



Mini-Circuits®

COAXIAL

High Power Amplifier

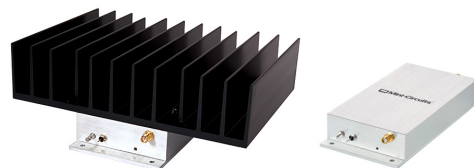
ZHL-1000-3W+
ZHL-1000-3WX+**50Ω 3W 500 to 1000 MHz**

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 AT +25°C

Parameter	Min.	Typ.	Max.	Units
Frequency Range	500	—	1000	MHz
Gain	38	—	—	dB
Gain Flatness ¹	—	—	±1.2	dB
Output Power at 1dB compression	+33.5	+36	—	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

[▲] 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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ZHL-1000-3W+
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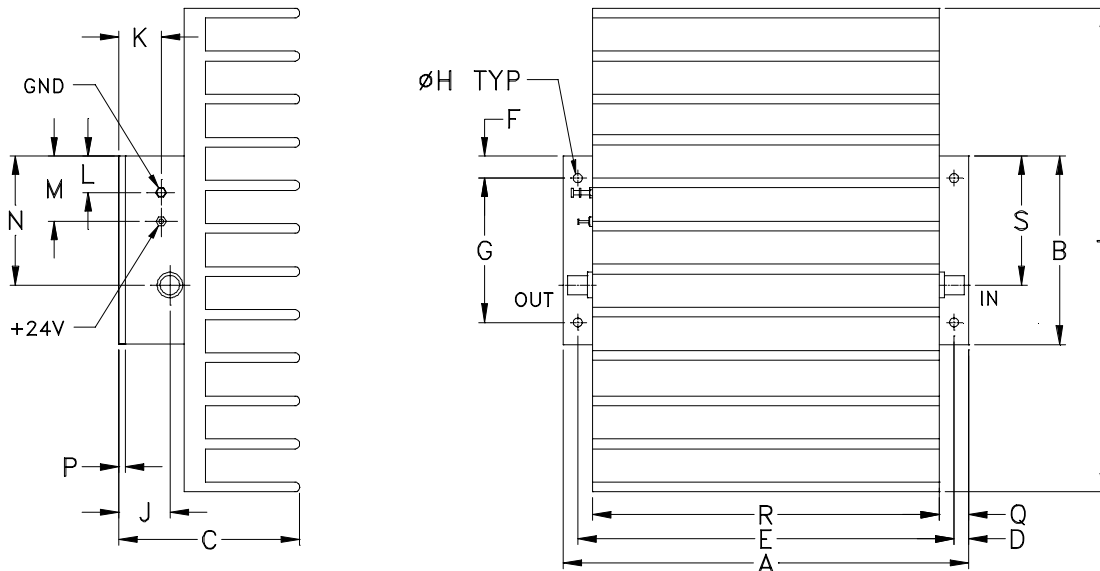
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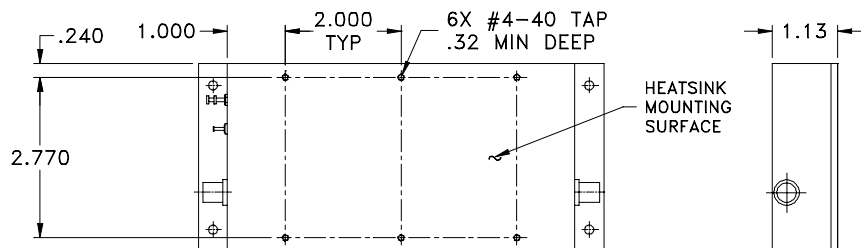
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ZHL-1000-3WX+

50Ω 3W 500 to 1000 MHz

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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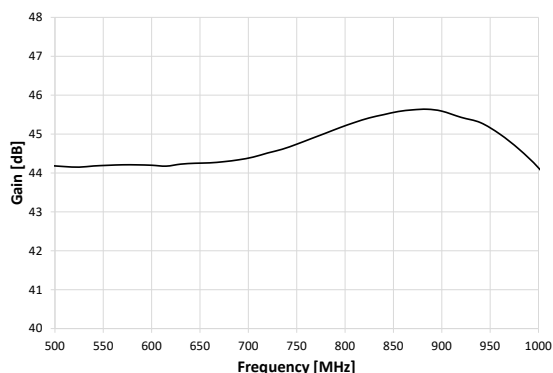
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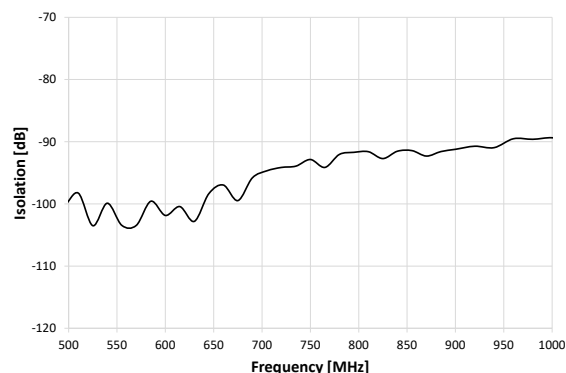
50Ω 3W 500 to 1000 MHz

TYPICAL PERFORMANCE CHARTS

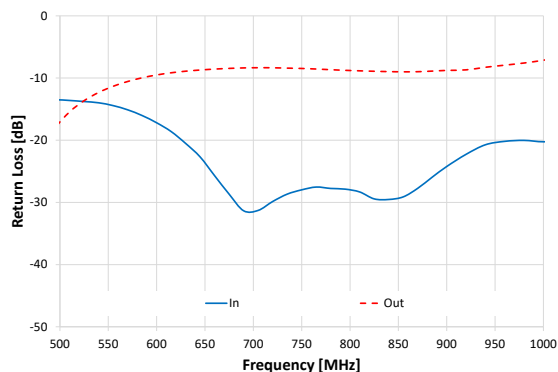
Gain vs. Frequency



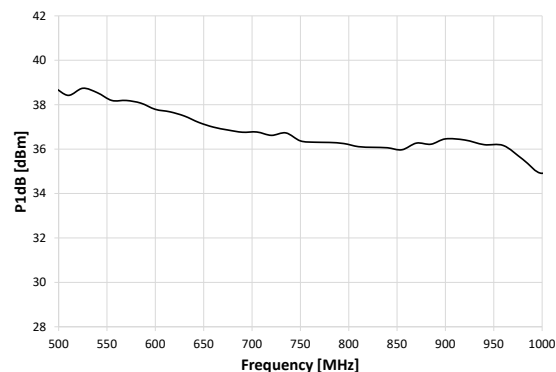
Isolation vs. Frequency



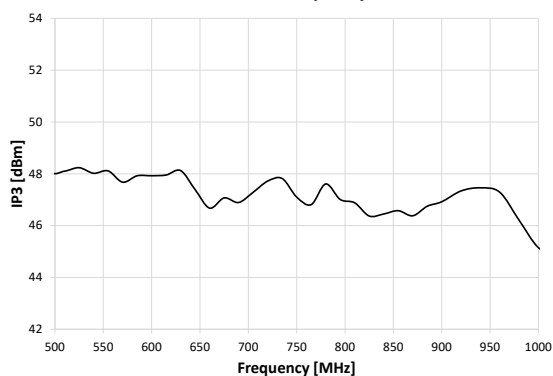
Return Loss vs. Frequency



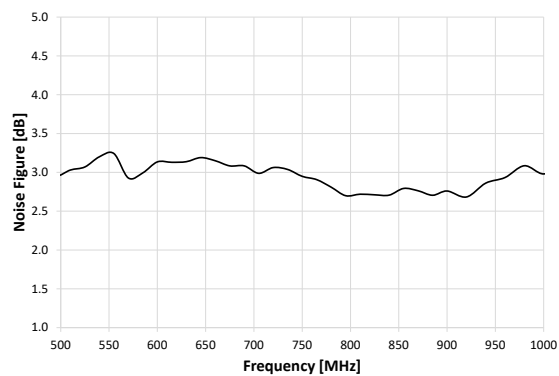
Output Power @ 1dB Compression vs. Frequency



IP3 vs. Frequency



Noise Figure vs. Frequency



NOTES

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- 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

