

Coaxial

# Voltage Controlled Oscillator

## ZX95-1000CA+

Ultra Low Noise 1000 MHz

### Features

- ultra low phase noise
- linear tuning characteristics
- very low pushing
- very low pulling
- 5V tuning voltage range
- protected by US patent 6,790,049



CASE STYLE: GB956

### Applications

- r & d
- lab
- instrumentation
- wireless communication
- military & avionics
- test equipment

Connectors	Model	Price	Qty.
SMA	ZX95-1000CA-S+	\$51.95 ea.	(1-9)

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

### Electrical Specifications

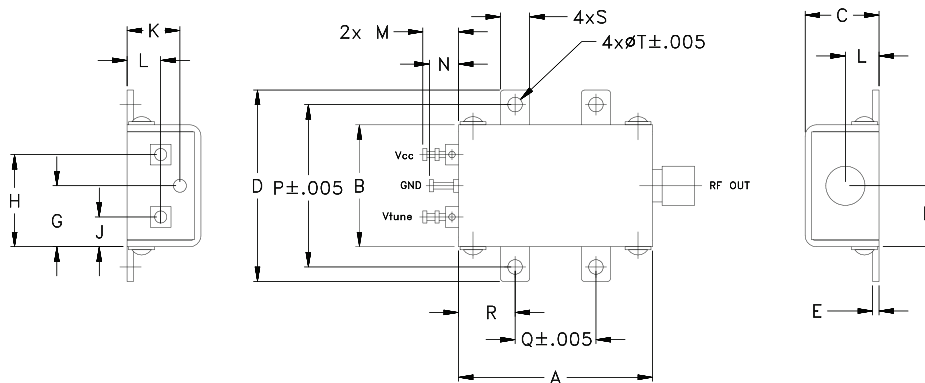
MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	PHASE NOISE dBc/Hz SSB at offset frequencies, kHz				TUNING					NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER	
	Min	Max		Typ.	1	10	100	1000	VOLTAGE RANGE (V)	SENSITIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Typ.	Max.			Vcc (volts)	Current (mA)
ZX95-1000CA+	1000		-1	-98	-125	-145	-164	0.5	5	5	20	80	-90	-22	-14	0.06	0.01	5	35

### Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	7V
Absolute Max. Tuning Voltage (Vtune)	7V
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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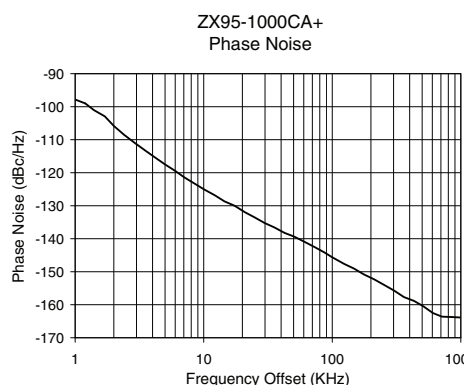
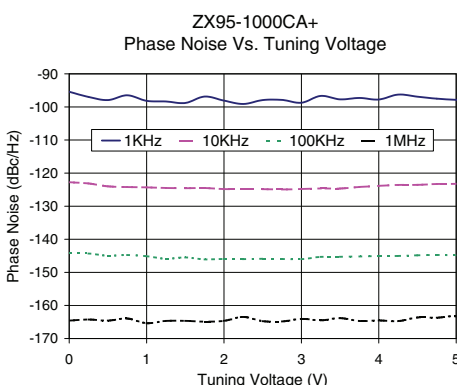
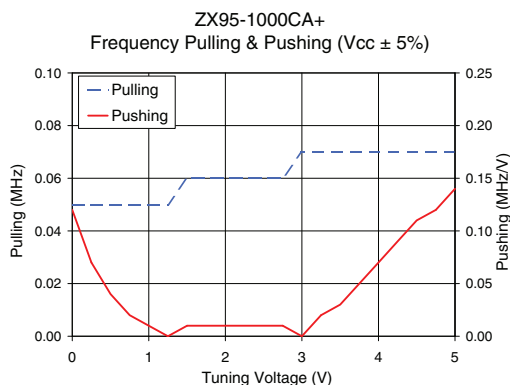
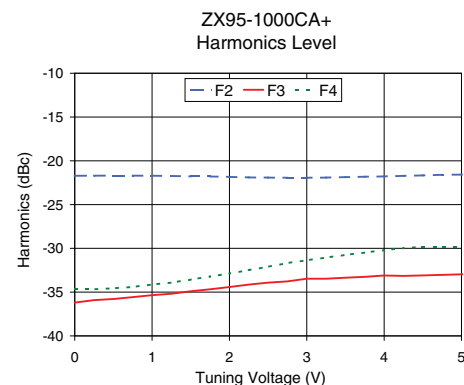
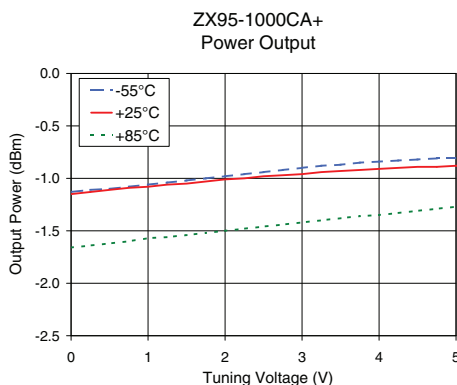
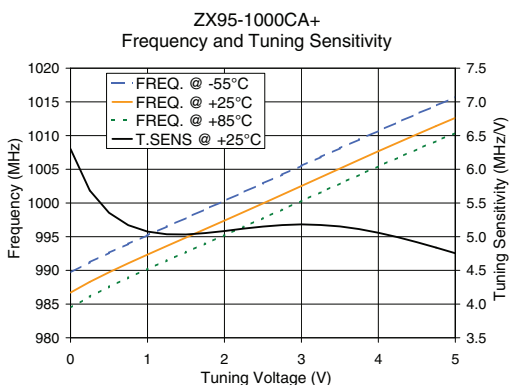
**Notes:** 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established 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).

# Performance Data & Curves\*

# ZX95-1000CA+

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 1002 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	6.30	989.7	986.7	984.5	-1.13	-1.15	-1.66	22.85	-21.7	-36.2	-34.7	0.12	0.05	-95.4	-122.7	-144.3	-164.6	1.0	-97.83
0.50	5.35	992.6	989.7	987.6	-1.10	-1.11	-1.62	22.96	-21.7	-35.8	-34.6	0.04	0.05	-97.9	-124.0	-145.0	-164.6	2.0	-105.84
0.75	5.17	993.9	991.0	988.9	-1.08	-1.09	-1.60	23.01	-21.7	-35.6	-34.4	0.02	0.05	-96.5	-124.2	-144.8	-164.0	3.5	-113.27
1.00	5.08	995.2	992.3	990.2	-1.06	-1.08	-1.57	23.06	-21.7	-35.4	-34.1	0.01	0.05	-98.2	-124.3	-145.1	-165.4	6.0	-119.46
1.25	5.04	996.5	993.6	991.5	-1.04	-1.06	-1.56	23.11	-21.7	-35.2	-33.9	0.00	0.05	-98.4	-124.5	-145.9	-164.7	8.5	-123.32
1.50	5.03	997.8	994.9	992.7	-1.02	-1.05	-1.54	23.15	-21.8	-34.9	-33.6	0.01	0.06	-98.8	-124.6	-145.5	-164.7	10.0	-124.99
1.75	5.05	999.0	996.1	994.0	-1.00	-1.03	-1.52	23.19	-21.8	-34.7	-33.2	0.01	0.06	-96.9	-124.5	-146.1	-164.9	20.8	-131.94
2.00	5.08	1000.3	997.4	995.2	-0.98	-1.01	-1.50	23.24	-21.8	-34.4	-32.9	0.01	0.06	-98.1	-124.8	-145.9	-164.7	35.5	-136.60
2.25	5.12	1001.6	998.7	996.5	-0.96	-1.00	-1.48	23.29	-21.9	-34.1	-32.5	0.01	0.06	-99.1	-124.9	-146.0	-163.5	60.7	-140.91
2.50	5.15	1002.9	999.9	997.7	-0.94	-0.98	-1.46	23.33	-21.9	-33.9	-32.1	0.01	0.06	-97.9	-124.9	-145.9	-164.8	86.7	-144.13
2.75	5.17	1004.2	1001.2	999.0	-0.92	-0.97	-1.44	23.37	-21.9	-33.8	-31.7	0.01	0.06	-97.9	-124.9	-146.0	-164.8	100.0	-145.62
3.00	5.18	1005.5	1002.5	1000.3	-0.90	-0.96	-1.42	23.43	-21.9	-33.5	-31.4	0.00	0.07	-98.7	-124.8	-146.0	-164.1	148.1	-149.08
3.25	5.17	1006.8	1003.8	1001.6	-0.88	-0.94	-1.40	23.47	-21.9	-33.5	-31.1	0.02	0.07	-96.7	-124.7	-145.3	-164.5	177.0	-150.86
3.50	5.15	1008.1	1005.1	1002.9	-0.87	-0.93	-1.38	23.51	-21.9	-33.4	-30.8	0.03	0.07	-97.7	-124.7	-145.3	-163.8	211.6	-152.31
3.75	5.11	1009.4	1006.4	1004.2	-0.85	-0.92	-1.36	23.55	-21.8	-33.3	-30.5	0.05	0.07	-97.3	-124.2	-145.2	-164.7	302.4	-155.70
4.00	5.06	1010.7	1007.7	1005.4	-0.84	-0.91	-1.35	23.59	-21.8	-33.1	-30.2	0.07	0.07	-97.8	-123.9	-145.1	-164.5	361.5	-157.70
4.25	4.99	1012.0	1008.9	1006.7	-0.83	-0.90	-1.33	23.63	-21.7	-33.2	-30.0	0.09	0.07	-96.3	-123.6	-145.0	-164.8	507.5	-160.40
4.50	4.92	1013.2	1010.2	1008.0	-0.82	-0.89	-1.31	23.66	-21.7	-33.1	-29.8	0.11	0.07	-96.9	-123.6	-144.9	-163.6	606.7	-162.53
4.75	4.84	1014.5	1011.4	1009.2	-0.81	-0.89	-1.29	23.69	-21.6	-33.0	-29.8	0.12	0.07	-97.5	-123.3	-144.7	-163.7	851.6	-163.72
5.00	4.75	1015.7	1012.6	1010.4	-0.81	-0.88	-1.27	23.72	-21.6	-33.0	-29.8	0.14	0.07	-97.9	-123.2	-144.9	-163.3	1000.0	-163.88

\*at 25°C unless mentioned otherwise



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