

Amplifier**ZHL-ED12129B/1****Important Note**

This model has been designed, built and tested in our engineering department. Performance data represents model capability.
At present it is a non-catalog model. On request, we can supply a final specification sheet, part number and price/delivery information.



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CASE STYLE : HM1099

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C				
Parameter	Min.	Typ.	Max.	Units
Frequency	50		550	MHz
Gain		49		dB
Output Power @1 dB compr.		40.00		dB
Noise Figure		7.0		dB
VSWR				
IN		1.37		(:1)
OUT		2.50		(:1)
DC Power				
Voltage		24.0		V
Current		4.4		A

MAXIMUM RATINGS	
Operating Temperature	-20°C to 85°C
Storage Temperature	-55°C to 100°C

Broadband Amplifier

ZHL-ED12129B/1

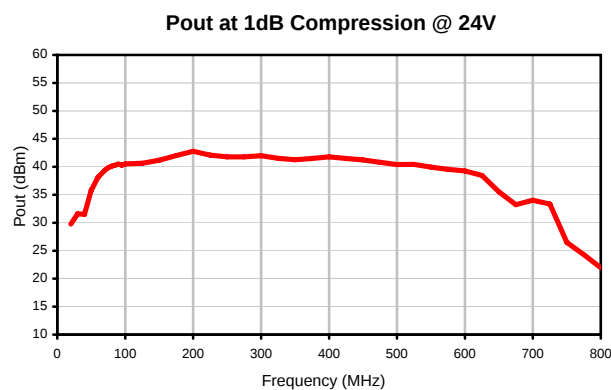
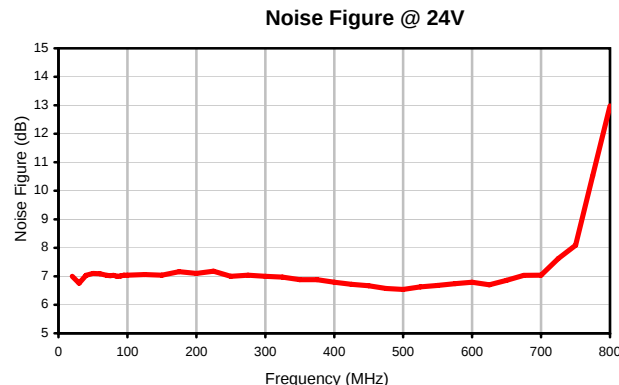
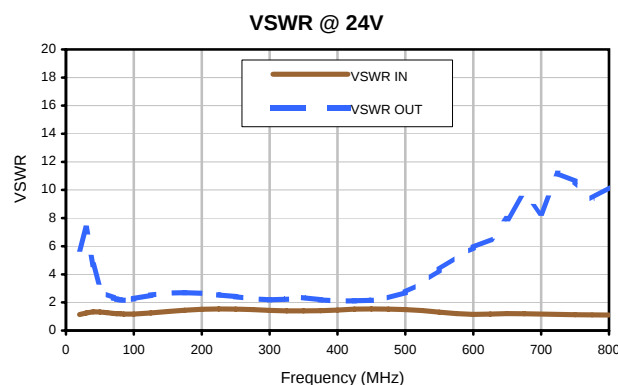
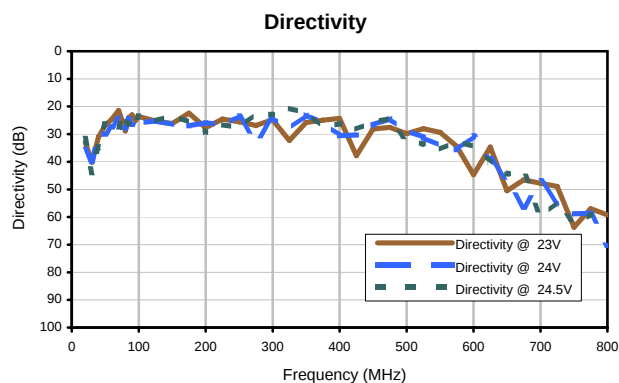
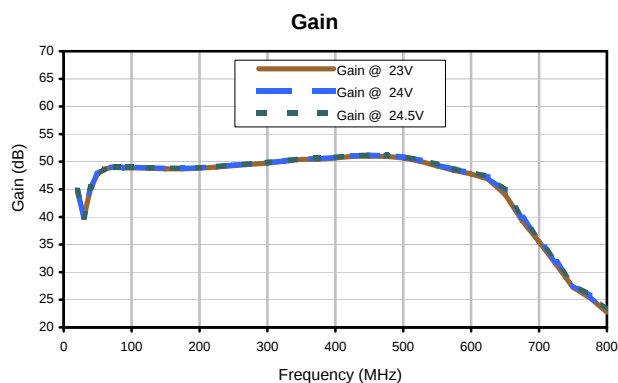
Typical Performance Data

FREQUENCY (MHz)	GAIN (dB)			DIRECTIVITY (dB)			VSWR IN (:1) 24V	VSWR OUT (:1) 24V	NOISE FIGURE (dB) 24V	Pout at 1dB Comp. (dBm) 24V
	23V	24V	24.5V	23V	24V	24.5V				
20.0	44.58	44.76	44.82	32.88	35.63	31.57	1.14	5.78	7.00	29.77
30.0	40.00	40.00	39.99	40.15	39.90	43.94	1.25	7.27	6.76	31.60
40.0	45.46	45.45	45.43	31.06	30.19	34.57	1.33	4.68	7.03	31.50
50.0	47.77	47.81	47.81	26.88	29.85	26.31	1.32	3.21	7.10	35.80
60.0	48.64	48.70	48.71	24.58	27.40	27.35	1.27	2.60	7.09	38.15
70.0	48.94	49.01	49.02	21.45	24.26	27.46	1.22	2.32	7.03	39.37
75.0	48.95	49.03	49.04	25.03	23.67	23.35	1.20	2.23	7.02	39.84
80.0	48.93	49.00	49.02	28.82	27.82	25.20	1.19	2.18	7.03	40.12
85.0	48.90	48.98	49.00	24.06	24.49	26.26	1.17	2.15	7.00	40.30
90.0	48.88	48.95	48.97	23.02	26.48	27.12	1.17	2.17	7.01	40.48
95.0	48.87	48.95	48.96	25.01	25.17	25.79	1.17	2.21	7.04	40.30
100.0	48.88	48.96	48.98	23.60	26.00	23.53	1.17	2.26	7.04	40.53
125.0	48.82	48.92	48.94	25.25	25.18	25.21	1.25	2.52	7.06	40.63
150.0	48.71	48.82	48.84	26.18	26.54	23.48	1.35	2.66	7.04	41.18
175.0	48.70	48.80	48.82	22.41	27.04	25.58	1.45	2.70	7.16	42.00
200.0	48.82	48.91	48.93	27.69	25.91	29.45	1.51	2.65	7.10	42.78
225.0	49.03	49.12	49.14	24.54	26.53	26.55	1.54	2.54	7.18	42.08
250.0	49.29	49.38	49.40	25.52	23.50	27.54	1.53	2.41	7.00	41.78
275.0	49.52	49.61	49.63	26.84	33.01	22.46	1.49	2.26	7.04	41.78
300.0	49.76	49.84	49.86	24.78	24.04	22.99	1.43	2.19	7.00	41.97
325.0	50.07	50.15	50.17	32.31	28.10	20.66	1.40	2.23	6.97	41.53
350.0	50.42	50.53	50.56	25.79	22.98	22.28	1.40	2.35	6.88	41.27
375.0	50.44	50.56	50.58	24.97	25.94	27.42	1.41	2.18	6.88	41.48
400.0	50.68	50.77	50.80	24.33	30.56	26.17	1.46	2.11	6.79	41.78
425.0	50.96	51.08	51.14	37.84	30.29	28.23	1.52	2.12	6.72	41.50
450.0	50.99	51.16	51.17	28.12	26.70	25.66	1.54	2.15	6.67	41.23
475.0	50.96	51.13	51.17	27.56	24.38	24.32	1.53	2.32	6.57	40.80
500.0	50.68	50.86	50.92	29.82	28.79	32.55	1.49	2.72	6.54	40.41
525.0	50.08	50.28	50.35	28.02	31.15	33.51	1.42	3.40	6.63	40.44
550.0	49.24	49.45	49.52	29.37	34.27	35.55	1.31	4.33	6.68	39.95
575.0	48.42	48.62	48.70	34.41	35.78	32.63	1.21	5.26	6.74	39.55
600.0	47.78	48.02	48.10	44.70	30.67	34.51	1.15	5.91	6.79	39.27
625.0	46.85	47.23	47.36	34.66	38.90	40.26	1.17	6.49	6.70	38.47
650.0	44.11	44.68	44.89	50.47	46.61	44.51	1.21	7.96	6.86	35.54
675.0	39.34	39.94	40.16	46.54	56.42	43.47	1.20	9.71	7.03	33.22
700.0	35.50	35.94	36.10	47.77	46.72	59.99	1.17	8.36	7.04	34.02
725.0	31.44	31.91	32.08	48.90	54.53	54.44	1.15	11.19	7.62	33.35
750.0	27.24	27.64	27.78	63.67	58.83	62.22	1.13	10.60	8.09	26.49
775.0	25.35	25.73	25.86	57.00	58.68	59.06	1.11	9.40	10.53	24.31
800.0	22.74	23.09	23.20	59.22	70.28	61.97	1.10	10.21	12.98	21.97

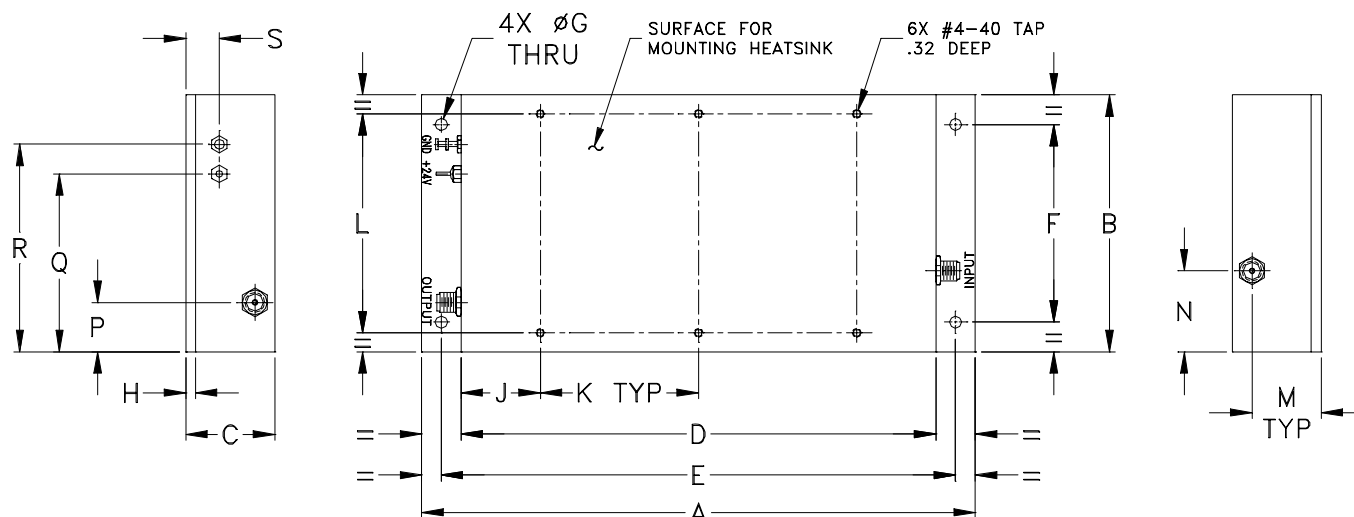
Broadband Amplifier

Typical Performance Curves

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Outline Dimensions



CASE#	A	B	C	D	E	F	G	H	J	K	L	M	N
HM1099	7.00 (177.80)	3.25 (82.55)	1.13 (28.70)	6.00 (152.40)	6.500 (165.10)	2.500 (63.50)	.156 (3.96)	.13 (3.30)	1.000 (25.40)	2.000 (50.80)	2.770 (70.36)	.88 (22.35)	1.03 (26.16)

CASE#	P	Q	R	S	WT. GRAMS
HM1099	.63 (16.00)	2.25 (57.15)	2.63 (66.80)	.43 (10.92)	560

Dimensions are in inches (mm). Tolerances: 2 Pl. $\pm .03$; 3 Pl. $\pm .015$

Notes:

- Case material: Aluminum alloy.
- Case finish:
For RoHS Case Styles: Clear chemical conversion coating, non-chrome or trivalent chrome based.
- Heat sink finish: Black anodize if supplied with heat sink.



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All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-20° to 65° C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Stabilization Bake	(non-operating) 125°C, 24 hours	- - -
Burn-in at Elevated Temp.	(DC on) 160 hours at 85° C	MIL-STD-202, Method 108
Thermal Shock	-55° to 100°C, 5 cycles	MIL-STD-202, Method 107, Condition A, except 100°C