

# Voltage Controlled Oscillator

## ZX95-810+

5V Tuning for PLL IC's 775 to 810 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



CASE STYLE: GB956

Connectors	Model
SMA	ZX95-810-S+

### Applications

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

**+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.	Max.
ZX95-810+	775	810	+0.5	-88	-112	-131	-151	0.5	5	12-13	70	60	-90	-19	-12	0.9	0.8	5	18

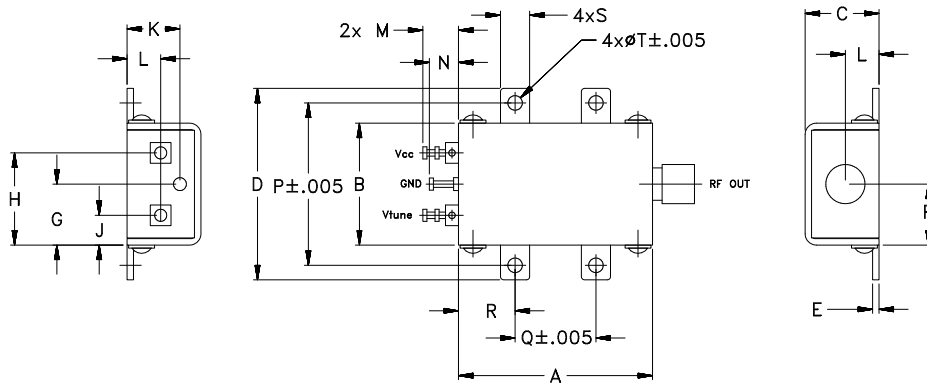
### Maximum Ratings

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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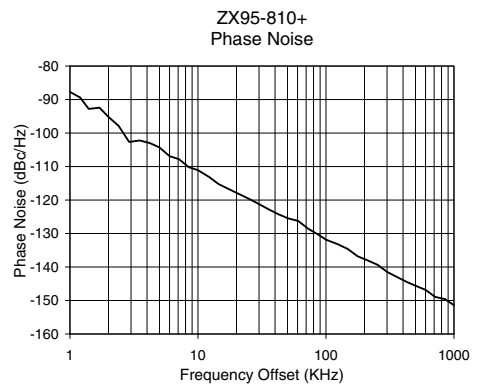
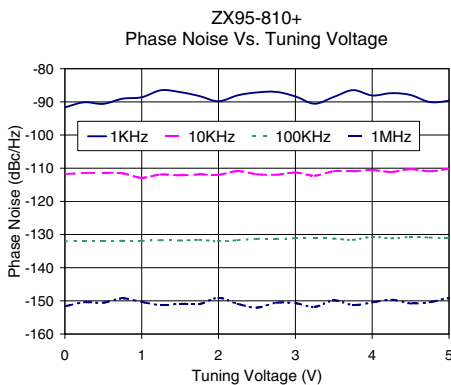
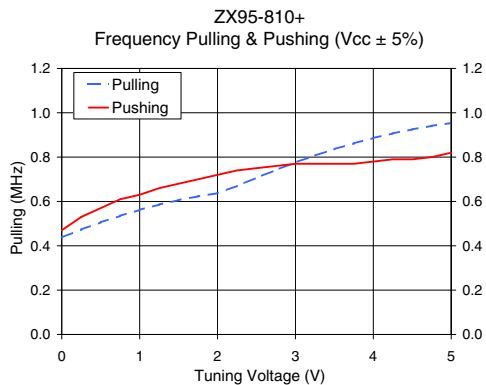
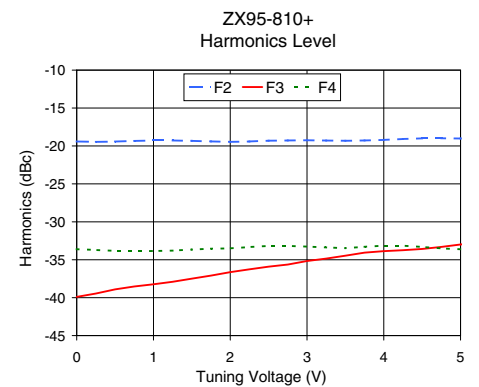
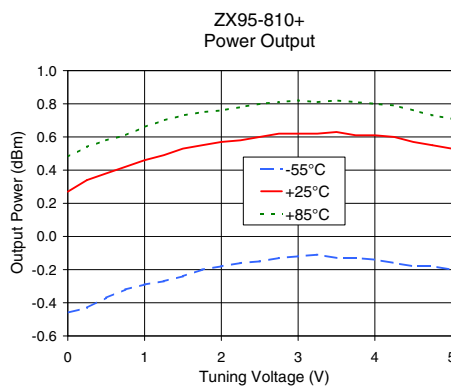
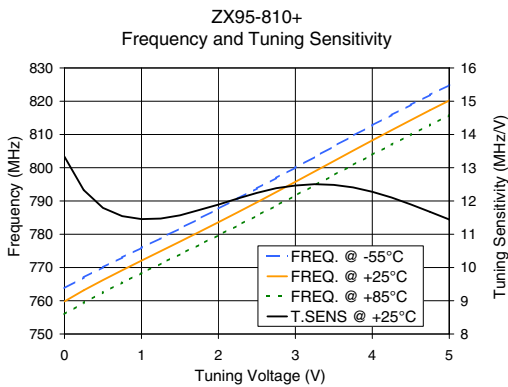


# Performance Data & Curves\*

# ZX95-810+

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 787 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	13.33	763.8	759.8	756.0	-0.46	0.27	0.48	12.45	-19.4	-39.9	-33.6	0.47	0.44	-91.7	-111.8	-132.0	-151.7	1.0	-87.71
0.50	11.79	770.1	766.2	762.5	-0.37	0.38	0.58	12.49	-19.4	-38.9	-33.8	0.57	0.51	-90.6	-111.4	-132.0	-150.6	2.0	-95.19
0.75	11.54	773.0	769.2	765.5	-0.32	0.42	0.61	12.51	-19.3	-38.5	-33.9	0.61	0.54	-89.1	-111.5	-131.9	-149.3	3.5	-102.21
1.00	11.46	775.9	772.1	768.3	-0.29	0.46	0.66	12.53	-19.3	-38.2	-33.9	0.63	0.56	-88.6	-112.9	-131.9	-150.3	6.0	-106.91
1.25	11.47	778.8	774.9	771.1	-0.27	0.49	0.70	12.55	-19.3	-37.9	-33.8	0.66	0.59	-86.5	-111.9	-131.7	-151.3	8.5	-110.21
1.50	11.57	781.7	777.8	774.0	-0.24	0.53	0.73	12.57	-19.3	-37.5	-33.7	0.68	0.61	-87.1	-112.2	-131.8	-150.9	10.0	-111.09
1.75	11.73	784.7	780.7	776.8	-0.20	0.55	0.75	12.58	-19.4	-37.1	-33.6	0.70	0.62	-88.3	-111.9	-131.6	-151.0	20.8	-118.18
2.00	11.89	787.7	783.6	779.7	-0.18	0.57	0.76	12.60	-19.5	-36.6	-33.5	0.72	0.64	-89.8	-112.0	-132.1	-149.1	35.5	-122.73
2.25	12.07	790.7	786.6	782.6	-0.16	0.58	0.78	12.61	-19.4	-36.3	-33.3	0.74	0.67	-88.0	-110.9	-131.7	-150.9	60.7	-126.23
2.50	12.24	793.8	789.6	785.6	-0.15	0.60	0.80	12.63	-19.3	-35.9	-33.2	0.75	0.71	-87.2	-111.8	-131.3	-152.0	86.7	-130.28
2.75	12.38	796.9	792.7	788.6	-0.13	0.62	0.81	12.64	-19.3	-35.6	-33.2	0.76	0.74	-87.0	-112.0	-131.3	-150.6	100.0	-131.84
3.00	12.46	800.1	795.8	791.6	-0.12	0.62	0.82	12.66	-19.2	-35.2	-33.3	0.77	0.78	-88.4	-111.3	-131.1	-150.7	148.1	-134.64
3.25	12.50	803.2	798.9	794.7	-0.11	0.62	0.81	12.67	-19.3	-34.9	-33.4	0.77	0.81	-90.5	-112.3	-131.2	-151.8	177.0	-136.80
3.50	12.48	806.4	802.0	797.8	-0.13	0.63	0.82	12.68	-19.3	-34.5	-33.5	0.77	0.84	-88.5	-110.9	-131.2	-149.9	211.6	-138.03
3.75	12.41	809.6	805.1	800.8	-0.13	0.61	0.81	12.69	-19.3	-34.1	-33.3	0.77	0.86	-86.5	-110.9	-131.6	-151.2	302.4	-141.53
4.00	12.28	812.7	808.2	803.9	-0.14	0.61	0.80	12.70	-19.2	-33.9	-33.1	0.78	0.89	-88.1	-110.6	-130.7	-150.5	361.5	-143.04
4.25	12.10	815.8	811.3	806.9	-0.16	0.60	0.79	12.71	-19.1	-33.7	-33.1	0.79	0.91	-87.4	-111.1	-131.2	-149.7	507.5	-145.68
4.50	11.90	818.9	814.3	809.9	-0.18	0.57	0.76	12.71	-19.0	-33.6	-33.3	0.79	0.93	-87.9	-110.3	-130.7	-150.8	600.0	-146.82
4.75	11.67	821.9	817.3	812.9	-0.18	0.55	0.73	12.72	-19.0	-33.3	-33.5	0.80	0.94	-90.1	-110.9	-130.9	-150.4	851.6	-149.61
5.00	11.44	824.9	820.2	815.8	-0.20	0.53	0.71	12.72	-19.0	-33.0	-33.6	0.82	0.95	-89.6	-110.3	-131.1	-149.3	1000.0	-151.40

\*at 25°C unless mentioned otherwise



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