

Coaxial Amplifier

ZFL-1HAD+ ZFL-1HAD

50Ω High Isolation 10 to 500 MHz

Features

- wideband, 10 to 500 MHz
- active directivity (isolation-gain), 30 dB typ.

Applications

- VHF/UHF
- laboratory use
- receivers
- two-tone, 3rd order IM testing



ZFL-1HADX(+)

ZFL-1HAD(+)

CASE STYLE: SS98

Connectors	Model	Price	Qty.
SMA	ZFL-1HAD(+)	\$210.00 ea.	(1-9)
BRACKET (OPTION "B")		\$5.00	(1+)
SMA	ZFL-1HADX(+)	\$200.00 ea.	(1-9)

+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.		ACTIVE DIRECTIVITY ¹ (dB)				DC POWER	
	f _L	f _U	Min.	Flatness Max. Total Range	Output (1 dB Compr.)			NF ³ (dB) Typ.	IP3 (dBm) Typ.	In ²	Out	L		U		Volt (V) Nom.	Current (mA) Max.
ZFL-1HAD(+)	10	500	10	±1.0	+20	+20	+17	7.5	+30	1.3	1.35	Typ.	Min.	Typ.	Min.	15	115
ZFL-1HADX(+)*	10	500	10	±1.0	+20	+20	+17	7.5	+30	1.3	1.35	30	20	25	18	15	115

* Heat sink not included

L= low range (f_L to f_U/2)

U= upper range (f_U/2 to f_U)

¹Active Directivity(dB)= Isolation (dB)- Gain (dB)

² Input VSWR in 10-20 MHz band increases to 1.45:1 at -20°C.

³ Below 50 MHz, NF increases to 13dB typ. at 10 MHz

Open load is not recommended, potentially can cause damage.

With no load derate max input power by 20 dB

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 temperature to 71°C, in order to ensure proper performance. For reference, this requires thermal resistance of user's external heat sink to be 15°C/W Max.

Maximum Ratings

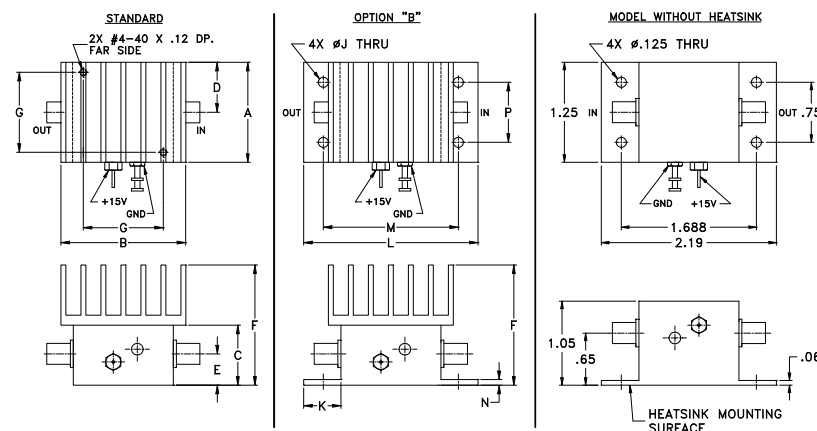
Operating Temperature -20°C to 71°C

Storage Temperature -55°C to 100°C

DC Voltage +17V 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*
1.25	1.56	.75	.63	.39	1.50	1.000	--	.125	.46	2.19	1.688	.06	.750	grams
31.75	39.62	19.05	16.00	9.91	38.10	25.40	--	3.18	11.68	55.63	42.88	1.52	19.05	

*70 grams without heat sink

Mini-Circuits
ISO 9001 ISO 14001 AS 9100 CERTIFIED

For detailed performance specs & shopping online see web site

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IF/RF MICROWAVE COMPONENTS

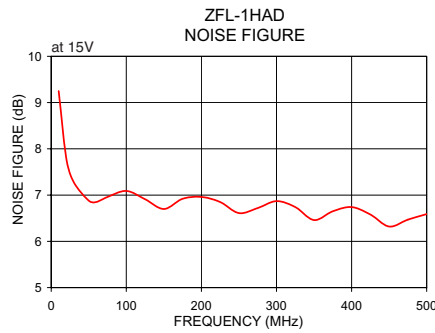
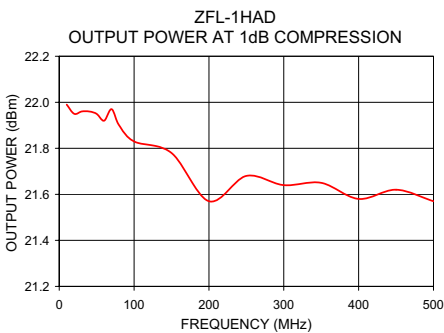
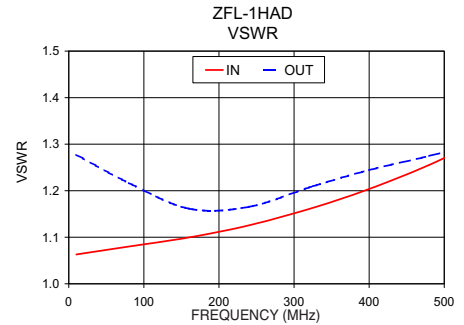
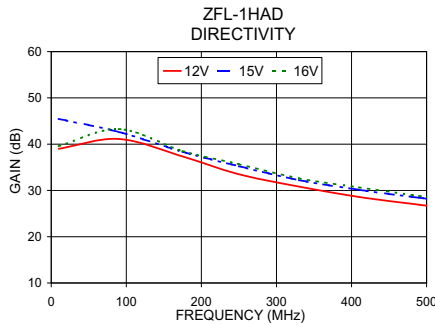
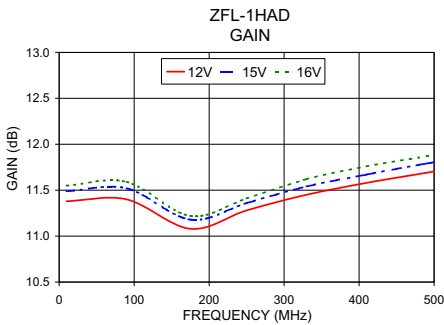
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REV. B
M136800
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120515
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Typical Performance Data/Curves

ZFL-1HAD+ ZFL-1HAD

FREQUENCY (MHz)	GAIN (dB)			DIRECTIVITY (dB)			VSWR (:1)		NOISE FIGURE (dB)	P. OUT at 1dB COMPR. (dBm)
	12V	15V	16V	12V	15V	16V	IN	OUT		
10.00	11.38	11.58	11.55	39.00	41.52	39.56	1.06	1.28	9.25	22.16
20.00	11.37	11.58	11.56	47.23	48.57	49.60	1.07	1.24	7.80	22.15
50.00	11.40	11.61	11.59	45.11	42.25	49.14	1.07	1.24	6.88	22.18
100.00	11.40	11.61	11.59	39.74	43.08	42.08	1.08	1.26	7.09	22.10
200.00	11.10	11.28	11.19	35.62	36.96	37.72	1.11	1.17	6.96	21.77
250.00	11.28	11.45	11.41	33.50	34.84	35.67	1.12	1.20	6.61	21.90
300.00	11.39	11.58	11.55	31.82	33.08	33.85	1.14	1.23	6.87	21.86
350.00	11.49	11.68	11.66	30.11	31.39	32.36	1.17	1.26	6.46	21.89
450.00	11.64	11.83	11.82	27.72	29.14	29.53	1.22	1.30	6.32	21.87
500.00	11.70	11.90	11.88	26.66	28.01	28.66	1.25	1.32	6.59	21.83



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