Coaxial

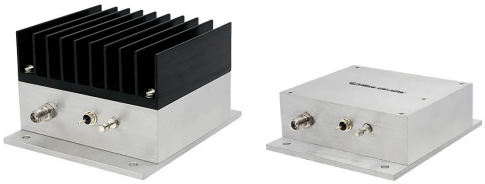
Low Noise Amplifier

ZHL-0812HLN+
ZHL-0812HLNX+

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



Generic photo used for illustration purposes only

Model No.	ZHL-0812HLN+	ZHL-0812HLNX+▲
Case Style	NN92	
Connectors	SMA	

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

Electrical Specifications at 25°C

Parameter	Frequency (MHz)	ZHL-0812HLN+			▲ ZHL-0812HLNX +			Units
		Min.	Typ.	Max.	Min	Typ.	Max.	
Frequency Range		800		1200	800		1200	MHz
Noise Figure	800-1200	—	0.5	1.5	—	0.5	1.5	dB
Gain	800-1200	38	—	—	38	—	—	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	—	1.4	—	—	1.4	—	:1
Output VSWR	800-1200	—	1.3	—	—	1.3	—	:1
DC Supply Voltage		—	15	—	—	15	—	V
Supply Current		—	620	725	—	620	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

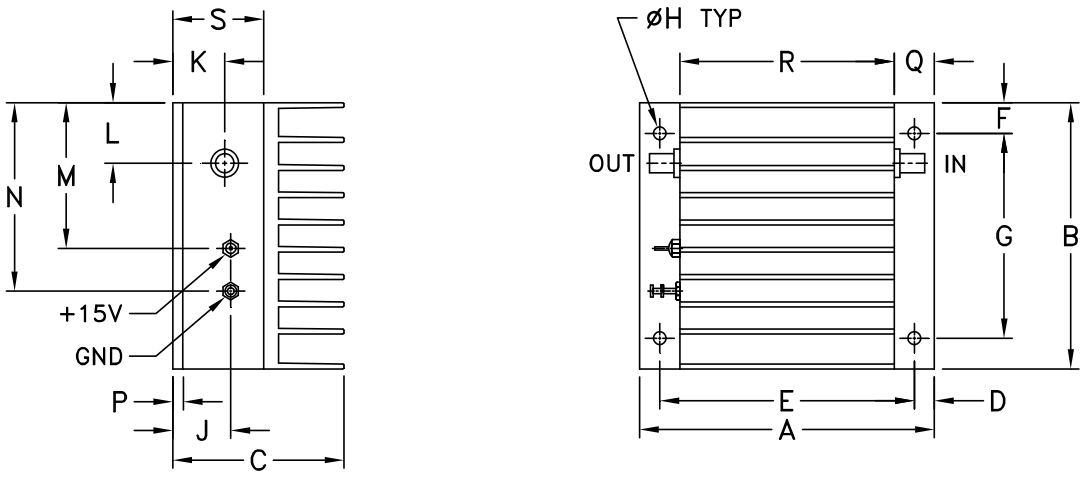
▲ Heat sink not included. Alternative heat sinking and heat removal must be provided by the user to limit maximum base-plate temperature to 65°C, in order to ensure proper performance. For reference, this requires thermal resistance of user's external heat sink to be 1.8°C/W max.

Maximum Ratings

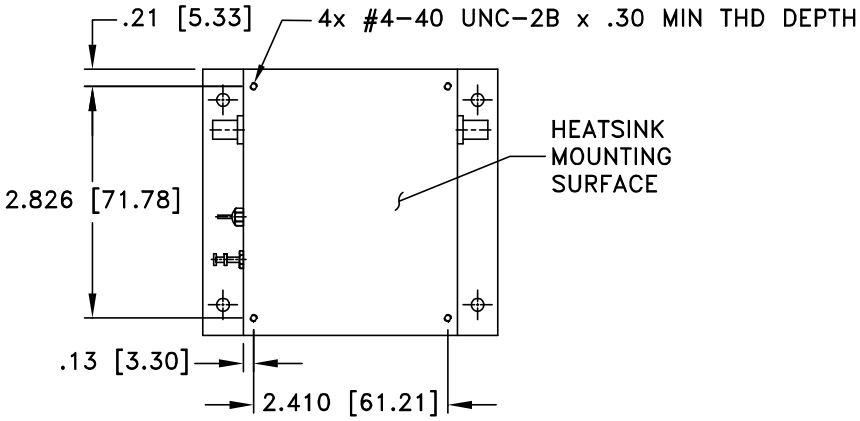
Parameter	Ratings
Operating Temperature	-20°C to 65°C
Storage Temperature	-55°C to 100°C
DC Voltage	20V
Input RF Power (no damage)	+10 dBm

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

Outline Drawing for models with heatsink



MOUNTING INFORMATION FOR MODELS WITHOUT HEATSINK



Outline Dimensions (inch / mm)

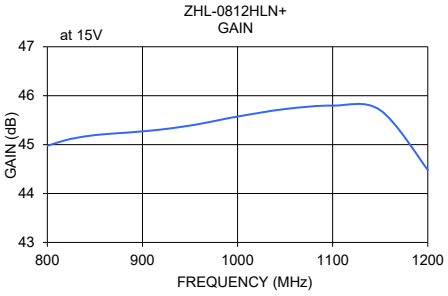
A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	wt
3.66	3.25	2.13	.25	3.16	.38	2.50	.156	.72	.64	.74	1.78	2.30	.125	.50	2.66	1.13	grams*
92.96	82.55	54.10	6.35	80.26	9.65	63.50	3.96	18.29	16.26	18.80	45.21	58.42	3.18	12.70	67.56	28.7	500.0

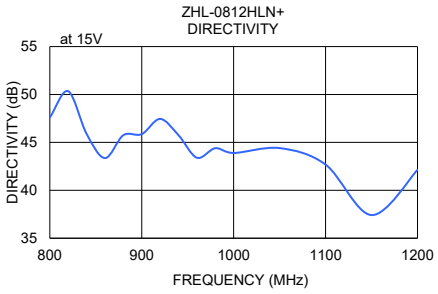
*362 grams without heatsink

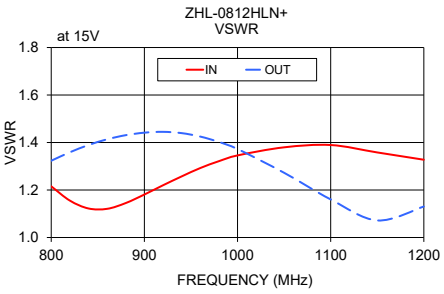
Notes
A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's 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/MCLStore/terms.jsp

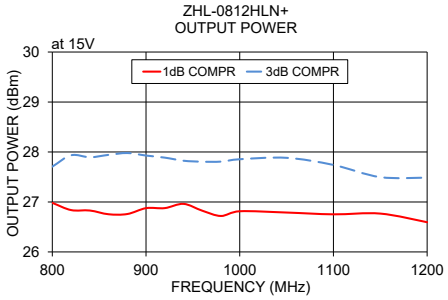
Typical Performance Data/Curves

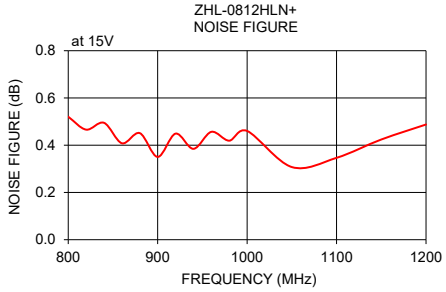
FREQUENCY (MHz)	GAIN (dB)	DIRECTIVITY (dB)	VSWR (:1)		POUT at 1 dB COMPR. (dBm)	NOISE FIGURE (dB)	IP3 (dBm)
	15V	15V	IN	OUT	15V	15V	15V
800	44.97	47.60	1.22	1.32	26.98	0.52	38.65
820	45.09	50.34	1.16	1.36	26.84	0.47	38.77
840	45.17	45.89	1.12	1.39	26.83	0.49	38.77
860	45.21	43.36	1.12	1.41	26.75	0.41	38.75
880	45.24	45.75	1.15	1.43	26.76	0.45	38.61
900	45.27	45.86	1.18	1.44	26.88	0.35	38.66
920	45.31	47.45	1.22	1.44	26.88	0.45	38.71
940	45.36	45.75	1.26	1.44	26.96	0.38	38.76
960	45.42	43.40	1.29	1.43	26.83	0.46	38.56
980	45.50	44.39	1.32	1.40	26.72	0.42	38.55
1000	45.57	43.90	1.35	1.37	26.81	0.46	38.62
1050	45.73	44.40	1.38	1.27	26.79	0.31	38.36
1100	45.80	42.68	1.39	1.16	26.75	0.35	38.13
1150	45.70	37.41	1.36	1.07	26.77	0.42	37.48
1200	44.48	42.14	1.33	1.13	26.59	0.49	37.49

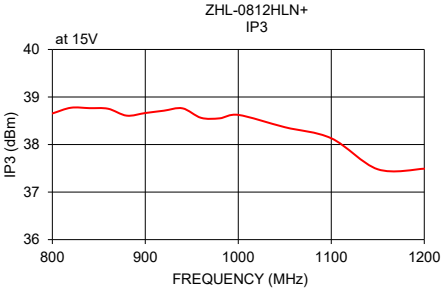












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