90	19.50	1.45	1.11	5.95	34.34
309.60	33.47	33.57	33.67	17.10	17.70	18.00	1.48	1.19	6.09	35.54
373.10	33.77	33.89	34.02	15.90	16.10	17.60	1.51	1.29	6.45	34.85
436.50	33.15	33.35	33.54	17.60	17.20	17.60	1.56	1.37	6.98	34.71
500.00	32.49	32.80	33.14	22.50	20.60	20.80	1.59	1.57	7.28	33.90



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/terms/viewterm.html

