

# Coaxial Low Noise Amplifier

## ZQLSC-2400

50Ω      1400 to 2400 MHz

### Features

- High reliability balanced design
- Noise Figure, 0.9 dB typ.
- Built-in alarm monitoring
- TTL alarm output, green/red alarm status LED
- Voltage regulated/protected DC input



### Applications

- Low noise receiver
- Digital cellular base stations
- TDMA, CDMA, GSM

Case Style: GZ1067			
Connectors	Model	Price	Qty.
SMA	ZQLSC-2400	\$295.00 ea.	(1-9)

### Electrical Specifications at 25°C

Parameter	Condition (MHz)	Min.	Typ.	Max.	Units
Frequency Range		1400		2400	MHz
Noise Figure	1400 - 1850	—	0.8	1.15	dB
	1850 - 2000	—	0.9	1.25	
	2000 - 2400	—	1.1	1.65	
Gain	1400 - 1850	13.5	17	—	dB
	1850 - 2000	12.5	15.6	—	
	2000 - 2400	10.5	13.2	—	
Gain Flatness	1400 - 1850	—	±1.0	±2.5	dB
	1850 - 2000	—	±0.5	±1.0	
	2000 - 2400	—	±1.5	±2.0	
Output Power at 1dB compression	1400 - 1850	17	19	—	dBm
	1850 - 2000	17	20.5	—	
	2000 - 2400	17	20	—	
Output third order intercept point	1400 - 1850	—	37	—	dBm
	1850 - 2000	—	35	—	
	2000 - 2400	—	34	—	
Input VSWR	1400 - 1850	—	1.7	—	:1
	1850 - 2000	—	1.5	—	
	2000 - 2400	—	1.6	—	
Output VSWR	1400 - 1850	—	1.6	—	:1
	1850 - 2000	—	1.6	—	
	2000 - 2400	—	1.9	—	
DC Supply Voltage <sup>1</sup>	1400 - 2400	—	24	—	V
Supply Current	1400 - 2400	—	—	185	mA

1. Other voltages available in the 6.5 to 60V range. please contact factory.

### 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](http://www.minicircuits.com/MCLStore/terms.jsp)

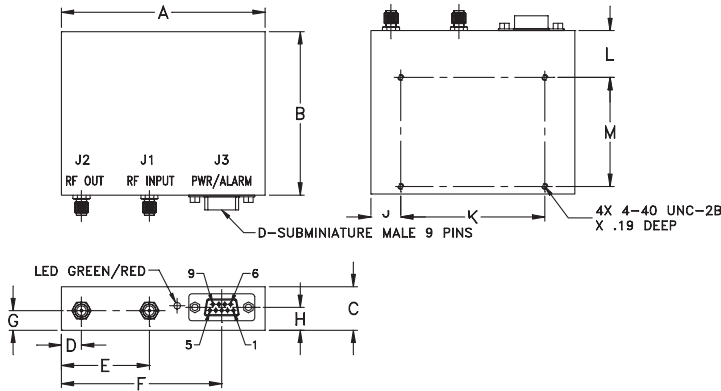


## Maximum Ratings

Parameter	Ratings
Operating Temperature	-40°C to 70°C case -40° to 60°C ambient
Storage Temperature	-55°C to 100°C
DC Voltage	+18V min, +36V max
Input RF Power (no damage)	+10 dBm

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	wt
3.75	3.00	.80	.37	1.62	2.95	.36	.42	.55	2.650	.86	2.000	grams
95.25	76.20	20.32	9.40	41.15	74.93	9.14	10.67	13.97	67.31	21.84	50.80	280.0

## Pin Connections

RF input	J1
RF output	J2
DC power input	5
TTL alarm output	1
Ground to test alarm, normally open	7*,9*
No connection	3,6,8
Ground	2,4
Case ground	2,4

\*Grounding Pin 7 will sink 75mA of current through Pin 7 creating a high-current alarm condition inside the amplifiers. A red LED and TTL high output will occur. Pin 7 floats at +4.3V typ. when open.

\*Grounding Pin 9 will sink 2mA of current through pin 9 and creating a low-current alarm condition inside the amplifier. A red LED and TTL high output will occur. Pin 9 floats at about +0.6V typ. when open.

## Alarm Functions

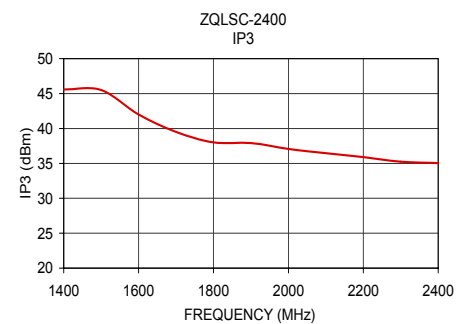
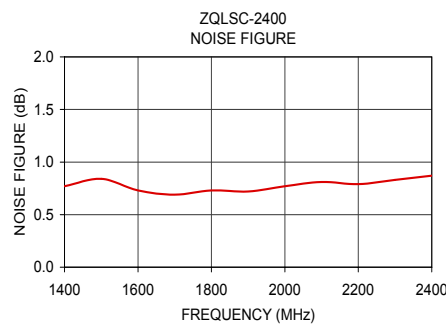
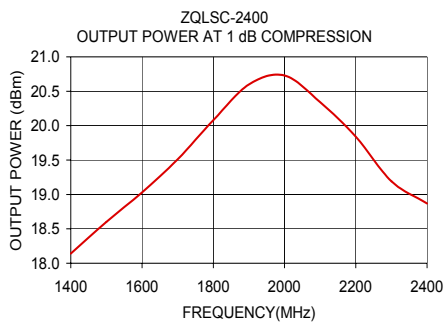
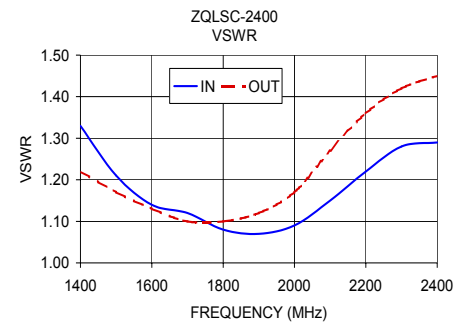
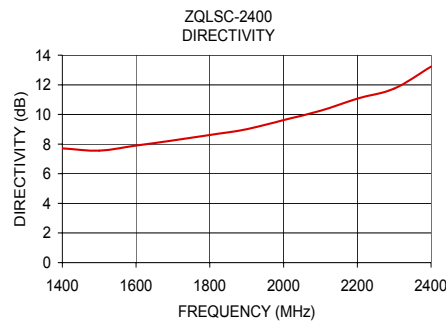
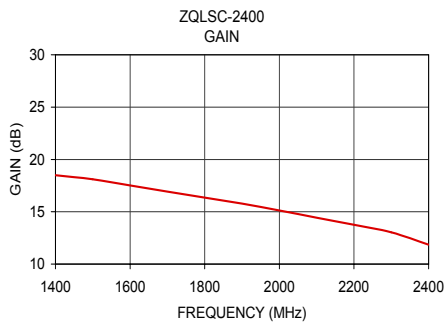
Normal:	TTL low output (0 to 0.8V), green LED
Alarm:	TTL high output (4 to 5V), red LED
DC & alarm connector:	9-pin male D-sub

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FREQUENCY (MHz)	GAIN (dB)	DIRECTIVITY (dB)	VSWR (:1)		POUT at 1 dB COMPR. (dBm)	IP3 (dBm)	NOISE FIGURE (dB)
	24V		IN	OUT			
1400.00	18.49	7.71	1.33	1.22	18.14	45.58	0.77
1500.00	18.10	7.56	1.21	1.17	18.60	45.50	0.84
1600.00	17.52	7.90	1.14	1.13	19.03	42.00	0.73
1700.00	16.92	8.25	1.12	1.10	19.51	39.51	0.69
1800.00	16.35	8.61	1.08	1.10	20.08	38.02	0.73
1900.00	15.78	9.00	1.07	1.12	20.60	37.91	0.72
2000.00	15.12	9.62	1.09	1.17	20.73	37.08	0.77
2100.00	14.43	10.25	1.15	1.27	20.34	36.47	0.81
2200.00	13.75	11.07	1.22	1.36	19.84	35.91	0.79
2300.00	13.03	11.75	1.28	1.42	19.19	35.23	0.83
2400.00	11.86	13.23	1.29	1.45	18.87	35.05	0.87



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