Push-Pull

Wideband Amplifier

ZHL-122LM+

50Ω 40 to 1200 MHz

Case Style: S860

The Big Deal

- Ultra low second harmonic, very high output IP2, 76 dBm typ.
- Excellent output IP3, 42 dBm typ.
- Output power at 1 dB compression, 23 dBm typ.
- Very low cost, $79.95 typ. (qty. 1)

Product Overview

The ZHL-122LM+ is a high-performance, push-pull amplifier featuring very low second-and third-order distortion products across its 40-1200 MHz bandwidth. Designed for a 6V/260 mA typ. power supply, with SMA connectors in/out, it's a high-value, low-cost solution providing a 12-dB gain for instrumentation, cellular, ISM, and UHF applications. The rugged, aluminum alloy case measures 3.75 x 2.0 x 0.80" high.

Feature	Advantages
Ultra low second harmonic, -75 dBc typ. at 5 dBm output	Exceptionally low second order harmonic distortion
Very high output IP2, 76 dBm typ	Very high linearity across entire 40-1200 MHz bandwidth
Excellent output IP3, 42 dBm typ	Excellent suppression of unwanted intermods in the presence of multi carriers
Output power 23 dBm typ	Appropriate signal strength for the coaxial portions of hybrid and FTTH systems, as well as many TETRA and LTE applications
Flat gain, 12.6 ± 1.5 dB	Ideal for applications requiring consistent, repeatable amplification across a wide range of frequencies

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Connectors	Model	Price	Qty.
SMA	ZHL-122LM-S+	$79.95 ea.	(1-9)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Features

- Ultra low second harmonic, -75 dBc typ. at 5 dBm output
- Very high output IP2, 76 dBm typ.
- Excellent output IP3, 42 dBm typ.
- Output power, 23 dBm.

Applications

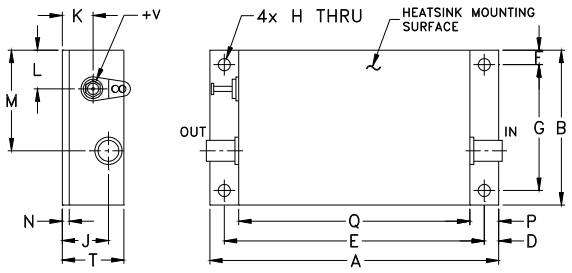
- Instrumentation
- Base stations
- Cellular
- FTTH

Electrical Specifications at 25°C

Parameter	Condition (MHz)	Min	Typ.	Max.	Units
Frequency Range		40		1200	MHz
Gain	40 700 1000 1200	12.7 10.8 10.4 9.5	14.2 12.3 11.9 11.0	— — — —	dB
Output Power at 1dB compression	40 700 1000 1200	22.5 21.5 21.0 19.5	24 23 23 21.5	— — — —	dBm
Output third order intercept point IP3*	40 700 1000 1200	— — — —	42 40 40 37	— — — —	dBm
Output second order intercept point IP2*	40 700 1000 1200	— — — —	81 70 66 61	— — — —	dBm
Noise Figure	40-1200	—	3.9	5.0	dB
Input VSWR	40-1200	—	1.5	—	:1
Output VSWR	40-1200	—	1.5	—	:1
DC Supply Voltage	40-1200	—	6.0	6.5	V
Supply Current	40-1200	200	260	360	mA

*Two tones, spaced 1 MHz apart, 5 dBm/tone at output.

Outline Drawing



Maximum Ratings

Parameter	Ratings
Operating Temperature	-40°C to 65°C Case
Case Temperature	+65°C
Storage Temperature	-55°C to 100°C
DC Voltage	7V
Input RF Power (no damage)	24dBm

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

Outline Dimensions (inch / mm)

A	B	D	E	F	G	H	J	K	L	M	N	P	Q	T	wt
3.75	2.00	.19	3.375	.19	1.625	.144	.50	.40	.50	1.30	.10	.38	3.00	.80	grams
95.25	50.80	4.83	85.73	4.83	41.28	3.66	12.70	10.16	12.70	33.02	2.54	9.65	76.20	20.32	150.0

REV. OR
M127027
ZHL-122LM+
ED-11699C/4
WZ/CP/AM
110816

FREQUENCY (MHz)	GAIN (dB)	DIRECTIVITY (dB)	VSWR (:1)		NOISE FIGURE (dB)	POUT at 1dB COMPR. (dBm)	OUTPUT IP3 (dBm)
	6V	6V	IN	OUT	6V	6V	6V
40.00	14.13	7.24	1.22	1.45	3.11	24.59	44.54
100.00	13.20	7.00	1.35	1.44	3.14	24.77	44.70
200.00	12.77	7.77	1.44	1.46	3.13	25.01	46.15
300.00	12.82	8.15	1.54	1.37	3.10	25.06	46.70
400.00	12.84	8.03	1.56	1.25	3.13	25.15	47.26
500.00	12.74	7.91	1.48	1.08	3.22	24.83	44.71
600.00	12.54	7.88	1.37	1.11	3.26	24.57	42.76
700.00	12.27	8.13	1.26	1.31	3.36	24.05	40.81
800.00	12.06	8.62	1.20	1.46	3.43	23.52	39.82
900.00	11.96	9.16	1.20	1.50	3.51	22.86	39.91
1000.00	11.85	9.61	1.29	1.40	3.68	22.83	39.88
1100.00	11.63	10.01	1.43	1.27	3.75	22.61	37.42
1200.00	11.13	10.35	1.58	1.33	3.95	22.36	38.70