

Low Noise Amplifier

ZX60-33LN+

50Ω

50 to 3000 MHz

Features

- wide bandwidth, 50 to 3000 MHz
- low noise figure 1.1 dB typ.
- output power, up to 17.5 dBm typ.
- protected by US patent 6,790,049

Applications

- front-end amplifier
- cellular
- GPS
- bluetooth
- lab
- instrumentation
- test equipment



Case Style: GC957

Connectors	Model	Price	Qty.
SMA	ZX60-33LN-S+	\$79.95 ea.	(1-9)

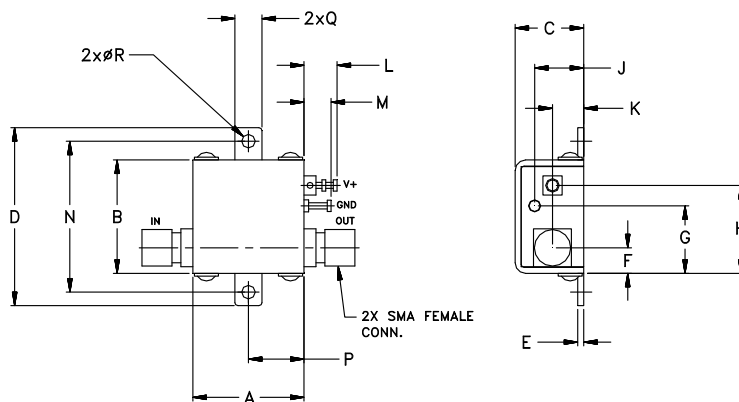
+ RoHS compliant in accordance with EU Directive (2002/95/EC)

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

Electrical Specifications at 25°C

Parameter	Condition(MHz)	Min	Typ.	Max.	Units
Frequency	—	50	—	3000	MHz
Noise Figure	—	—	1.1	1.9	dB
Gain	100	—	21.9	—	dB
	1000	—	18.8	—	
	2000	13	14.5	—	
	3000	—	11.9	—	
Gain Flatness	—	—	—	—	dB
Output Power at 1dB compression	—	14.5	16.5	—	dBm
Output third order intercept point	—	—	+32	—	dBm
Input VSWR	—	—	2.0	—	:1
Output VSWR	—	—	1.6	—	:1
Active Directivity	—	—	—	—	dB
DC Supply Voltage	—	—	5	—	V
Supply Current	—	—	70	80	mA

Outline Drawing



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)	+13 dBm
Power Dissipation	0.44W

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	P	Q	R	wt
.74	.75	.46	1.18	.04	.17	.45	.59	.33	.21	.22	.18	1.00	.37	.18	.106	grams
18.80	19.05	11.68	29.97	1.02	4.32	11.43	14.99	8.38	5.33	5.59	4.57	25.40	9.40	4.57	2.69	23.0



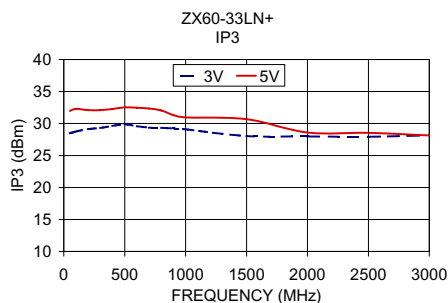
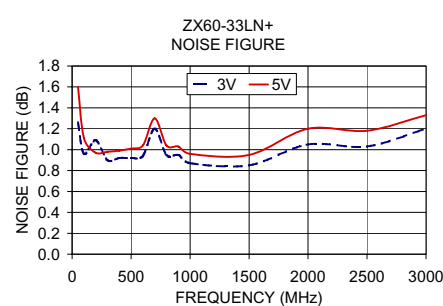
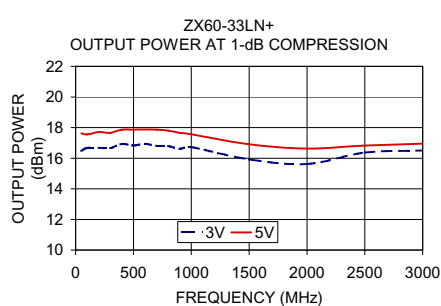
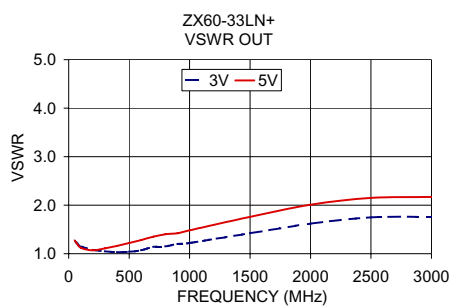
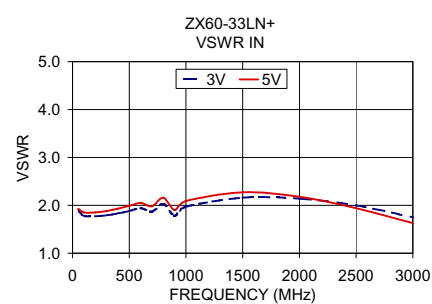
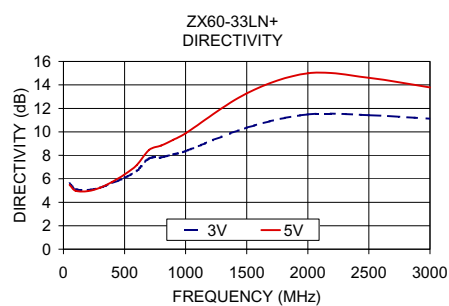
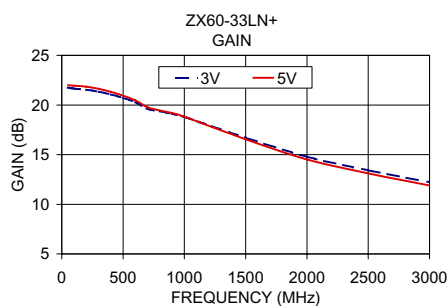
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Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained 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 this part also visible and accessible thereon enter address unit 8401, (718) 332-4661, website at www.minicircuits.com (8.6.11) (Standard Terms)

For detailed performance specs & shopping online see web site

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FREQUENCY (MHz)	GAIN (dB)		DIRECTIVITY (dB)		VSWR IN (:1)		VSWR OUT (:1)		NOISE FIGURE (dB)		POUT at 1dB COMPR. (dBm)		IP3 (dBm)	
	3V	5V	3V	5V	3V	5V	3V	5V	3V	5V	3V	5V	3V	5V
50.00	21.75	21.99	5.60	5.48	1.89	1.93	1.26	1.27	1.26	1.60	16.47	17.63	28.47	31.95
100.00	21.65	21.94	5.12	4.98	1.78	1.85	1.15	1.12	0.96	1.11	16.67	17.55	28.75	32.29
200.00	21.54	21.84	5.05	4.95	1.77	1.85	1.08	1.07	1.09	0.97	16.68	17.71	29.11	32.08
300.00	21.34	21.63	5.24	5.24	1.79	1.88	1.05	1.11	0.90	0.98	16.66	17.66	29.31	32.09
400.00	21.06	21.32	5.64	5.74	1.83	1.93	1.03	1.16	0.92	0.99	16.93	17.86	29.63	32.27
500.00	20.71	20.94	6.09	6.37	1.88	1.99	1.04	1.22	0.92	1.01	16.83	17.87	29.86	32.51
600.00	20.28	20.47	6.67	7.17	1.94	2.05	1.07	1.28	0.94	1.04	16.94	17.88	29.59	32.48
700.00	19.61	19.76	7.73	8.45	1.87	1.98	1.14	1.35	1.20	1.30	16.80	17.87	29.35	32.33
800.00	19.37	19.46	7.82	8.83	2.03	2.16	1.15	1.40	0.95	1.04	16.79	17.80	29.32	32.03
900.00	19.11	19.19	8.08	9.32	1.78	1.90	1.20	1.42	0.95	1.03	16.61	17.66	29.23	31.29
1000.00	18.80	18.82	8.35	9.88	1.97	2.09	1.22	1.48	0.87	0.96	16.72	17.56	29.10	30.95
1500.00	16.71	16.54	10.35	13.28	2.16	2.27	1.42	1.76	0.85	0.95	15.92	16.91	28.04	30.66
2000.00	14.79	14.51	11.49	14.99	2.14	2.18	1.62	2.01	1.05	1.20	15.62	16.63	27.99	28.58
2500.00	13.42	13.11	11.42	14.60	2.00	1.94	1.75	2.15	1.03	1.18	16.37	16.83	27.92	28.55
3000.00	12.22	11.90	11.12	13.78	1.75	1.63	1.76	2.17	1.20	1.33	16.50	16.95	28.16	28.14



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