



COAXIAL HIGH IP3

# Low Noise Amplifier

## ZHL-2010+

50Ω Medium High Power 50 to 1000 MHz

### FEATURES

- Wideband, 50 to 1000 MHz
- Low Noise, 3.7 dB typ.
- High IP3, +46 dBm typ.
- Very High IP2, +68 - +83 dBm typ.



Generic photo used for illustration purposes only

### APPLICATIONS

- VHF/UHF
- Cellular
- Test Equipment
- Instrumentation
- Laboratory

Model No.	ZHL-2010+
Case Style	S32
Connectors	SMA

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

### ELECTRICAL SPECIFICATIONS

Parameter	Frequency (MHz)	Min	Typ	Max	Units
Frequency		50		1000	MHz
Gain	50-1000	20			dB
Gain Flatness	50-1000			±0.8	dB
Output Power at 1dB Compression	50-1000	+26			dBm
Noise Figure	50-1000		3.7		dB
Input IP3	50-1000		+46		dBm
Input VSWR	50-1000			2.0	:1
Output VSWR	50-1000			2.0	:1
DC Supply Voltage			+12		V
Supply Current				0.90	A

Open load is not recommended, potentially can cause damage.  
 With no load derate max input power by 20 dB

### ABSOLUTE MAXIMUM RATINGS

Parameter	Ratings
Operating Temperature	-20°C to +65°C
Storage Temperature	-55°C to +100°C
DC Voltage	+13V Max.
RF Input Power (no damage)	+11 dBm

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

REV. E  
 ECO-017949  
 ZHL-2010+  
 MCL NY  
 230524





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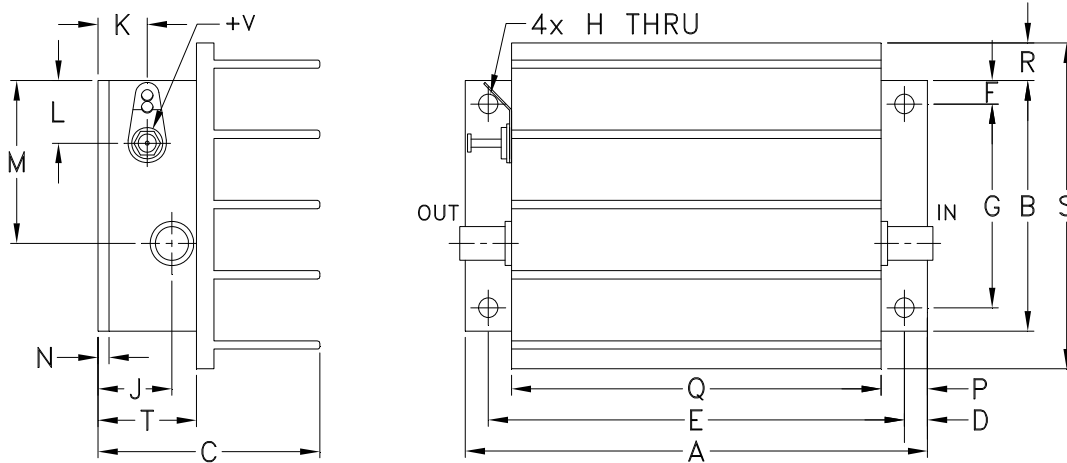
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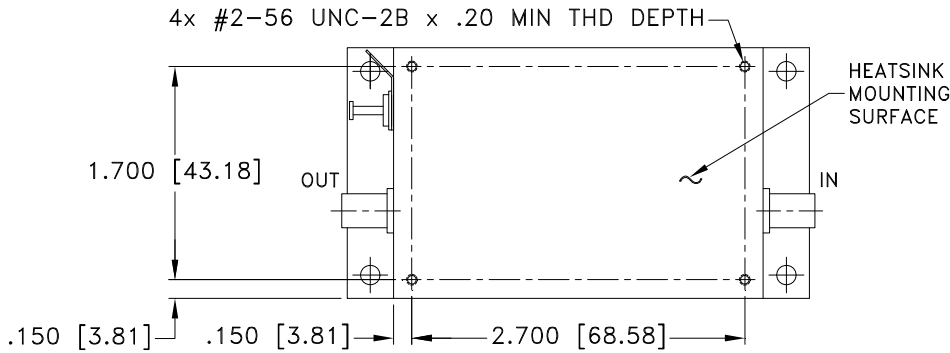
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### OUTLINE DRAWING



### 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	
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	
																		wt. w/o heat sink	150



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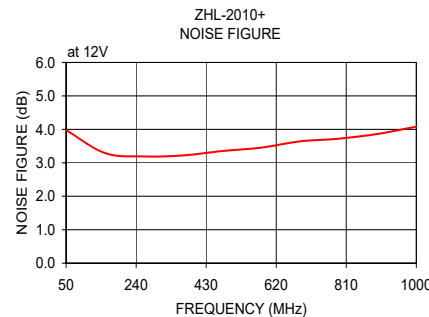
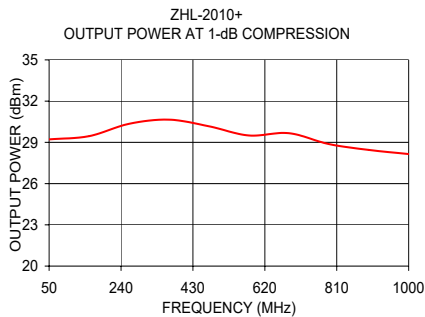
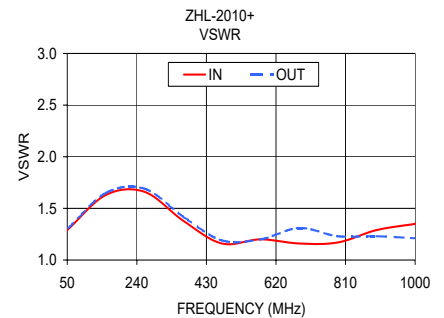
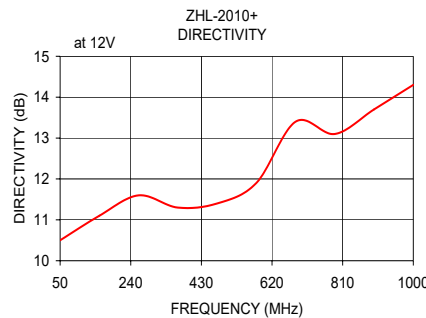
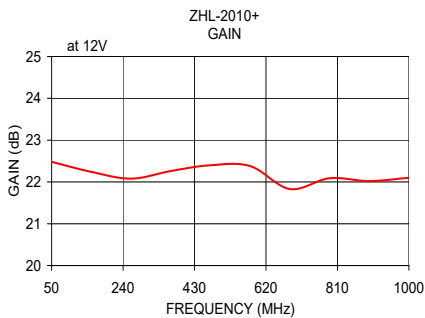
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### TYPICAL PERFORMANCE DATA/CURVES

FREQUENCY (MHz)	GAIN (dB)	DIRECTIVITY (dB)	VSWR (:1)		NOISE FIGURE (dB)	POUT at 1 dB COMPR. (dBm)
	12V	12V	IN	OUT	12V	12V
50.00	22.48	10.50	1.29	1.30	3.98	29.22
155.60	22.24	11.10	1.63	1.65	3.29	29.45
261.10	22.08	11.60	1.66	1.69	3.19	30.35
366.70	22.26	11.30	1.38	1.42	3.22	30.65
472.20	22.40	11.40	1.16	1.19	3.35	30.17
577.80	22.38	11.90	1.20	1.20	3.45	29.50
683.30	21.83	13.40	1.16	1.31	3.64	29.67
788.90	22.09	13.10	1.17	1.23	3.72	28.88
894.40	22.02	13.70	1.29	1.23	3.86	28.45
1000.00	22.10	14.30	1.35	1.21	4.08	28.15



- 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](http://www.minicircuits.com/terms/viewterm.html)

