

Coaxial

# Voltage Controlled Oscillator

## ZX95-1023+

5V Tuning for PLL IC's 945 to 1023 MHz

### Features

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



CASE STYLE: GB956

### Applications

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

Connectors	Model	Price	Qty.
SMA	ZX95-1023-S+	\$ 44.95 ea.	(1-9)

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

### Electrical Specifications

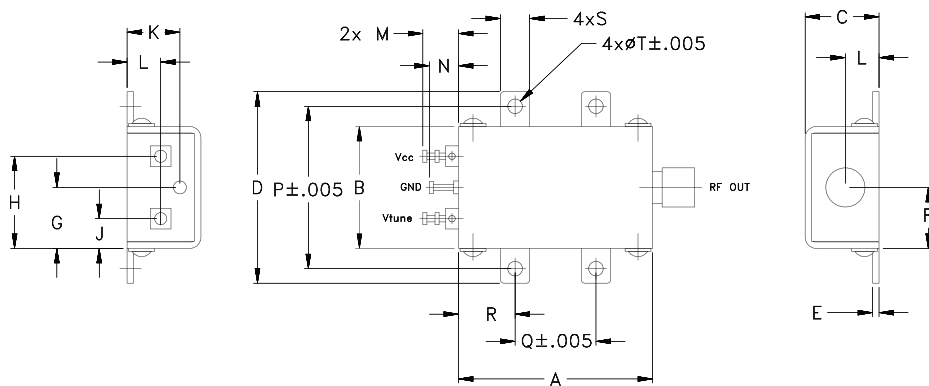
MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	PHASE NOISE dBc/Hz SSB at offset frequencies,kHz				TUNING					NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @ 12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER				
	Min.	Max.		Typ.	1	10	100	1000	VOLTAGE RANGE (V)		SENSI-TIVITY (MHz/V)	PORT CAP (pF)		3 dB MODULATION BANDWIDTH (MHz)	Typ.			Typ.	Typ.	Typ.	Vcc (volts)	Current (mA)
	Min.	Max.							Min.	Max.												
ZX95-1023+	945	1023	+6.6	-81	-109	-130	-150	0.5	5	32	43	40	-90	-26	-19	1.4	0.4	5	35			

### Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	6V
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).

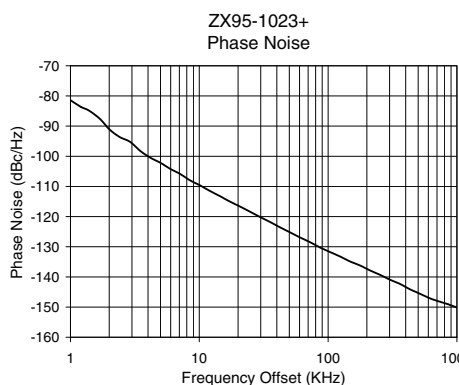
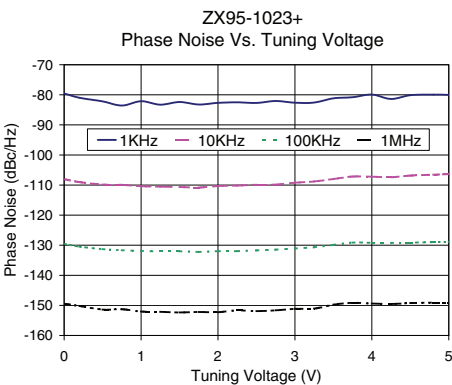
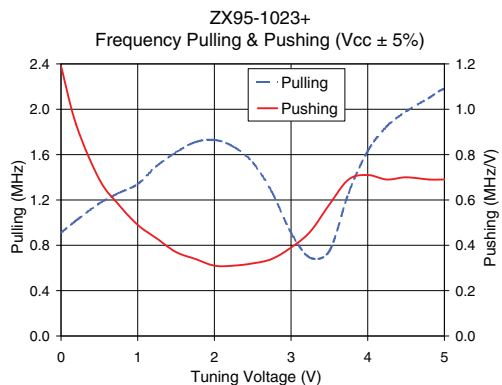
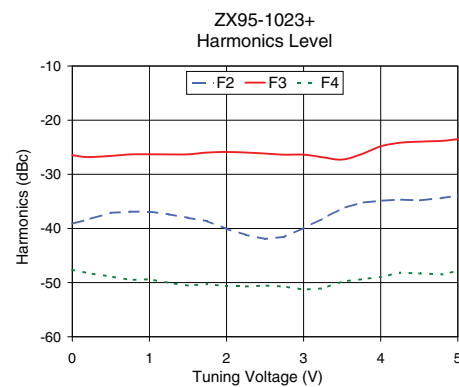
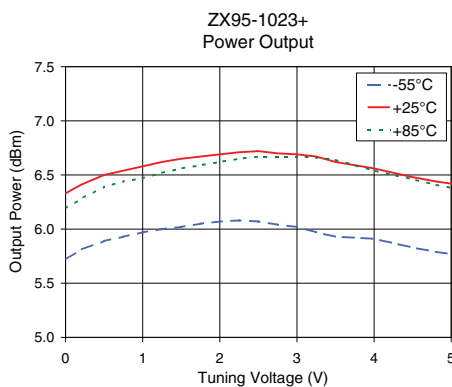
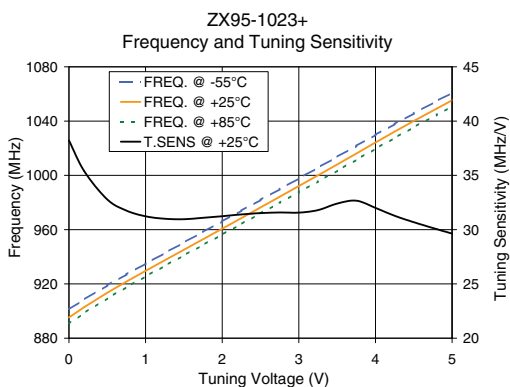
REV. OR  
M122533  
EDR-9227F2  
ZX95-1023+  
RAV  
120902  
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# Performance Data & Curves\*

# ZX95-1023+

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 984 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	38.22	901.2	895.3	890.7	5.72	6.33	6.19	26.13	-39.1	-26.5	-47.6	1.19	0.91	-79.5	-108.0	-129.5	-149.5	1.0	-81.42
0.50	32.78	918.9	913.5	909.4	5.89	6.50	6.39	26.52	-37.1	-26.6	-48.9	0.69	1.17	-82.2	-109.8	-131.3	-151.4	2.0	-91.02
0.75	31.75	927.0	921.7	917.6	5.93	6.54	6.44	26.69	-36.9	-26.3	-49.5	0.58	1.26	-83.6	-109.9	-131.7	-151.3	3.5	-98.31
1.00	31.23	934.9	929.6	925.5	5.97	6.58	6.47	26.85	-36.9	-26.3	-49.4	0.49	1.34	-82.1	-110.4	-131.9	-152.0	6.0	-104.26
1.25	31.00	942.8	937.4	933.3	6.00	6.62	6.52	27.01	-37.4	-26.3	-50.0	0.43	1.50	-83.3	-110.5	-132.1	-152.1	8.5	-108.01
1.50	30.96	950.5	945.2	941.0	6.02	6.65	6.56	27.15	-38.0	-26.3	-50.6	0.37	1.62	-82.4	-110.7	-132.0	-152.4	10.0	-109.51
1.75	31.09	958.3	952.9	948.7	6.05	6.67	6.59	27.28	-38.7	-26.0	-50.3	0.34	1.71	-83.2	-110.8	-132.2	-152.2	20.8	-116.72
2.00	31.23	966.1	960.7	956.4	6.07	6.69	6.62	27.40	-40.1	-25.9	-50.7	0.31	1.73	-82.7	-110.3	-132.0	-152.3	35.5	-121.82
2.25	31.40	974.0	968.5	964.2	6.08	6.71	6.65	27.50	-41.2	-26.0	-50.7	0.31	1.67	-82.5	-110.2	-132.0	-151.7	60.7	-126.94
2.50	31.52	981.9	976.4	972.0	6.07	6.72	6.67	27.58	-41.9	-26.2	-50.5	0.32	1.53	-82.7	-109.9	-131.7	-151.9	86.7	-130.26
2.75	31.58	989.8	984.3	979.8	6.04	6.70	6.67	27.65	-41.6	-26.4	-50.7	0.34	1.27	-82.1	-109.9	-131.5	-151.6	100.0	-131.47
3.00	31.56	997.8	992.1	987.6	6.02	6.69	6.67	27.71	-39.9	-26.4	-51.3	0.39	0.91	-82.6	-109.2	-131.1	-151.2	148.1	-134.89
3.25	31.80	1005.7	1000.0	995.5	5.97	6.67	6.66	27.74	-38.2	-26.9	-51.1	0.46	0.69	-82.6	-108.8	-130.7	-151.1	177.0	-136.21
3.50	32.40	1013.6	1008.0	1003.4	5.93	6.62	6.64	27.76	-36.3	-27.3	-49.8	0.58	0.75	-81.2	-108.0	-129.9	-149.8	211.6	-137.87
3.75	32.67	1021.7	1016.1	1011.5	5.92	6.59	6.59	27.79	-35.2	-26.3	-49.4	0.69	1.26	-80.8	-107.2	-129.1	-149.1	302.4	-140.91
4.00	32.00	1029.9	1024.3	1019.6	5.91	6.56	6.54	27.87	-34.9	-24.8	-49.0	0.71	1.63	-79.9	-107.2	-129.2	-149.4	361.5	-142.31
4.25	31.27	1037.8	1032.3	1027.6	5.87	6.52	6.50	27.95	-34.7	-24.2	-48.2	0.69	1.85	-81.4	-107.4	-129.2	-149.5	507.5	-145.41
4.50	30.69	1045.6	1040.1	1035.5	5.83	6.48	6.46	28.04	-34.8	-24.0	-48.3	0.70	1.98	-80.1	-106.9	-129.1	-149.2	606.7	-146.95
4.80	30.04	1054.8	1049.3	1044.7	5.79	6.44	6.41	28.13	-34.4	-23.8	-48.5	0.69	2.10	-79.9	-106.6	-129.0	-149.1	851.6	-149.05
5.00	29.64	1060.8	1055.3	1050.7	5.77	6.42	6.38	28.19	-34.0	-23.5	-47.8	0.69	2.18	-80.0	-106.4	-128.9	-149.1	1000.0	-150.16

\*at 25°C unless mentioned otherwise



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