

Coaxial

# Voltage Controlled Oscillator

## ZX95-2770+

Linear Tuning 1970 to 2770 MHz

### Features

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

### Applications

- r & d
- lab
- instrumentation
- satellite systems
- wireless communications



CASE STYLE: GB956

Connectors	Model	Price	Qty.
SMA	ZX95-2770-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

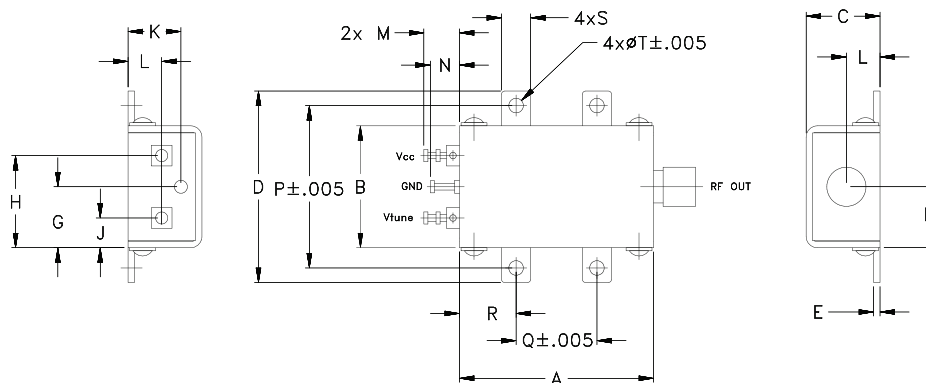
MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	PHASE NOISE dBc/Hz SSB at offset frequencies, KHz				TUNING					NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @ 12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER	
	Min.	Max.		Typ.	1	10	100	1000	VOLTAGE RANGE (V)	SENSI- TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Typ.	Typ. Max.			Typ.	Typ.
ZX95-2770+	1970	2770	+6	-74	-101	-122	-143	1	28	24-56	20	250	-90	-27	-15	4.5	1.5	10	32

### Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	12V
Absolute Max. Tuning Voltage (Vtune)	30V
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

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**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).

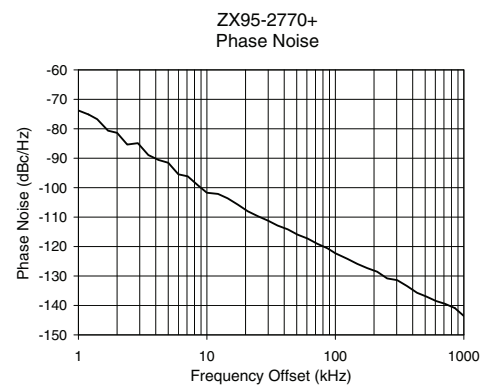
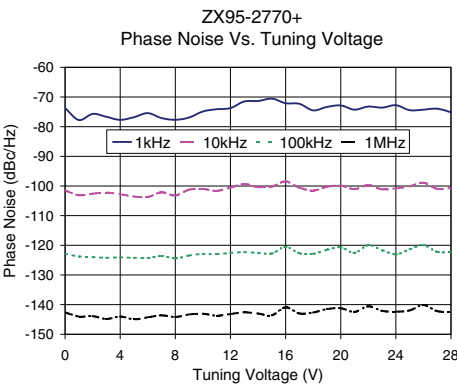
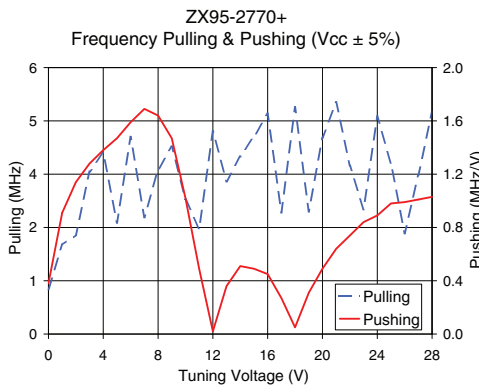
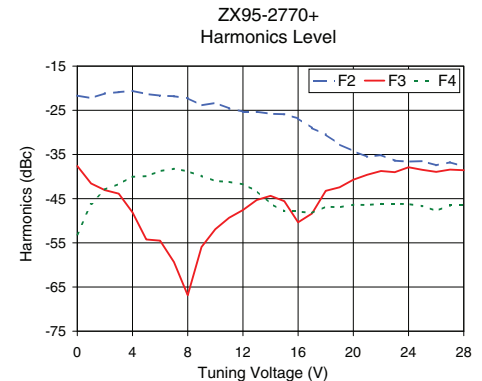
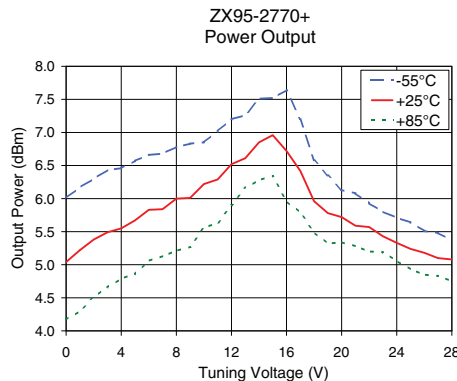
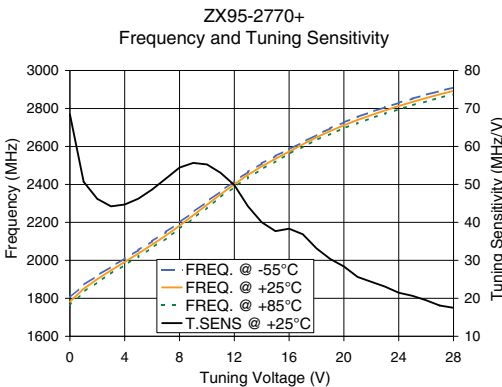
REV. OR  
M108616  
EDR-7114  
ZX95-2770+  
RAV  
120904  
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# Performance Data & Curves\*

# ZX95-2770+

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	68.44	1804.1	1781.8	1762.5	6.01	5.04	4.17	25.58	-21.7	-37.6	-53.1	0.38	1.01	-73.7	-101.5	-122.9	-142.6	1.0	-73.80
1.00	50.68	1870.2	1850.2	1833.2	6.17	5.22	4.30	25.69	-22.2	-41.6	-46.2	0.91	2.01	-77.8	-103.1	-123.7	-144.0	2.0	-81.38
2.00	46.19	1920.1	1900.9	1884.7	6.30	5.38	4.51	25.76	-21.2	-43.1	-42.9	1.14	2.23	-75.7	-102.6	-124.0	-143.9	3.5	-88.92
3.00	44.22	1965.7	1947.1	1930.8	6.43	5.49	4.66	25.80	-20.9	-43.9	-41.7	1.28	3.66	-76.7	-102.3	-124.2	-144.8	6.0	-95.47
4.00	44.71	2009.7	1991.3	1975.2	6.46	5.55	4.79	25.84	-20.6	-48.1	-40.1	1.38	4.08	-77.7	-102.8	-124.1	-144.0	8.5	-99.19
6.00	48.64	2100.4	2082.3	2066.1	6.66	5.83	5.06	25.91	-21.7	-54.5	-38.8	1.59	4.44	-75.5	-103.7	-124.3	-144.3	10.0	-101.72
8.00	54.44	2199.9	2182.4	2166.4	6.78	6.00	5.21	25.99	-22.3	-66.9	-38.8	1.64	3.70	-77.7	-103.2	-124.4	-144.2	20.8	-108.01
10.00	55.27	2308.9	2292.5	2277.0	6.85	6.22	5.56	26.05	-23.3	-51.9	-41.0	1.02	3.04	-74.9	-101.0	-122.9	-143.1	35.5	-112.87
11.00	53.05	2363.6	2347.8	2332.9	7.02	6.29	5.63	26.09	-24.6	-49.3	-41.2	0.49	2.37	-74.1	-101.6	-123.0	-143.7	60.7	-117.28
12.00	49.83	2416.3	2400.8	2386.2	7.20	6.52	5.90	26.13	-25.3	-47.6	-41.8	0.02	4.57	-73.8	-100.5	-122.6	-143.2	86.7	-120.58
14.00	40.04	2510.0	2494.9	2479.9	7.51	6.85	6.28	26.13	-25.8	-44.4	-46.1	0.51	4.00	-71.4	-100.4	-122.6	-143.0	100.0	-122.29
16.00	38.33	2585.0	2572.6	2560.7	7.64	6.72	5.96	25.93	-26.9	-50.4	-47.9	0.45	4.96	-72.1	-98.5	-120.5	-140.9	148.1	-125.90
18.00	33.15	2660.2	2647.8	2634.2	6.58	5.96	5.49	25.69	-30.5	-43.2	-46.8	0.05	5.11	-74.5	-101.5	-122.9	-142.7	177.0	-127.33
20.00	28.38	2726.7	2711.3	2695.9	6.13	5.72	5.34	25.59	-34.2	-40.7	-46.3	0.49	4.42	-72.9	-99.9	-120.7	-141.2	211.6	-128.55
22.00	24.34	2781.6	2765.3	2749.1	5.93	5.57	5.20	25.53	-35.1	-38.7	-46.2	0.74	3.79	-73.2	-99.7	-119.9	-140.6	302.4	-131.40
24.00	21.48	2829.4	2812.7	2795.3	5.71	5.33	5.06	25.47	-36.6	-37.9	-46.2	0.89	4.90	-72.8	-100.8	-123.0	-142.4	361.5	-133.41
25.00	20.67	2851.6	2834.2	2817.0	5.64	5.24	4.93	25.43	-36.5	-38.5	-46.7	0.98	3.84	-74.4	-100.1	-121.3	-142.0	507.5	-136.91
26.00	19.49	2872.1	2854.9	2837.1	5.51	5.18	4.85	25.40	-37.4	-38.9	-47.7	0.99	2.27	-74.3	-98.9	-119.9	-140.1	606.7	-138.48
27.00	18.11	2891.6	2874.4	2856.6	5.48	5.10	4.83	25.38	-36.8	-38.4	-46.6	1.01	3.58	-73.9	-101.0	-122.2	-142.2	851.6	-140.90
28.00	17.51	2910.2	2892.5	2874.6	5.37	5.08	4.75	25.35	-37.7	-38.6	-46.5	1.03	5.00	-75.1	-100.7	-122.3	-142.4	1000.0	-143.59

\*at 25°C unless mentioned otherwise



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