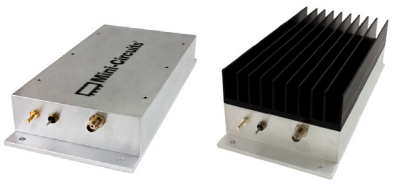
Coaxial
Amplifier

ZHL-42+

50Ω Medium High Power 700 to 4200 MHz



ZHL-42X+ ZHL-42+

CASE STYLE: U36

Connectors	Model
SMA	ZHL-42+
SMA	ZHL-42X+

Features
- wideband, 700 to 4200 MHz
- high IP3, +38 dBm typ.
- high gain, 30 dB min.

Applications
- communication systems
- cellular
- instrumentation
- laboratory

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

Electrical Specifications at 25°C

Parameter	Condition (MHz)	ZHL-42+ ▲ZHL-42X+ Min.	Typ.	Max.	Units
Frequency Range		700	—	4200	MHz
Gain	700-4200	30	34	40	dB
Gain Flatness	700-4200	—	±0.8	±1.3	dB
Output Power at 1dB compression*	700-4200	+28	+30	—	dBm
Output Power at 3dB compression**	700-4200	+29	+31	—	dBm
Noise Figure	700-4200	—	8	—	dB
Output third order intercept point	700-4200	—	+38	—	dBm
Input VSWR	700-4200	—	—	2.5	:1
Output VSWR	700-4200	—	—	2.5	:1
DC Supply Voltage		—	15	—	V
Supply Current		—	—	1.0	A

Open load is not recommended, potentially can cause damage.
With no load derate max. input power by 20 dB.
* +27 dBm at 3700-4200 MHz
** +28 dBm at 3700-4200 MHz

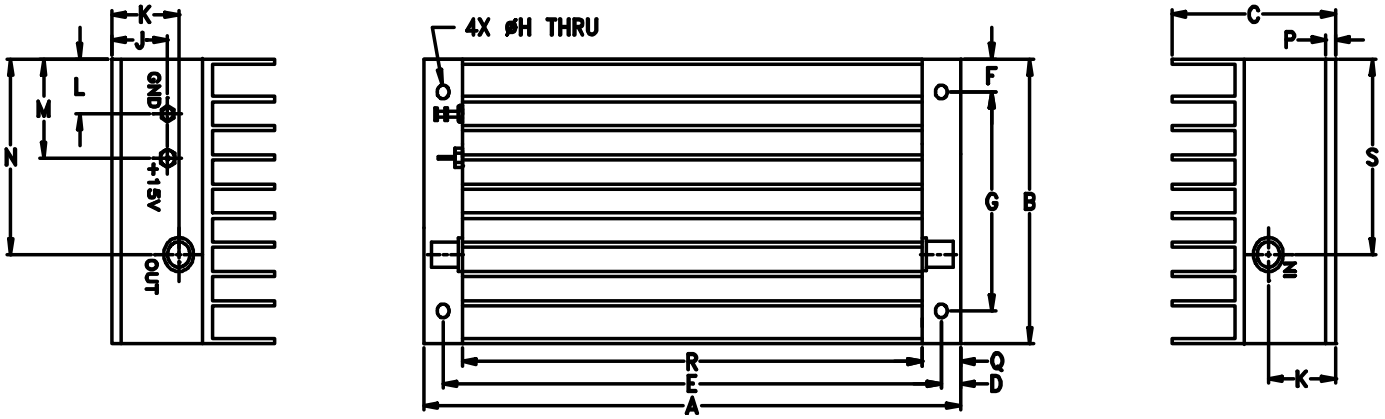
▲Heat sink not included. Alternative heat sinking and heat removal must be provided by the user to limit maximum base-plate temperature to 65°C, in order to ensure proper performance. For reference, this requires thermal resistance of user's external heat sink to be 1.3°C/W max.

Maximum Ratings

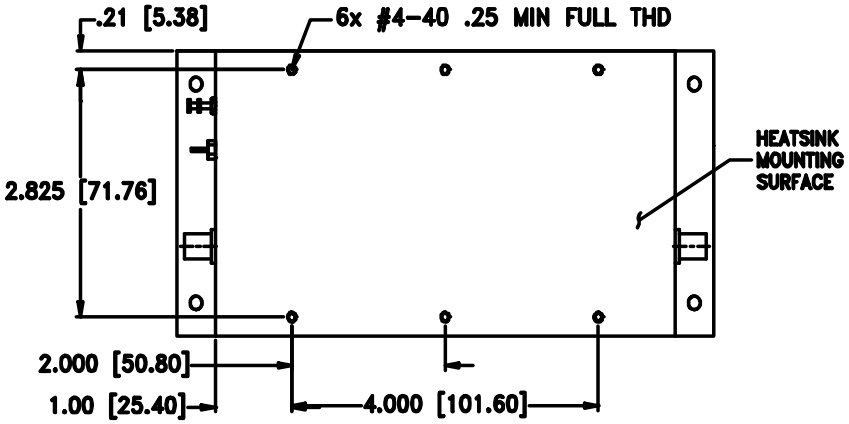
Parameter	Ratings
Operating Temperature	-20°C to 65°C
Storage Temperature	-55°C to 100°C
DC Voltage	+20V
Input RF Power (no damage)	+5 dBm

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

Outline Drawing for models with heatsink



MOUNTING INFORMATION FOR MODELS WITHOUT HEATSINK



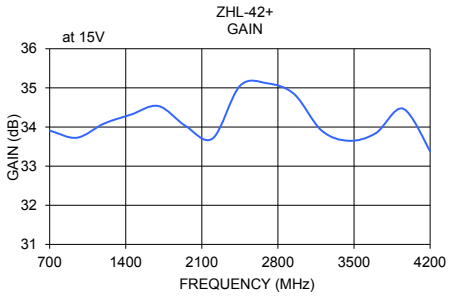
Outline Dimensions (inch / mm)

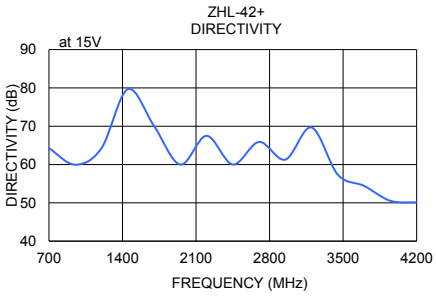
A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	wt
7.00	3.25	2.13	.25	6.500	.38	2.500	.156	.73	.88	.63	1.13	2.23	.125	.50	6.00	2.23	grams
177.80	82.55	54.10	6.35	165.10	9.65	63.50	3.96	18.54	22.35	16.00	28.70	56.64	3.18	12.70	152.40	56.64	900

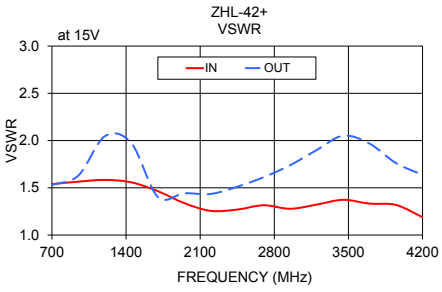
*600 grams without heatsink

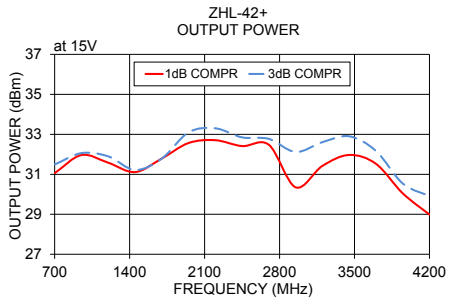
Notes
A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's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

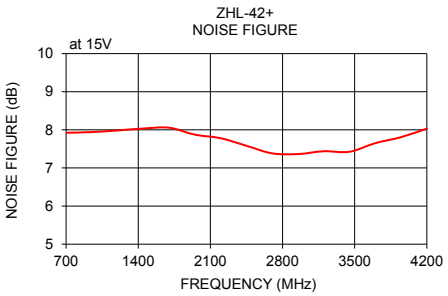
FREQUENCY (MHz)	GAIN (dB)	DIRECTIVITY (dB)	VSWR (:1)		POUT at 1 dB COMPR. (dBm)	NOISE FIGURE (dB)	IP3 (dBm)
	15V	15V	IN	OUT	15V	15V	15V
700	33.91	64.29	1.54	1.53	31.06	7.92	48.36
950	33.73	59.96	1.57	1.63	31.96	7.94	48.15
1200	34.09	64.26	1.58	2.05	31.58	7.98	46.95
1450	34.32	79.67	1.56	1.97	31.11	8.03	46.03
1700	34.54	70.09	1.46	1.40	31.79	8.06	48.52
1950	34.03	59.99	1.34	1.44	32.57	7.87	47.54
2200	33.71	67.49	1.26	1.44	32.71	7.78	46.90
2450	35.05	60.02	1.27	1.51	32.41	7.58	46.31
2700	35.12	65.90	1.32	1.61	32.48	7.38	46.92
2950	34.84	61.29	1.28	1.74	30.35	7.36	41.71
3200	33.91	69.68	1.32	1.90	31.42	7.44	42.77
3450	33.65	57.34	1.37	2.05	31.97	7.43	44.69
3700	33.84	54.43	1.33	1.97	31.53	7.65	44.44
3950	34.47	50.52	1.32	1.76	30.05	7.81	40.28
4200	33.38	50.14	1.19	1.64	28.99	8.03	41.79

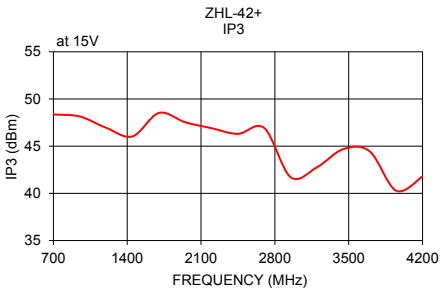












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