

# Coaxial Low Noise Amplifier

## ZEL-0812LN

50Ω      800 to 1200 MHz

### Features

- very low noise figure, 1.5 dB max.
- wideband, 800 to 1200 MHz
- rugged, shielded case

### Applications

- UHF
- cellular
- PCS/GSM



Generic photo used for illustration purposes only

Case Style: EEE132	
Connectors	Model
SMA	ZEL-0812LN

### Electrical Specifications

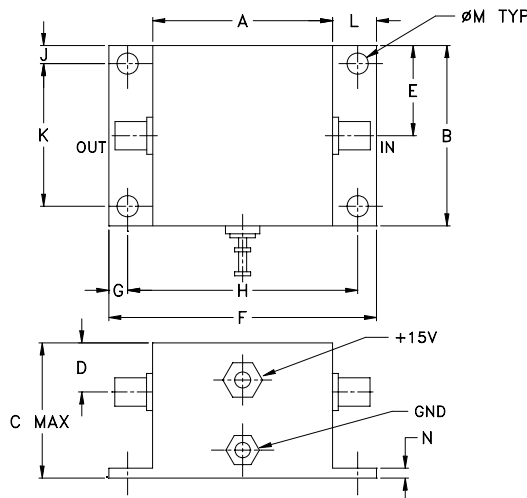
Parameter	Frequency (MHz)	Min.	Typ.	Max.	Units
Frequency Range		800		1200	MHz
Noise Figure	800-1200	—	—	1.5	dB
Gain	800-1200	20	—	—	dB
Gain Flatness	800-1200	—	—	±1.0	dB
Output Power at 1dB compression	800-1200	—	+8	—	dBm
Output third order intercept point	800-1200	—	+18	—	dBm
Input VSWR	800-1200	—	—	2.5	:1
Output VSWR	800-1200	—	—	2.5	:1
DC Supply Voltage		—	15	—	V
Supply Current		—	—	70	mA

Noise Figure specified at room temperature, increases to 2 dB typical at +85°C

Open load is not recommended, potentially can cause damage.

With no load derate max input power by 20 dB

### Outline Drawing



### Maximum Ratings

Parameter	Ratings
Operating Temperature	-54°C to 85°C
Storage Temperature	-55°C to 100°C
DC Voltage	17V
Input RF Power (no damage)	+13 dBm

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

### Outline Dimensions (inch/mm)

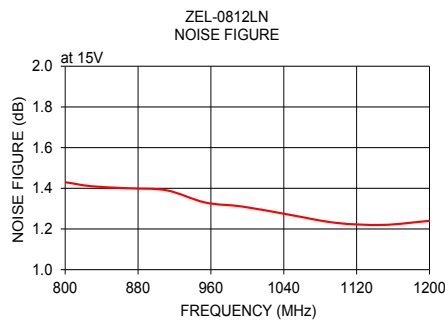
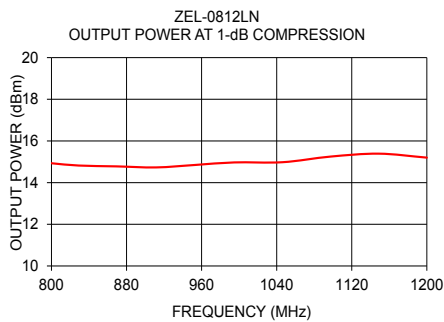
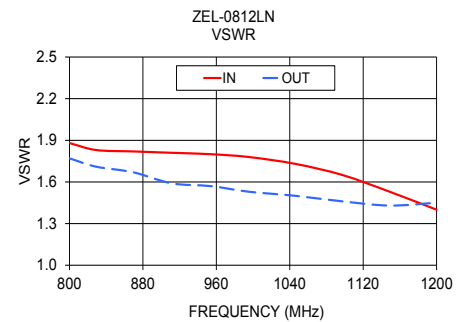
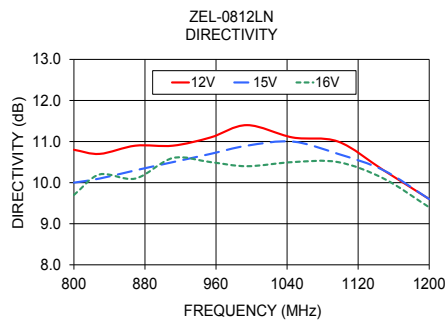
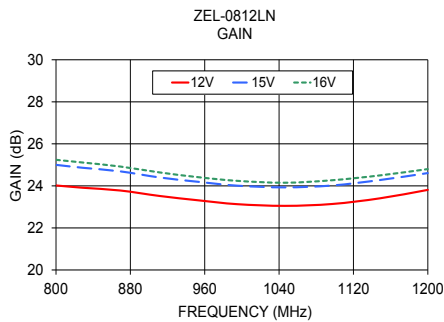
A	B	C	D	E	F	G	H	J	K	L	M	N	wt
.90	.90	.675	.245	.45	1.34	.09	1.152	.09	.712	.22	.106	.05	grams
22.86	22.86	17.15	6.22	11.43	34.04	2.29	29.26	2.29	18.08	5.59	2.69	1.27	50.0

#### 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.
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FREQUENCY (MHz)	GAIN (dB)			DIRECTIVITY (dB)			VSWR (:1)		NOISE FIGURE (dB)	POUT at 1 dB COMPR. (dBm)
	12V	15V	16V	12V	15V	16V	IN	OUT		
800.00	24.02	25.00	25.24	10.80	10.00	9.70	1.88	1.77	1.43	14.93
829.00	23.91	24.86	25.11	10.70	10.10	10.20	1.83	1.71	1.41	14.82
869.20	23.78	24.69	24.92	10.90	10.30	10.10	1.82	1.67	1.40	14.78
911.50	23.52	24.40	24.64	10.90	10.50	10.60	1.81	1.59	1.39	14.73
953.80	23.31	24.19	24.41	11.10	10.70	10.50	1.80	1.57	1.33	14.85
994.90	23.13	24.01	24.24	11.40	10.90	10.40	1.78	1.53	1.31	14.97
1046.20	23.05	23.93	24.15	11.10	11.00	10.50	1.73	1.50	1.27	14.98
1097.40	23.14	24.02	24.27	11.00	10.70	10.50	1.65	1.46	1.23	15.25
1148.70	23.41	24.28	24.50	10.30	10.30	10.10	1.53	1.43	1.22	15.39
1200.00	23.81	24.61	24.80	9.60	9.60	9.40	1.40	1.45	1.24	15.20



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# Low Noise Amplifier

# ZEL-0812LN

## Typical Performance Data

FREQUENCY (MHz)	GAIN (dB)			DIRECTIVITY (dB)			VSWR IN (:1) 15V	VSWR OUT (:1) 15V	NOISE FIGURE (dB) 15V	Pout at 1dB Comp. (dBm) 15V
	12V	15V	16V	12V	15V	16V				
800.0	24.02	25.00	25.24	10.80	10.00	9.70	1.88	1.77	1.43	14.93
829.0	23.91	24.86	25.11	10.70	10.10	10.20	1.83	1.71	1.41	14.82
869.2	23.78	24.69	24.92	10.90	10.30	10.10	1.82	1.67	1.40	14.78
911.5	23.52	24.40	24.64	10.90	10.50	10.60	1.81	1.59	1.39	14.73
953.8	23.31	24.19	24.41	11.10	10.70	10.50	1.80	1.57	1.33	14.85
994.9	23.13	24.01	24.24	11.40	10.90	10.40	1.78	1.53	1.31	14.97
1046.2	23.05	23.93	24.15	11.10	11.00	10.50	1.73	1.50	1.27	14.98
1097.4	23.14	24.02	24.27	11.00	10.70	10.50	1.65	1.46	1.23	15.25
1148.7	23.41	24.28	24.50	10.30	10.30	10.10	1.53	1.43	1.22	15.39
1200.0	23.81	24.61	24.80	9.60	9.60	9.40	1.40	1.45	1.24	15.20

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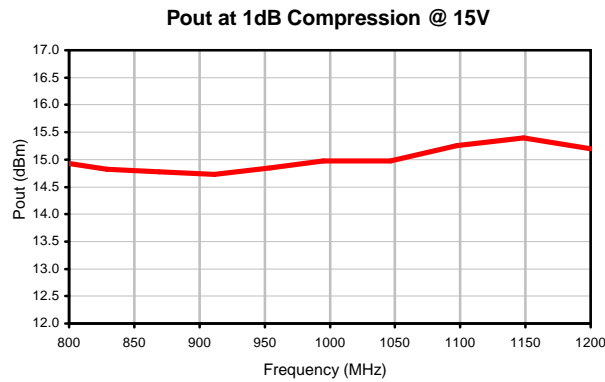
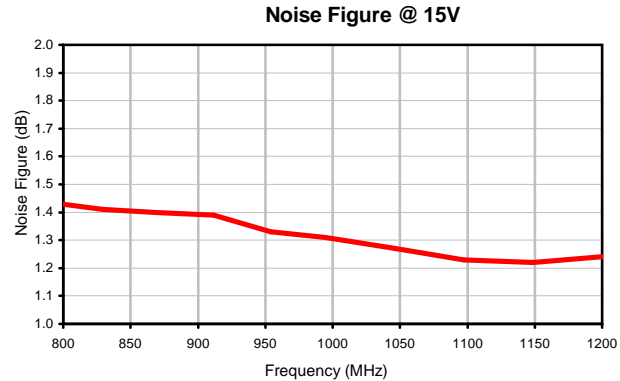
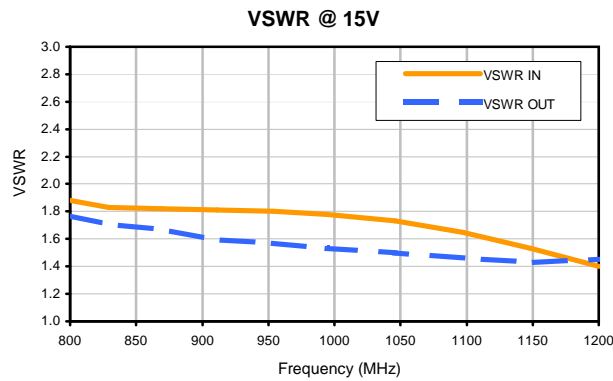
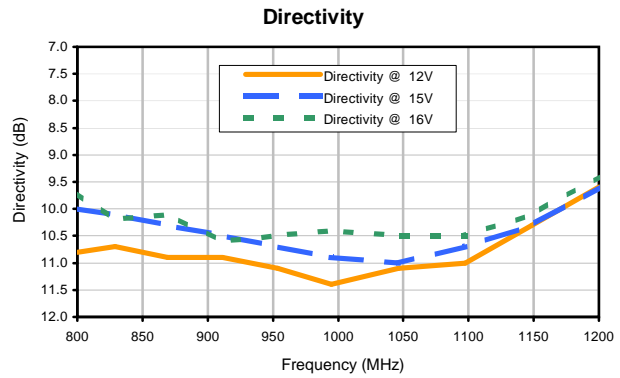
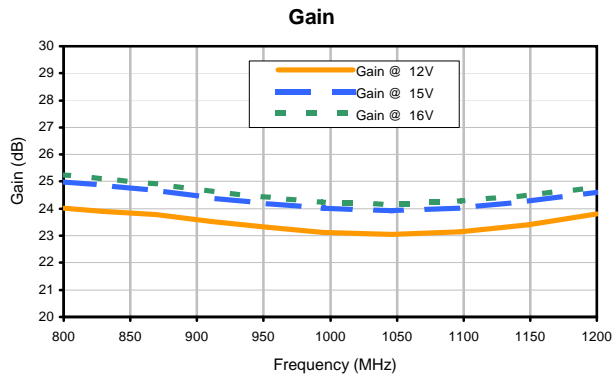
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# Low Noise Amplifier

## Typical Performance Curves

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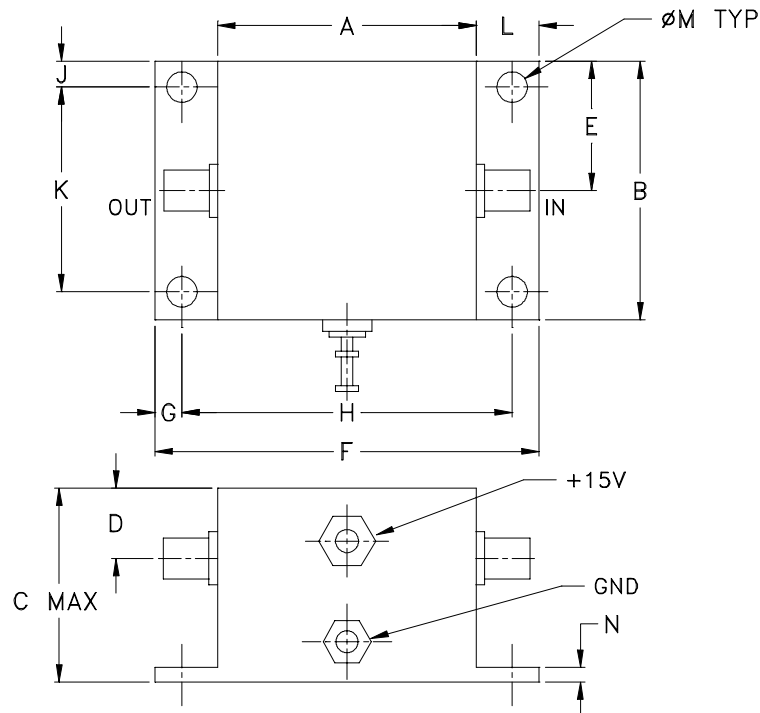
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### Outline Dimensions



CASE #	A	B	C	D	E	F	G	H	J	K	L
EEE132	.90 (22.86)	.90 (22.86)	.675 (17.15)	.245 (6.22)	.45 (11.43)	1.34 (34.04)	.09 (2.29)	1.152 (29.26)	.09 (2.29)	.712 (18.08)	.22 (5.59)

CASE #	M	N	WT. GRAM
EEE132	.106 (2.69)	.05 (1.27)	50.0

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

#### Notes:

- Case material: Aluminum alloy.
- Case finish:  
For RoHS Case Styles: Clear chemical conversion coating, non-chrome or trivalent chrome based.



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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	-54° to 85°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