

Low Noise Amplifier

ZHL-0812HLN

50Ω 800 to 1200 MHz

Features

- very low noise figure, 1.5 dB max.
- wideband, 800 to 1200 MHz
- high dynamic range

Applications

- UHF
- cellular
- communication systems

Not Recommended for New Designs

Recommended Replacement Part:

[ZHL-0812HLN+](#)
[ZHL-0812HLNX+](#)



Model No.	ZHL-0812HLN-S	ZHL-0812HLNX-S [▲]
Case Style	NN92	
Connectors	SMA	

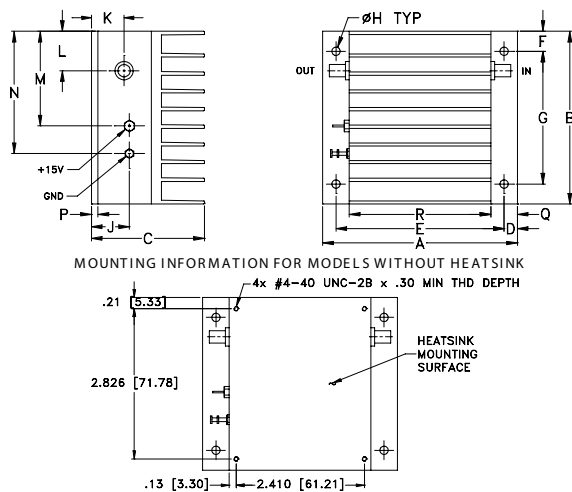
Electrical Specifications

Parameter	Frequency (MHz)	ZHL-0812HLN-S			ZHL-0812HLNX-S [▲]			Units
		Min.	Typ.	Max.	Min	Typ.	Max.	
Frequency Range		800		1200	800		1200	MHz
Noise Figure	800-1200	—	—	1.5	—	—	1.5	dB
Gain	800-1200	30	—	—	30	—	—	dB
Gain Flatness	800-1200	—	—	±1.0	—	—	±1.0	dB
Output Power at 1dB compression	800-1200	—	+26	—	—	+26	—	dBm
Output third order intercept point	800-1200	—	+36	—	—	+36	—	dBm
Input VSWR	800-1200	—	2.4	—	—	2.4	—	:1
Output VSWR	800-1200	—	2.4	—	—	2.4	—	:1
DC Supply Voltage		—	15	—	—	15	—	V
Supply Current		—	—	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

[▲] 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

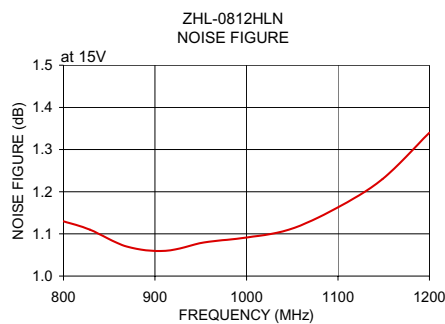
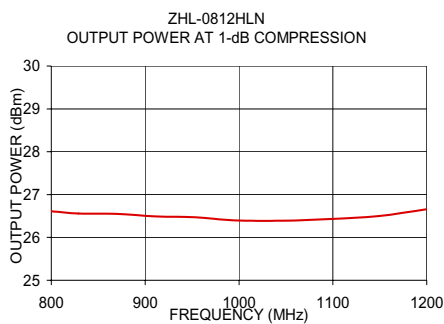
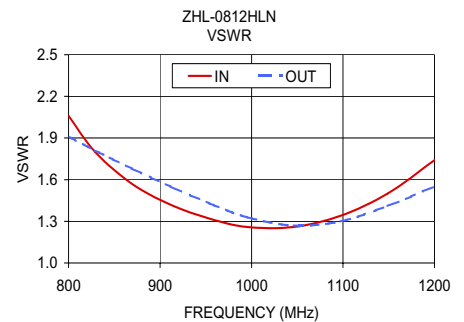
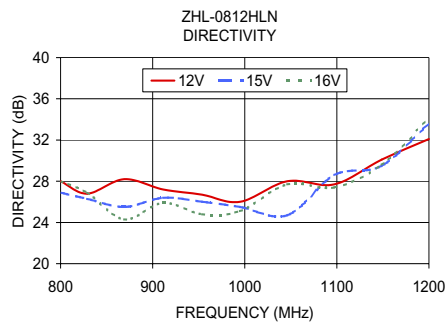
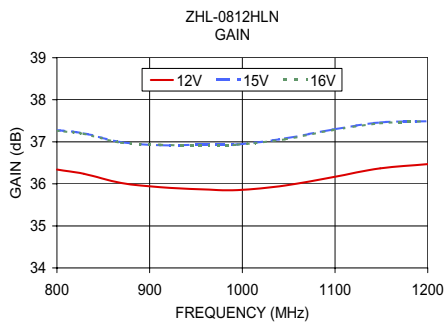
*362 grams without heatsink

Notes

- 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.
- 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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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		
800.00	36.34	37.28	37.26	28.00	26.90	28.00	2.06	1.91	1.13	26.61
829.00	36.24	37.20	37.19	26.80	26.30	26.90	1.80	1.81	1.11	26.56
869.20	36.02	36.99	36.98	28.20	25.50	24.30	1.57	1.68	1.07	26.55
911.50	35.92	36.92	36.93	27.20	26.40	25.90	1.42	1.55	1.06	26.49
953.80	35.87	36.93	36.91	26.70	26.00	24.80	1.32	1.43	1.08	26.47
994.90	35.85	36.94	36.93	26.00	25.50	25.10	1.26	1.33	1.09	26.40
1046.20	35.96	37.08	37.06	28.00	24.70	27.70	1.26	1.27	1.11	26.39
1097.40	36.16	37.29	37.28	27.70	28.60	27.40	1.34	1.30	1.16	26.43
1148.70	36.37	37.46	37.44	30.10	29.50	29.60	1.50	1.41	1.23	26.50
1200.00	36.47	37.49	37.49	32.10	33.60	34.10	1.74	1.55	1.34	26.66



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