

Coaxial

# Voltage Controlled Oscillator

## ZX95-2920CA+

Low Noise 2760 to 2920 MHz

### Features

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

### Applications

- r & d
- lab
- wireless communications
- test equipment



CASE STYLE: GB956

Connectors	Model	Price	Qty.
SMA	ZX95-2920CA-S+	\$ 50.95 ea.	(1-9)

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

### Electrical Specifications

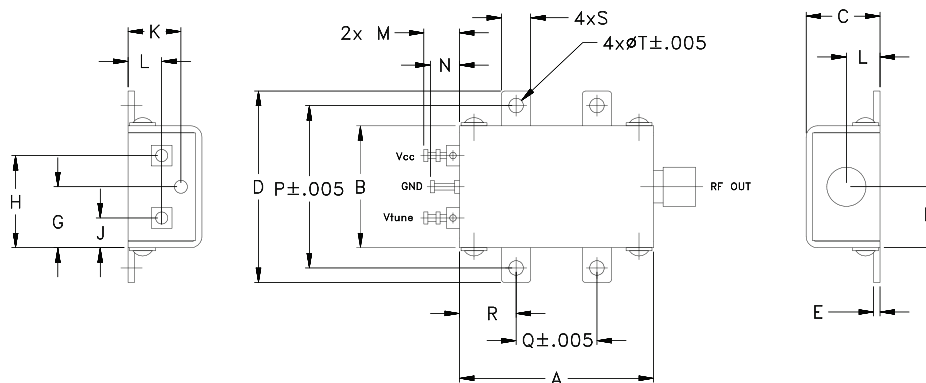
MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	PHASE NOISE				TUNING					NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @ 12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER		
				dBc/Hz SSB at offset frequencies, kHz				VOLTAGE RANGE (V)	SENSI- TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)	Typ.		Typ.	Typ.			Max.	Typ.	Max.
	Typ.	1		10	100	1000	Min.													
ZX95-2920CA+	2760	2920	+3.3	-87	-112	-133	-153	0.5	18	8-15	39	55	-90	-15	-	0.7	0.5	8	35	

### Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	8.5V
Absolute Max. Tuning Voltage (Vtune)	20.0V
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).

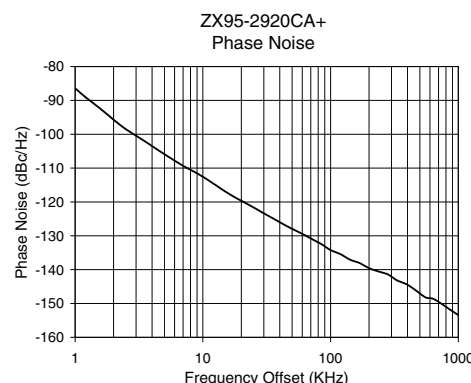
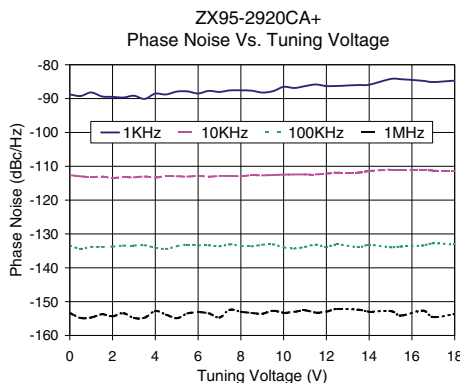
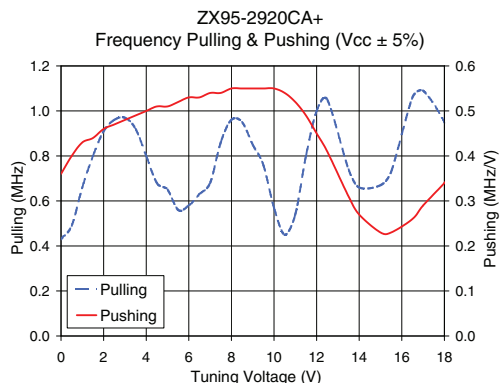
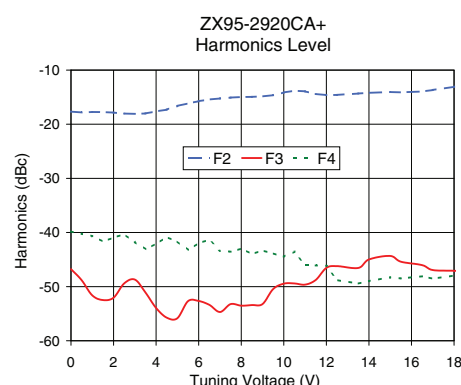
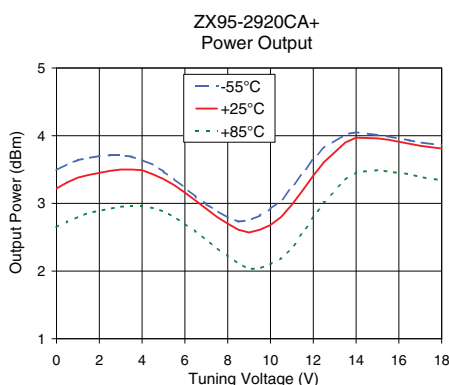
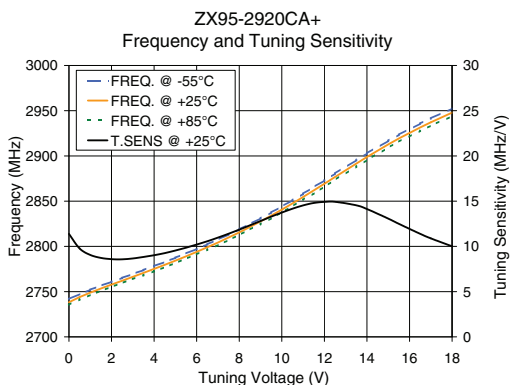
REV. OR  
M121306  
EDR-9431F2  
ZX95-2920CA+  
RAV  
120904  
Page 1 of 2

# Performance Data & Curves\*

# ZX95-2920CA+

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 2840 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	11.39	2741.8	2738.3	2735.4	3.49	3.22	2.65	29.90	-17.7	-46.8	-39.8	0.36	0.43	-88.8	-112.6	-133.5	-153.3	1.0	-86.44
0.50	9.77	2747.3	2744.0	2741.3	3.58	3.31	2.73	29.97	-17.8	-48.8	-40.2	0.40	0.49	-89.2	-113.0	-134.4	-154.8	2.0	-95.69
1.00	9.06	2752.1	2748.9	2746.3	3.64	3.38	2.80	30.02	-17.7	-51.6	-40.7	0.43	0.66	-88.2	-113.2	-133.8	-154.7	3.5	-102.03
2.00	8.59	2760.9	2757.8	2755.3	3.70	3.45	2.89	30.09	-17.9	-52.1	-40.9	0.46	0.91	-89.5	-113.4	-133.8	-154.3	6.0	-107.79
2.50	8.57	2765.2	2762.1	2759.6	3.71	3.48	2.92	30.11	-18.0	-49.4	-40.3	0.47	0.96	-89.7	-113.3	-133.5	-153.4	8.5	-111.03
3.00	8.67	2769.5	2766.3	2763.8	3.71	3.50	2.95	30.13	-18.1	-48.7	-41.7	0.48	0.97	-89.2	-113.3	-133.4	-154.8	10.0	-112.56
4.00	9.03	2778.2	2775.1	2772.5	3.64	3.49	2.96	30.14	-17.6	-53.9	-42.1	0.50	0.80	-88.5	-113.3	-134.1	-152.8	20.8	-119.98
5.00	9.54	2787.4	2784.2	2781.6	3.47	3.36	2.88	30.15	-16.6	-55.8	-41.7	0.51	0.65	-87.9	-113.0	-133.6	-154.9	35.5	-124.87
6.00	10.20	2797.2	2793.9	2791.2	3.23	3.16	2.70	30.15	-15.7	-52.7	-41.9	0.53	0.58	-88.5	-112.8	-133.4	-153.2	60.7	-129.51
7.00	10.98	2807.6	2804.3	2801.6	2.99	2.92	2.46	30.15	-15.2	-54.7	-43.4	0.54	0.68	-88.0	-112.9	-133.7	-154.7	85.2	-132.52
8.00	11.86	2818.8	2815.5	2812.7	2.79	2.70	2.22	30.17	-15.0	-53.5	-43.0	0.55	0.96	-87.6	-112.9	-133.6	-153.0	100.0	-134.23
9.00	12.81	2831.0	2827.6	2824.7	2.75	2.57	2.03	30.18	-14.9	-53.2	-43.3	0.55	0.85	-88.2	-112.7	-133.2	-153.6	142.9	-137.12
10.00	13.74	2844.1	2840.7	2837.7	2.92	2.68	2.10	30.20	-14.1	-49.5	-44.5	0.55	0.57	-86.5	-112.5	-134.0	-153.2	167.8	-138.00
11.00	14.53	2858.2	2854.6	2851.5	3.24	2.98	2.34	30.19	-13.9	-49.6	-46.1	0.52	0.54	-86.3	-112.4	-133.8	-152.6	200.6	-139.58
12.00	14.92	2873.0	2869.3	2866.1	3.65	3.41	2.79	30.16	-14.6	-46.5	-46.2	0.45	1.00	-86.3	-112.2	-133.9	-153.0	281.6	-141.43
14.00	14.13	2902.8	2898.9	2895.4	4.05	3.97	3.46	30.09	-14.2	-45.0	-49.0	0.27	0.66	-85.9	-111.4	-133.2	-153.0	330.7	-143.15
15.00	13.07	2916.8	2912.7	2909.2	4.01	3.96	3.49	30.08	-14.1	-44.3	-48.3	0.23	0.67	-84.2	-111.0	-133.9	-152.8	464.2	-146.11
15.50	12.49	2923.4	2919.3	2915.7	3.99	3.94	3.47	30.07	-14.1	-45.4	-48.5	0.23	0.73	-84.3	-111.1	-133.7	-154.1	554.9	-148.20
17.00	10.89	2941.6	2937.2	2933.4	3.90	3.85	3.39	30.05	-13.7	-46.9	-48.5	0.29	1.09	-85.1	-111.3	-132.8	-154.6	914.6	-152.47
18.00	10.02	2952.4	2947.8	2944.0	3.86	3.81	3.34	30.03	-13.1	-47.1	-48.0	0.34	0.95	-84.7	-111.3	-133.1	-153.6	1000.0	-153.41

\*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).