

Coaxial

Voltage Controlled Oscillator

ZX95-2210+

5V Tuning for PLL IC's 2200 to 2240 MHz

Features

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



CASE STYLE: GB956

Applications

- r & d
- lab
- instrumentation
- wireless communications
- cellular Infrastructure

Connectors	Model
SMA	ZX95-2210-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	
								VOLTAGE RANGE (V)	SENSI- TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)								
											Typ.	Typ.							
ZX95-2210+	Min.	Max.	Typ.	1	10	100	1000	Min.	Max.	Typ.	Typ.	Typ.	Typ.	Typ.	Max.	Typ.	Typ.	Vcc	Current
				-83	-106	-126	-146	0.5	4.5	21-25	34	60	-90	-20	-10	1.5	0.5	5	35

Maximum Ratings

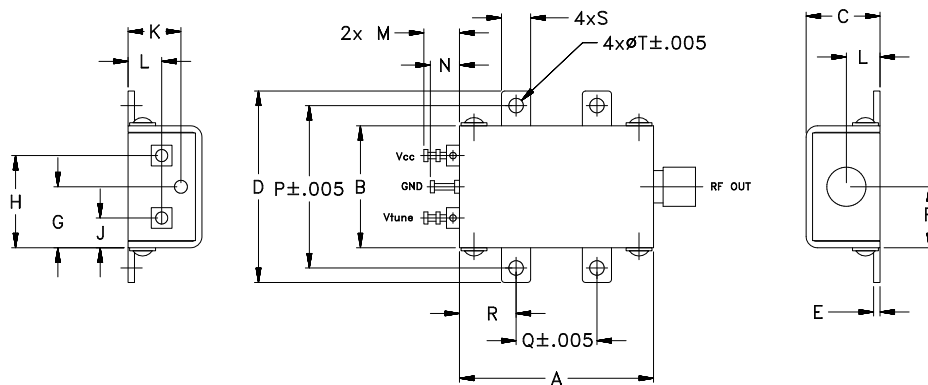
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	7.0V
Absolute Max. Tuning Voltage (Vtune)	6.5V
All specifications	50 ohm system

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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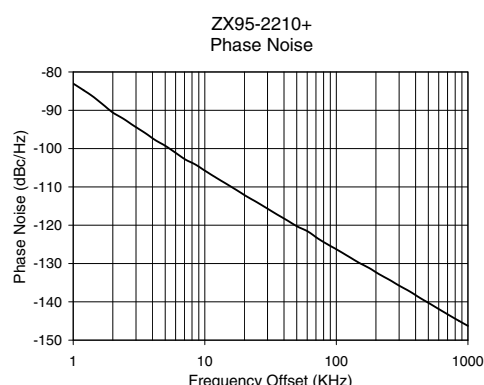
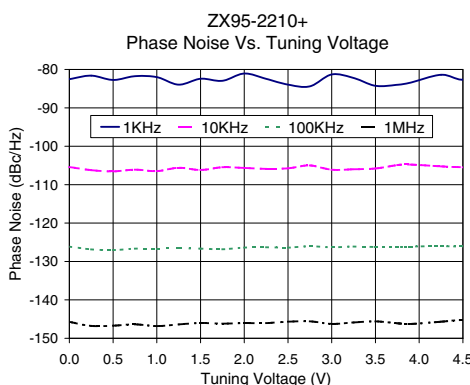
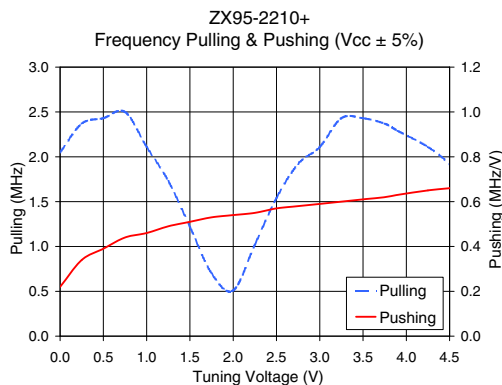
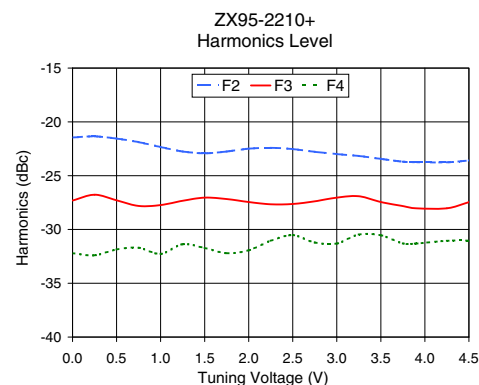
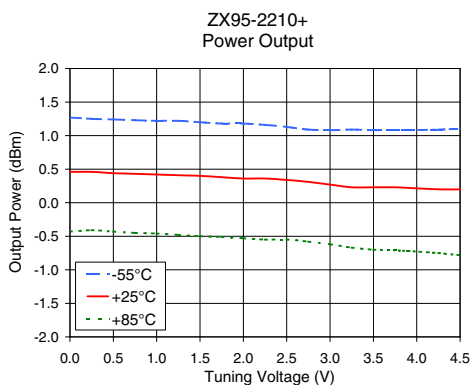
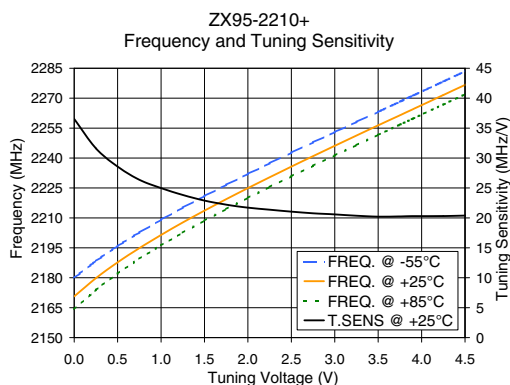
REV. A
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Performance Data & Curves*

ZX95-2210+

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 2220 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	36.54	2180.0	2170.7	2164.3	1.27	0.46	-0.43	25.77	-21.5	-27.3	-32.2	0.22	2.05	-82.5	-105.4	-126.1	-145.7	1.0	-83.04
0.25	31.62	2188.4	2179.8	2173.9	1.25	0.46	-0.41	25.77	-21.4	-26.8	-32.4	0.34	2.37	-81.6	-106.2	-126.8	-146.8	2.0	-90.61
0.50	28.57	2195.9	2187.7	2182.2	1.24	0.44	-0.43	25.77	-21.6	-27.3	-31.9	0.39	2.43	-82.7	-106.6	-127.0	-146.7	3.5	-95.87
0.75	26.36	2202.7	2194.9	2189.5	1.23	0.43	-0.45	25.77	-21.9	-27.8	-31.7	0.44	2.50	-81.8	-106.1	-126.7	-146.4	6.0	-101.09
1.00	24.98	2209.1	2201.4	2196.3	1.22	0.42	-0.46	25.77	-22.3	-27.7	-32.3	0.46	2.11	-82.0	-106.5	-126.6	-146.8	8.5	-104.17
1.25	23.84	2215.1	2207.7	2202.6	1.22	0.41	-0.48	25.76	-22.8	-27.3	-31.4	0.49	1.73	-84.0	-105.6	-126.6	-146.4	10.0	-105.74
1.50	22.90	2221.0	2213.6	2208.6	1.20	0.40	-0.50	25.76	-22.9	-27.0	-31.7	0.51	1.22	-82.4	-106.2	-126.7	-146.0	20.8	-112.47
1.75	22.21	2226.6	2219.4	2214.4	1.18	0.38	-0.51	25.76	-22.8	-27.2	-32.2	0.53	0.70	-83.0	-105.5	-126.8	-146.2	35.5	-117.22
2.00	21.72	2232.0	2224.9	2220.0	1.18	0.36	-0.53	25.76	-22.5	-27.5	-31.9	0.54	0.51	-81.1	-105.6	-126.4	-146.0	60.7	-121.62
2.25	21.37	2237.4	2230.4	2225.5	1.16	0.36	-0.55	25.76	-22.4	-27.7	-31.1	0.55	1.02	-82.5	-105.9	-126.3	-146.1	86.7	-125.10
2.50	21.05	2242.7	2235.7	2230.9	1.13	0.34	-0.55	25.76	-22.5	-27.6	-30.5	0.57	1.54	-84.0	-105.8	-126.4	-145.7	100.0	-126.28
2.75	20.77	2247.9	2241.0	2236.1	1.09	0.31	-0.58	25.76	-22.8	-27.4	-31.2	0.58	1.92	-84.4	-105.0	-126.0	-145.6	148.1	-129.77
3.00	20.59	2253.0	2246.2	2241.3	1.08	0.27	-0.62	25.75	-23.0	-27.0	-31.3	0.59	2.11	-81.3	-106.1	-126.3	-146.3	211.6	-132.80
3.25	20.36	2258.1	2251.3	2246.5	1.09	0.23	-0.67	25.75	-23.2	-26.9	-30.5	0.60	2.43	-82.2	-106.0	-126.1	-145.9	302.4	-135.83
3.50	20.21	2263.2	2256.4	2251.6	1.08	0.23	-0.70	25.75	-23.4	-27.5	-30.5	0.61	2.43	-84.3	-105.8	-126.2	-145.6	361.5	-137.31
3.75	20.25	2268.2	2261.4	2256.7	1.08	0.23	-0.71	25.75	-23.7	-27.8	-31.3	0.62	2.37	-84.0	-104.9	-126.3	-146.1	507.5	-140.37
3.90	20.29	2271.3	2264.5	2259.8	1.08	0.22	-0.72	25.75	-23.8	-28.0	-31.3	0.63	2.29	-83.5	-104.8	-126.1	-146.3	606.7	-141.97
4.25	20.31	2278.3	2271.6	2266.8	1.09	0.20	-0.75	25.75	-23.8	-28.0	-31.1	0.65	2.11	-81.4	-105.2	-126.0	-145.7	851.6	-144.93
4.50	20.39	2283.4	2276.7	2271.9	1.10	0.20	-0.78	25.74	-23.6	-27.5	-31.0	0.66	1.92	-82.7	-105.5	-126.1	-145.2	1000.0	-146.27

*at 25°C unless mentioned otherwise



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