Coaxial

Wideband Amplifier

ZVA-203GX+

50Ω 2 to 20 GHz

Features

- Low noise figure, 2 dB at 8 GHz
- High IP3, 27.5 dBm typ. at 8 GHz
- Excellent gain flatness, ± 1.0 from 2 GHz to 20 GHz

Applications

- radar
- very wideband test instrumentation
- lab use
- wideband isolation, directivity 50 dB typ.
- EW



Case Style: AV2554-1

Connectors	Model
2.92mm	ZVA-203GX+

+RoHS Compliant

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

Electrical Specifications at 25°C, Vdd=+9.0V, typ.

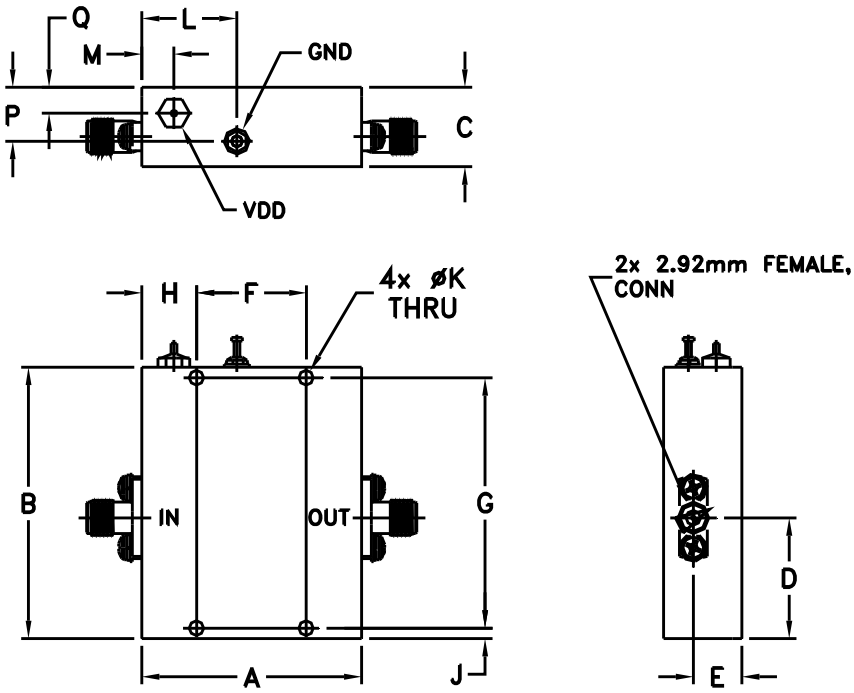
Parameter	Condition (GHz)	Min.	Typ.	Max.	Units
Frequency Range[1]		2.0		20	GHz
Noise Figure	2.0	—	4.8	6.4	dB
	8.0	—	2.0	3.7	
	20.0	—	4.0	6.4	
Gain	2.0	26.0	29.5	32.0	dB
	8.0	26.0	29.5	32.0	
	14.0	25.0	28.5	31.0	
	20.0	27.0	30.0	33.0	
Input VSWR	2.0	14.5	17.0	—	:1
	4.0	14.5	25.0	—	
	6.0	14.5	20.0	—	
	8.0	14.5	25.0	—	
	10.0	14.5	27.0	—	
	12.0	14.5	22.0	—	
	14.0	9.5	15.0	—	
	16.0	8.5	15.0	—	
	18.0	7.5	10.0	—	
	20.0	8.5	15.0	—	
Output VSWR	2.0	19.5	27.0	—	:1
	4.0	19.5	30.0	—	
	6.0	14.5	22.0	—	
	8.0	14.5	22.0	—	
	10.0	8.0	14.0	—	
	12.0	7.0	10.0	—	
	14.0	7.0	14.0	—	
	16.0	8.0	14.0	—	
	18.0	8.0	14.0	—	
	20.0	8.0	10.0	—	
Output Power @ 1 dB compression	2.0	14.5	16.0	—	dBm
	8.0	14.5	16.0	—	
	12.0	13.5	15.0	—	
	16.0	13.5	15.0	—	
	18.0	12.5	14.0	—	
	20.0	12.0	14.0	—	
Output IP3	2.0	23.0	27.5	—	dBm
	8.0	24.0	27.5	—	
	12.0	23.0	27.0	—	
	16.0	23.0	26.5	—	
	18.0	23.0	26.0	—	
	20.0	21.0	25.0	—	
Device Operating Current at V_{DD}=5V and V_{gg}=-5V	—	250.0	450.0		mA

1. Usable 1GHz to 22 GHz

Absolute Maximum Ratings[2]

Parameter	Ratings
Operating Temperature (ground lead)	0°C to 85°C
Storage Temperature	-55°C to 100°C
Total Power Dissipation	2W
Input Power (CW), Vd=12	0 dBm
DC Voltage	15V

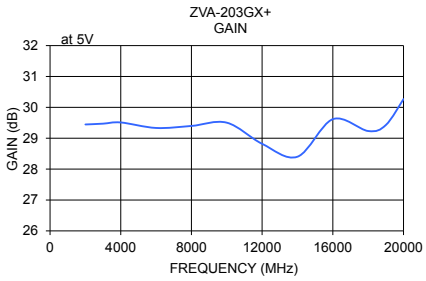
Outline Drawing

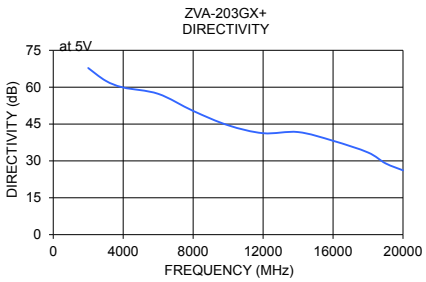


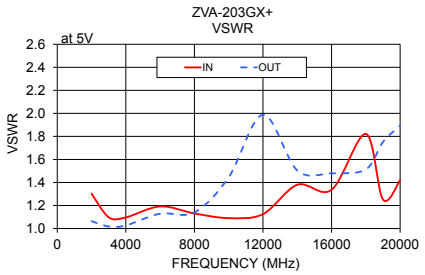
Outline Dimensions (inch / mm)

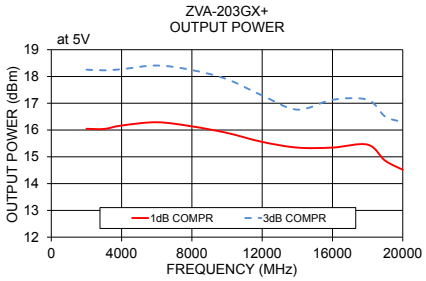
A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	wt
1.5	1.82	0.53	0.81	0.33	0.75	1.680	0.380	0.070	0.098	0.65	0.22	-	0.36	0.17	grams
38.10	46.23	13.46	20.57	8.38	19.05	42.67	9.65	1.78	2.49	16.51	5.59	-	9.14	4.32	140

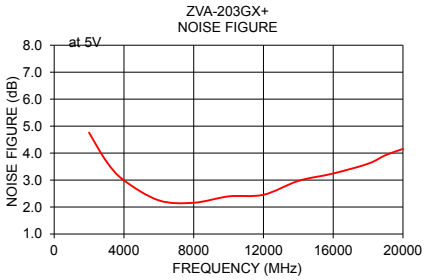
FREQUENCY (MHz)	GAIN (dB)	DIRECTIVITY (dB)	VSWR (:1)		NOISE FIGURE (dB)	POUT COMPR. (dBm)		OUTPUT IP3 (dBm)
			IN	OUT		1dB	3dB	
2000	29.45	67.79	1.30	1.06	4.76	16.05	18.25	28.72
3000	29.47	62.60	1.10	1.02	3.69	16.04	18.23	28.84
4000	29.51	59.87	1.10	1.03	2.99	16.17	18.27	29.02
6000	29.33	57.30	1.19	1.13	2.25	16.29	18.41	29.41
8000	29.40	50.34	1.13	1.14	2.16	16.14	18.24	28.68
10000	29.50	44.50	1.09	1.45	2.40	15.89	17.90	28.16
12000	28.82	41.28	1.13	1.99	2.45	15.56	17.29	28.47
14000	28.40	41.74	1.38	1.50	2.97	15.34	16.76	28.10
16000	29.62	38.19	1.34	1.48	3.24	15.34	17.13	27.39
18000	29.23	33.43	1.82	1.51	3.61	15.45	17.13	28.02
19000	29.43	29.01	1.25	1.75	3.92	14.86	16.50	27.28
20000	30.27	26.16	1.42	1.89	4.15	14.52	16.30	26.21

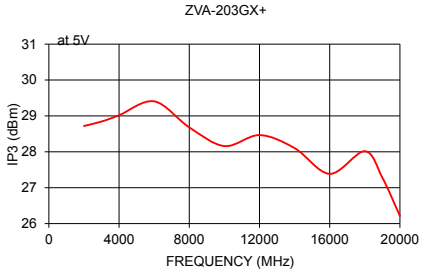












Additional Notes

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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