



Mini-Circuits

COAXIAL

High Power Amplifier

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

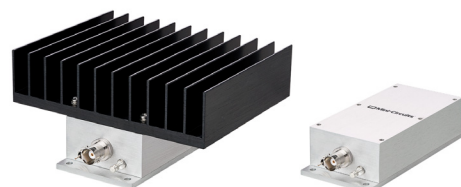
50Ω 2 W 5 to 500 MHz BNC/SMA/N-Type Connectors

FEATURES

- Wideband, 5 to 500 MHz
- High Power Output, +33 dBm Typ., +32.5 dBm Min.
- High Gain, 32 dB Typ., 29 dB Min.
- High OIP3, +44 dBm Typ.
- Good Matching VSWR, 1.5:1

APPLICATIONS

- VHF/UHF
- Instrumentation
- Laboratory



Generic photo used for illustration purposes only

Case Style: T35

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	32		dB
Gain Flatness	5-500			±1.0	dB
Output Power at 1 dB Compression	5-500	+32.5	+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.

▲ Heatsink not included. 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 1.0 °C/W max.

ABSOLUTE MAXIMUM RATINGS

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

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

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REV. G
ECO-025117
ZHL-1-2W(X)+
MCL NY
260220

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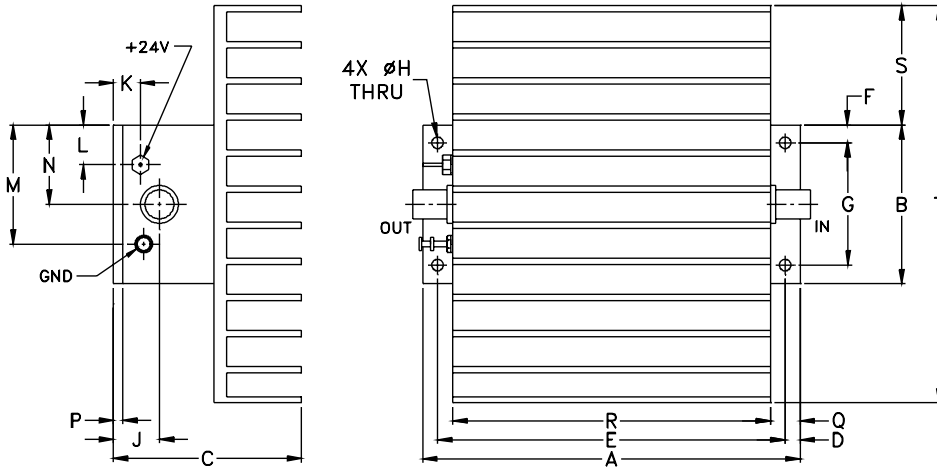
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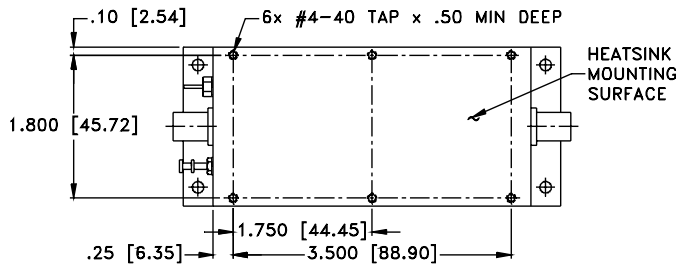
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OUTLINE DRAWING FOR MODELS WITH HEATSINK



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																		

*300 grams without heatsink



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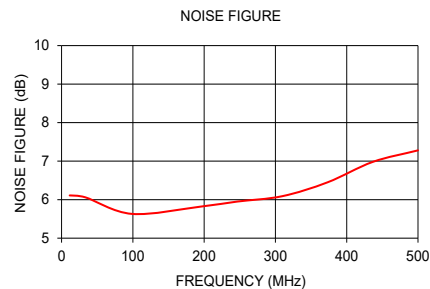
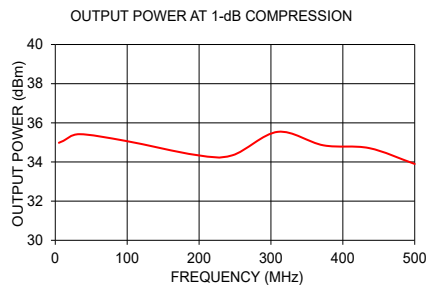
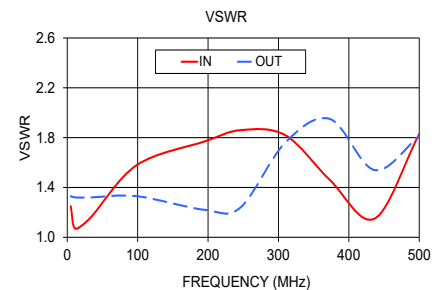
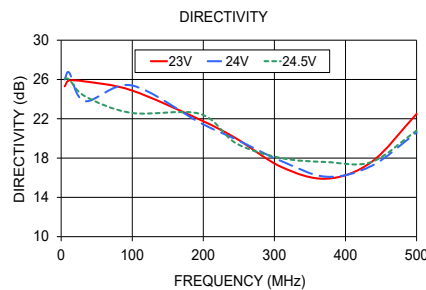
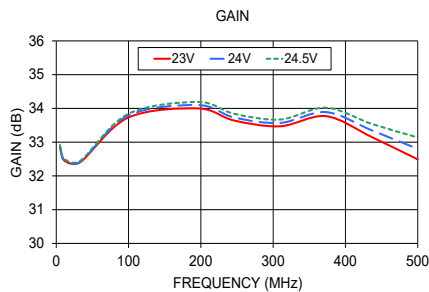
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TYPICAL PERFORMANCE DATA/CURVES

FREQUENCY (MHz)	GAIN (dB)			DIRECTIVITY (dB)			VSWR (:1)		NOISE FIGURE (dB)	P _{OUT} at 1 dB COMPR. (dBm)
	+23 V	+24 V	+24.5 V	+23 V	+24 V	+24.5 V	IN	OUT		
5.0	32.84	32.87	32.92	25.30	26.00	26.10	1.12	1.51		34.98
11.3	32.45	32.47	32.50	25.90	26.70	26.00	1.10	1.49	6.11	35.08
33.4	32.41	32.42	32.45	25.80	23.80	24.30	1.16	1.49	6.06	35.42
98.8	33.72	33.78	33.83	24.90	25.40	22.60	1.28	1.43	5.63	35.07
195.4	34.00	34.10	34.19	21.90	21.60	22.50	1.41	1.18	5.82	34.36
246.2	33.64	33.73	33.84	20.00	19.90	19.50	1.45	1.11	5.95	34.34
309.6	33.47	33.57	33.67	17.10	17.70	18.00	1.48	1.19	6.09	35.54
373.1	33.77	33.89	34.02	15.90	16.10	17.60	1.51	1.29	6.45	34.85
436.5	33.15	33.35	33.54	17.60	17.20	17.60	1.56	1.37	6.98	34.71
500.0	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

