Coaxial

Voltage Controlled Oscillator ZX95-2510+

5V Tuning for PLL IC's 2300 to 2510 MHz

Features

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

Applications

- r & d
- lab
- instrumentation
- wireless communications
- WiMAX 2.5 GHz

CASE STYLE: GB956

Connectors	Model
SMA	ZX95-2510-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 dBr (MHz)	PUSHING (MHz/V)	DC OPERATING POWER	
								VOLTAGE RANGE (V)		SENSI-TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)						Vcc (volts)	Current (mA)
	Min.	Max.	Typ.	1	10	100	1000	Min.	Max.	Typ.	Typ.	Typ.	Typ.	Typ.	Max.	Typ.	Typ.		Max.
ZX95-2510+	2300	2510	+4	-69	-96	-118	-138	0.5	5	85-103	40	35	-90	-18	-10	0.8	1	5	40

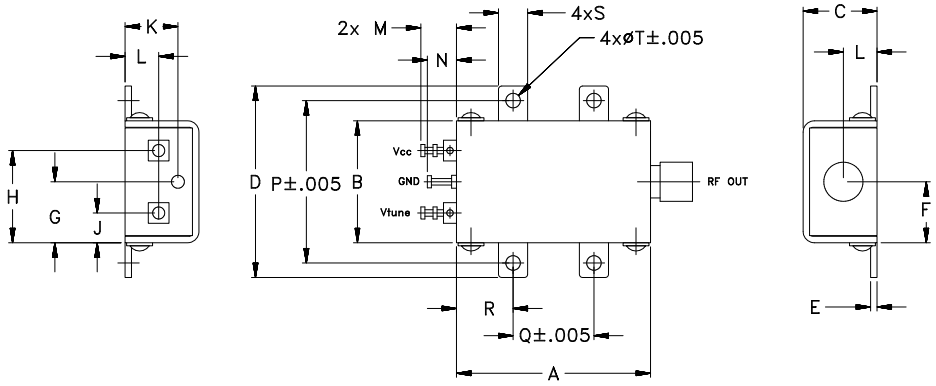
Maximum Ratings

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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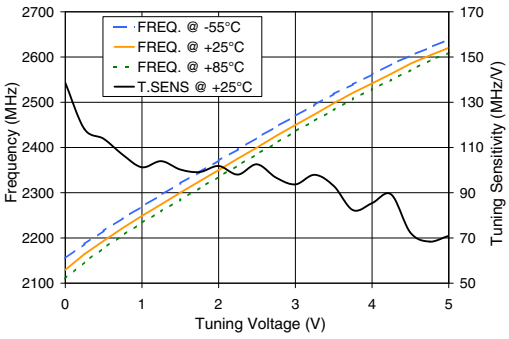
Performance Data & Curves*

ZX95-2510+

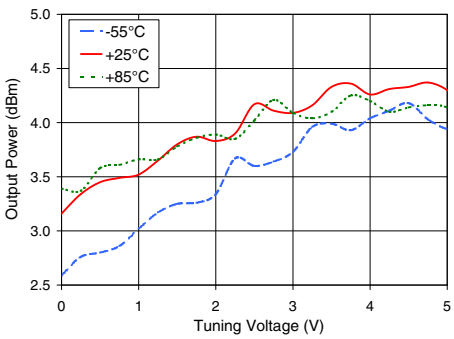
V TUNE	TUNE SENS (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)			Icc (mA)	HARMONICS (dBc)			FREQ. PUSH (MHz/V)	FREQ. PULL (MHz)	PHASE NOISE (dBc/Hz) at offsets				FREQ OFFSET (KHz)	PHASE NOISE at 2405 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	138.62	2155.0	2129.5	2110.1	2.59	3.16	3.39	32.59	-20.7	-16.4	-32.3	3.70	0.36	-69.2	-96.2	-118.5	-138.6	1.0	-69.22
0.50	113.85	2216.0	2193.7	2177.7	2.80	3.45	3.58	32.72	-20.0	-18.7	-32.6	1.15	0.50	-70.6	-97.0	-119.2	-139.3	2.0	-78.04
0.75	106.77	2243.7	2222.2	2205.9	2.86	3.49	3.61	32.69	-20.7	-18.4	-31.0	0.77	0.19	-68.5	-96.8	-118.9	-139.0	3.5	-85.27
1.00	101.26	2269.4	2248.9	2233.7	3.02	3.52	3.66	32.74	-19.0	-19.7	-29.1	0.64	0.52	-70.0	-97.2	-119.4	-139.4	6.0	-91.04
1.25	103.96	2295.5	2274.2	2259.2	3.17	3.65	3.66	32.69	-19.4	-21.7	-30.1	0.50	0.10	-69.8	-96.8	-118.8	-138.8	8.5	-94.71
1.50	100.26	2320.9	2300.2	2284.5	3.25	3.80	3.78	32.61	-18.8	-24.1	-32.3	0.33	0.52	-69.0	-96.0	-118.4	-138.4	10.0	-96.30
1.75	99.13	2345.6	2325.3	2310.5	3.26	3.87	3.86	32.62	-18.8	-25.3	-33.6	0.35	0.45	-68.6	-96.7	-118.8	-138.9	20.8	-103.44
2.00	101.80	2371.1	2350.1	2335.1	3.34	3.83	3.89	32.54	-17.8	-30.4	-36.4	0.32	0.40	-68.8	-96.3	-118.3	-138.4	35.5	-108.50
2.25	98.02	2395.8	2375.5	2360.3	3.67	3.90	3.85	32.47	-18.2	-35.8	-41.9	0.39	0.80	-69.0	-96.3	-118.4	-138.5	60.7	-113.24
2.50	102.57	2421.3	2400.0	2385.4	3.60	4.17	4.02	32.38	-17.9	-36.4	-43.8	0.70	0.45	-69.4	-96.2	-118.1	-138.1	85.2	-116.48
2.75	96.65	2446.1	2425.6	2410.0	3.64	4.11	4.21	32.29	-18.2	-32.4	-54.1	1.11	0.87	-68.2	-95.1	-117.1	-137.2	100.0	-117.94
3.00	93.70	2469.8	2449.8	2436.0	3.73	4.09	4.09	32.27	-17.1	-29.7	-57.5	1.68	1.18	-69.2	-96.1	-118.1	-138.2	142.9	-121.06
3.25	97.94	2494.4	2473.2	2459.1	3.96	4.16	4.04	32.14	-17.2	-26.8	-56.6	2.31	0.64	-69.8	-95.5	-117.3	-137.4	167.8	-122.56
3.50	93.02	2518.3	2497.7	2482.7	3.99	4.33	4.10	31.98	-17.1	-26.7	-50.2	2.87	1.58	-69.9	-96.3	-118.1	-138.2	200.6	-124.04
3.75	82.31	2539.4	2521.0	2507.8	3.93	4.36	4.25	32.01	-17.2	-25.7	-47.9	3.41	1.50	-69.5	-96.5	-118.2	-138.4	281.6	-127.09
4.00	85.38	2561.3	2541.6	2528.9	4.04	4.26	4.20	31.92	-16.6	-25.7	-47.8	4.00	0.90	-68.5	-95.4	-117.3	-137.4	330.7	-128.56
4.25	89.27	2584.2	2562.9	2549.6	4.11	4.31	4.10	31.78	-16.7	-25.7	-48.4	4.34	1.69	-68.6	-94.3	-116.5	-136.7	464.2	-131.46
4.50	72.37	2602.8	2585.2	2570.7	4.18	4.33	4.14	31.66	-17.3	-26.3	-48.5	4.73	2.18	-69.2	-95.4	-117.1	-137.3	554.9	-132.99
4.75	68.40	2620.7	2603.3	2592.2	4.03	4.37	4.16	31.65	-16.8	-27.2	-47.5	3.98	1.61	-70.4	-95.9	-117.4	-137.6	914.6	-137.22
5.00	70.90	2638.9	2620.4	2609.2	3.94	4.30	4.14	31.55	-17.4	-26.9	-48.3	4.08	1.74	-70.4	-94.8	-116.4	-136.6	1000.0	-138.00

*at 25°C unless mentioned otherwise

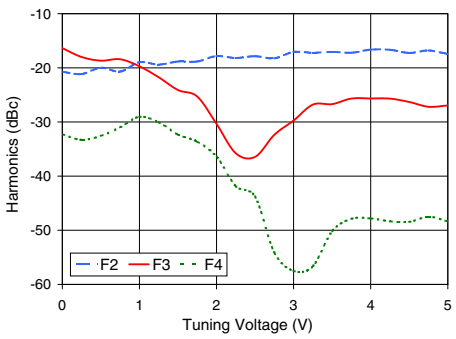
ZX95-2510+
Frequency and Tuning Sensitivity



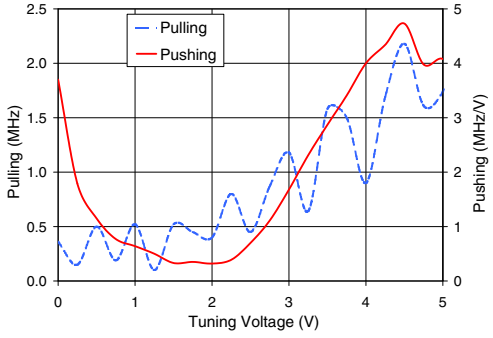
ZX95-2510+
Power Output



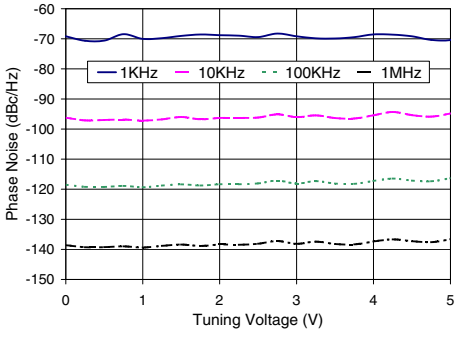
ZX95-2510+
Harmonics Level



ZX95-2510+
Frequency Pulling & Pushing (Vcc ± 5%)



ZX95-2510+
Phase Noise Vs. Tuning Voltage



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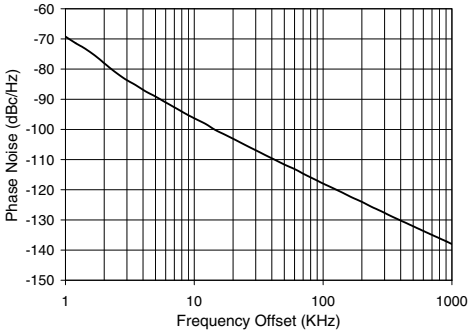
Phase Noise



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