

High IP3

# Low Noise Amplifier

## ZRL-700+

50Ω

250 to 700 MHz

### Features

- High IP3, +46 dBm typ.
- Low Noise figure, 2.0 dB typ.
- Broadband flat gain response
- Internal voltage regulated
- Over-voltage and transient protected

### Applications

- High dynamic range applications
- Mobile radio service
- NMT 450 cellular service
- aeronautical communications
- UHF television



Generic photo used for illustration purposes only

Case Style: FJ893

Connectors	Model
SMA	ZRL-700+

**+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		250		700	MHz
Noise Figure	250 - 700	—	2.0	3.5	dB
	300 - 500	—	2.0	3.5	
Gain	250 - 700	27	30	—	dB
	300 - 500	27.5	31	—	
Gain Flatness	250 - 700	—	±0.5	±1.0	dB
	300 - 500	—	±0.3	±0.7	
Output Power at 1dB compression	250 - 700	23.5	24.8	—	dBm
	300 - 500	23.5	24.8	—	
Output Power at 3dB compression	250 - 700	—	25.2	—	dBm
	300 - 500	—	25.3	—	
Output third order intercept point <sup>1</sup>	250 - 700	—	+45	—	dBm
	300 - 500	—	+46	—	
Input VSWR	250 - 700	—	1.2	—	:1
	300 - 500	—	1.15	—	
Output VSWR	250 - 700	—	1.15	—	:1
	300 - 500	—	1.10	—	
Active Directivity	250 - 700	—	13	—	dB
	300 - 500	—	13.5	—	
DC Supply Voltage <sup>2</sup>		—	12	—	V
Supply Current		—	450	575	mA

1. 1 MHz tone spacing.

2. Unit is internally voltage regulated for 6.5 to 17VDC input voltage range.

### 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

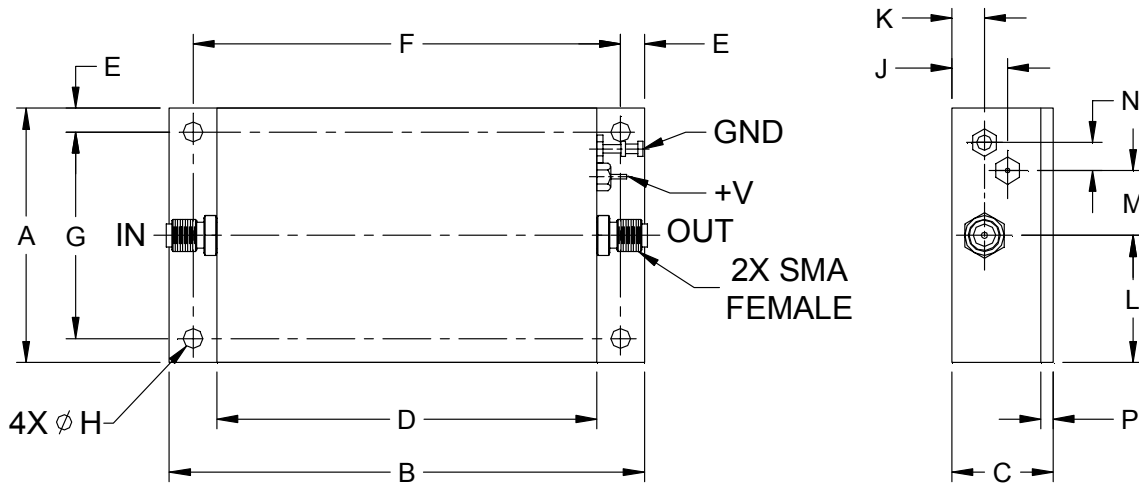
Permanent damage may occur if any of these limits are exceeded.

### 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.
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## Outline Drawing



## Outline Dimensions (inch/mm)

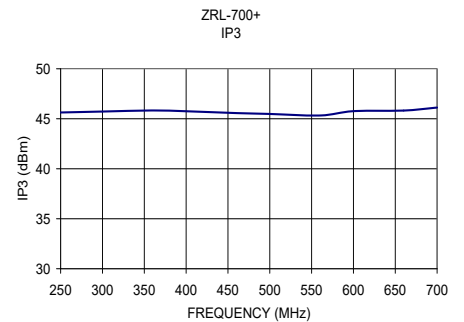
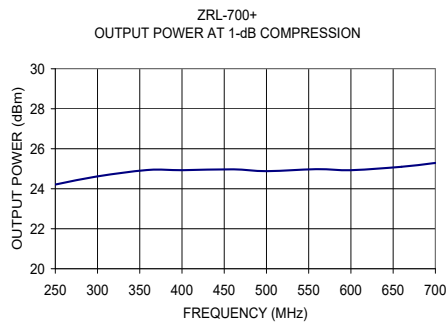
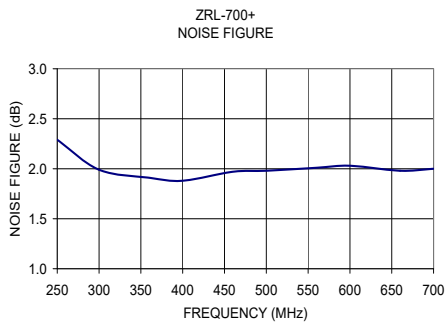
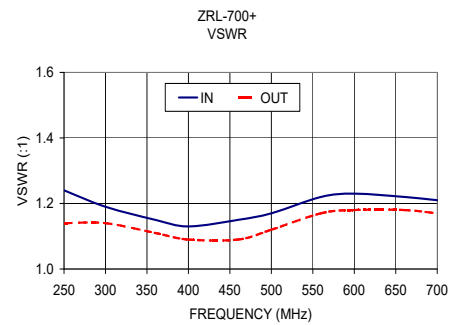
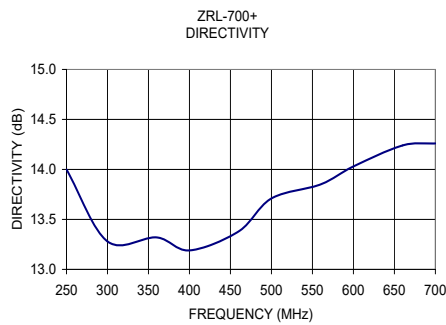
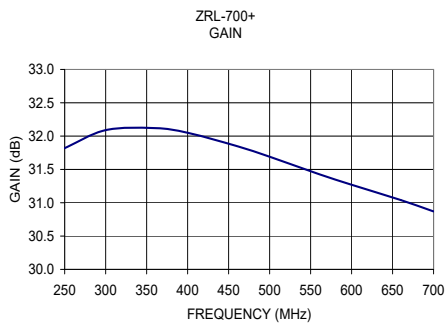
A	B	C	D	E	F	G	H	J	K	L	M	N	P	wt
2.00	3.75	0.80	3.00	0.19	3.374	1.624	0.156	0.44	0.26	1.00	0.51	0.22	0.10	grams
50.80	95.25	20.32	76.20	4.83	85.70	41.25	3.96	11.18	6.60	25.40	12.95	5.59	2.54	135

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FREQUENCY (MHz)	GAIN (dB)	DIRECTIVITY (dB)	VSWR (:1)		NOISE FIGURE (dB)	POUT at 1dB COMPR. (dBm)	OUTPUT IP3 (dBm)
	12V		IN	OUT			
250.00	31.82	14.00	1.24	1.14	2.29	24.21	45.63
300.00	32.09	13.28	1.19	1.14	1.99	24.62	45.72
360.00	32.12	13.32	1.15	1.11	1.91	24.94	45.83
400.00	32.05	13.19	1.13	1.09	1.88	24.93	45.75
460.00	31.85	13.38	1.15	1.09	1.97	24.97	45.57
500.00	31.69	13.71	1.17	1.12	1.98	24.88	45.48
560.00	31.43	13.85	1.22	1.17	2.01	24.98	45.33
600.00	31.27	14.03	1.23	1.18	2.03	24.93	45.76
660.00	31.04	14.24	1.22	1.18	1.98	25.10	45.82
700.00	30.87	14.26	1.21	1.17	2.00	25.29	46.12





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