

Voltage Controlled Oscillator

ZX95-924A+

Linear Tuning 851 to 917 MHz

Features

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

Applications

- r & d
- lab
- instrumentation
- wireless communications
- line for receiver
- defence systems
- land mobile



CASE STYLE: GB956

Connectors	Model
SMA	ZX95-924A-S+

+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 _r (MHz)	PUSHING (MHz/V)	DC OPERATING POWER	
								VOLTAGE RANGE (V)	SENSI- TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)	V _{cc} (volts)						Current (mA)	
	Typ.	1		10	100	1000	Min.	Max.	Typ.	Typ.	Typ.	Typ.		Typ.	Max.			Typ.	Typ.
ZX95-924A+	851	917	+0.6	-91	-115	-135	-155	0.5	14	8	49	90	-90	-20	-10	0.04	0.06	5	30

Maximum Ratings

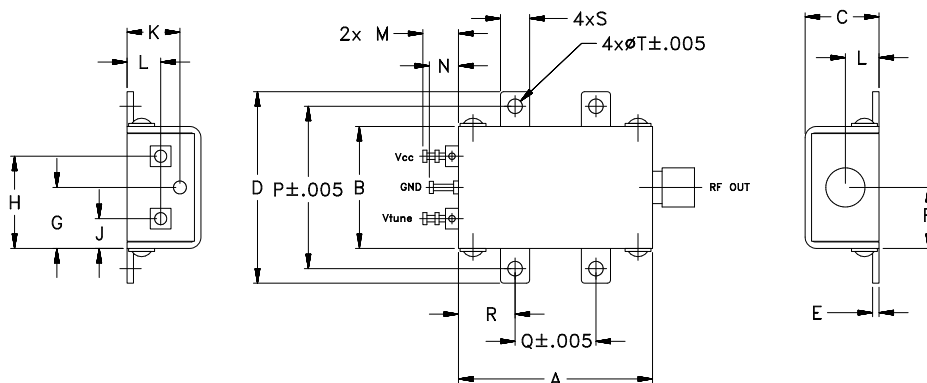
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	6.5V
Absolute Max. Tuning Voltage (Vtune)	15.0V
All specifications	50 ohm system

Permanent damage may occur if any of these limits are exceeded.



NOTE: When soldering the DC connections, caution must be used to avoid overheating the DC terminals. See Application Note [AN-40-10](#).

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

Notes

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 C. The parts covered by this specification document 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



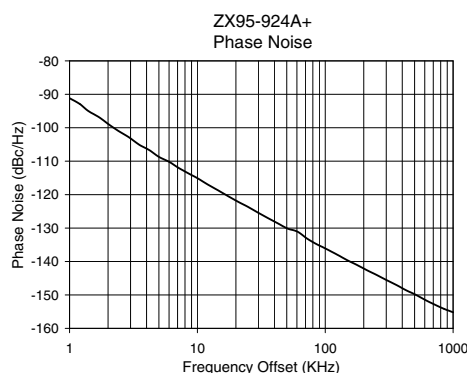
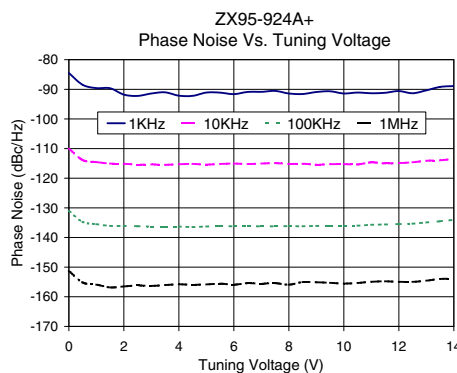
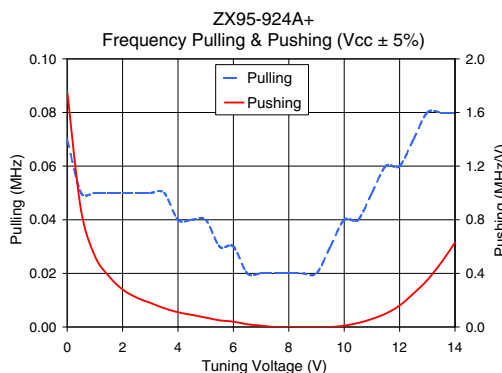
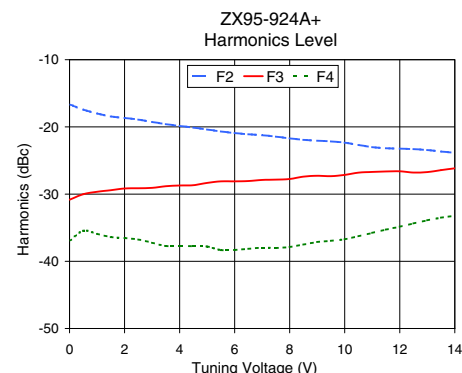
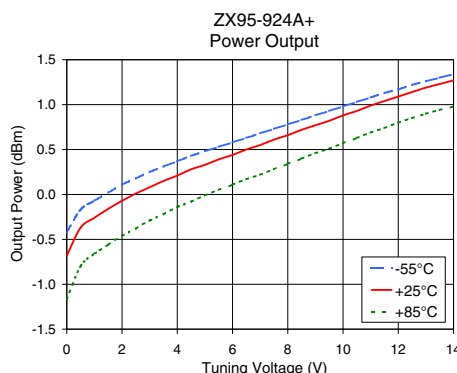
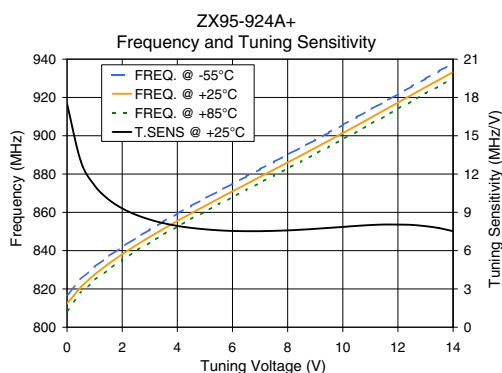
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Performance Data & Curves*

ZX95-924A+

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 884 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	17.50	816.9	812.3	808.6	-0.42	-0.68	-1.17	20.93	-16.7	-30.8	-37.0	1.76	0.07	-84.5	-110.0	-131.0	-151.3	1.0	-91.17
0.50	12.99	825.1	821.1	817.9	-0.17	-0.37	-0.80	21.07	-17.4	-30.0	-35.5	0.87	0.05	-88.5	-113.9	-134.7	-155.2	2.0	-98.85
1.00	11.10	831.5	827.6	824.6	-0.07	-0.26	-0.66	21.09	-18.0	-29.7	-35.9	0.53	0.05	-89.6	-114.5	-135.5	-155.9	3.5	-105.06
2.50	8.81	846.6	842.8	839.9	0.18	0.01	-0.38	21.13	-18.9	-29.1	-36.8	0.22	0.05	-92.2	-115.4	-136.2	-156.2	6.0	-110.18
3.00	8.43	851.0	847.2	844.3	0.25	0.08	-0.29	21.13	-19.3	-29.1	-37.2	0.18	0.05	-91.4	-115.3	-136.3	-156.3	8.5	-113.64
3.50	8.15	855.2	851.4	848.5	0.31	0.15	-0.22	21.14	-19.6	-28.8	-37.7	0.14	0.05	-91.0	-115.5	-136.3	-156.1	10.0	-115.08
4.00	7.94	859.3	855.5	852.5	0.37	0.21	-0.14	21.15	-19.9	-28.7	-37.7	0.11	0.04	-92.2	-115.3	-136.3	-155.8	20.8	-122.14
4.50	7.78	863.3	859.5	856.5	0.43	0.28	-0.08	21.15	-20.1	-28.7	-37.8	0.09	0.04	-92.2	-115.2	-136.5	-155.9	35.5	-126.99
5.50	7.59	871.1	867.2	864.2	0.53	0.39	0.05	21.16	-20.7	-28.1	-38.3	0.05	0.03	-91.1	-115.2	-136.2	-155.6	60.7	-131.09
6.00	7.54	874.9	871.0	868.0	0.58	0.44	0.11	21.17	-20.9	-28.1	-38.3	0.04	0.03	-91.6	-115.1	-136.2	-155.9	86.7	-134.93
6.50	7.52	878.7	874.8	871.7	0.63	0.50	0.17	21.17	-21.1	-28.1	-38.2	0.02	0.02	-90.9	-115.2	-136.2	-155.4	100.0	-136.08
7.00	7.52	882.5	878.5	875.5	0.68	0.55	0.22	21.18	-21.2	-27.9	-38.0	0.01	0.02	-90.9	-115.1	-136.3	-155.6	148.1	-139.58
7.50	7.55	886.3	882.3	879.2	0.73	0.61	0.28	21.18	-21.5	-27.8	-38.0	0.00	0.02	-90.5	-114.9	-136.2	-155.4	177.0	-141.04
8.50	7.64	894.0	889.8	886.7	0.83	0.72	0.40	21.19	-21.9	-27.4	-37.5	0.00	0.02	-91.6	-115.1	-136.2	-155.1	211.6	-142.60
9.50	7.78	901.7	897.5	894.3	0.93	0.82	0.51	21.19	-22.2	-27.3	-37.0	0.00	0.03	-90.7	-115.3	-136.0	-155.3	302.4	-145.60
10.00	7.86	905.7	901.4	898.2	0.98	0.88	0.57	21.20	-22.4	-27.2	-36.7	0.01	0.04	-91.4	-115.2	-136.0	-155.6	361.5	-147.05
11.00	8.00	913.6	909.3	906.1	1.08	0.99	0.69	21.20	-23.0	-26.7	-35.8	0.06	0.05	-91.3	-114.7	-135.7	-154.9	507.5	-149.91
12.00	8.04	921.7	917.3	914.1	1.17	1.09	0.80	21.21	-23.2	-26.6	-34.9	0.16	0.06	-90.6	-114.9	-135.5	-155.0	606.7	-151.52
13.50	7.76	933.8	929.3	926.0	1.30	1.23	0.94	21.22	-23.7	-26.4	-33.5	0.48	0.08	-89.2	-114.0	-134.5	-154.0	851.6	-154.19
14.00	7.53	937.7	933.2	929.9	1.34	1.27	0.98	21.23	-23.9	-26.2	-33.2	0.63	0.08	-88.9	-113.5	-134.1	-153.9	1000.0	-155.20

*at 25°C unless mentioned otherwise



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