High IP3

Low Noise Amplifier

ZRL-400+

50Ω 150 to 400 MHz

Features

- High IP3, +42 dBm typ.
- Low Noise figure, 2.5 dB typ.
- Broadband flat gain response
- Internal voltage regulated
- Over-voltage and transient protected

Applications

- High dynamic range VHF/UHF
- Mobile radio
- VHF/UHF television or radio
- defense communications

Case Style: FJ893

Connectors	Model
SMA	ZRL-400+

+RoHS Compliant

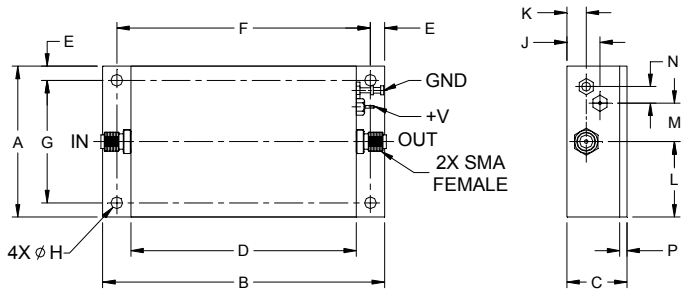
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Electrical Specifications at 25°C

Parameter	Condition (MHz)	Min.	Typ.	Max.	Units
Frequency Range		150		400	MHz
Noise Figure	150 - 400 175 - 300	— —	2.5 2.5	3.5 3.5	dB
Gain	150 - 400 175 - 300	27 28	31 31	— —	dB
Gain Flatness	150 - 400 175 - 300	— —	±0.5 ±0.3	±1.0 ±0.5	dB
Output Power at 1dB compression	150 - 400 175 - 300	23.5 23.5	25 25	— —	dBm
Output third order intercept point[1]	150 - 400 175 - 300	— —	+42 +42	— —	dBm
Input VSWR	150 - 400 175 - 300	— —	1.5 1.5	— —	:1
Output VSWR	150 - 400 175 - 300	— —	1.25 1.15	— —	:1
DC Supply Voltage[2]		—	12	—	V
Supply Current		—	450	575	mA

1. 1 MHz tonse spacing.
2. Unit is internally voltage regulated for 6.5 to 17VDC input voltage range.

Outline Drawing



Maximum Ratings

Parameter	Ratings
Operating Temperature	-40°C to 80°C case -40°C to 60° ambient
Storage Temperature	-55°C to 100°C
DC Voltage	+17V
Input RF Power (no damage)	+10 dBm

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

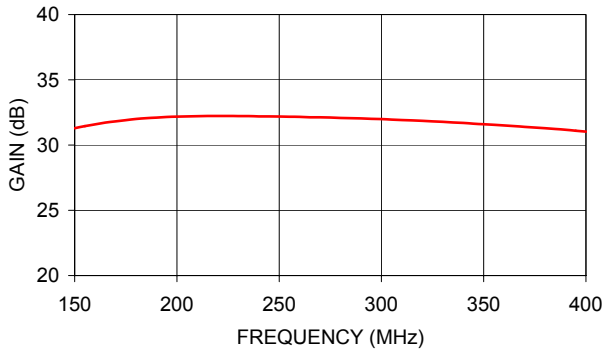
Outline Dimensions (inch / mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	wt
2.00	3.75	0.80	3.00	0.19	3.374	1.624	0.156	0.44	0.26	1.00	0.51	0.22	0.10	grams
50.80	95.25	20.32	76.20	4.83	85.70	41.25	3.96	11.18	6.60	25.40	12.95	5.59	2.54	135

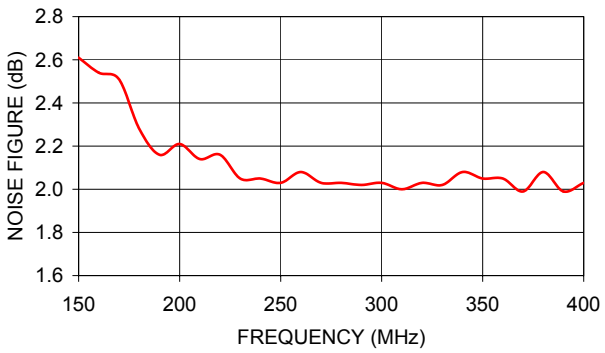
Notes

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

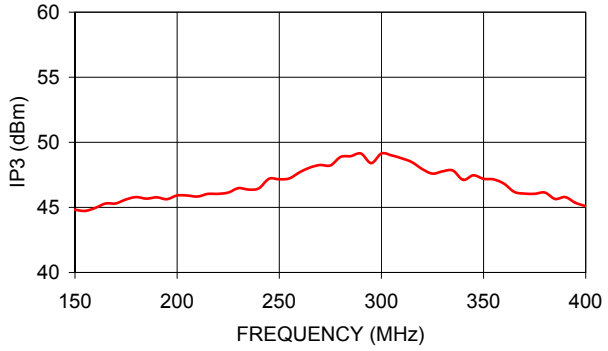
ZRL-400+
GAIN



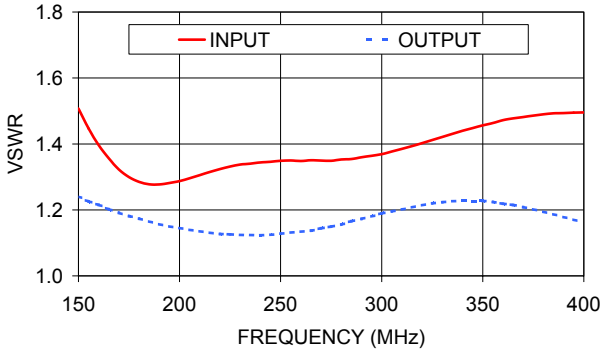
ZRL-400+
NOISE FIGURE



ZRL-400+
IP3



ZRL-400+
VSWR



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