

Super Ultra Wideband Amplifier

ZVA-183+

50Ω 700 MHz to 18 GHz

Features

- super ultra-wideband, 700 MHz to 18 GHz
- high output IP3, +33 dBm typ.
- rugged, compact case (including mounting bracket)
- unconditionally stable
- good matching at input and output
- withstands open/short load at 1dB compression point output power
- very good isolation, 75 dB typ.

Applications

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



ZVA-183X+

ZVA-183+

CASE STYLE: AV1280

Connectors	Model	Price	Qty.
SMA	ZVA-183-S+	\$895.00	(1-9)
SMA	ZVA-183X-S+	\$845.00	(1-9)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Electrical Specifications $T_{AMB}=25^{\circ}C$

MODEL NO.	FREQUENCY (GHz)		GAIN (dB)			MAXIMUM POWER (dBm)			DYNAMIC RANGE		VSWR (:1) Typ.		DC POWER		
	f_L	f_U	Typ.	Min.	Flatness Typ.	Output (1 dB Compr.) Typ.	Min.	CW Input (no damage)	NF (dB) Typ.	Output IP3 (dBm) Typ.	In	Out	Volt (V) Nom.	Current (mA) Max.	
ZVA-183+	0.7	18	26	24	± 1.0	24	21	+4	3.0	5.5	+33	1.35	1.25	12	400
ZVA-183X+*	0.7	18	26	24	± 1.0	24	21	+4	3.0	5.5	+33	1.35	1.25	12	400

*Heat sink not included

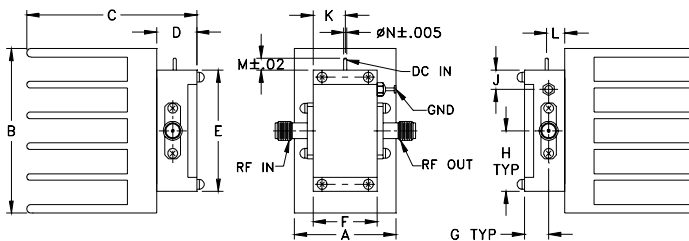
To order without heat sink add suffix X to model number. Alternative heat sinking and heat removal must be provided by the user to limit maximum base-plate temperature to 85°C, in order to ensure proper performance. For reference, this requires thermal resistance of user's external heat sink to be 4°C/W Max.

Maximum Ratings

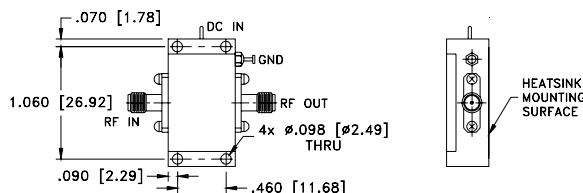
Operating Temperature	-55°C to 85°C base plate temp.
Storage Temperature	-65°C to 150°C
DC Voltage	+15V Max.

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

Outline Drawing



MOUNTING INFORMATION FOR MODELS WITHOUT HEATSINK



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	wt
1.01	1.63	1.69	.40	1.20	.64	.24	.60	.19	.32	.22	.12	.03	grams*
25.65	41.40	42.93	10.16	30.48	16.26	6.10	15.24	4.83	8.13	5.59	3.05	0.76	58

*17 grams without heatsink

Mini-Circuits®

ISO 9001 ISO 14001 AS 9100 CERTIFIED

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IF/RF MICROWAVE COMPONENTS

For detailed performance specs & shopping online see web site

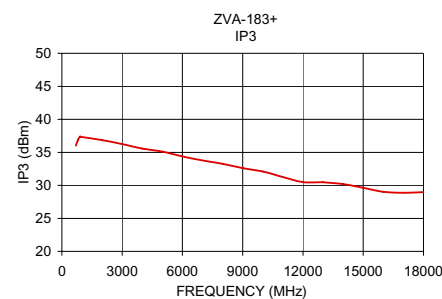
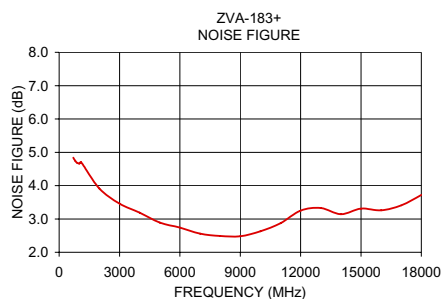
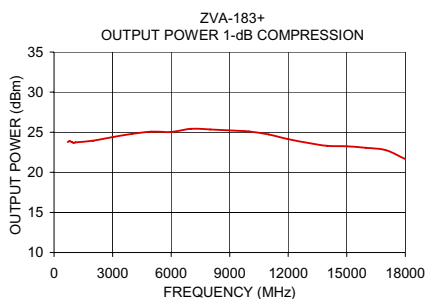
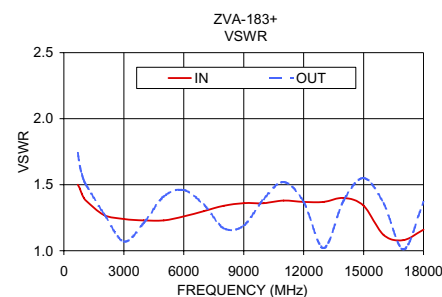
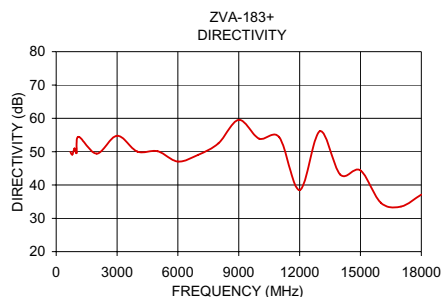
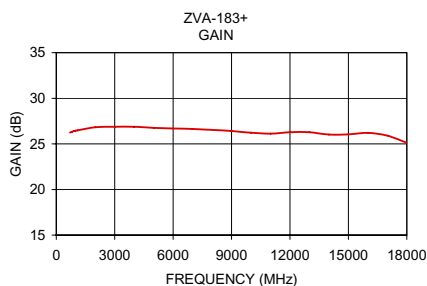
Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established 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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Typical Performance Data/Curves

ZVA-183+

FREQUENCY (MHz)	GAIN (dB)	DIRECTIVITY (dB)	VSWR (:1)		NOISE FIGURE (dB)	P _{OUT} at 1 dB COMPR. (dBm)	FREQUENCY (MHz)	IP ₃ (dBm)
	12V		IN	OUT				
700.00	26.25	49.93	1.50	1.74	4.84	23.77	700.00	36.01
800.00	26.32	49.16	1.47	1.64	4.74	23.89	800.00	36.82
900.00	26.40	50.96	1.43	1.58	4.68	23.80	900.00	37.38
1000.00	26.45	49.60	1.40	1.53	4.66	23.67	1000.00	37.33
1100.00	26.49	54.43	1.38	1.50	4.70	23.73	2000.00	36.86
2000.00	26.83	49.44	1.27	1.28	3.91	23.95	3000.00	36.24
3000.00	26.88	54.76	1.24	1.07	3.46	24.39	4000.00	35.58
4000.00	26.87	50.02	1.23	1.21	3.19	24.80	5000.00	35.10
5000.00	26.75	50.10	1.23	1.41	2.89	25.08	6000.00	34.38
6000.00	26.68	47.03	1.26	1.46	2.74	25.04	7000.00	33.78
7000.00	26.64	49.03	1.30	1.35	2.56	25.43	8000.00	33.26
8000.00	26.53	52.49	1.34	1.17	2.49	25.34	9000.00	32.62
9000.00	26.42	59.55	1.36	1.19	2.48	25.23	10000.00	32.09
10000.00	26.23	53.89	1.36	1.39	2.63	25.09	11000.00	31.27
11000.00	26.12	54.33	1.38	1.52	2.87	24.73	12000.00	30.49
12000.00	26.28	38.47	1.37	1.37	3.25	24.14	13000.00	30.47
13000.00	26.27	56.13	1.37	1.02	3.33	23.68	14000.00	30.19
14000.00	26.03	43.11	1.40	1.38	3.14	23.31	15000.00	29.63
15000.00	26.04	44.40	1.34	1.55	3.31	23.24	16000.00	29.01
16000.00	26.21	34.69	1.12	1.36	3.26	23.06	17000.00	28.88
17000.00	25.90	33.52	1.08	1.01	3.41	22.76	18000.00	28.98
18000.00	25.12	37.12	1.16	1.37	3.72	21.65		



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