

Coaxial

# Low Noise Amplifier

## ZHL-1724HLN

50Ω

1700 to 2400 MHz

### Features

- very low noise figure, 1.5 dB max.
- wideband, 1700 to 2400 MHz
- high dynamic range

### Applications

- PCS/DCS
- UMTS
- communication systems



Model No.	ZHL-1724HLN-S	ZHL-1724HLNX-S <sup>▲</sup>
Case Style	NN92	
Connectors	SMA	
Price (Qty.)	\$399.50 ea. (1-9)	\$389.50 ea. (1-9)

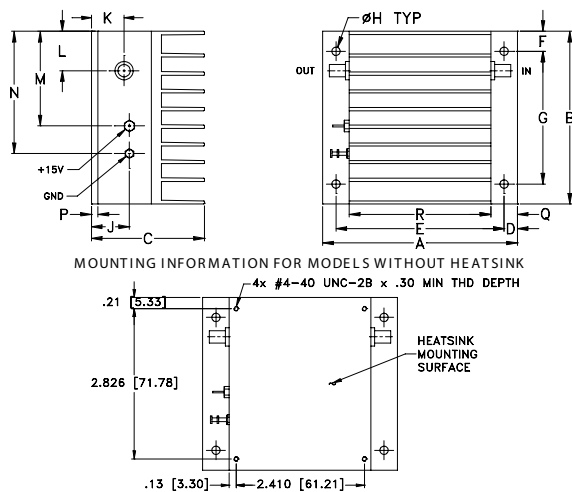
### Electrical Specifications

Parameter	Frequency (MHz)	ZHL-1724HLN-S			ZHL-1724HLNX-S <sup>▲</sup>			Units
		Min.	Typ.	Max.	Min	Typ.	Max.	
Frequency Range		1700		2400	1700		2400	MHz
Noise Figure	1700-2400	—	—	1.5	—	—	1.5	dB
Gain	1700-2400	30	—	—	30	—	—	dB
Gain Flatness	1700-2400	—	—	±1.0	—	—	±1.0	dB
Output Power at 1dB compression	1700-2400	—	+26	—	—	+26	—	dBm
Output third order intercept point	1700-2400	—	+36	—	—	+36	—	dBm
Input VSWR	1700-2400	—	2.4	—	—	2.4	—	:1
Output VSWR	1700-2400	—	2.4	—	—	2.4	—	:1
DC Supply Voltage		—	15	—	—	15	—	V
Supply Current <sup>†</sup>		—	—	725	—	—	725	mA

Noise Figure specified at room temperature, increases to 2.3 dB max. at +65°C  
 Open load is not recommended, potentially can cause damage.  
 With no load derate max input power by 20 dB

<sup>▲</sup> Heat sink not included. Alternative heat sinking and heat removal must be provided by the user to limit maximum base-plate temperature to 65°C, in order to ensure proper performance. For reference, this requires thermal resistance of user's external heat sink to be 1.8°C/W max.

### Outline Drawing



### Maximum Ratings

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

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	Q	R	wt
3.66	3.25	2.13	.25	3.16	.38	2.50	.156	.72	.64	.74	1.78	2.30	.125	.50	2.66	grams*
92.96	82.55	54.10	6.35	80.26	9.65	63.50	3.96	18.29	16.26	18.80	45.21	58.42	3.18	12.70	67.56	500.0

\*362 grams without heatsink



For detailed performance specs & shopping online see web site

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at [minicircuits.com](http://minicircuits.com)

IFIRF MICROWAVE COMPONENTS

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp).

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FREQUENCY (MHz)	GAIN (dB)			DIRECTIVITY (dB)			VSWR (:1)		NOISE FIGURE (dB)	POUT at 1 dB COMPR. (dBm)
	12V	15V	16V	12V	15V	16V	IN	OUT		
1700.00	39.56	40.17	40.15	11.20	10.70	17.30	2.09	1.11	1.33	28.99
1751.20	38.88	39.50	39.50	15.20	12.30	12.20	1.77	1.14	1.21	29.09
1821.90	39.10	39.69	39.66	15.80	3.10	14.50	1.44	1.12	1.10	28.70
1895.50	38.37	38.94	38.93	23.50	13.20	9.00	1.19	1.17	1.08	27.52
1969.20	38.48	39.09	39.09	15.20	10.90	14.80	1.10	1.22	1.12	27.22
2041.00	38.68	39.37	39.35	24.60	16.90	21.50	1.24	1.29	1.16	26.69
2130.80	38.05	38.89	38.87	13.30	17.80	17.30	1.46	1.42	1.20	27.37
2220.50	38.23	39.17	39.16	10.60	24.20	10.60	1.48	1.52	1.21	28.97
2310.30	37.42	38.47	38.48	17.30	26.60	13.90	1.69	1.68	1.20	29.40
2400.00	37.51	38.68	38.69	13.80	14.90	14.80	1.98	1.76	1.19	29.12

