

Coaxial

Voltage Controlled Oscillator

ZX95-870+

5V Tuning for PLL IC's 840 to 870 MHz

Features

- linear tuning characteristics
- low phase noise
- low pushing
- low pulling
- 0.5-5V tuning voltage range
- protected by US patent 6,790,049

Applications

- r & d
- lab
- instrumentation
- PLL circuitry
- wireless microphones



CASE STYLE: GB956

Connectors	Model
SMA	ZX95-870-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 Typ.				TUNING					NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER Vcc Current (volts) (mA)	
								VOLTAGE RANGE (V)	SENSI- TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)								
	Min.	Max.	Typ.	1	10	100	1000	Min.	Max.	Typ.	Typ.	Typ.	Typ.	Typ.	Max.	Typ.	Typ.	Max.	
ZX95-870+	840	870	+1	-87	-110	-131	-151	0.5	5	11-12	50	55	-90	-19	-12	1	0.8	5	17

Maximum Ratings

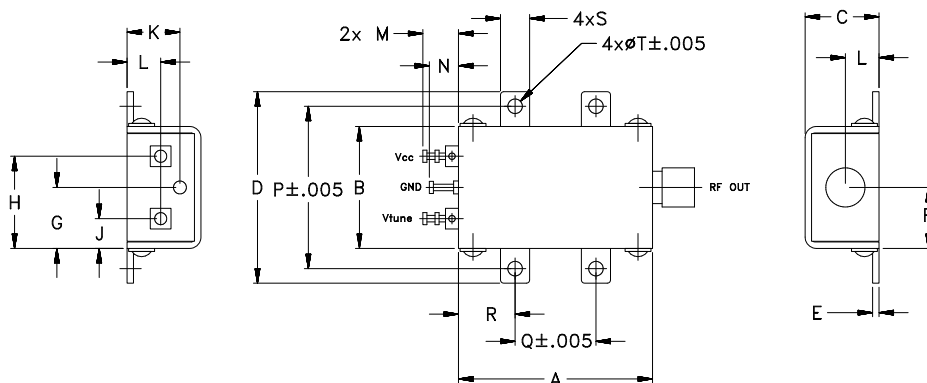
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	7V
Absolute Max. Tuning Voltage (Vtune)	7V
All specifications	50 ohm system

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



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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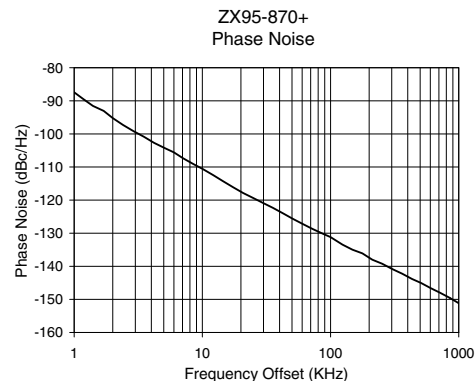
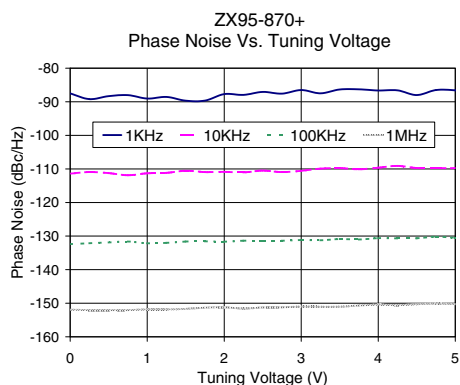
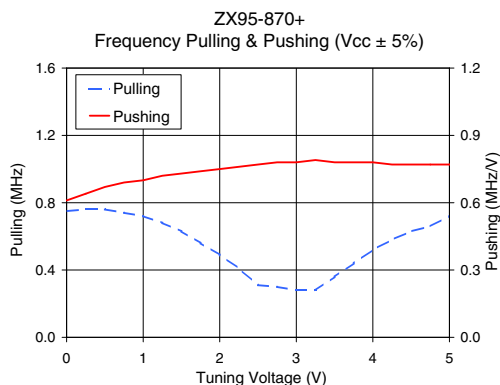
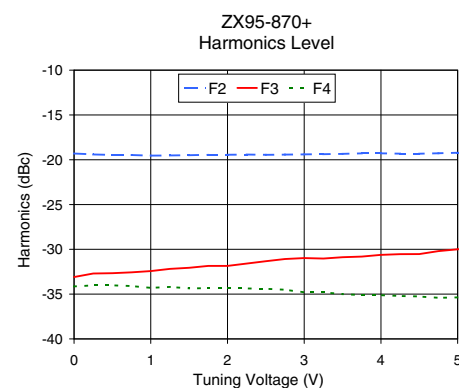
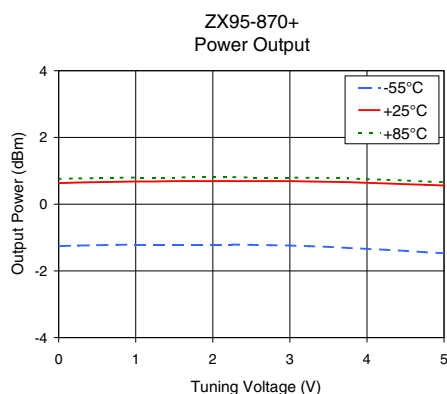
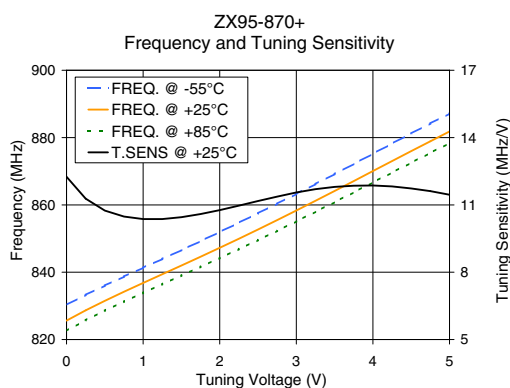
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Performance Data & Curves*

ZX95-870+

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 855 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	12.25	830.3	825.6	822.6	-1.26	0.63	0.76	11.82	-19.3	-33.1	-34.1	0.61	0.75	-87.5	-111.4	-132.4	-151.9	1.0	-87.43
0.25	11.28	833.2	828.7	825.7	-1.24	0.65	0.77	11.83	-19.4	-32.7	-34.0	0.64	0.76	-89.2	-110.9	-132.1	-152.1	2.0	-95.23
0.50	10.75	836.0	831.5	828.6	-1.23	0.66	0.78	11.84	-19.5	-32.7	-34.0	0.67	0.76	-88.3	-111.3	-131.9	-152.1	3.5	-100.86
0.75	10.48	838.7	834.2	831.3	-1.22	0.67	0.79	11.85	-19.5	-32.6	-34.1	0.69	0.74	-88.0	-111.9	-131.6	-152.0	6.0	-105.57
1.00	10.37	841.3	836.8	833.9	-1.21	0.68	0.80	11.86	-19.5	-32.4	-34.3	0.70	0.72	-89.1	-111.3	-132.1	-151.8	8.5	-109.09
1.25	10.37	843.9	839.4	836.4	-1.21	0.68	0.80	11.87	-19.5	-32.2	-34.2	0.72	0.68	-88.6	-111.2	-132.0	-151.9	10.0	-110.54
1.50	10.45	846.6	842.0	839.0	-1.21	0.69	0.80	11.88	-19.5	-32.1	-34.4	0.73	0.63	-89.7	-110.6	-131.6	-151.7	20.8	-117.86
1.75	10.59	849.2	844.6	841.6	-1.21	0.69	0.81	11.89	-19.5	-31.9	-34.3	0.74	0.56	-89.7	-110.9	-131.6	-151.3	35.5	-122.33
2.00	10.77	851.9	847.3	844.2	-1.21	0.69	0.81	11.90	-19.4	-31.9	-34.4	0.75	0.49	-87.7	-110.9	-131.7	-151.2	60.7	-127.21
2.25	10.97	854.7	849.9	846.9	-1.21	0.69	0.81	11.90	-19.4	-31.6	-34.4	0.76	0.41	-88.0	-111.0	-131.4	-151.6	86.7	-130.13
2.50	11.17	857.5	852.7	849.6	-1.22	0.69	0.80	11.91	-19.5	-31.3	-34.4	0.77	0.31	-87.1	-110.5	-131.4	-151.3	100.0	-131.18
2.75	11.37	860.3	855.5	852.3	-1.23	0.69	0.80	11.92	-19.4	-31.1	-34.5	0.78	0.30	-87.6	-110.9	-131.4	-151.2	148.1	-134.98
3.00	11.55	863.3	858.3	855.1	-1.24	0.69	0.80	11.92	-19.4	-31.0	-34.8	0.78	0.28	-86.5	-110.6	-131.2	-151.0	177.0	-136.09
3.25	11.70	866.2	861.2	858.0	-1.26	0.68	0.79	11.93	-19.4	-31.0	-34.8	0.79	0.28	-87.5	-109.9	-131.3	-151.0	211.6	-138.01
3.50	11.80	869.2	864.1	860.8	-1.28	0.67	0.78	11.93	-19.4	-30.9	-35.0	0.78	0.36	-86.4	-109.8	-130.9	-151.0	302.4	-140.82
3.75	11.86	872.2	867.1	863.8	-1.31	0.66	0.77	11.93	-19.3	-30.8	-35.1	0.78	0.44	-86.3	-110.1	-131.0	-150.7	361.5	-142.23
4.00	11.87	875.2	870.1	866.7	-1.34	0.64	0.75	11.94	-19.3	-30.6	-35.1	0.78	0.52	-86.7	-109.6	-130.6	-150.4	507.5	-145.05
4.25	11.82	878.2	873.0	869.6	-1.37	0.62	0.73	11.94	-19.3	-30.5	-35.2	0.77	0.58	-86.6	-109.1	-130.7	-150.6	606.7	-146.64
4.50	11.73	881.2	876.0	872.5	-1.40	0.60	0.71	11.94	-19.3	-30.5	-35.3	0.77	0.63	-88.0	-109.7	-130.6	-150.3	851.6	-149.54
5.00	11.45	887.1	881.8	878.3	-1.47	0.56	0.66	11.94	-19.2	-30.0	-35.4	0.77	0.72	-86.6	-109.7	-130.5	-150.3	1000.0	-151.14

*at 25°C unless mentioned otherwise



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