Coaxial

Low Noise Amplifier

ZHL-1217MLN+

50Ω 1200 to 1700 MHz

Case Style: S32

The Big Deal

- Low noise figure, 1.5 dB max.
- High IP3, +36 dBm
- High gain, 29 dB
- Good gain flatness, ±1.0 dB

Product Overview

ZHL-1217MLN+ is a coaxial, low-noise amplifier supporting applications from 1200 to 1700 MHz. This model provides a combination of low noise, high IP3 and high gain with excellent gain flatness. The amplifier operates on a 15V supply with low current consumption (380mA) and comes housed in an aluminum alloy case (3.75 x 2.0 x 1.8”) with SMA connectors and heat sink for efficient cooling.

Key Features

Feature	Advantages
Low noise, (1.5 dB max)	Excellent noise figure performance increases signal to noise ratio
High OIP3, +36 dBm	Provides highly linear performance with excellent sensitivity and two-tone spur-free dynamic range.
High Gain, 29 dB	Reduces the number of gain stages, lowering component count and overall system cost.
Good gain flatness (±1.0 dB)	Provides consistent performance across its operating frequency, minimizing the need for external equalizing networks in wideband applications.

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Features

- very low noise figure, 1.5 dB max.
- wideband, 1200 to 1700 MHz
- high dynamic range

Applications

- GPS
- Mar sat
- Communication systems

Case Style: S32

Connectors	Model
SMA	ZHL-1217MLN+

+RoHS Compliant

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

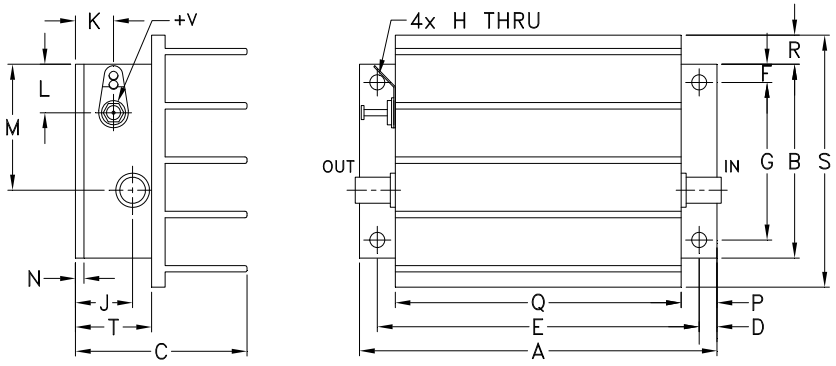
Electrical Specifications

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Units
Frequency Range		1200		1700	MHz
Noise Figure	1200-1700	—	—	1.5	dB
Gain	1200-1700	29	—	—	dB
Gain Flatness	1200-1700	—	—	±1.0	dB
Output Power at 1dB compression	1200-1700	—	+22	—	dBm
Output third order intercept point	1200-1700	—	+36	—	dBm
Input VSWR	1200-1700	—	—	1.8	:1
Output VSWR	1200-1700	—	—	1.8	:1
DC Supply Voltage		—	15	—	V
Supply Current		—	—	380	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

Outline Drawing



Maximum Ratings

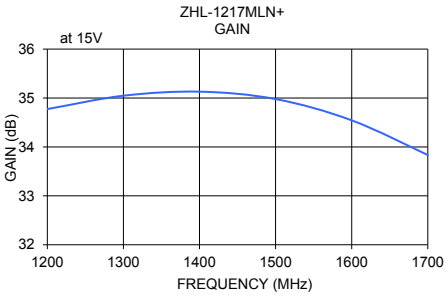
Parameter	Ratings
Operating Temperature	-20°C to 65°C
Storage Temperature	-55°C to 100°C
DC Voltage	17V
Input RF Power (no damage)	0 dBm

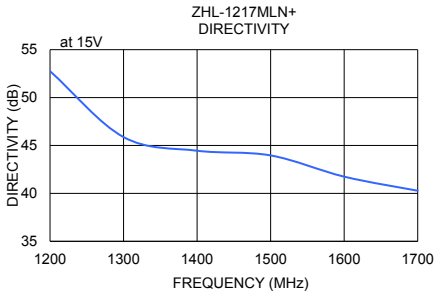
Permanent damage may occur if any of these limits are exceeded.

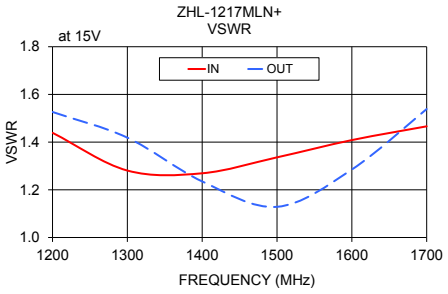
Outline Dimensions (inch / mm)

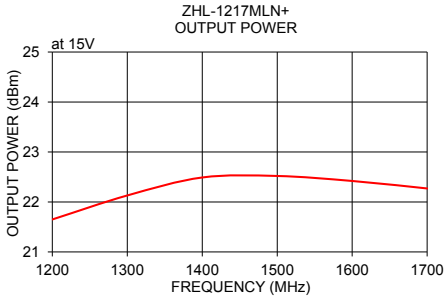
A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	wt
3.75	2.00	1.80	.19	3.375	.19	1.625	.144	.50	.40	.50	1.30	.10	.38	3.00	.30	2.60	.80	grams
95.25	50.80	45.72	4.83	85.73	4.83	41.28	3.66	12.70	10.16	12.70	33.02	2.54	9.65	76.20	7.62	66.04	20.32	220.0

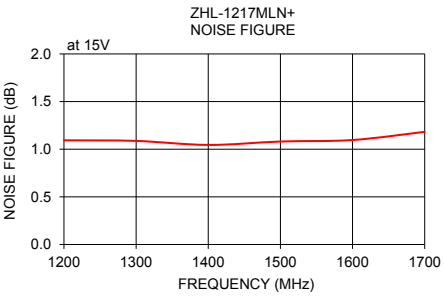
FREQ. (MHz)	GAIN (dB)	DIRECTIVITY (dB)	VSWR (:1)		NOISE FIGURE (dB)	POUT at 1 dB COMPR. (dBm)	OUTPUT IP3 (dBm)
	15V	15V	IN	OUT	15V	15V	15V
1200	34.77	52.76	1.44	1.53	1.09	21.65	35.09
1300	35.05	45.88	1.28	1.42	1.09	22.13	35.58
1400	35.13	44.45	1.27	1.24	1.04	22.49	36.18
1500	34.98	43.96	1.34	1.13	1.08	22.52	36.16
1600	34.54	41.75	1.41	1.29	1.10	22.42	36.38
1700	33.83	40.28	1.47	1.54	1.18	22.27	36.23

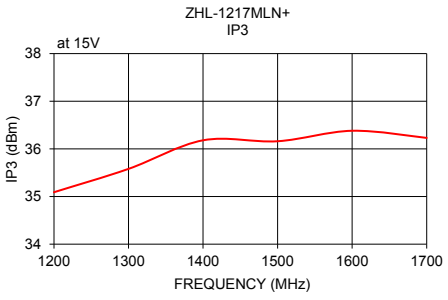












Additional Notes

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