Coaxial

Amplifier

ZJL-7G+

50Ω Low Power 20 to 7000 MHz

Generic photo used for illustration purposes only

CASE STYLE: BW459

Connectors	Model
SMA	ZJL-7G+

+RoHS Compliant

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

Features

- ultra wideband, 20 to 7000 MHz
- compact rugged case, 1.07"x0.61" (including mounting backet)
- protected by US Patent, 6,943,629

Applications

- communications systems
- radar
- instrumentation
- laboratory use

Amplifier Electrical Specifications

MODEL NO.	FREQUENCY (MHz)		GAIN (dB)			MAXIMUM POWER (dBm)			DYNAMIC[1] RANGE		VSWR (:1) Typ.		DC POWER	
						Min. Output (1 dB Compr.)								
	f_L	f_U	Typ.	Min.	Flatness[1] Typ.	L	U	Input (no damage)	NF (dB) Typ.	IP3 (dBm) Typ.	In	Out	Volt (V) Nom.	Current (mA) Max.
ZJL-7G+	20	7000	10	7.5	±1.5	+8	+8.5	+15	5.0	+24	1.5	1.5	12	50

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

L= low range (f_L to f_U/2) U= upper range (f_U/2 to f_U)

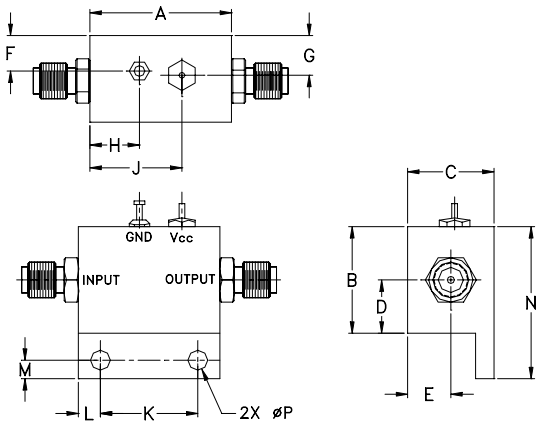
Open load is not recommended, potentially can cause damage.
With no load derate max input power by 20 dB

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



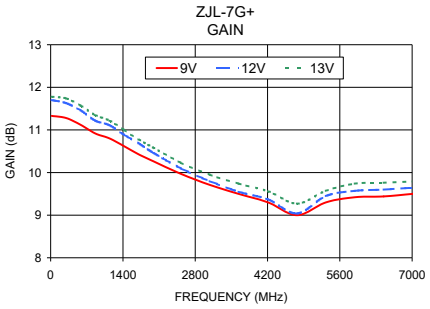
Outline Dimensions (inch / mm)

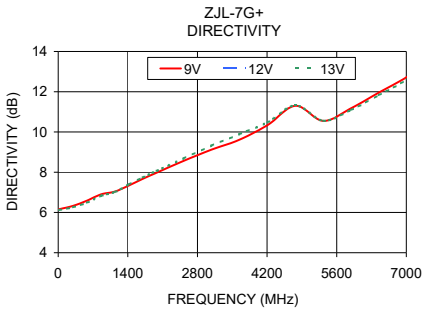
A	B	C	D	E	F	G	H	J	K	L	M	N	P	wt
1.00	.75	.61	.38	.29	.25	.26	.35	.65	.688	.156	.13	1.07	.140	grams
25.40	19.05	15.49	9.65	7.37	6.35	6.60	8.89	16.51	17.48	3.96	3.30	27.18	3.56	25

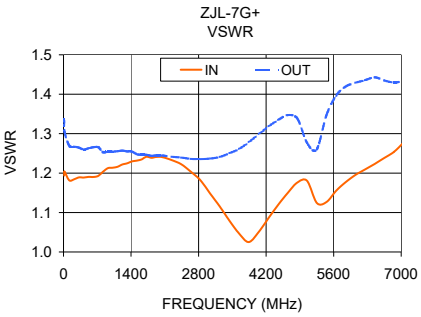
Notes

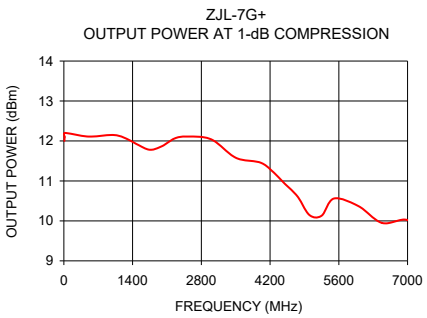
A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's 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

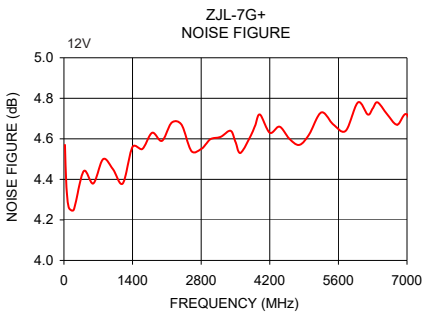
FREQUENCY (MHz)	GAIN (dB)			DIRECTIVITY (dB)			VSWR (:1)		NOISE FIGURE (dB)	POUT at 1 dB COMPR. (dBm)
	9V	12V	13V	9V	12V	13V	IN	OUT		
20.00	11.33	11.70	11.78	6.16	6.05	6.12	1.20	1.31	4.56	12.24
600.00	11.11	11.46	11.55	6.58	6.55	6.52	1.19	1.27	4.41	12.15
1200.00	10.77	11.07	11.18	7.09	7.08	7.11	1.22	1.26	4.39	11.88
2000.00	10.26	10.46	10.58	7.96	8.11	8.06	1.24	1.25	4.58	11.88
2400.00	10.02	10.17	10.30	8.46	8.61	8.62	1.23	1.24	4.65	12.07
2900.00	9.79	9.88	10.03	8.90	9.12	9.13	1.17	1.24	4.57	12.13
3500.00	9.55	9.61	9.79	9.50	9.69	9.72	1.07	1.25	4.58	11.64
3900.00	9.41	9.46	9.65	9.95	10.14	10.11	1.03	1.28	4.67	11.47
4400.00	9.24	9.29	9.50	10.61	10.70	10.68	1.11	1.33	4.68	11.14
5000.00	8.76	8.75	9.04	11.89	11.84	11.76	1.19	1.30	4.61	10.38
5500.00	9.42	9.56	9.72	10.63	10.66	10.56	1.13	1.37	4.66	10.50
6000.00	9.43	9.58	9.75	11.30	11.39	11.27	1.19	1.43	4.75	10.37
6300.00	9.44	9.59	9.76	11.78	11.74	11.61	1.21	1.44	4.77	10.11
6600.00	9.46	9.60	9.78	12.16	12.13	12.01	1.24	1.45	4.73	9.69
7000.00	9.51	9.64	9.80	12.71	12.68	12.63	1.27	1.43	4.69	9.99











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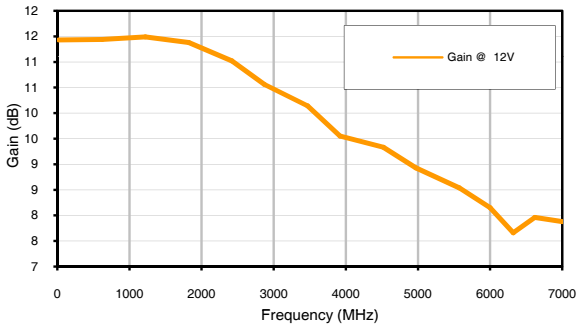
Amplifier ZJL-7G+

Typical Performance Data

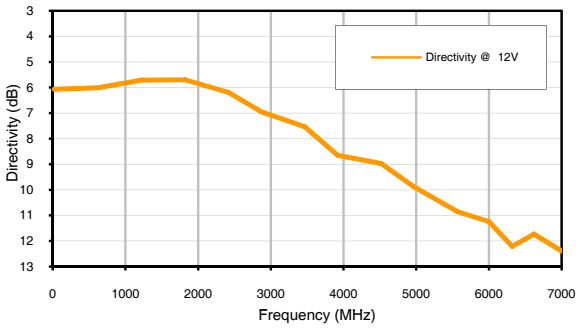
FREQUENCY (MHz)	GAIN (dB) 12V	DIRECTIVITY (dB) 12V	VSWR IN (:1) 12V	VSWR OUT (:1) 12V	NOISE FIGURE (dB) 12V	Pout at 1dB Comp. (dBm) 12V
20	11.70	6.05	1.20	1.31	4.56	12.24
100	11.69	6.11	1.18	1.27	4.26	12.21
200	11.67	6.18	1.18	1.27	4.23	12.25
400	11.58	6.34	1.19	1.26	4.44	12.21
600	11.46	6.55	1.19	1.27	4.41	12.15
800	11.26	6.83	1.20	1.25	4.49	12.08
1000	11.19	6.89	1.21	1.26	4.45	12.16
1200	11.07	7.08	1.22	1.26	4.39	11.88
1200	11.07	7.08	1.22	1.26	4.39	11.88
1400	10.91	7.34	1.23	1.25	4.55	11.94
1600	10.75	7.57	1.23	1.24	4.53	11.92
1800	10.60	7.89	1.24	1.24	4.62	11.90
2000	10.46	8.11	1.24	1.25	4.58	11.88
2200	10.31	8.36	1.23	1.24	4.65	11.98
2400	10.17	8.61	1.23	1.24	4.65	12.07
2600	10.05	8.82	1.21	1.23	4.52	12.14
2800	9.93	9.06	1.18	1.24	4.54	12.10
2900	9.88	9.12	1.17	1.24	4.57	12.13
3200	9.74	9.38	1.12	1.24	4.61	12.01
3500	9.61	9.69	1.07	1.25	4.58	11.64
3600	9.57	9.82	1.05	1.26	4.53	11.53
3900	9.46	10.14	1.03	1.28	4.67	11.47
4200	9.37	10.50	1.07	1.31	4.65	11.36
4400	9.29	10.70	1.11	1.33	4.68	11.14
5000	8.75	11.84	1.19	1.30	4.61	10.38
5500	9.56	10.66	1.13	1.37	4.66	10.50
6000	9.58	11.39	1.19	1.43	4.75	10.37
6300	9.59	11.74	1.21	1.44	4.77	10.11
6600	9.60	12.13	1.24	1.45	4.73	9.69
6800	9.63	12.37	1.26	1.44	4.65	9.82
7000	9.64	12.68	1.27	1.43	4.69	9.99

Typical Performance Curves

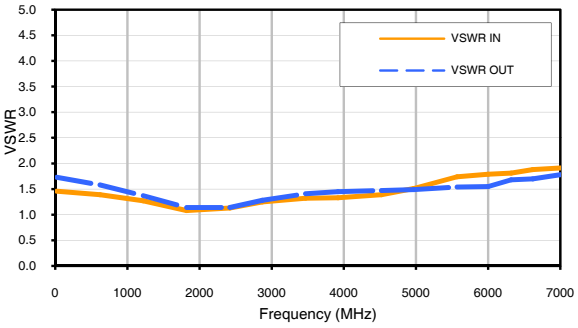
Gain



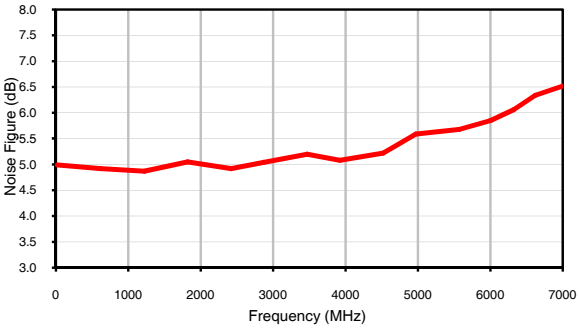
Directivity



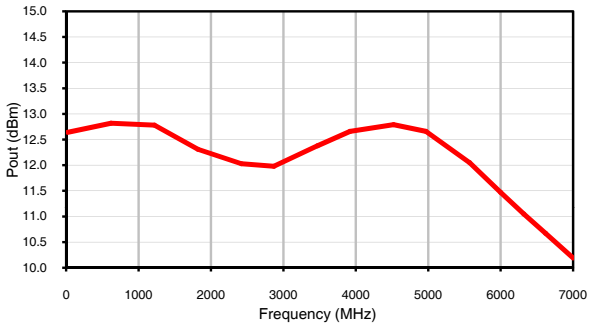
VSWR @ 12V



Noise Figure @ 12V



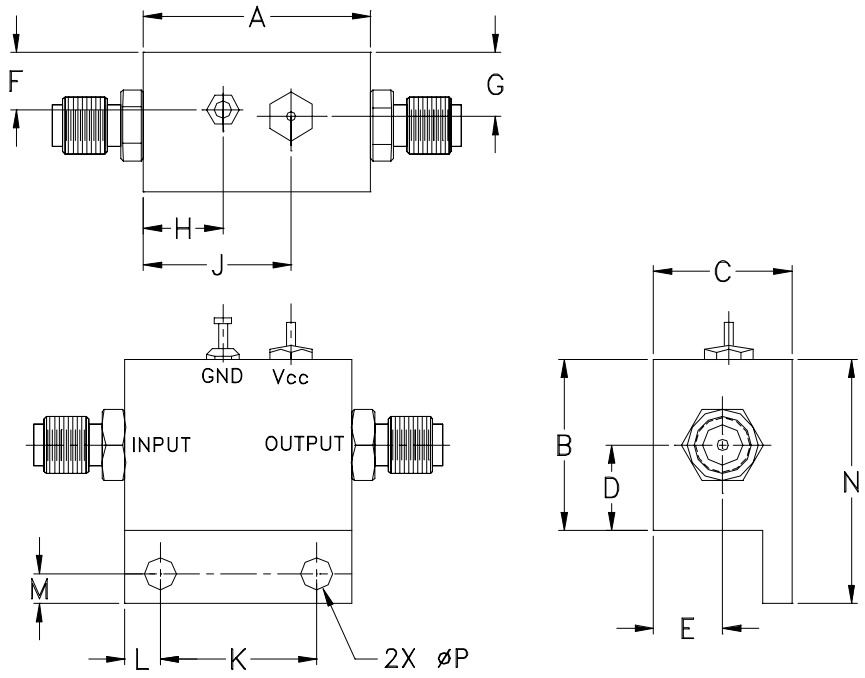
Pout at 1dB Compression @ 12V



Case Style BW

BW459

Outline Dimensions



CASE#	A	B	C	D	E	F	G	H	J	K	L	M	N
BW459	1.00 (25.40)	.75 (19.05)	.61 (15.49)	.38 (9.65)	.29 (7.37)	.25 (6.35)	.26 (6.60)	.35 (8.89)	.65 (16.51)	.688 (17.48)	.156 (3.96)	.13 (3.30)	1.07 (27.18)

CASE#	P	WT. GRAMS
BW459	.140 (3.56)	25

Dimensions are in inches (mm). Tolerances: 2 Pl. ± .03; 3 Pl. ± .015

Notes:

1. Case material: Aluminum alloy.
2. Case finish:

   For RoHS Case Styles: Clear chemical conversion coating, non-chrome or trivalent chrome based.

Mini-Circuits®
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Environmental Specifications ENV23T6

All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-40° to 75°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Stabilization Bake	(non-operating) 125°C, 24 hours	- - -
Burn-in at Elevated Temp.	(DC on) 160 hours at 85° C	MIL-STD-202, Method 108
Thermal Shock	-55° to 100°C, 5 cycles	MIL-STD-202, Method 107, Condition A, except 100°C