

Coaxial Low Noise Amplifier

ZQL-2700MLNW+

50Ω 2200 to 2700 MHz

Features

- Very low noise figure, 1.5 dB max.
- High IP3, +38 dBm typ.
- Rugged, shielded case

Applications

- MMDS
- Communication systems



Generic photo used for illustration purposes only

Case Style: CW686	
Connectors	Model
SMA	ZQL-2700MLNW+

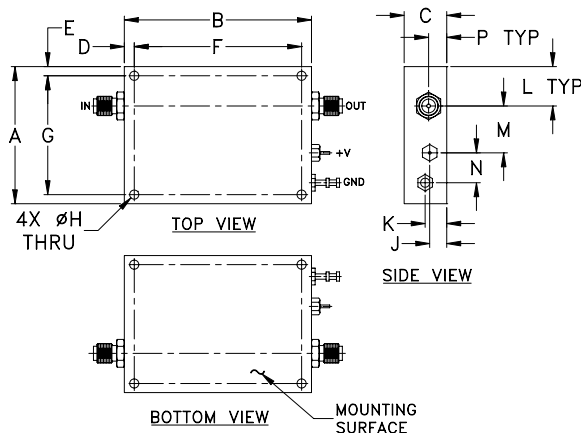
+RoHS Compliant
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Electrical Specifications

Parameter	Condition (MHz)	Min.	Typ.	Max.	Units
Frequency Range		2200		2700	MHz
Noise Figure	2200-2400	—	—	1.3	dB
	2200-2700	—	—	1.5	
Gain	2200-2400	25	—	—	dB
	2200-2700	25	—	—	
Gain Flatness	2200-2400	—	—	±1.0	dB
	2200-2700	—	—	±2.3	
Output Power at 1dB compression	2200-2400	—	+25	—	dBm
	2200-2700	—	+25	—	
Output third order intercept point	2200-2400	—	+38	—	dBm
	2200-2700	—	+38	—	
Input VSWR	2200-2400	—	1.25	—	:1
	2200-2700	—	1.25	—	
Output VSWR	2200-2400	—	1.15	—	:1
	2200-2700	—	1.15	—	
DC Supply Voltage	2200-2400	—	15	—	V
	2200-2700	—	15	—	
Supply Current	2200-2400	—	—	350	mA
	2200-2700	—	—	350	

Open load is not recommended, potentially can cause damage.
With no load derate max input power by 20 dB

Outline Drawing



Maximum Ratings

Parameter	Ratings
Operating Temperature	-40°C to 70°C
Storage Temperature	-55°C to 100°C
DC Voltage	+17V
Input RF Power (no damage)	+3 dBm

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

Outline Dimensions (inch mm)

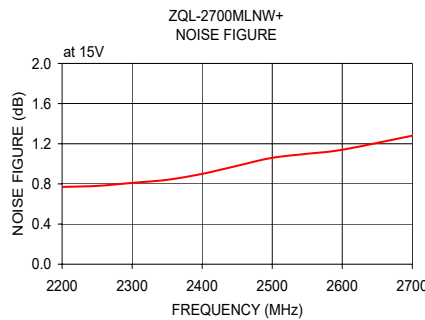
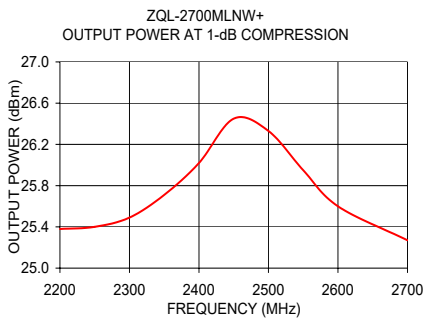
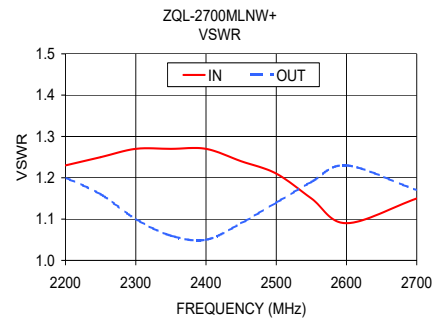
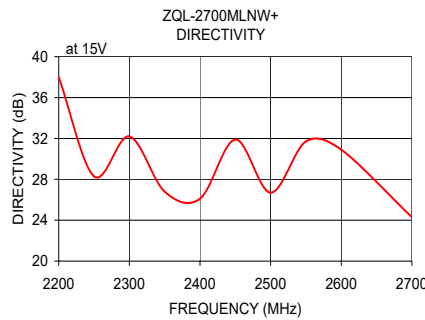
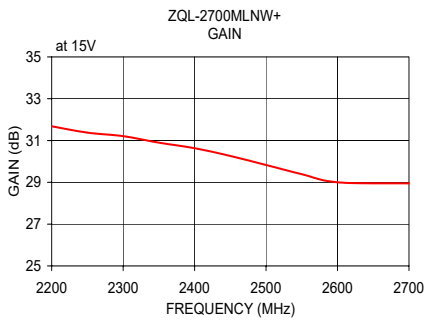
A	B	C	D	E	F	G	H	J	K	L	M	N	P	wt
1.77	2.42	.55	.13	.12	2.165	1.535	.126	.22	.28	.51	.61	.39	0.22	grams
44.96	61.47	13.97	3.30	3.05	55.0	39.0	3.20	5.59	7.11	12.95	15.49	9.91	5.59	71.0

Notes

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- 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)		NOISE FIGURE (dB)	POUT at 1 dB COMPR. (dBm)
	15V		IN	OUT		
2200.00	31.68	38.00	1.23	1.20	0.77	25.38
2250.00	31.38	28.30	1.25	1.16	0.78	25.40
2300.00	31.21	32.20	1.27	1.10	0.81	25.49
2350.00	30.90	26.80	1.27	1.06	0.84	25.71
2400.00	30.63	26.10	1.27	1.05	0.90	26.02
2450.00	30.26	31.90	1.24	1.09	0.98	26.45
2500.00	29.83	26.70	1.21	1.14	1.06	26.33
2550.00	29.39	31.70	1.15	1.19	1.10	25.95
2600.00	29.00	30.90	1.09	1.23	1.14	25.60
2700.00	28.95	24.30	1.15	1.17	1.28	25.27



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Typical Performance Data

FREQUENCY (MHz)	GAIN (dB) 15V	DIRECTIVITY (dB) 15V	VSWR IN (:1) 15V	VSWR OUT (:1) 15V	NOISE FIGURE (dB) 15V	Pout at 1dB Comp. (dBm) 15V
2200.0	31.68	37.99	1.23	1.20	0.77	25.38
2250.0	31.38	28.29	1.25	1.16	0.78	25.40
2300.0	31.21	32.16	1.27	1.10	0.81	25.49
2350.0	30.90	26.81	1.27	1.06	0.84	25.71
2400.0	30.63	26.12	1.27	1.05	0.90	26.02
2450.0	30.26	31.89	1.24	1.09	0.98	26.45
2500.0	29.83	26.70	1.21	1.14	1.06	26.33
2550.0	29.39	31.67	1.15	1.19	1.10	25.95
2600.0	29.00	30.91	1.09	1.23	1.14	25.60
2700.0	28.95	24.26	1.15	1.17	1.28	25.27

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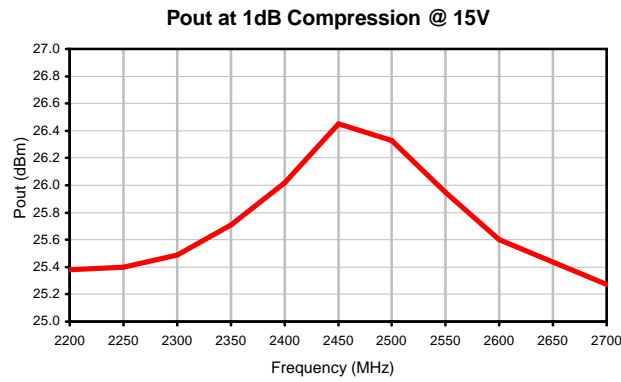
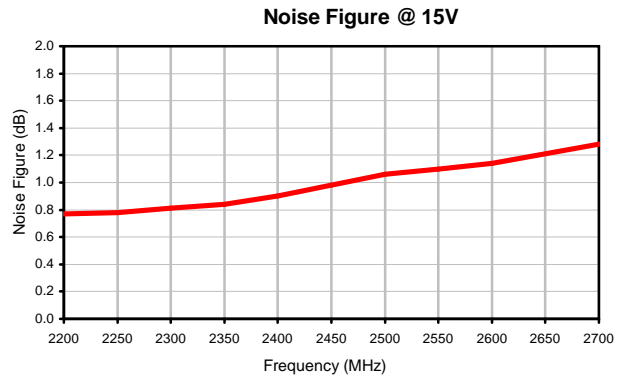
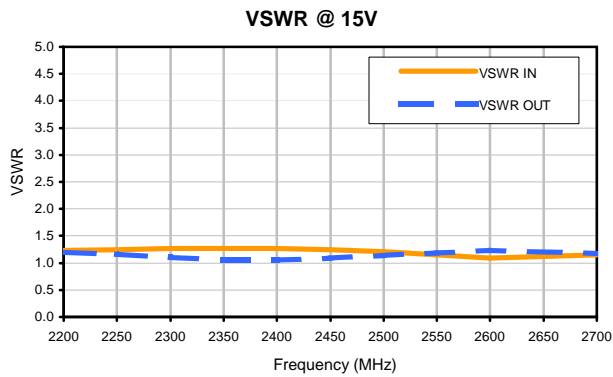
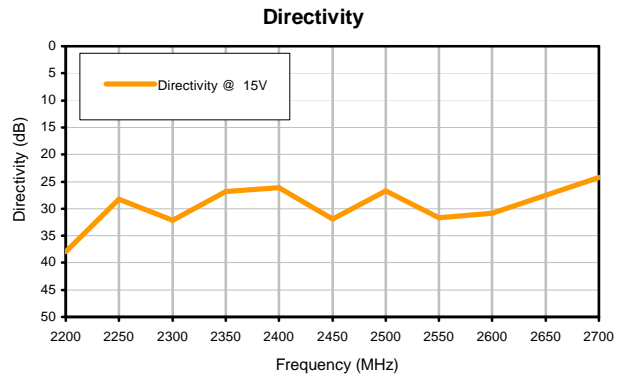
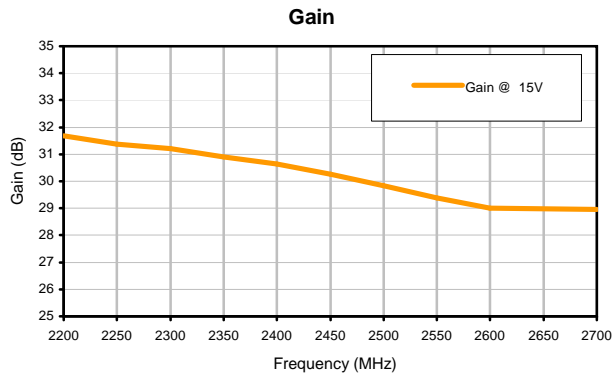
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Typical Performance Curves



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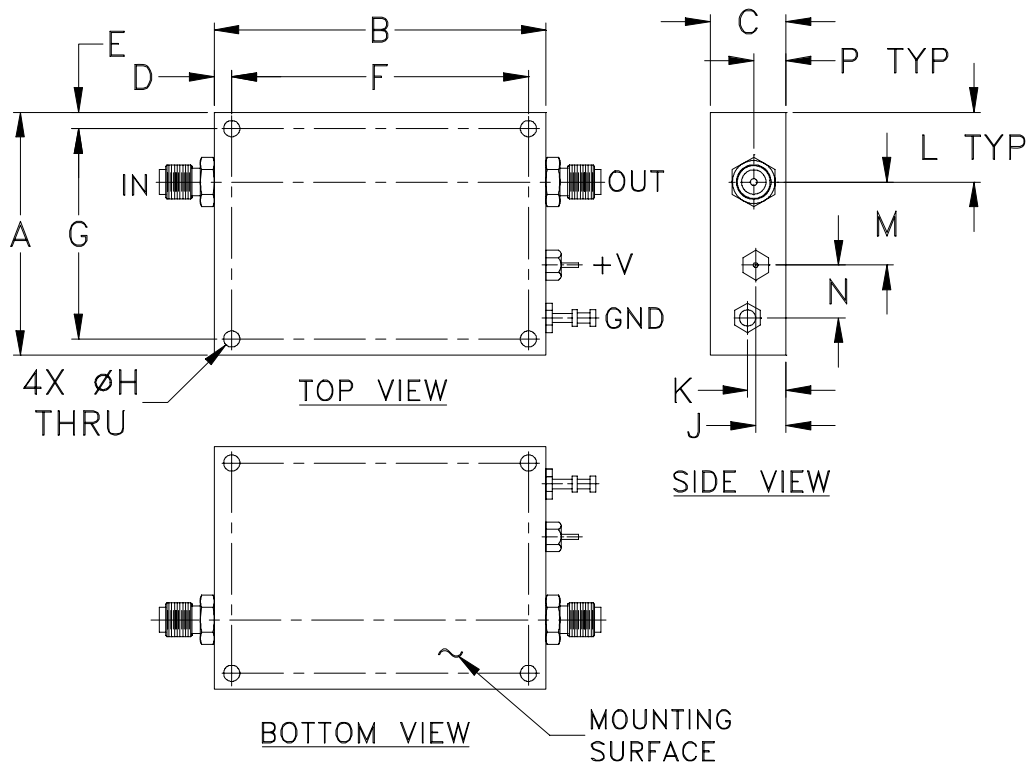
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Outline Dimensions



CASE#	A	B	C	D	E	F	G	H	J	K	L	M	N
CW686	1.77 (44.96)	2.42 (61.47)	.55 (13.97)	.13 (3.30)	.12 (3.05)	2.165 (54.99)	1.535 (38.99)	.126 (3.20)	.22 (5.59)	.28 (7.11)	.51 (12.95)	.61 (15.49)	.39 (9.91)

CASE#	P	Q	WT. GRAMS
CW686	.22 (5.59)	-- --	71

Dimensions are in inches (mm). Tolerances: 2 Pl. $\pm .03$; 3 Pl. $\pm .015$

Notes:

- Case material: Aluminum alloy.
- Case finish:
For RoHS Case Styles: Clear chemical conversion coating, non-chrome or trivalent chrome based.

All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-40° to 70° C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Stabilization Bake	(non-operating) 125°C, 24 hours	- - -
Burn-in at Elevated Temp.	(DC on) 160 hours at 85° C	MIL-STD-202, Method 108
Thermal Shock	-55° to 85°C, 5 cycles	MIL-STD-202, Method 107, Condition A