Coaxial

Voltage Controlled Oscillator

ZX95-610+

5V Tuning for PLL IC's 510 to 610 MHz

Features

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

Applications

- r & d
- lab
- instrumentation
- wireless sensor

CASE STYLE: GB956

Connectors	Model
SMA	ZX95-610-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 VOLTAGE RANGE (V)		SENSI-TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)	NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @12 dBr (MHz)	PUSHING (MHz/V)	DC OPERATING POWER Vcc (volts)	DC OPERATING POWER Current (mA)
	Min.	Max.	Typ.	1	10	100	1000	Min.	Max.	Typ.	Typ.	Typ.	Typ.	Typ.	Max.	Typ.	Typ.		Max.
ZX95-610+	510	610	+4.2	-80	-108	-129	-149	0.25	4.5	41-55	73	50	-90	-25	-10	0.9	0.5	5	40

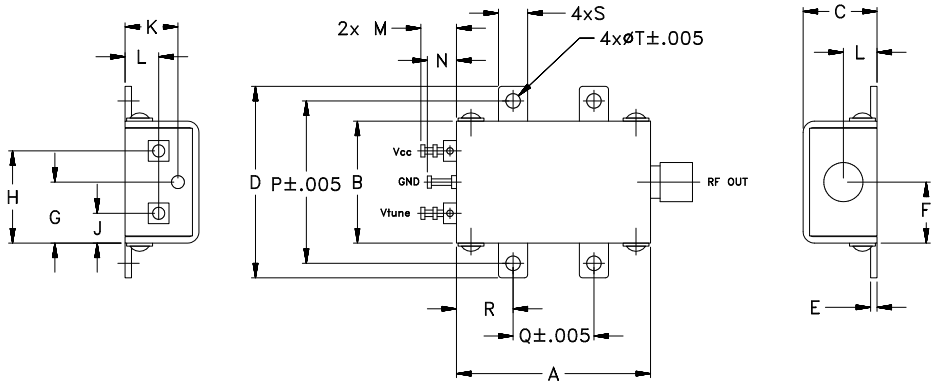
Maximum Ratings

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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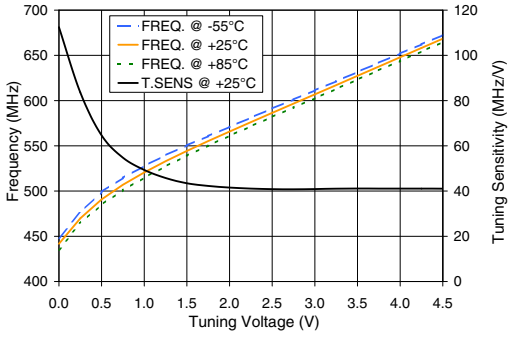
Performance Data & Curves*

ZX95-610+

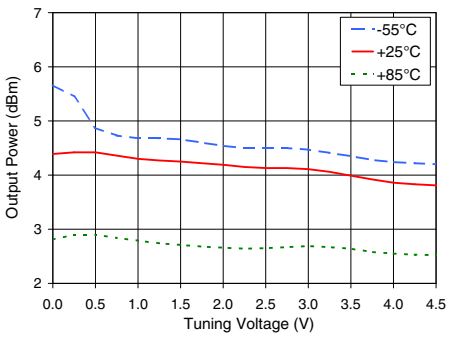
V TUNE	TUNE SENS (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)			Icc (mA)	HARMONICS (dBc)			FREQ. PUSH (MHz/V)	FREQ. PULL (MHz)	PHASE NOISE (dBc/Hz) at offsets				FREQ OFFSET (KHz)	PHASE NOISE at 560 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	112.48	448.4	441.8	435.3	5.66	4.39	2.81	32.61	-10.5	-34.3	-37.1	4.39	0.48	-71.4	-98.5	-118.5	-138.6	1.0	-79.13
0.25	83.60	476.2	469.9	464.5	5.45	4.42	2.90	32.53	-13.5	-33.5	-35.8	3.42	0.27	-71.2	-102.1	-123.3	-143.2	2.0	-90.15
0.50	64.63	499.1	490.8	484.9	4.87	4.42	2.90	32.50	-16.4	-32.6	-35.3	2.30	0.17	-77.7	-104.3	-127.5	-147.6	3.5	-96.90
0.75	54.77	514.6	506.9	501.0	4.73	4.36	2.84	32.53	-19.1	-32.0	-35.9	1.29	0.14	-78.1	-107.1	-128.9	-149.2	6.0	-102.22
1.00	49.33	527.7	520.6	514.8	4.68	4.30	2.79	32.57	-21.3	-31.7	-36.6	0.84	0.11	-78.5	-107.2	-129.0	-149.5	8.5	-106.07
1.25	45.76	539.6	533.0	527.4	4.68	4.27	2.74	32.60	-23.6	-31.6	-37.2	0.60	0.36	-80.1	-106.8	-129.1	-149.7	10.0	-107.66
1.50	43.43	550.4	544.4	539.1	4.66	4.25	2.71	32.63	-25.7	-31.4	-37.5	0.51	0.71	-79.4	-107.8	-129.2	-149.5	20.8	-114.65
1.75	42.26	560.7	555.3	550.2	4.60	4.22	2.68	32.67	-27.1	-31.0	-38.1	0.53	1.08	-79.3	-107.1	-128.9	-149.5	35.5	-119.72
2.00	41.54	571.0	565.8	561.1	4.54	4.19	2.66	32.71	-28.8	-31.2	-38.8	0.52	1.34	-79.7	-107.8	-129.2	-150.0	60.7	-124.74
2.25	41.08	581.1	576.2	571.6	4.50	4.15	2.64	32.76	-30.0	-30.8	-40.8	0.46	1.45	-79.4	-107.6	-129.5	-149.7	86.7	-128.15
2.50	40.85	591.2	586.5	582.0	4.50	4.13	2.65	32.81	-31.6	-30.7	-40.7	0.40	1.39	-80.0	-108.9	-129.5	-149.9	100.0	-129.46
2.75	40.77	601.2	596.7	592.3	4.50	4.13	2.67	32.87	-32.6	-30.9	-37.9	0.32	1.17	-79.8	-107.8	-129.6	-149.7	148.1	-132.83
3.00	40.87	611.3	606.9	602.6	4.47	4.11	2.69	32.92	-32.6	-30.8	-39.8	0.27	0.91	-79.5	-107.9	-129.2	-149.5	211.6	-136.03
3.25	41.04	621.4	617.1	612.9	4.41	4.06	2.67	32.96	-33.7	-30.7	-40.8	0.22	0.54	-80.4	-109.5	-129.0	-149.3	302.4	-139.22
3.50	41.11	631.6	627.4	623.2	4.35	3.99	2.64	33.01	-34.4	-31.0	-42.3	0.18	0.37	-79.5	-107.6	-129.3	-149.1	361.5	-140.60
3.75	41.08	641.8	637.6	633.5	4.28	3.92	2.58	33.06	-35.8	-31.0	-42.8	0.15	0.77	-78.2	-107.8	-129.1	-149.5	507.5	-143.93
4.00	41.07	652.0	647.9	643.9	4.24	3.86	2.55	33.11	-35.8	-30.9	-43.3	0.14	1.23	-79.4	-108.7	-129.1	-149.3	606.7	-145.39
4.25	41.07	662.2	658.2	654.3	4.22	3.83	2.53	33.15	-36.6	-31.1	-43.8	0.14	1.58	-79.7	-109.0	-129.0	-149.3	851.6	-148.34
4.50	41.06	672.4	668.4	664.6	4.20	3.81	2.52	33.18	-36.9	-31.8	-43.5	0.16	1.74	-81.1	-109.4	-129.0	-149.1	1000.0	-149.38

*at 25°C unless mentioned otherwise

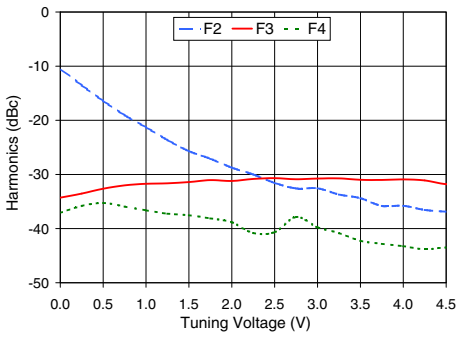
ZX95-610+
Frequency and Tuning Sensitivity



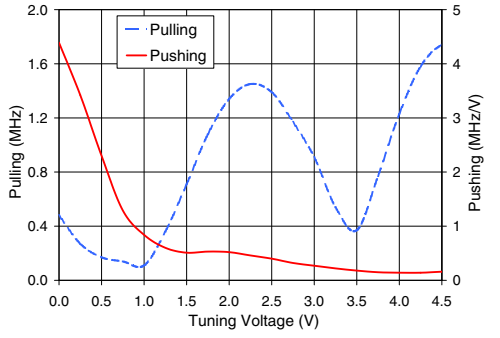
ZX95-610+
Power Output



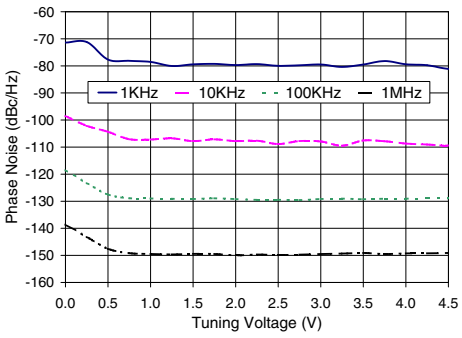
ZX95-610+
Harmonics Level



ZX95-610+
Frequency Pulling & Pushing (Vcc ± 5%)



ZX95-610+
Phase Noise Vs. Tuning Voltage



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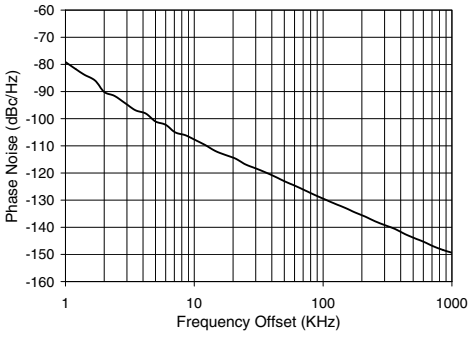
Phase Noise



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