

# Coaxial Amplifier

## ZJL-5G+ ZJL-5G

50Ω Medium Power 20 to 5000 MHz

### Features

- ultra-wideband, 20 to 5000 MHz
- high IP3, +32 dBm typ.
- rugged, compact case, 1.07"x0.61" (including mounting bracket)
- protected by US Patent, 6,943,629

### Applications

- radar
- instrumentation
- lab use



CASE STYLE: BW459  
Connectors    Model  
SMA            ZJL-5G-S

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

### Amplifier Electrical Specifications

MODEL NO.	FREQUENCY (MHz)		GAIN (dB)			MAXIMUM POWER (dBm)			DYNAMIC RANGE		VSWR (:1) Typ.		DC POWER	
	$f_L$	$f_U$	Typ.	Min.	Flatness <sup>1</sup> Typ.	Output (1 dB Compr.)		Input (no damage)	NF (dB) Typ.	IP3 (dBm) Typ.	In	Out	Volt (V) Nom.	Current (mA) Max.
ZJL-5G(+)	20	5000	9.0	7.0	±0.55	+15	+9.5	+20	8.5	+32	1.6	1.3	12	80

1. Flatness specified to 0.75 fU, dynamic range at 2 GHz.

Open load is not recommended, potentially can cause damage.  
With no load derate max input power by 20 dB

L= low range ( $f_L$  to  $f_U/2$ )

U= upper range ( $f_U/2$  to  $f_U$ )

### Maximum Ratings

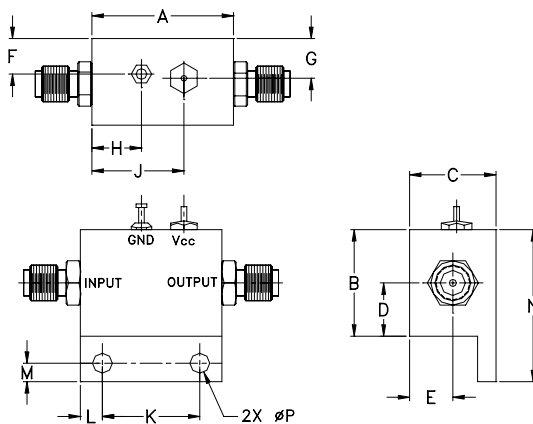
Operating Temperature -40°C to 75°C

Storage Temperature -55°C to 100°C

DC Voltage +13V Max.

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

### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	wt
1.00	.75	.61	.38	.29	.25	.26	.35	.65	.688	.156	.13	1.07	.140	grams
25.40	19.05	15.49	9.65	7.37	6.35	6.60	8.89	16.51	17.48	3.96	3.30	27.18	3.56	25

### Notes

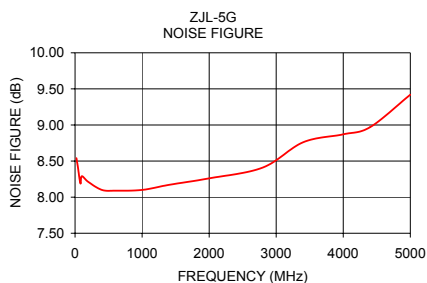
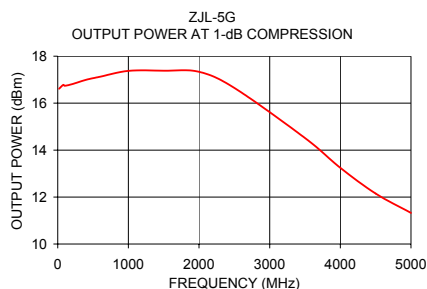
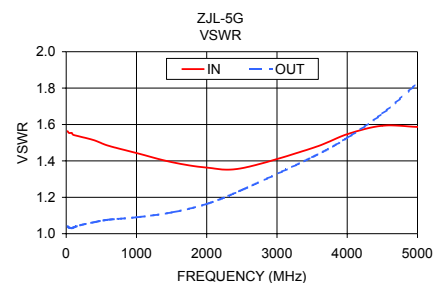
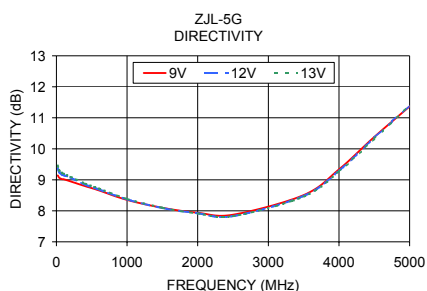
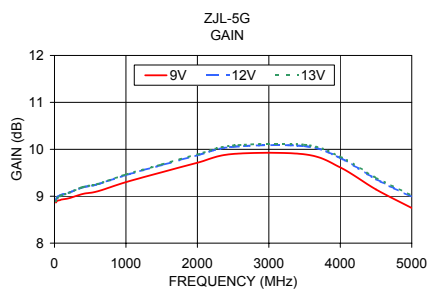
- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- 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](http://www.minicircuits.com/MCLStore/terms.jsp)



# Typical Performance Data/Curves

# ZJL-5G+ ZJL-5G

FREQUENCY (MHz)	GAIN (dB)			DIRECTIVITY (dB)			VSWR (:1)		POUT at 1 dB COMPR. (dBm)	FREQUENCY (MHz)	NOISE FIGURE (dB)
	9V	12V	13V	9V	12V	13V	IN	OUT			
20.00	8.86	8.92	8.89	9.14	9.37	9.46	1.56	1.04	16.61	20.00	8.54
40.00	8.90	8.98	8.96	9.07	9.25	9.30	1.55	1.03	16.68	40.00	8.43
80.00	8.92	9.01	9.00	9.02	9.17	9.22	1.55	1.03	16.78	80.00	8.19
100.00	8.93	9.03	9.02	9.02	9.15	9.20	1.54	1.03	16.74	100.00	8.29
200.00	8.96	9.07	9.07	8.95	9.07	9.10	1.53	1.05	16.81	200.00	8.21
400.00	9.05	9.19	9.20	8.80	8.85	8.88	1.51	1.06	16.99	400.00	8.10
600.00	9.10	9.25	9.26	8.66	8.69	8.72	1.48	1.08	17.13	600.00	8.09
1000.00	9.30	9.45	9.46	8.35	8.37	8.38	1.44	1.09	17.38	1000.00	8.10
1500.00	9.51	9.66	9.68	8.10	8.09	8.10	1.39	1.12	17.38	1400.00	8.17
2000.00	9.71	9.87	9.89	7.94	7.92	7.91	1.36	1.16	17.34	2000.00	8.26
2500.00	9.90	10.05	10.08	7.87	7.83	7.83	1.36	1.24	16.65	2800.00	8.41
3500.00	9.89	10.07	10.10	8.51	8.48	8.46	1.47	1.42	14.51	3400.00	8.76
4000.00	9.61	9.81	9.84	9.34	9.29	9.27	1.55	1.53	13.25	4000.00	8.87
4500.00	9.14	9.36	9.39	10.38	10.36	10.32	1.59	1.66	12.15	4400.00	8.97
5000.00	8.75	8.99	9.01	11.37	11.40	11.41	1.59	1.83	11.33	5000.00	9.42



**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](http://www.minicircuits.com/MCLStore/terms.jsp)

