

Coaxial

# Voltage Controlled Oscillator

## ZX95-2770A+

Wide Band 1970 to 2770 MHz

### Features

- low phase noise
- low pushing
- protected by US patent 6,790,049



CASE STYLE: GB956

### Applications

- r & d
- lab
- instrumentation
- wireless communications
- CATV

Connectors	Model	Price	Qty.
SMA	ZX95-2770A-S+	\$49.95 ea.	(1-9)

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

### Electrical Specifications

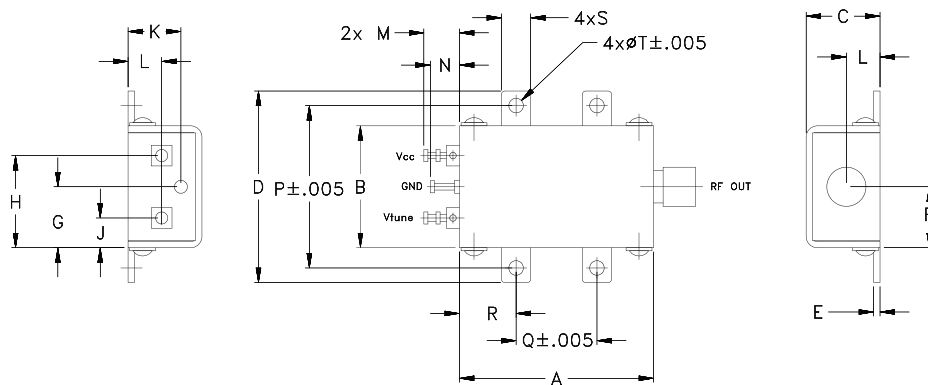
MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	PHASE NOISE dBc/Hz SSB at offset frequencies,kHz				TUNING					NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @ 12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER	
	Min.	Max.		Typ.	1	10	100	1000	VOLTAGE RANGE (V)	SENSI-TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Typ.	Typ.			Typ.	Max.
ZX95-2770A+	1970	2770	+5	-75	-102	-123	-142	0.5	25	36-65	50	45	-90	-16	-	3.5	2	8	35

### Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	9V
Absolute Max. Tuning Voltage (Vtune)	27V
All specifications	50 ohm system

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	Q	R	S	T	wt.
1.20	.75	.46	1.18	.04	.38	.38	.57	.18	.33	.21	.22	.18	1.00	.50	.35	.18	.106	grams
30.48	19.05	11.68	29.97	1.02	9.65	9.65	14.48	4.57	8.38	5.33	5.59	4.57	25.40	12.70	8.89	4.57	2.69	35.0



For detailed performance specs & shopping online see web site

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at [minicircuits.com](http://minicircuits.com)

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

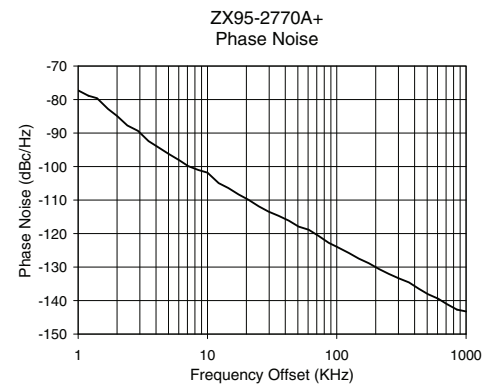
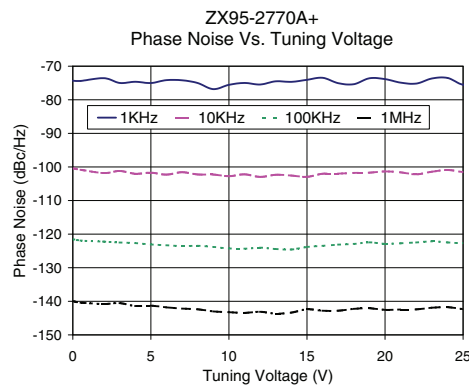
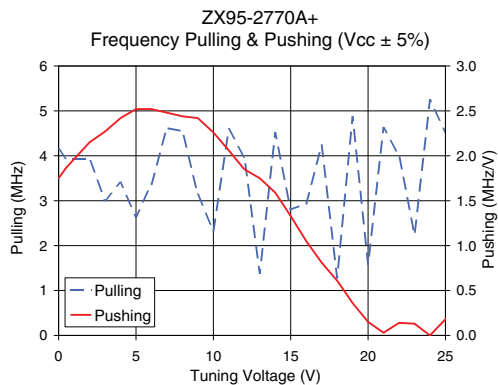
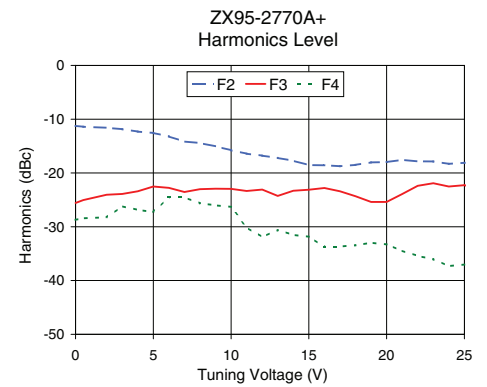
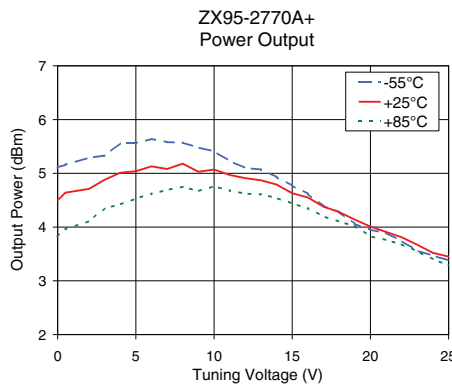
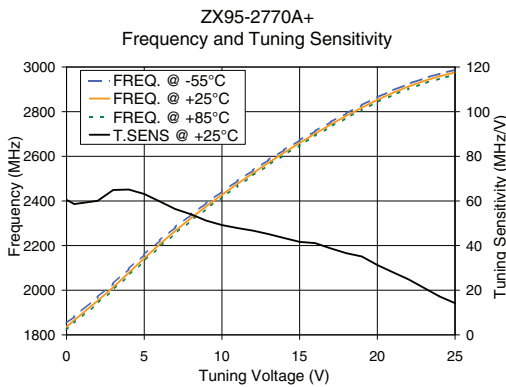
REV. OR  
M119372  
EDR-7114/3F2  
ZX95-2770A+  
RAV  
120904  
Page 1 of 2

# Performance Data & Curves\*

# ZX95-2770A+

V TUNE	TUNE SENS (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)			Icc (mA)	HARMONICS (dBc)			FREQ. PUSH (MHz/V)	FREQ. PULL (MHz)	PHASE NOISE (dBc/Hz) at offsets				FREQ OFFSET (KHz)	PHASE NOISE at 2370 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	60.49	1853.0	1835.9	1823.0	5.11	4.50	3.83	27.71	-11.2	-25.6	-28.7	1.75	4.15	-74.3	-100.4	-121.5	-140.0	1.0	-77.27
0.50	58.60	1882.4	1866.1	1854.1	5.16	4.64	3.96	27.83	-11.4	-25.0	-28.4	1.87	3.93	-74.4	-100.8	-121.9	-140.4	2.0	-84.89
2.00	60.07	1969.4	1953.1	1941.7	5.29	4.71	4.11	28.05	-11.6	-24.0	-28.2	2.15	3.93	-73.6	-101.8	-122.2	-140.8	3.5	-92.41
3.00	64.90	2030.1	2013.2	2001.6	5.33	4.88	4.35	28.24	-11.9	-23.9	-26.2	2.27	3.01	-75.0	-101.2	-122.5	-140.5	6.0	-98.02
4.00	65.10	2095.3	2078.1	2066.1	5.56	5.01	4.42	28.45	-12.3	-23.4	-26.9	2.42	3.40	-74.6	-102.0	-122.7	-141.4	8.5	-101.03
6.00	59.77	2223.3	2206.3	2194.5	5.64	5.13	4.62	28.74	-13.2	-22.8	-24.5	2.52	3.37	-74.2	-102.3	-123.3	-141.8	10.0	-101.82
7.00	56.36	2282.9	2266.1	2254.3	5.58	5.08	4.69	28.78	-14.2	-23.5	-24.5	2.48	4.62	-74.2	-101.6	-123.6	-142.2	20.8	-109.93
8.00	54.04	2338.2	2322.4	2311.0	5.57	5.18	4.75	28.86	-14.4	-23.0	-25.6	2.44	4.55	-75.0	-102.2	-123.5	-142.4	35.5	-114.71
9.00	51.14	2391.4	2376.4	2365.1	5.48	5.03	4.67	28.87	-15.1	-22.9	-26.0	2.42	3.14	-76.8	-102.3	-123.8	-143.0	60.7	-118.85
10.00	49.20	2442.3	2427.6	2416.4	5.41	5.07	4.76	28.79	-15.8	-23.0	-26.3	2.26	2.33	-75.6	-102.8	-124.3	-143.2	86.7	-122.77
12.00	46.70	2537.8	2524.6	2514.1	5.10	4.91	4.62	28.58	-16.8	-23.1	-31.9	1.85	3.97	-75.5	-103.0	-124.0	-143.1	100.0	-123.93
14.00	43.40	2628.9	2616.5	2605.9	4.93	4.79	4.54	28.36	-17.7	-23.3	-31.5	1.59	4.51	-74.7	-102.6	-124.6	-143.4	148.1	-127.48
15.00	41.67	2671.8	2659.9	2649.7	4.77	4.63	4.44	28.23	-18.5	-23.1	-31.9	1.33	2.80	-74.1	-102.9	-123.8	-142.4	177.0	-128.85
16.00	41.12	2712.7	2701.6	2691.5	4.62	4.55	4.35	28.05	-18.6	-22.8	-33.7	1.05	2.94	-73.5	-102.0	-123.5	-142.8	211.6	-130.56
17.00	38.74	2753.6	2742.7	2732.5	4.39	4.38	4.20	27.87	-18.7	-23.4	-33.7	0.81	4.23	-75.1	-102.0	-123.1	-142.8	302.4	-133.38
18.00	36.61	2792.0	2781.4	2771.5	4.28	4.28	4.10	27.79	-18.5	-24.3	-33.4	0.61	1.29	-75.4	-101.8	-122.9	-142.3	361.5	-134.57
19.00	35.13	2829.6	2818.0	2807.8	4.06	4.14	4.02	27.59	-18.0	-25.4	-33.0	0.36	4.86	-73.6	-101.7	-122.4	-142.1	507.5	-138.08
21.00	28.06	2895.4	2884.4	2874.4	3.89	3.91	3.76	27.42	-17.6	-23.9	-34.5	0.03	4.62	-74.9	-101.6	-122.7	-142.5	606.7	-139.41
23.00	21.07	2949.1	2937.4	2926.5	3.56	3.67	3.55	27.19	-17.9	-21.9	-36.0	0.13	2.25	-73.7	-101.4	-122.2	-141.9	851.6	-142.71
25.00	14.22	2987.3	2975.7	2965.0	3.38	3.45	3.29	27.09	-18.1	-22.3	-37.0	0.18	4.53	-75.5	-101.5	-122.7	-142.3	1000.0	-143.25

\*at 25°C unless mentioned otherwise



For detailed performance specs & shopping online see web site

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at [minicircuits.com](http://minicircuits.com)

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