

Coaxial Broadband Amplifier

50Ω Variable Gain 10 to 2000 MHz

ZFL-2000G+

Features

- wideband, 10 to 2000 MHz
- rugged, shielded case
- gain control range: 60 dB typ.
- gain control voltage: 0 to +5V
- variable gain, +24 to -36dB

Applications

- cellular
- VHF/UHF
- AGC applications



CASE STYLE: Y39

Connectors	Model
SMA	ZFL-2000G+
BRACKET (OPTION "B")	

+RoHS Compliant

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

Product Description

ZFL-2000G+ is a Class-A variable gain, unconditionally stable amplifier. It features very wide gain control range and maintain good input/output matching over the full gain control range. It uses a small ruggedized metal case.

Electrical Specifications at 25°C, $V_{CTRL}=0V$ (or open)

Parameter	Condition (MHz)	Min.	Typ.	Max.	Units
Frequency Range		10	—	2000	MHz
Gain	10 - 2000	20	24	—	dB
Gain Flatness	10 - 2000	—	±2.5	—	dB
Output Power at 1dB compression	10 - 2000	—	+7	—	dBm
Output Power at 3dB compression	10 - 2000	—	+9	—	dBm
Noise Figure	10 - 2000	—	7.5	—	dB
Output third order intercept point	10 - 2000	—	+17	—	dBm
Output second order intercept point	10 - 2000	—	+40	—	dBm
Input VSWR	10 - 2000	—	1.5	—	:1
Output VSWR	10 - 2000	—	1.5	—	:1
DC Supply Voltage		—	15	—	V
Supply Current		—	—	180	mA

Open load is not recommended, potentially can cause damage.

With no load derate max input power by 20 dB

V_{CTRL} : Gain Control Voltage.

Gain Flatness, $V_{CC}=15V$, 10-2000 MHz

V_{CTRL} (V)	Gain Flatness (dB) Typ.
0 or open	±2.5
1	±2.9
2	±4.75
3	±8.5
4	±3.3
5	±3.5

Maximum Ratings

Parameter	Ratings
Operating Temperature	-20°C to 71°C
Storage Temperature	-55°C to 100°C
DC Voltage	+17V
V_{CTRL}	0 to +5.5V
Input RF Power (no damage)	+10 dBm

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

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ISO 9001 ISO 14001 AS 9100 CERTIFIED

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IF/RF MICROWAVE COMPONENTS

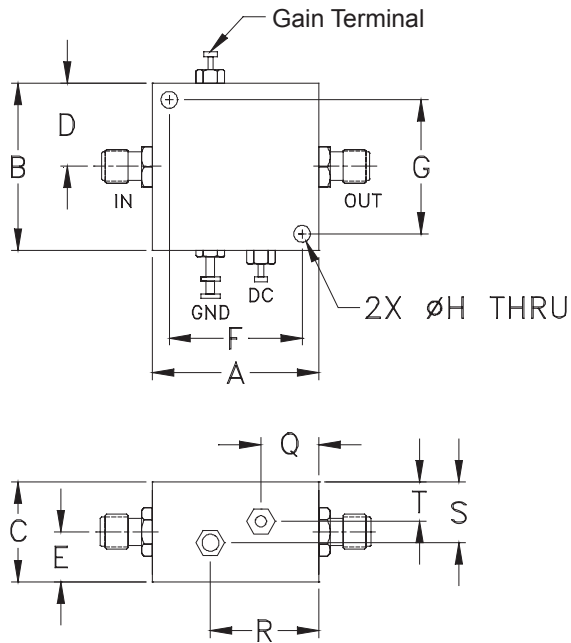
For detailed performance specs
& shopping online see web site

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-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.

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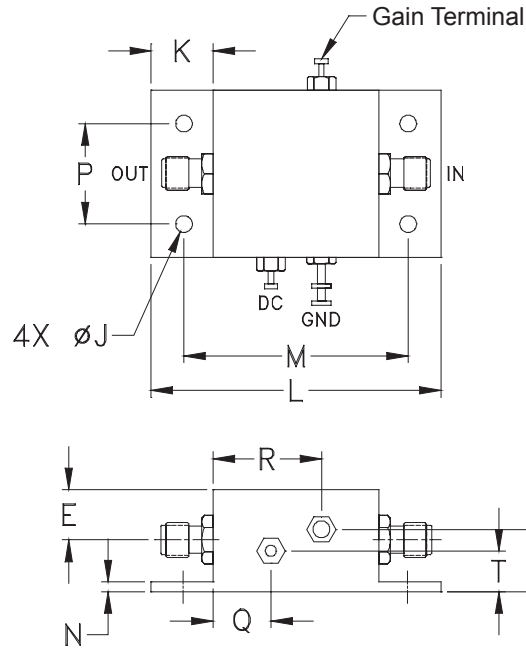
Outline Drawing

STANDARD



OPTION "B"

INVERTED ORIENTATION. SEE CATALOG FOR APPLICABLE MODELS



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	wt.
1.25	1.25	.75	.63	.36	1.000	1.000	.125	.125	.46	2.18	1.688	.06	.750	.50	.80	.45	.29	grams
31.75	31.75	19.05	16.00	9.14	25.40	25.40	3.18	3.18	11.68	55.37	42.88	1.52	19.05	12.70	20.32	11.43	7.37	38



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FREQUENCY (MHz)	GAIN (dB)	DIRECTIVITY (dB)	VSWR (:1)		POUT at 1 dB COMPR. (dBm)	POUT at 3 dB COMPR. (dBm)	NOISE FIGURE (dB)	IP3 (dBm)	IP2 (dBm)
			IN	OUT					
10.00	26.94	20.17	1.20	1.29	9.41	11.21	10.85	21.68	46.48
200.00	27.23	41.29	1.17	1.28	10.87	12.26	5.93	24.51	44.28
400.00	26.93	50.36	1.18	1.48	11.47	12.44	5.96	24.81	43.69
600.00	26.61	43.44	1.20	1.66	11.44	12.16	6.38	23.25	39.47
800.00	26.34	45.20	1.24	1.73	11.00	11.73	6.46	21.31	37.49
1000.00	26.00	46.53	1.27	1.65	10.28	10.95	6.60	18.94	34.79
1200.00	25.53	45.02	1.32	1.52	9.72	10.40	7.15	17.13	35.19
1400.00	24.98	44.13	1.38	1.40	9.00	9.73	7.35	15.14	38.65
1600.00	24.41	42.45	1.48	1.31	8.05	8.87	7.66	13.09	50.44
1800.00	23.77	40.34	1.59	1.23	7.00	8.03	7.87	11.47	48.26
2000.00	22.89	39.16	1.76	1.09	5.82	7.07	7.84	10.47	38.41

