

Push-Pull Wideband Amplifier

ZX60-23LM+

50Ω 500 to 2000 MHz

Features

- Ultra low harmonic, -65 dBc typ.
- 11V-13V operation
- Good output IP3, 35 dBm typ.
- Unconditionally stable
- Protected by US patent 6,790,049

Applications

- Cellular, CATV,
- LNA for GPS application
- General purpose small signal
- MMDS & Wireless LAN
- Lab
- Instrumentation
- Test Equipment



Case Style: GA955

Connectors	Model	Price	Qty.
SMA	ZX60-23LM-S+	\$89.95 ea.	(1-9)

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

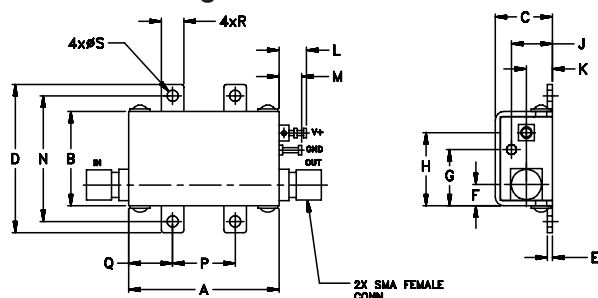
The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Electrical Specifications at 25°C

Parameter	Condition (MHz)	Min	Typ.	Max.	Units
Frequency Range		500		2000	MHz
Gain	500	17.0	18.2		dB
	1000	16.5	18.9		
	1500		18.4		
	2000		17.4		
Output Power at 1dB compression	500	18.0	19.0		dBm
	1000		19.6		
	1500		18.8		
	2000		17.5		
Output third order intercept point IP3*	500		33		dBm
	800		35		
	1000		35		
	1500		34		
Output second order intercept point IP2*	500		60		dBm
	800		60		
	1000		67		
	1500		60		
2000		69			
Noise Figure	500-2000		4.0		dB
Input VSWR	800-2000		1.5		:1
Output VSWR	800-2000		1.4		:1
DC Supply Voltage		11.5	12.0	12.5	V
Supply Current			125	143	mA

*Two tones, spaced 1 MHz apart, 4 dBm/tone at output.

Outline Drawing



Maximum Ratings

Parameter	Ratings
Operating Temperature	-40°C to 80°C Case
Storage Temperature	-55°C to 100°C
DC Voltage	13V
Input RF Power (no damage)	13dBm

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	S	wt
1.20	.75	.46	1.18	.04	.17	.45	.59	.33	.21	.22	.18	1.00	.50	.35	.18	.09	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	2.29	35.00

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ISO 9001 ISO 14001 AS 9100 CERTIFIED

For detailed performance specs & shopping online see web site

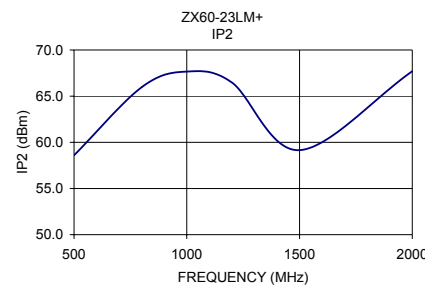
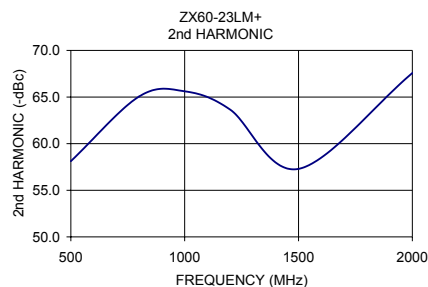
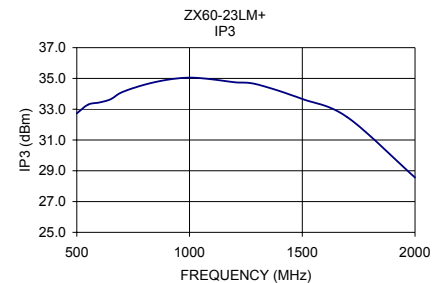
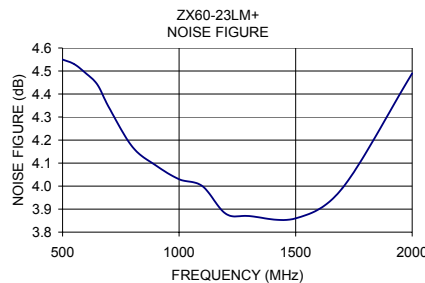
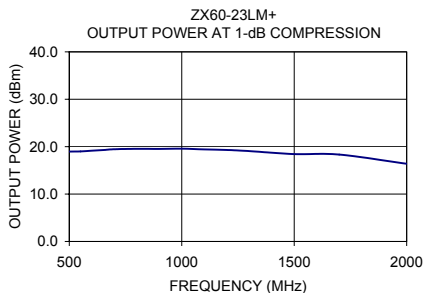
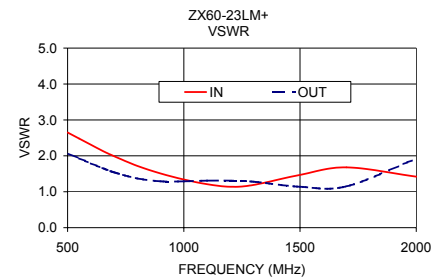
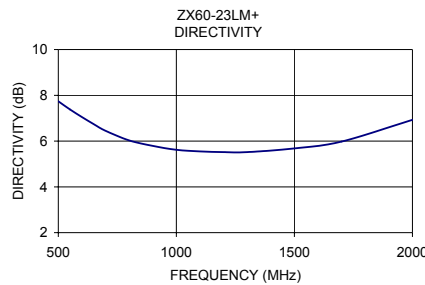
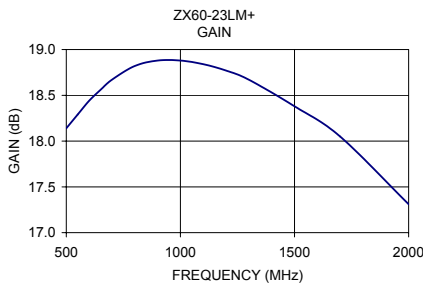
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Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained 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-Circuit's 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-Circuit's website at www.minicircuits.com/MCLStore/terms.jsp.

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FREQUENCY (MHz)	GAIN (dB)	DIRECTIVITY (dB)	VSWR (:1)		NOISE FIGURE (dB)	POUT at 1dB COMPR. (dBm)	OUTPUT IP3 (dBm)
	12V	12V	IN	OUT	12V	12V	12V
500	18.14	7.74	2.65	2.07	4.55	18.97	32.73
550	18.29	7.38	2.48	1.93	4.53	19.00	33.30
600	18.44	7.05	2.31	1.79	4.49	19.15	33.44
650	18.56	6.74	2.14	1.66	4.44	19.28	33.65
700	18.67	6.45	1.99	1.54	4.34	19.46	34.10
800	18.82	6.03	1.72	1.37	4.17	19.54	34.59
900	18.88	5.79	1.51	1.29	4.09	19.53	34.91
1000	18.88	5.62	1.34	1.29	4.03	19.57	35.05
1100	18.84	5.55	1.21	1.31	4.00	19.43	34.94
1200	18.77	5.52	1.14	1.31	3.88	19.30	34.75
1300	18.67	5.52	1.19	1.28	3.87	19.07	34.61
1500	18.38	5.68	1.47	1.14	3.86	18.43	33.67
1700	18.05	5.98	1.68	1.15	3.99	18.34	32.48
2000	17.31	6.93	1.42	1.92	4.49	16.39	28.56



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