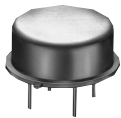


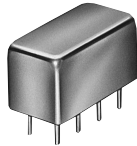
# LOW-NOISE AMPLIFIERS

50Ω

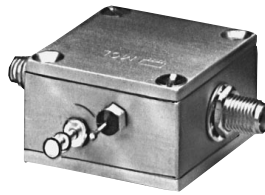
BROADBAND, LINEAR 0.1 to 2400 MHz



AMP



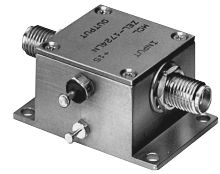
MAN



ZFL



TO



ZEL

up to +16 dBm output

MODEL NO.	FREQ. MHz		NF dB	GAIN, dB			MAXIMUM POWER, dBm		INTERCEPT POINT, dBm	VSWR Typ.		DC POWER		CAPD DATA	CASE STYLE	CONNECTOR	Price \$
	$f_L$	$f_U$		Typ.	Min.	Flatness		Output (1 dB Comp.)		Input (no damage)	IP3 Typ.	In	Out				
			m			Max.											
AMP-11-2	5-1000		3	14	±1.0	±1.0	-3.5	+13	+13	2:1	2:1	15	12		PP120	cd	44.95
AMP-15	5-1000		2.8	13	±0.6	±1.2	+8	+13	+22	2:1	2:1	15	29		PP120	cd	49.95
AMP-75	5-500		2.4	19	±0.4	±1.0	+12	+13	+28	2:1	2:1	15	29		PP120	cd	49.95
AMP-76	5-500		3.1	26	±0.7	±1.0	+13.5	+6	+28	2:1	2:1	15	68		PP120	cd	78.95
AMP-77	5-500		3.3	15	±0.4	±1.0	+16	+13	+32	2:1	2:1	15	56	(see YONI on our website)	PP120	cd	55.95
MAN-1LN**	0.5-500		3.0	28	±0.5	±1.4	+7	+15	+18	1.8:1	1.8:1	12	60		A05	cc	19.95
MAN-1HLN	10-500		3.7	10	±0.5	±0.8	+15	+15	+30	1.8:1	1.8:1	12	70		A06	cc	19.95
ZFL-500HLN	10-500		3.8	19	—	±0.4	+16	+15	+30	2:1	2:1	15	110		Y460	-	99.95
ZFL-500LN*	0.1-500		2.9	24	—	±0.5	+5	+5	+14	1.5:1	1.6:1	15	60		Y460	-	79.95
ZFL-1000LN	0.1-1000		2.9	20	—	±0.5	+3	+5	+14	1.5:1	2:1	15	60		Y460	-	89.95

m = mid range ( $2 f_L$  to  $f_U/2$ )

## features

- very low noise
- ideal for printed-circuit designs (AMP, MAN & TO series)
- high dynamic range (ZHL- HLN & ZQL series)
- smooth response over entire band, no external resonances
- low impedance, less susceptible to EMI
- easy to use, 50 ohm input/output
- all models are cascadable

## NOTES:

- \* VSWR 1.6:1 maximum from 0.1 to 0.2 MHz. Also available with BNC connectors.
  - \*\* Below 5 MHz, 1 dB compression point decreases to 6.5 dBm.
  - △ Available only with SMA connectors
  - B. Connector types and case mounted options, case finishes are given in section 0, see "Case styles & outline drawings".
  - C. Prices and specifications subject to change without notice.
  - D. For Quality Control Procedures see Table of Contents, Section 0, "Mini-Circuits Guarantees Quality" article. For Environmental Specifications see Amplifier Selection Guide.
- Absolute maximum power, voltage and current rating:  
1a. AMP models, 17V DC. 1b. MAN models, 12.5V DC. 1c. ZFL models, 17V DC.
  - Open load is not recommended, potentially can cause damage. With no load, derate max input power by 20 dB.
  - ZEL and TO models, NF specified at room temperature, increases to 2 dB typical at +85 deg.C.
  - ZHL models, NF specified at room temperature, increases to 2.3 dB maximum at +65 deg.C.

## NSN GUIDE

MCL NO.	NSN
AMP-15	5895-01-350-9550
AMP-75	5895-01-350-9551
AMP-77	5895-01-350-9549
ZFL-1000LN	5996-01-412-3031



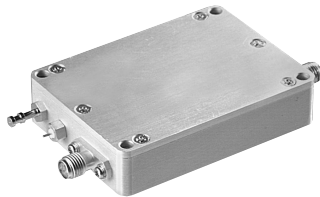
Distribution Centers NORTH AMERICA 800-654-7949 • 417-335-5935 • Fax 417-335-5945 • EUROPE 44-1252-835094 • Fax 44-1252-837010

INTERNET <http://www.minicircuits.com>

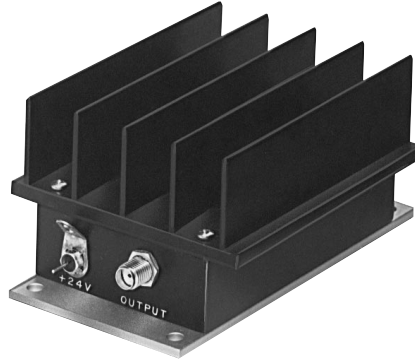
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661

ISO 9001 CERTIFIED

## Plug-In & Coaxial



ZQL



ZHL-case S32



ZHL-case NN92

up to +27 dBm output

MODEL NO.	FREQ. MHz		NF dB	GAIN, dB		MAXIMUM POWER, dBm		INTERCEPT POINT, dBm	VSWR Max.		DC POWER		CAPD DATA	CASE STYLE	CONNECTION	Price \$
	f <sub>L</sub>	f <sub>U</sub>		Max.	Min.	Flatness Max.	Output (1 dB Comp.) Min.		Input (no damage)	IP3 Typ.	In	Out				
TO-0812LN	800-1200		1.6	20	±1.0	+8	+13	+18	2.5:1	2.5:1	15	70		QQ96	ce	199.00
TO-1217LN	1200-1700		1.6	20	±1.0	+10	+13	+25	2.5:1	2.5:1	15	70		QQ96	ce	199.00
TO-1724LN	1700-2400		1.6	20	±1.0	+10	+13	+22	2.5:1	2.5:1	15	70		QQ96	ce	199.00
△ ZEL-0812LN	800-1200		1.5	20	±1.0	+8	+13	+18	2.5:1	2.5:1	15	70		EEE132	—	274.95
△ ZEL-1217LN	1200-1700		1.5	20	±1.0	+10	+13	+25	2.5:1	2.5:1	15	70		EEE132	—	274.95
△ ZEL-1724LN	1700-2400		1.5	20	±1.0	+10	+13	+22	2.5:1	2.5:1	15	70		EEE132	—	274.95
△ ZHL-0812MLN	800-1200		1.6	28	±1.0	+20	0	+33	2.5:1	2.5:1	15	300		S32	—	295.00
△ ZHL-1217MLN	1200-1700		1.5	30	±1.0	+20	0	+34	2.5:1	2.5:1	15	300		S32	—	295.00
△ ZHL-1724MLN	1700-2400		1.5	28	±1.0	+20	0	+32	2.5:1	2.5:1	15	300		S32	—	295.00
△ ZHL-0812HLN	800-1200		1.5	30	±1.0	+26	+10	+36	2.4:1	2.4:1	15	725		NN92	—	399.50
△ ZHL-1217HLN	1200-1700		1.5	30	±1.0	+26	+10	+36	2.4:1	2.4:1	15	725		NN92	—	399.50
△ ZHL-1724HLN	1700-2400		1.5	30	±1.0	+26	+10	+36	2.4:1	2.4:1	15	725		NN92	—	399.50
<b>NEW</b> ZQL-900LNW	800-900		1.6	13	±1.6	+21	+10	+35	1.2:1	1.1:1	15	160		CW686	—	229.00
<b>NEW</b> ZQL-900LN	824-849		1.3	15	±0.5	+21	+10	+35	1.2:1	1.1:1	15	160		CW686	—	229.00
<b>NEW</b> ZQL-1900LNW	1700-2000		1.6	14	±1.8	+18.5	+10	+37	1.15:1	1.25:1	15	160		CW686	—	249.00
<b>NEW</b> ZQL-1900LN	1850-1910		1.5	15	±0.5	+19	+10	+37	1.15:1	1.25:1	15	160		CW686	—	249.00
<b>NEW</b> ZQL-900MLNW	800-900		1.7	22	±2.2	+23	+3	+41	1.3:1	1.4:1	15	230		CW686	—	249.00
<b>NEW</b> ZQL-900MLN	824-849		1.5	25.5	±0.5	+24.5	+3	+41	1.3:1	1.4:1	15	230		CW686	—	249.00
<b>NEW</b> ZQL-1900MLNW	1800-2000		1.6	23	±2.0	+25	+3	+41	1.4:1	1.25:1	15	310		CW686	—	265.00
<b>NEW</b> ZQL-1900MLN	1850-1910		1.5	25	±0.7	+26	+3	+41	1.25:1	1.2:1	15	310		CW686	—	265.00

FOR  
DATA  
SEE YONI  
ON OUR  
WEBSITE

### pin connections

PORT	cc	cd	ce
RF IN	1	2	5
RF OUT	8	4	11
DC	5	1	2
CASE GND	2,3,4,6	3	1,3,4,6,7,8,9,10,12
NOT USED	7	—	—



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