Coaxial Low Noise Amplifier

50Ω 50 to 3000 MHz

ZX60-P103LN+

The Big Deal

- Ultra Low Noise Figure, 0.5 dB typ.
- High Dynamic Range



Case Style: GC957

Product Overview

The ZX60-P103LN+ (RoHS compliant) uses Mini-Circuits' E-PHEMT technology to offer ultra low noise figure over a broad frequency range and high IP3. Housed in a rugged, cost effective unibody chassis, this amplifier supports a wide variety of applications requiring moderate power output, low distortion and 50 ohm matched input/output ports.

Key Features

Feature	Advantages
Ultra Low Noise Figure, 0.5 dB at 1GHz	Outstanding world class noise figure performance.
High IP3 vs. DC power consumption 29.9 dBm typical at 1 GHz	Combining Low Noise and High IP3 makes this model ideal for use in Low Noise Receiver Front End (RFE)
Max. Input Power, +25 dBm	Ruggedized design operates to high input powers often seen at receiver inputs.
Very Small Size, 0.75" x 0.75"	The unique unibody size and construction enable the ZX60-P103LN+ to be used in extremely compact con- nectorized applications.

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Coaxial Low Noise Amplifier

50Ω 50 to 3000 MHz

Features

- wideband, 50 to 3000 MHz, usable to 3500 MHz
- low noise figure, 0.5 dB typ.
- output power up to 22.5 dBm typ.
- ESD protection at input

Applications

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

Electrical Specifications at 25°C

Parameter	Condition (MHz)	Min.	Тур.	Max.	Units
Frequency Range		50		3000	MHz
	50		1.2		
	500		0.4		
Noise Figure	1000		0.5		dB
	2000		0.6		
	3000		1.0		
	50	23.0	25.2		
	500	18.0	20.3		
Gain	1000	13.5	15.6		dB
	2000	8.0	10.0		
	3000	4.5	6.9		
	50		19.8		
	500		22.3		
Output Power @ 1 dB compression	1000		22.4		dBm
	2000		23.2		
	3000		23.8		
	50		36.9		
	500		39.7		
Output IP3	1000		39.4		dBm
	2000		42.6		
	3000		44.3		
	50		2.15		
	500		1.91		
Input VSWR	1000		1.65		dB
	2000		1.48		
	3000		1.27		
	50		1.27		
	500		1.10		
Output VSWR	1000		1.47		dB
	2000		2.36		
	3000		1.80		
	50		6.46		
	500		5.82		
Active Directivity (Isolation-Gain)	1000		6.27		dB
·····	2000		6.99		
	3000		7.01		
	3000				
DC Supply Voltage			5.0	_	V
Supply Current		—	95	120	mA

Notes

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Connectors	Model	Price	Qty.					
SMA	ZX60-P103LN+	\$69.95 ea.	(1-9)					

ZX60-P103LN+

+RoHS Compliant

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

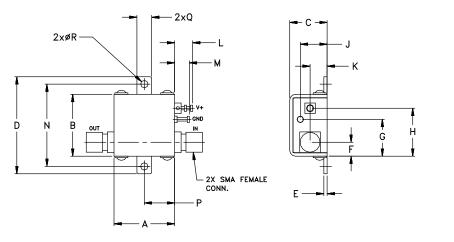
www.minicircuits.com P.O. Box 35166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

Maximum Ratings

Ratings			
-40°C to 85°C Case			
-55°C to 100°C			
5.5 V			
+21 dBm			
0.66 W			

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

Outline Drawing



Outline Dimensions (inch)

А	В	С	D	Е	F	G	н	J	к	L	М	Ν	Р	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

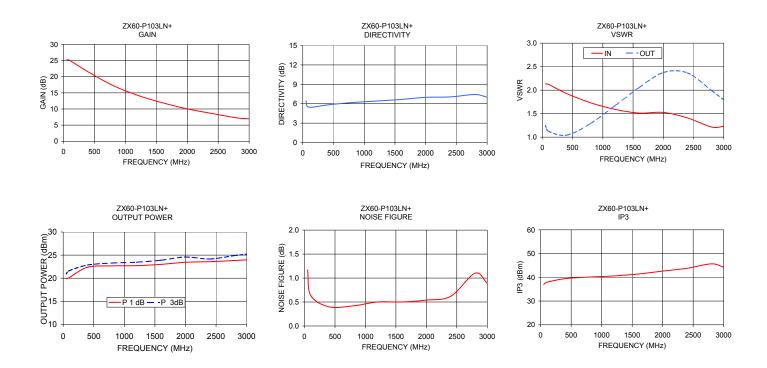
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Typical Performance Data/Curves

ZX60-P103LN+

FREQUENCY (MHz)	GAIN (dB)	DIRECTIVITY (dB)	VSWR (:1)		POUT at 1dB COMPR. (dBm)	NOISE FIGURE (dB)	OUTPUT IP3 (dBm)
			IN	OUT			
50.00	25.29	6.46	2.13	1.25	19.9	1.2	37.0
100.00	25.05	5.47	2.12	1.13	20.1	0.6	37.9
400.00	21.49	5.82	1.93	1.04	22.4	0.4	39.4
800.00	17.27	6.18	1.73	1.29	22.7	0.4	40.1
1200.00	14.22	6.42	1.59	1.67	22.7	0.5	40.6
1600.00	11.92	6.66	1.51	2.06	23.0	0.5	41.4
2000.00	10.03	6.99	1.53	2.37	23.5	0.5	42.6
2400.00	8.60	7.06	1.41	2.37	23.6	0.6	43.8
2800.00	7.25	7.43	1.21	1.99	23.8	1.1	45.7
3000.00	6.95	7.01	1.23	1.80	24.0	0.9	44.3



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