

Coaxial 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



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

Case Style: GC957

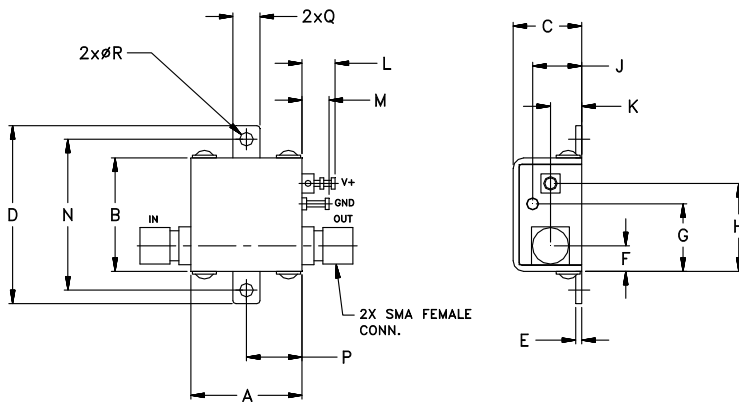
+ RoHS compliant in accordance with EU Directive (2002/95/EC)

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	Min	Typ.	Max.	Units
Frequency		50		3000	MHz
Noise Figure			1.1	1.9	dB
Gain	100 MHz 1000 MHz 2000 MHz 3000 MHz	13	21.9 18.8 14.5 11.9		dB
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	5.5	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
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



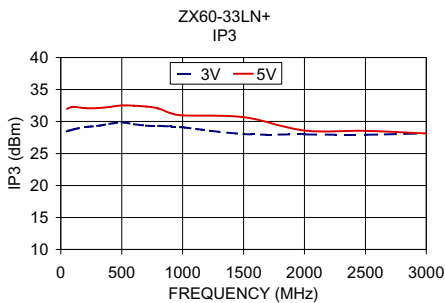
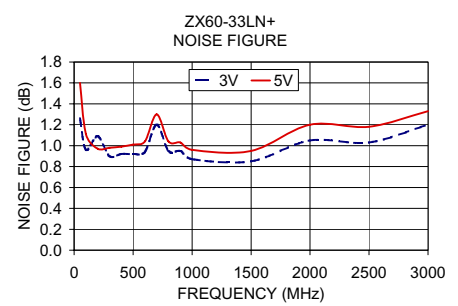
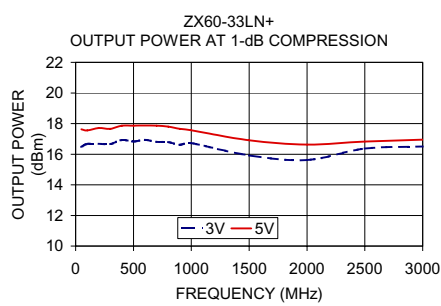
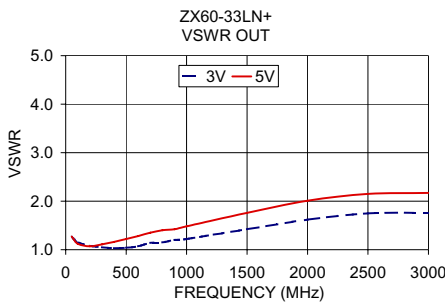
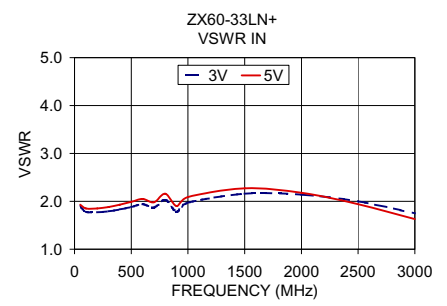
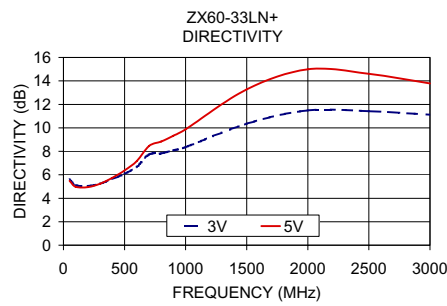
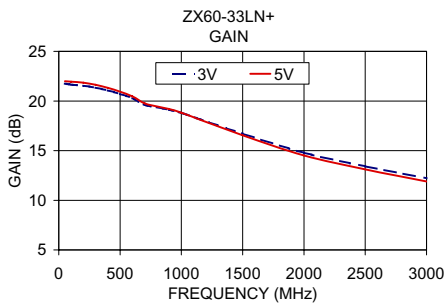
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at minicircuits.com

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 conditions, please refer to our website at www.minicircuits.com or call 1-800-368-7003.

For detailed performance specs & shopping online see web site

REV. A
M116867
ZX60-33LN+
ED-12875/2
MM/CP/AM
090819
Page 1 of 2

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



For detailed performance specs & shopping online see web site

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

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 conditions, please refer to the Mini-Circuits website at www.minicircuits.com or call (718) 934-4500.