Coaxial

Low Noise Amplifier

ZX60-0916LN-S+

50Ω 824 to 960 MHz

Features

- Ultra low noise figure, 0.55 dB typ.
- High gain, 18 dB typ.
- Output power, up to +16.5 dBm typ.
- Low current consumption
- Good return loss
- Unconditionally stable
- Protected by US patent 6,790,049

Applications

- Base transceiver station, tower mounted amplifier, repeater
- CDMA: 824 to 894 MHz
- GSM Rx: 880 to 915 MHz
- GSM Tx: 925 to 960 MHz
- General purpose low noise amplifier
- Lab
- Instrumentation
- Test equipment



CASE STYLE: GA955

Connectors	Model
SMA	ZX60-0916LN-S+

+RoHS Compliant

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

Electrical Specifications at 25°C

Parameter	Condition (MHz)	Min.	Typ.	Max.	Units
Frequency Range		824		960	MHz
Noise Figure	824 - 960		0.55	0.80	dB
	824 - 894		0.60	0.80	
	880 - 915		0.55	0.70	
	925 - 960		0.55	0.70	
Gain	824 - 960	16.5	18.0		dB
	824 - 894	16.5	18.0		
	880 - 915	16.5	18.0		
	925 - 960	16.5	17.5		
Gain Flatness	824 - 960		± 0.6	± 1.2	dB
	824 - 894		± 0.4	± 0.8	
	880 - 915		± 0.2	± 0.4	
	925 - 960		± 0.2	± 0.4	
Output Power at 1dB compression	824 - 960	15.5	16.5		dBm
	824 - 894	15.5	16.5		
	880 - 915	15.5	16.5		
	925 - 960	15.5	16.5		
Output third order intercept point	824 - 960		30		dBm
	824 - 894		30		
	880 - 915		30		
	925 - 960		30		
Input VSWR	824 - 960		1.2		:1
	824 - 894		1.2		
	880 - 915		1.2		
	925 - 960		1.1		
Output VSWR	824 - 960		1.4		:1
	824 - 894		1.3		
	880 - 915		1.4		
	925 - 960		1.5		
Active Directivity	824 - 960		6.7		dB
DC Supply Voltage			5		V
Supply Current			40	45	mA

Notes

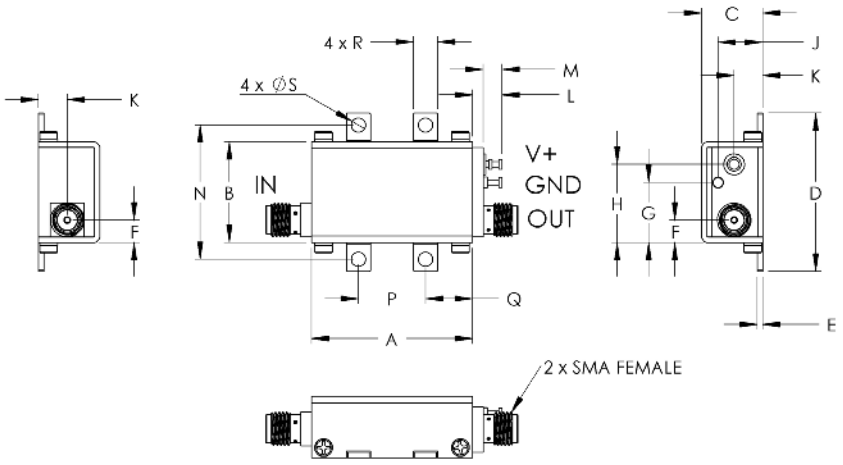
A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's 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/MCLStore/terms.jsp

Maximum Ratings

Parameter	Ratings
Operating Temperature	-40°C to 85°C Case
Storage Temperature	-55°C to 100°C
DC Voltage	5.5 V
Input RF Power (no damage)	+10 dBm
Power Consumption	250 mW

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

Outline Drawing



NOTE: When soldering the DC connections, caution must be used to avoid overheating the DC terminals. See Application Note AN-40-10 .

Outline Dimensions (inch / mm)

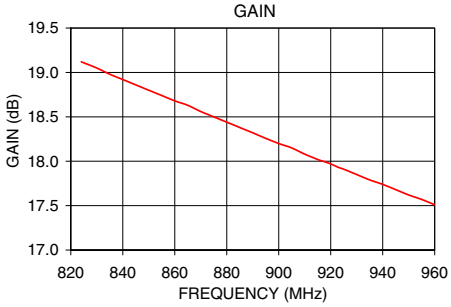
A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	wt.
1.20	.75	.46	1.18	.04	.17	.45	.59	.33	.21	.22	.14	1.00	.50	.35	.18	.106	grams
30.48	19.05	11.68	29.97	1.02	4.32	11.43	14.99	8.38	5.33	5.59	3.56	25.40	12.70	8.89	4.57	2.69	35.0

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/MCLStore/terms.jsp

FREQUENCY (MHz)	GAIN (dB)	DIRECTIVITY (dB)	VSWR IN (:1)	VSWR OUT (:1)	POWER OUT @ 1dB COMPRESSION (dBm)	OUTPUT IP3 (dBm)	NF (dB)
824.00	19.12	6.33	1.18	1.30	16.93	31.23	0.55
830.00	19.05	6.35	1.17	1.32	16.90	31.47	0.56
835.00	18.98	6.38	1.16	1.33	16.85	31.61	0.52
845.00	18.86	6.45	1.14	1.36	16.89	31.71	0.53
850.00	18.80	6.46	1.13	1.37	16.92	31.72	0.54
855.00	18.74	6.49	1.13	1.38	16.98	31.61	0.55
860.00	18.68	6.53	1.12	1.40	16.98	31.45	0.56
870.00	18.56	6.61	1.10	1.42	16.92	31.06	0.55
875.00	18.50	6.58	1.10	1.44	16.90	31.02	0.55
880.00	18.44	6.63	1.09	1.45	16.90	31.04	0.54
885.00	18.38	6.68	1.09	1.46	16.92	31.10	0.53
894.00	18.27	6.73	1.08	1.48	16.81	31.33	0.55
900.00	18.20	6.80	1.08	1.50	16.72	31.69	0.55
905.00	18.15	6.82	1.08	1.51	16.73	31.76	0.55
915.00	18.02	6.84	1.07	1.53	16.89	31.42	0.55
925.00	17.91	6.96	1.07	1.55	16.81	30.94	0.55
930.00	17.85	6.95	1.07	1.56	16.76	30.82	0.53
935.00	17.79	6.99	1.08	1.57	16.72	30.74	0.52
945.00	17.68	7.07	1.08	1.59	16.68	30.82	0.58
960.00	17.51	7.13	1.09	1.63	16.47	31.42	0.54

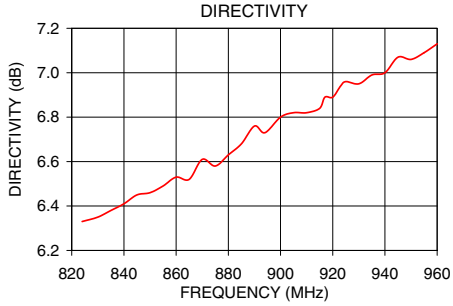
ZX60-0916LN-S+

GAIN



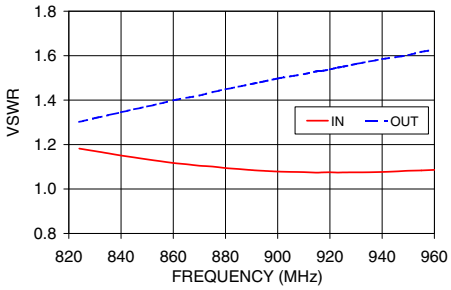
ZX60-0916LN-S+

DIRECTIVITY



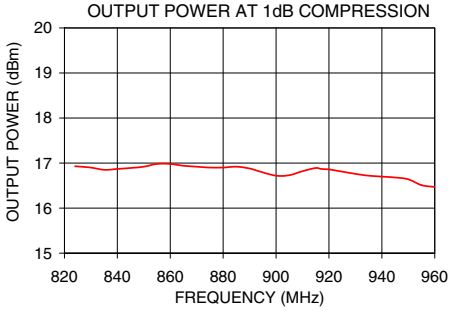
ZX60-0916LN-S+

VSWR



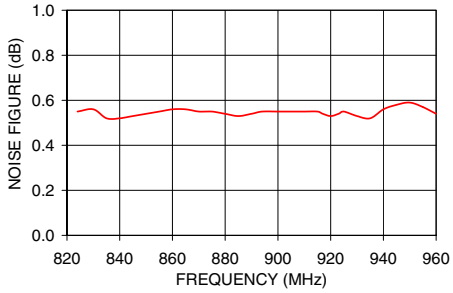
ZX60-0916LN-S+

OUTPUT POWER AT 1dB COMPRESSION



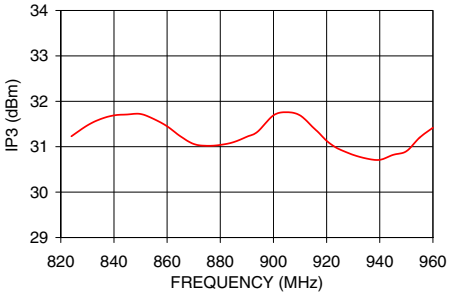
ZX60-0916LN-S+

NOISE FIGURE



ZX60-0916LN-S+

OUTPUT IP3



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/MCLStore/terms.jsp