



COAXIAL High Power Amplifier

ZHL-1000-3W+ ZHL-1000-3WX+

50Ω 3W 500 to 1000 MHz

FEATURES

- High Power, 3 Watt
- Wideband, 500 to 1000 MHz
- High Power Output, +35dBm Min.
- High IP3, +45 dBm typ.
- High Gain, 43 dB typ.
- Protected by US Patent, 6,943,629

APPLICATIONS

- VHF
- Cellular
- Instrumentation
- Laboratory



Generic photo used for illustration purposes only

Model No.	ZHL-1000-3W+	ZHL-1000-3WX+ [▲]
Case Style	DDD131	
Connectors	SMA	

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

ELECTRICAL SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Units
Frequency Range	500	—	1000	MHz
Gain	38	—	—	dB
Gain Flatness ¹	—	—	±1.0	dB
Output Power at 1dB compression	+35	+37	—	dBm
Noise Figure	—	3.5	—	dB
Output third order intercept point	—	+45	—	dBm
Input VSWR	—	2.0	—	:1
Output VSWR	—	2.5	—	:1
DC Supply Voltage	—	24	—	V
Supply Current	—	—	2.25	A

1. 1.5 dB over temperature range -20°C to +65°C.

[▲] Heat sink not included. Alternative heat sinking and heat removal must be provided by the user to limit maximum base-plate temperature to 75°C, in order to ensure proper performance. For reference, this requires thermal resistance of user's external heat sink to be 0.8°C/W max.

ABSOLUTE MAXIMUM RATINGS

Parameter	Ratings
Operating Temperature	-20°C to +65°C
Storage Temperature	-55°C to +100°C
Base Plate Temperature	+75°C
DC Voltage	+25V
Input RF Power (no damage)	0 dBm

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





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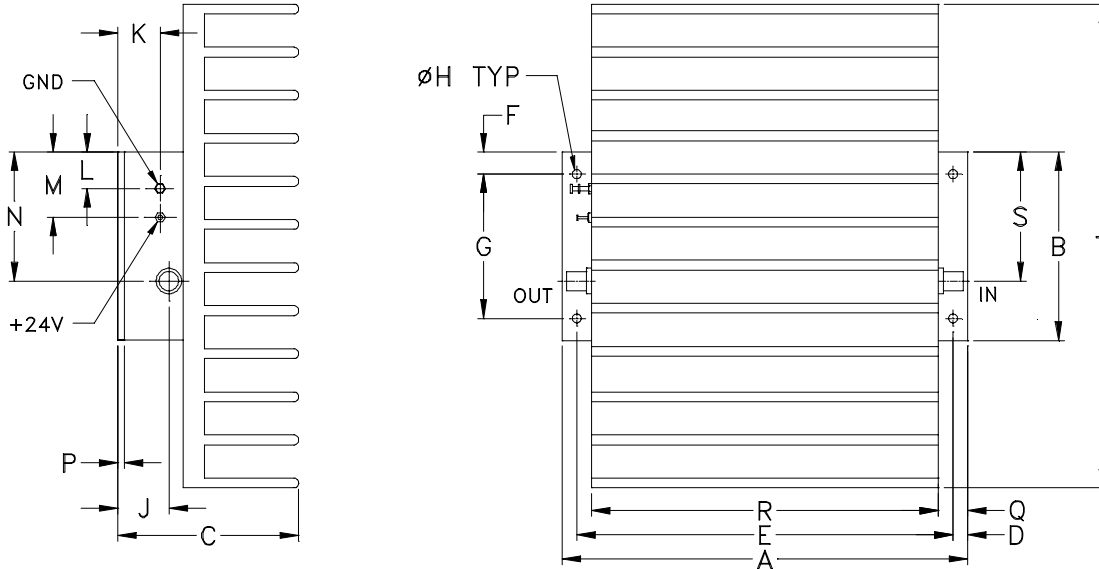
High Power Amplifier

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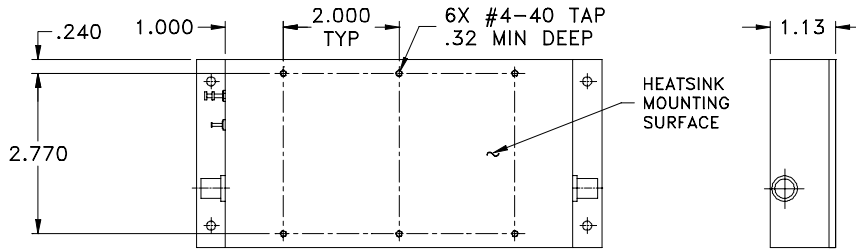
Mini-Circuits

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OUTLINE DRAWING



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	T	wt
7.00	3.25	3.13	.25	6.500	.38	2.500	.156	.88	.43	.62	1.00	2.63	.125	.50	6.00	2.23	8.35	grams*
177.80	82.55	79.50	6.35	165.10	9.65	63.50	3.96	22.35	10.92	15.75	25.40	66.80	3.18	12.70	152.40	56.64	212.09	1780

*510 grams without heatsink



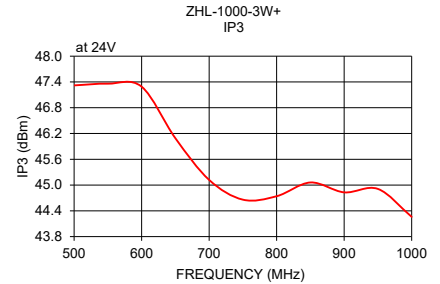
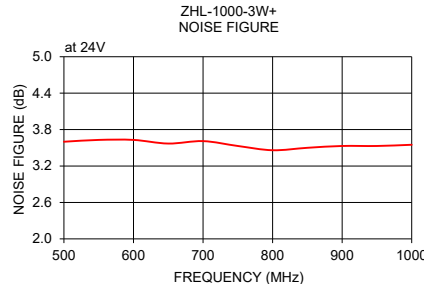
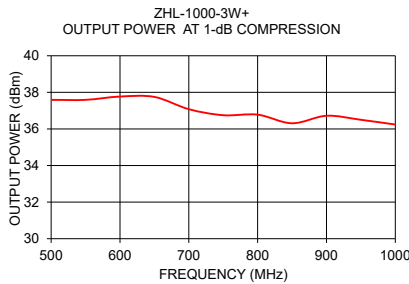
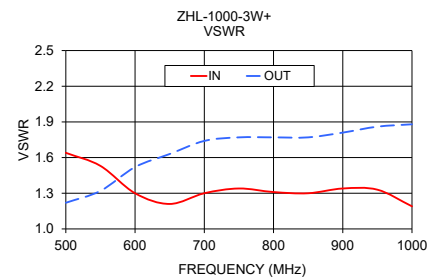
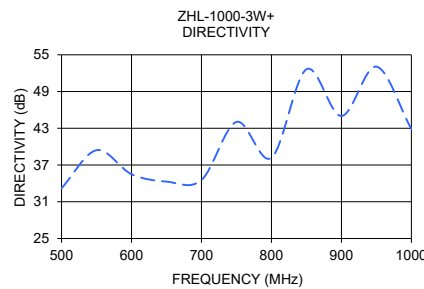
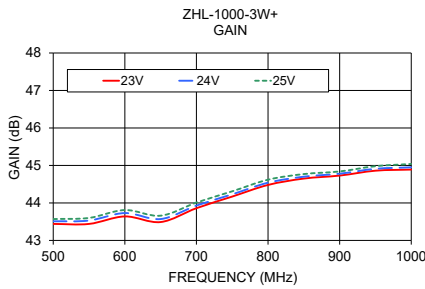
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TYPICAL PERFORMANCE DATA AND CHARTS

FREQUENCY (MHz)	GAIN (dB)			DIRECTIVITY (dB)	VSWR (:1)		NOISE FIGURE (dB)	P _{OUT} at 1 dB COMPR. (dBm)	IP ₃ (dBm)
	23V	24V	24.5V		24V	IN			
500.00	43.44	43.51	43.57	33.21	1.64	1.22	3.60	37.59	47.32
550.00	43.44	43.53	43.60	39.42	1.53	1.32	3.63	37.59	47.36
600.00	43.64	43.73	43.81	35.50	1.30	1.52	3.63	37.77	47.29
650.00	43.49	43.57	43.66	34.29	1.21	1.63	3.57	37.75	46.09
700.00	43.86	43.93	44.01	34.55	1.30	1.74	3.61	37.08	45.12
750.00	44.17	44.23	44.31	44.04	1.34	1.77	3.53	36.75	44.66
800.00	44.48	44.54	44.62	38.17	1.31	1.77	3.46	36.78	44.74
850.00	44.65	44.70	44.77	52.63	1.30	1.77	3.50	36.31	45.06
900.00	44.73	44.78	44.84	45.00	1.34	1.81	3.53	36.72	44.83
950.00	44.86	44.91	44.98	53.07	1.33	1.86	3.53	36.50	44.91
1000.00	44.89	44.95	45.04	42.88	1.19	1.88	3.55	36.24	44.26



- 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/terms/viewterm.html

