# **Low Noise Amplifier**

ZHL-1010-75+

Medium High Power 50 to 1000 MHz

#### **Features**

- wideband, 50 to 1000 MHz
- low noise, 3.5 dB typ.
- high IP3, +47 dBm typ.
- very high IP2, 68-83 dBm typ.

#### **Applications**

- VHF/UHF
- CATV
- cellular
- instrumentation



Generic photo used for illustration purposes only

CASE STYLE: S32 Connectors Model

ZHL-1010-75+ BNC

## +RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

#### **Electrical Specifications**

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MODEL NO.	FREQ. (MHz)	GAIN (dB)	MAXIMUM POWER OUTPUT (dBm)	DYNAMIC RANGE	VSWR (:1) Max.	DC POWER
	f <sub>L</sub> f <sub>U</sub>	Flatness Min. Max.	(1 dB Compr.) Input Min. (no damage)	NF IP3 (dB) (dBm) Typ. Typ.	In Out	Volt Current (V) (A) Nom. Max.
ZHL-1010-75	50 1000	9.5 ±0.7	+26 +20	3.5 +47	1.5 1.5	12 0.525

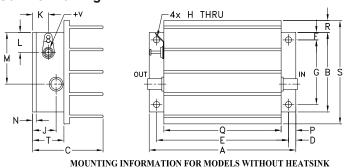
Open load is not recommended, potentially can cause damage.

With no load derate max input power by 20 dB

#### **Maximum Ratings**

Operating Temperature	-20°C to 65°C					
Storage Temperature	-55°C to 100°C					
DC Voltage	+13V Max.					
Permanent damage may occur if any of these limits are exceeded						

#### **Outline Drawing**



## 4x #2-56 UNC-2B x .20 MIN THD DEPTH HEATSINK SURFACE 1.700 [43.18] .150 [3.81] .150 [3.81] -2.700 [68.58]

#### Outline Dimensions (inch )

wt	Т	S	R	Q	Р	N	M	L	K	J	Н	G	F	E	D	С	В	Α
grams	.80	2.60	.30	3.00	.38	.10	1.30	.50	.40	.50	.144	1.625	.19	3.375	.19	1.80	2.00	3.75
220.0	20.32	66.04	7.62	76.20	9.65	2.54	33.02	12.70	10.16	12.70	3.66	41.28	4.83	85.73	4.83	45.72	50.80	95.25
150	at eink	w/o ho	wt															

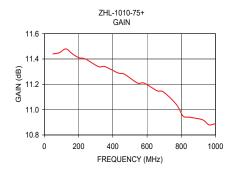
A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.

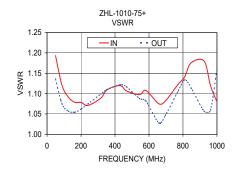
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.

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.ninicircuits.com/MCLStore/terms.jsp



FREQUENCY	GAIN	VSWR
(MHz)	(dB)	(:1)
	12V	IN OUT
50.00	11.44	1.19 1.14
164.00	11.44	1.08 1.05
240.00	11.40	1.07 1.07
354.00	11.34	1.11 1.11
468.00	11.28	1.11 1.12
544.00 658.00 772.00 848.00 962.00	11.21 11.15 11.04 10.94 10.88 10.89	1.10 1.09 1.07 1.03 1.12 1.11 1.18 1.11 1.12 1.06 1.08 1.16

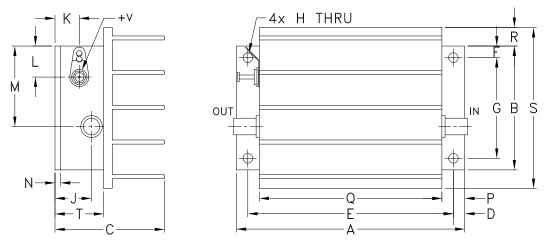




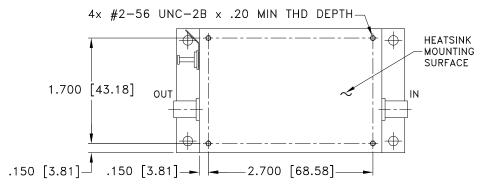
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**S32** 

# **Outline Dimensions**



#### MOUNTING INFORMATION FOR MODELS WITHOUT HEATSINK



CASE#	A	В	С	D	Е	F	G	Н	J	K	L	M	N
S32	3.75	2.00	1.80	.19	3.375	.19	1.625	.144	.50	.40	.50	1.30	.10
332	(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)

CASE#	P	Q	R	S	T	WT. GRAMS	WT. WITHOUT HEATSINK GRAMS
S32	.38 (9.65)	3.00 (76.20)	.30 (7.62)	2.60 (66.04)	.80 (20.32)	220.0	150.0

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

#### **Notes:**

1. Case material: Aluminum alloy.

2. Case finish:

For RoHS Case Styles:

Clear chemical conversion coating, non-chrome or trivalent chrome based.

3. Heat sink finish: Black anodize.





P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site

The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com





## **Environmental Specifications**

**ENV23T3** 

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

ENV23T3 Rev: OR

07/03/06

M105677 File: ENV23T3.pdf