Coaxial

Voltage Controlled Oscillator

ZX95-694+

5V Tuning for PLL IC's 584 to 694 MHz

Features

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

Applications

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

CASE STYLE: GB956

Connectors	Model
SMA	ZX95-694-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.
ZX95-694+	584	694	-0.2	-81	-107	-128	-148	0.5	5	42-49	65	40	-90	-29	-15	0.7	0.3	5	38

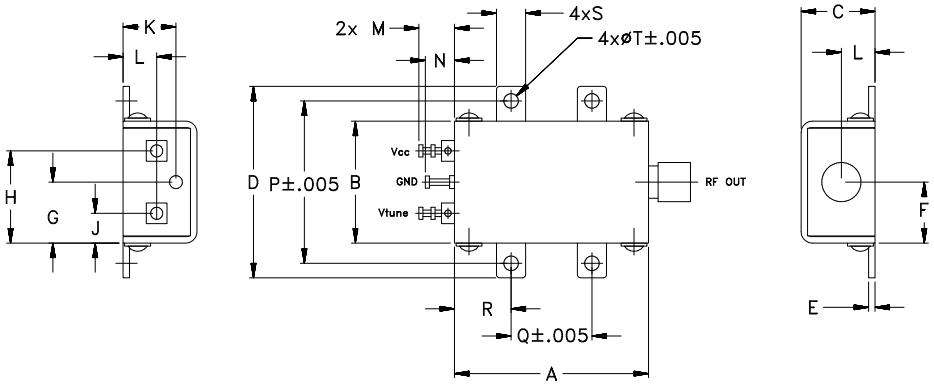
Maximum Ratings

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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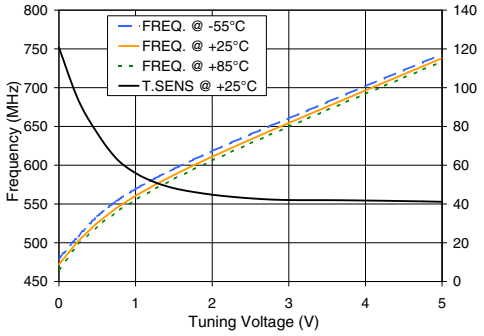
Performance Data & Curves*

ZX95-694+

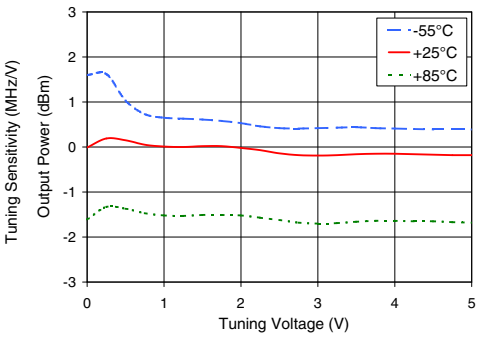
V TUNE	TUNE SENS (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)			Icc (mA)	HARMONICS (dBc)			FREQ. PUSH (MHz/V)	FREQ. PULL (MHz)	PHASE NOISE (dBc/Hz) at offsets				FREQ OFFSET (KHz)	PHASE NOISE at 639 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	120.74	479.5	472.0	465.7	1.60	-0.01	-1.61	31.87	-13.5	-32.4	-35.3	4.12	0.39	-68.8	-95.5	-117.1	-137.6	1.0	-79.86
0.50	76.55	534.0	525.6	521.2	1.03	0.15	-1.37	31.80	-18.7	-30.0	-34.5	3.26	0.92	-76.1	-101.9	-124.9	-145.0	2.0	-89.18
0.75	63.44	553.7	544.8	539.8	0.73	0.05	-1.47	31.83	-20.9	-29.4	-35.6	2.19	0.73	-76.6	-104.9	-126.8	-147.0	3.5	-96.39
1.00	55.94	569.3	560.6	555.4	0.65	0.01	-1.52	31.84	-22.5	-29.3	-37.1	1.50	0.57	-78.8	-105.9	-127.4	-147.9	6.0	-101.88
1.25	51.21	582.9	574.6	569.4	0.63	0.00	-1.53	31.86	-24.0	-29.1	-38.7	1.07	0.67	-78.8	-106.4	-127.8	-148.3	8.5	-105.35
1.50	48.14	595.3	587.4	582.2	0.61	0.02	-1.51	31.88	-25.5	-29.0	-41.0	0.76	0.63	-80.4	-106.4	-127.9	-148.9	10.0	-106.94
1.75	46.24	607.0	599.5	594.2	0.58	0.02	-1.51	31.91	-26.6	-29.4	-39.5	0.55	0.70	-80.3	-106.4	-128.1	-148.6	20.8	-113.81
2.00	44.79	618.3	611.0	605.8	0.53	-0.02	-1.52	31.92	-27.4	-29.0	-39.5	0.37	0.74	-80.1	-106.4	-127.9	-148.5	35.6	-118.66
2.25	43.74	629.2	622.2	617.1	0.46	-0.07	-1.57	31.94	-28.2	-29.3	-40.9	0.24	0.71	-80.5	-106.8	-128.1	-148.4	60.8	-122.84
2.50	42.93	639.9	633.1	628.1	0.42	-0.14	-1.62	31.96	-28.6	-29.3	-42.0	0.16	0.82	-80.7	-106.8	-128.1	-148.3	86.9	-126.72
2.75	42.30	650.4	643.9	639.0	0.41	-0.18	-1.68	31.98	-29.5	-29.7	-41.7	0.13	0.89	-81.2	-106.8	-128.0	-148.5	100.0	-127.99
3.00	42.04	660.6	654.5	649.7	0.42	-0.19	-1.70	32.00	-29.7	-29.7	-41.5	0.14	0.85	-81.1	-106.7	-128.0	-148.1	145.8	-131.38
3.25	41.97	670.9	665.0	660.3	0.43	-0.18	-1.69	32.01	-30.2	-30.1	-41.1	0.13	0.66	-80.2	-107.1	-127.9	-148.2	171.2	-132.82
3.50	41.99	681.2	675.5	670.9	0.44	-0.16	-1.66	32.03	-30.5	-30.1	-40.7	0.10	0.64	-81.8	-107.0	-128.0	-148.0	204.6	-134.39
3.75	41.91	691.6	686.0	681.5	0.42	-0.15	-1.64	32.05	-30.8	-30.1	-41.0	0.05	0.57	-81.2	-106.7	-127.9	-148.0	287.3	-137.38
4.00	41.79	701.9	696.4	692.0	0.41	-0.15	-1.64	32.06	-30.9	-30.8	-40.6	0.00	0.78	-80.2	-106.8	-127.7	-148.0	337.4	-138.72
4.25	41.65	712.2	706.9	702.4	0.40	-0.16	-1.65	32.07	-31.3	-31.1	-41.2	0.05	0.91	-81.4	-106.8	-127.9	-147.8	473.6	-141.81
4.50	41.50	722.5	717.3	712.9	0.39	-0.17	-1.65	32.08	-30.9	-31.3	-41.3	0.10	0.95	-81.3	-107.0	-127.8	-147.8	566.2	-143.38
4.75	41.34	732.7	727.7	723.3	0.39	-0.18	-1.67	32.08	-31.1	-31.8	-41.7	0.14	0.89	-80.3	-106.8	-127.8	-147.6	933.4	-147.64
5.00	41.14	742.9	738.0	733.7	0.39	-0.18	-1.68	32.08	-31.2	-32.5	-42.3	0.17	0.77	-79.7	-106.5	-127.6	-147.7	1000.0	-148.32

*at 25°C unless mentioned otherwise

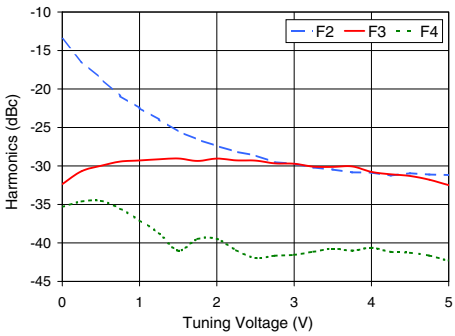
ZX95-694+
Frequency and Tuning Sensitivity



ZX95-694+
Power Output



ZX95-694+
Harmonics Level



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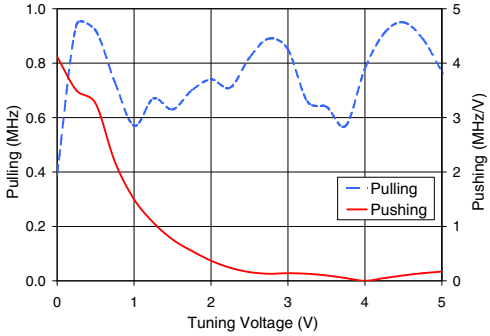
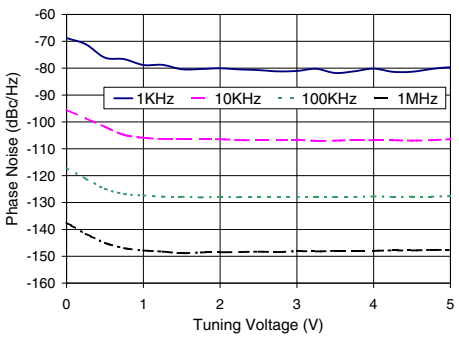
Frequency Pulling & Pushing (Vcc ± 5%)



ZX95-694+
Phase Noise Vs. Tuning Voltage



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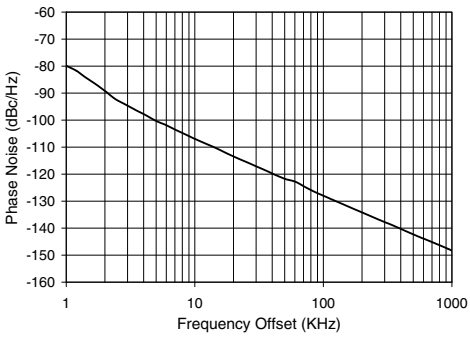
Phase Noise



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