

# Voltage Controlled Oscillator

## ZX95-808+

5V Tuning for PLL IC's 770 to 808 MHz

### Features

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



CASE STYLE: GB956

### Applications

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

Connectors	Model
SMA	ZX95-808-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 (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.	Max.	Typ.
ZX95-808+	770	808	+7.2	-84	-110	-130	-150	0.5	5	19	20	120	-90	-30	-15	0.8	0.8	5	30

### Maximum Ratings

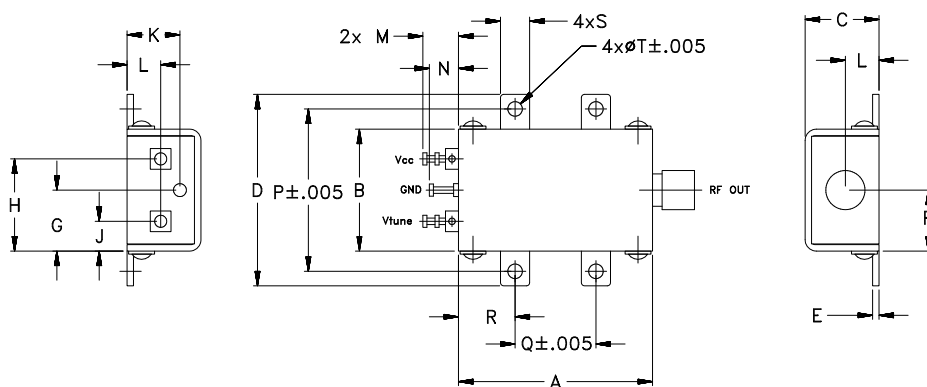
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	6.5V
Absolute Max. Tuning Voltage (Vtune)	7.0V
All specifications	50 ohm system

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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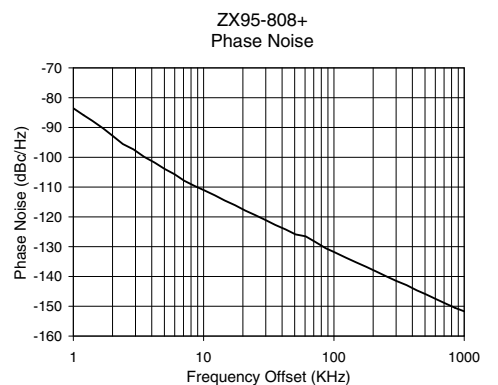
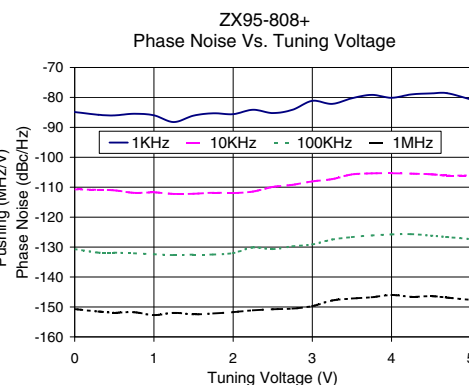
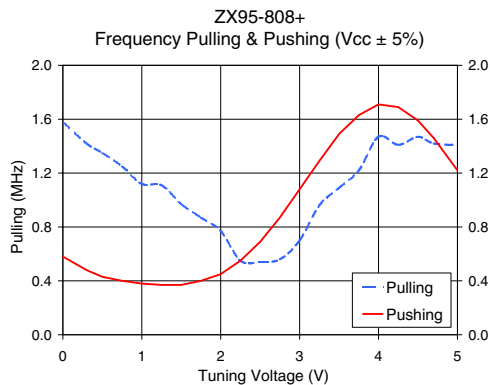
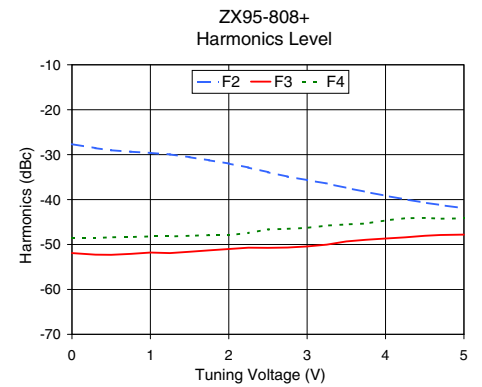
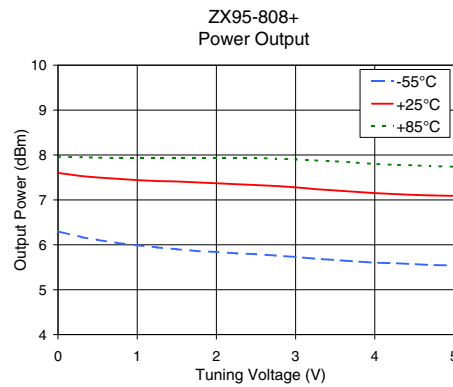
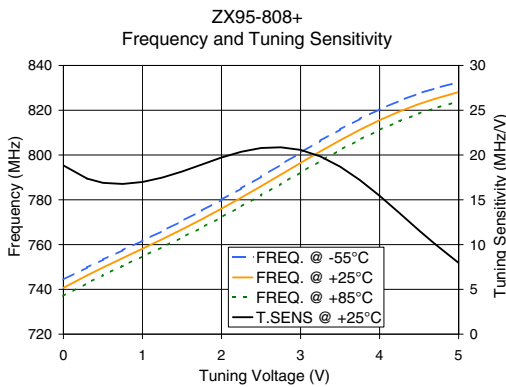


# Performance Data & Curves\*

# ZX95-808+

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 785 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	18.84	744.4	740.7	737.1	6.30	7.60	7.96	22.34	-27.7	-51.9	-48.6	0.58	1.58	-84.9	-110.7	-130.7	-150.7	1.0	-83.54
0.30	17.37	749.8	746.2	742.8	6.17	7.53	7.95	22.41	-28.6	-52.3	-48.6	0.48	1.42	-85.8	-110.9	-131.9	-151.5	2.0	-92.77
0.50	16.89	753.3	749.7	746.3	6.11	7.50	7.94	22.47	-29.0	-52.3	-48.4	0.43	1.35	-86.0	-111.0	-131.9	-151.9	3.5	-99.87
0.75	16.77	757.5	754.0	750.5	6.04	7.47	7.93	22.53	-29.4	-52.1	-48.3	0.40	1.25	-85.5	-111.9	-132.1	-151.8	6.0	-105.72
1.00	16.99	761.7	758.2	754.7	5.99	7.44	7.93	22.59	-29.6	-51.8	-48.2	0.38	1.12	-86.0	-111.7	-132.4	-152.7	8.5	-109.61
1.25	17.48	766.0	762.4	758.9	5.94	7.42	7.93	22.65	-30.0	-51.9	-48.2	0.37	1.11	-88.2	-112.2	-132.7	-152.0	10.0	-110.98
1.50	18.15	770.5	766.8	763.2	5.90	7.41	7.93	22.72	-30.6	-51.6	-48.1	0.37	0.97	-86.1	-112.2	-132.5	-152.5	20.8	-117.85
1.75	18.94	775.2	771.3	767.6	5.86	7.39	7.93	22.79	-31.3	-51.3	-47.9	0.40	0.87	-85.3	-111.9	-132.5	-152.2	35.5	-122.71
2.00	19.72	780.0	776.0	772.2	5.84	7.37	7.93	22.86	-32.0	-51.0	-47.9	0.45	0.77	-85.6	-111.9	-132.0	-151.7	60.7	-126.53
2.25	20.36	785.1	781.0	777.0	5.81	7.35	7.93	22.93	-32.9	-50.7	-47.4	0.55	0.55	-84.1	-111.5	-130.1	-151.1	86.7	-130.54
2.50	20.78	790.4	786.1	782.0	5.79	7.33	7.93	23.00	-33.9	-50.8	-46.7	0.69	0.54	-85.2	-109.9	-130.7	-150.8	100.0	-131.78
2.75	20.86	795.7	791.3	787.1	5.76	7.31	7.92	23.07	-34.9	-50.7	-46.5	0.87	0.56	-84.1	-109.2	-129.7	-150.6	148.1	-135.26
3.00	20.57	801.1	796.5	792.2	5.73	7.28	7.90	23.13	-35.7	-50.4	-46.3	1.08	0.70	-81.1	-108.1	-129.1	-149.7	177.0	-136.75
3.25	19.84	806.3	801.6	797.3	5.69	7.24	7.88	23.18	-36.4	-50.0	-45.8	1.29	0.96	-82.2	-107.3	-127.5	-147.9	211.6	-138.34
3.50	18.71	811.4	806.6	802.2	5.66	7.21	7.86	23.23	-37.4	-49.3	-45.5	1.49	1.09	-80.3	-105.7	-126.7	-147.2	302.4	-141.53
3.75	17.21	816.1	811.3	806.9	5.63	7.18	7.83	23.28	-38.3	-49.0	-45.3	1.63	1.22	-79.2	-105.4	-126.1	-146.8	361.5	-142.91
4.00	15.45	820.4	815.6	811.2	5.60	7.15	7.80	23.32	-39.2	-48.7	-44.6	1.71	1.47	-80.1	-105.3	-125.8	-146.0	507.5	-145.99
4.25	13.53	824.2	819.4	815.1	5.59	7.13	7.78	23.35	-40.0	-48.4	-44.2	1.69	1.41	-79.0	-105.5	-125.7	-146.6	606.7	-147.59
4.50	11.57	827.5	822.8	818.5	5.57	7.11	7.77	23.37	-40.7	-48.1	-44.1	1.59	1.47	-78.7	-105.7	-126.2	-146.4	851.6	-150.53
5.00	7.95	832.6	828.1	824.0	5.54	7.09	7.74	23.41	-42.0	-47.8	-44.2	1.22	1.41	-80.7	-106.1	-127.3	-147.7	1000.0	-151.69

\*at 25°C unless mentioned otherwise



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