

Ultra Low Noise Amplifier

ZX60-1215LN+

50Ω 800 MHz to 1400 MHz

Features

- Ultra low noise figure 0.4 typ.
- 11V-13V operation
- Good IP3, 27 dBm typ.
- Reverse voltage connection protected
- Small size
- Low cost
- Protected by US patent 6,790,049

Applications

- Low noise amplifier RF front end
- Low noise pre-amp
- Buffer amplifier
- LNA for GPS application
- General purpose small signal
- Lab
- Instrumentation
- Test equipment



CASE STYLE: GA955

Connectors	Model	Price	Qty.
SMA	ZX60-1215LN-S+	\$149.95 ea.	(1-9)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Electrical Specifications at T_{AMB} = 25°C

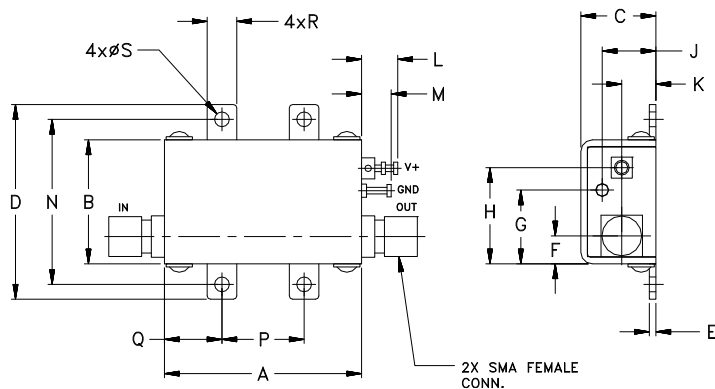
MODEL NO.	FREQ. (MHz)	GAIN (dB)				MAXIMUM POWER (dBm)	DYNAMIC RANGE			VSWR (:1) Typ.		ACTIVE DIRECTIVITY (dB) Isolation-Gain	DC VOLTAGE @ Pin V+ (V)	DC OPERATING CURRENT @ Pin V+ (mA)		
		Flatness					Output (1 dB Comp.)	NF (dB)	IP3 (dBm)	In	Out			Typ.	Typ.	Max.
		Typ.	Min.	Typ.	Max.											
ZX60-1215LN +	800-1000	16.5	14.0	±0.7	±1.3	12.5	0.4	0.7	26.0	1.65	1.40	13	12	42	50	
	1000-1400	14.5	11.0	±1.2	±2.5	12.5	0.4	0.7	27.5	1.70	1.40	13	12	42	50	

Maximum Ratings

Operating Temperature	-40°C to 80°C case
Storage Temperature	-55°C to 100°C
DC Voltage	15V
Input Power(no Damage)	13dBm

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

Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	wt.
1.20	.75	.46	1.18	.04	.17	.45	.59	.33	.21	.22	.18	1.00	.50	.35	.18	.106	grams
30.48	19.05	11.68	29.97	1.02	4.32	11.43	14.99	8.38	5.33	5.59	4.57	25.40	12.70	8.89	4.57	2.69	35.0



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at minicircuits.com

For detailed performance specs & shopping online see web site

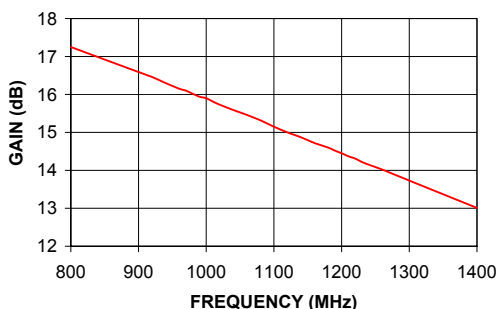
Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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/MCLStore/terms.jsp.

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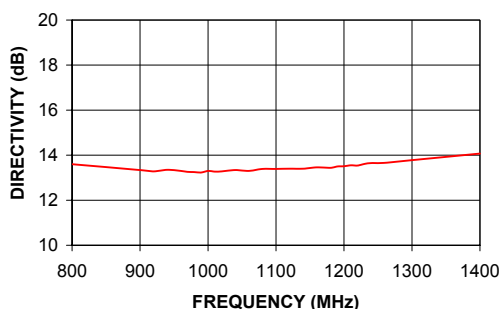
Typical Performance Data & Curves at 25°C ZX60-1215LN+

FREQUENCY (MHz)	GAIN (dB)	DIRECTIVITY (dB)	VSWR IN (:1)	VSWR OUT (:1)	POWER OUT @1dB COMPRESSION (dBm)	IP3 (dBm)	NF (dB)
800	17.25	13.60	1.63	1.76	12.00	24.51	0.42
850	16.90	13.47	1.61	1.62	12.16	25.00	0.41
900	16.59	13.34	1.59	1.49	12.33	25.49	0.41
920	16.46	13.28	1.59	1.44	12.40	25.68	0.41
940	16.30	13.35	1.59	1.40	12.46	25.86	0.41
960	16.15	13.30	1.60	1.36	12.53	26.05	0.40
980	16.02	13.25	1.60	1.32	12.59	26.23	0.40
990	15.94	13.23	1.61	1.30	12.62	26.32	0.40
1000	15.90	13.30	1.61	1.29	12.64	26.41	0.40
1020	15.73	13.28	1.62	1.26	12.70	26.59	0.40
1050	15.53	13.34	1.63	1.23	12.77	26.83	0.40
1080	15.32	13.39	1.65	1.21	12.85	27.13	0.40
1100	15.15	13.39	1.67	1.21	12.89	27.32	0.40
1120	15.00	13.40	1.68	1.22	12.93	27.50	0.40
1150	14.79	13.43	1.69	1.25	12.96	27.73	0.40
1180	14.60	13.44	1.72	1.29	13.01	28.05	0.41
1200	14.45	13.51	1.74	1.31	13.03	28.23	0.41
1250	14.15	13.65	1.77	1.40	13.06	28.65	0.42
1300	13.73	13.78	1.81	1.51	13.05	29.11	0.43
1400	13.01	14.07	1.87	1.74	12.93	29.91	0.45

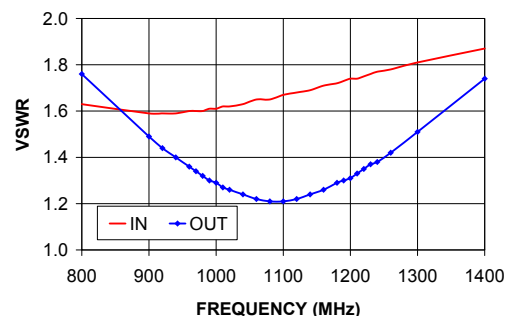
ZX60-1215LN+ GAIN



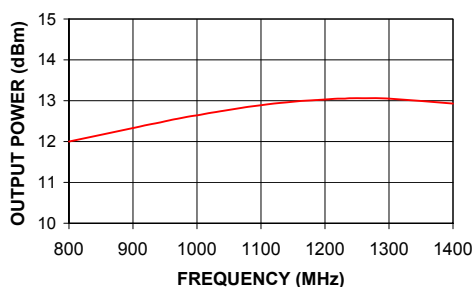
ZX60-1215LN+ DIRECTIVITY



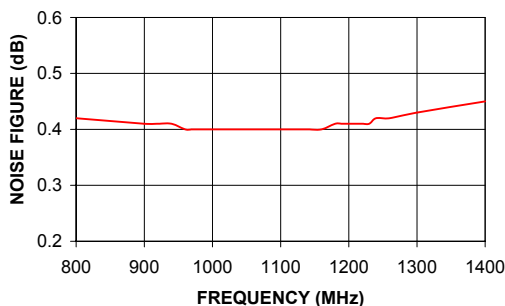
ZX60-1215LN+ VSWR



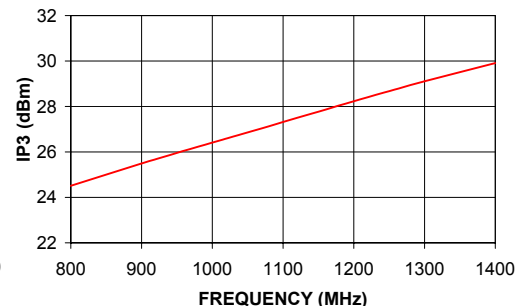
ZX60-1215LN+ OUTPUT POWER AT 1dB COMPRESSION



ZX60-1215LN+ NOISE FIGURE



ZX60-1215LN+ IP3



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