Coaxial

Voltage Controlled Oscillator

ZX95-694A+

5V Tuning for PLL IC's 689 to 704 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
- military & avionics

CASE STYLE: GB956

Connectors	Model
SMA	ZX95-694A-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.
ZX95-694A+	689	704	+0.6	-91	-119	-141	-160	0.5	5	11	41	40	-90	-26	-15	0.2	0.6	5	35

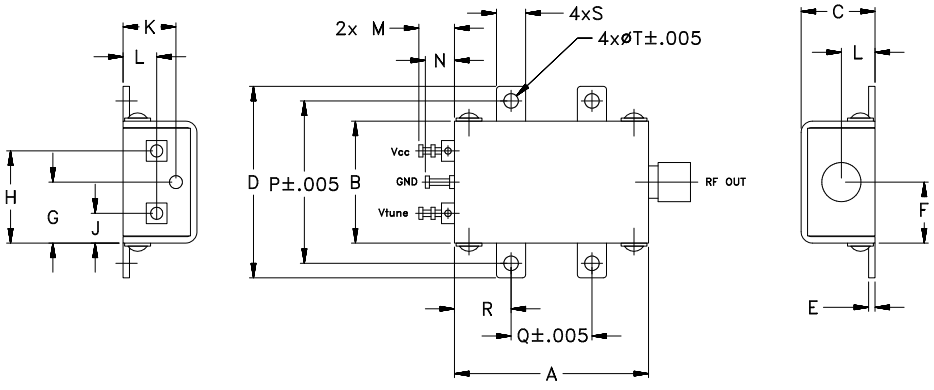
Maximum Ratings

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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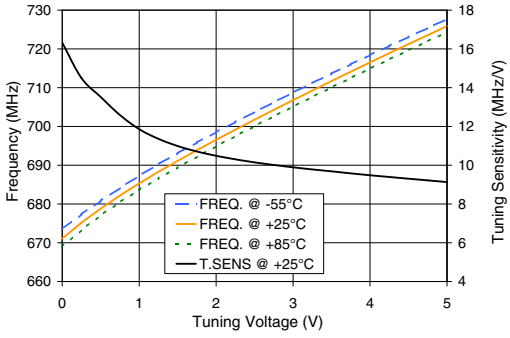
Performance Data & Curves*

ZX95-694A+

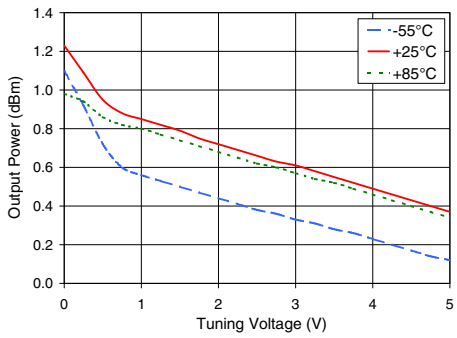
V TUNE	TUNE SENS (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)			Icc (mA)	HARMONICS (dBc)			FREQ. PUSH (MHz/V)	FREQ. PULL (MHz)	PHASE NOISE (dBc/Hz) at offsets				FREQ OFFSET (KHz)	PHASE NOISE at 697 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	16.32	673.5	671.1	669.0	1.10	1.23	0.98	25.54	-24.3	-34.3	-45.0	1.01	0.13	-86.6	-115.1	-136.2	-156.5	1.0	-90.45
0.50	13.52	680.8	678.8	677.1	0.72	0.95	0.86	25.71	-25.0	-29.8	-40.9	1.01	0.15	-90.4	-117.2	-140.0	-159.8	2.0	-99.76
0.75	12.59	684.1	682.2	680.5	0.60	0.88	0.82	25.72	-25.3	-28.7	-41.4	1.00	0.16	-90.1	-117.6	-140.3	-160.2	3.5	-106.02
1.00	11.86	687.3	685.3	683.6	0.56	0.85	0.80	25.72	-25.1	-27.9	-41.2	0.88	0.16	-89.6	-117.6	-141.1	-160.3	6.0	-112.48
1.25	11.36	690.3	688.3	686.6	0.53	0.82	0.77	25.71	-25.1	-28.0	-41.4	0.79	0.17	-89.9	-117.5	-141.3	-161.2	8.5	-116.42
1.50	10.99	693.1	691.1	689.4	0.50	0.79	0.74	25.70	-25.1	-28.7	-41.5	0.74	0.17	-89.3	-118.2	-141.6	-159.8	10.0	-118.10
1.75	10.71	695.9	693.9	692.2	0.47	0.75	0.71	25.69	-25.8	-29.0	-40.4	0.70	0.18	-89.4	-118.6	-141.3	-160.6	20.8	-125.93
2.00	10.49	698.5	696.6	694.9	0.44	0.72	0.68	25.68	-26.2	-28.7	-39.2	0.69	0.18	-90.2	-118.6	-140.7	-160.7	35.5	-131.79
2.25	10.30	701.1	699.2	697.5	0.41	0.69	0.65	25.66	-26.2	-28.1	-38.6	0.68	0.19	-92.0	-118.4	-141.3	-161.0	60.7	-136.95
2.50	10.14	703.7	701.8	700.1	0.38	0.66	0.62	25.65	-26.6	-27.8	-38.8	0.67	0.20	-91.2	-118.6	-141.7	-160.3	86.7	-139.92
2.75	10.01	706.2	704.3	702.6	0.36	0.63	0.60	25.63	-26.5	-27.7	-38.8	0.67	0.21	-92.2	-118.2	-141.6	-161.2	100.0	-141.41
3.00	9.89	708.7	706.8	705.1	0.33	0.61	0.57	25.61	-26.3	-27.6	-39.3	0.68	0.22	-92.1	-118.5	-141.6	-161.6	148.1	-145.17
3.25	9.78	711.2	709.3	707.6	0.31	0.58	0.54	25.60	-26.2	-27.2	-40.0	0.69	0.23	-91.9	-118.3	-142.4	-160.2	177.0	-146.30
3.50	9.68	713.6	711.7	710.1	0.28	0.55	0.52	25.58	-26.1	-26.7	-40.4	0.70	0.24	-89.9	-118.3	-141.2	-160.6	211.6	-147.86
3.75	9.58	716.0	714.1	712.5	0.26	0.52	0.49	25.57	-26.1	-26.4	-40.4	0.71	0.25	-90.7	-118.3	-141.1	-161.4	302.4	-150.95
4.00	9.48	718.4	716.5	714.9	0.23	0.49	0.46	25.55	-26.3	-26.6	-40.3	0.72	0.25	-88.8	-118.2	-141.4	-160.7	361.5	-152.71
4.25	9.39	720.8	718.9	717.3	0.20	0.46	0.43	25.54	-27.0	-26.9	-40.6	0.74	0.26	-89.0	-117.8	-141.2	-160.1	507.5	-155.67
4.50	9.30	723.1	721.2	719.6	0.17	0.43	0.40	25.52	-27.3	-27.0	-40.6	0.75	0.26	-90.2	-117.7	-141.2	-160.3	606.7	-157.07
4.75	9.22	725.4	723.6	722.0	0.14	0.40	0.37	25.51	-27.4	-26.9	-40.2	0.76	0.26	-88.3	-117.8	-141.2	-160.3	851.6	-159.71
5.00	9.13	727.7	725.9	724.3	0.12	0.37	0.34	25.49	-27.5	-26.7	-39.9	0.78	0.26	-90.3	-117.3	-141.2	-160.1	1000.0	-160.47

*at 25°C unless mentioned otherwise

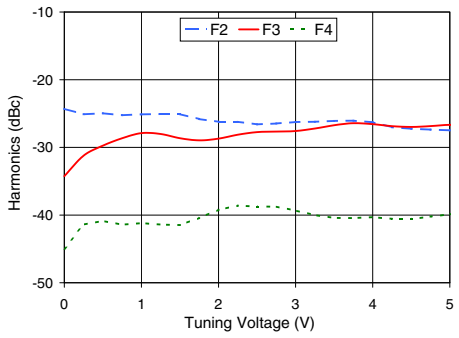
ZX95-694A+
Frequency and Tuning Sensitivity



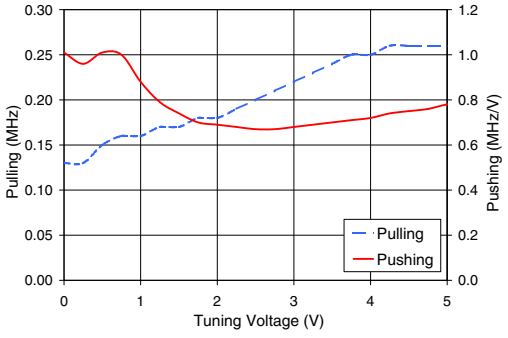
ZX95-694A+
Power Output



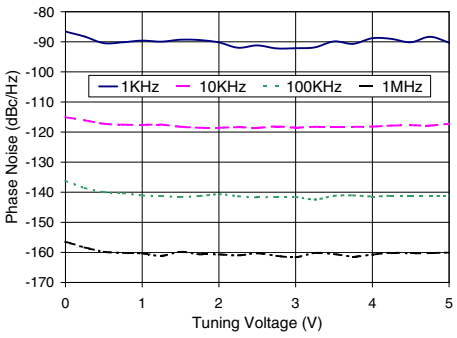
ZX95-694A+
Harmonics Level



ZX95-694A+
Frequency Pulling & Pushing (Vcc ± 5%)



ZX95-694A+
Phase Noise Vs. Tuning Voltage



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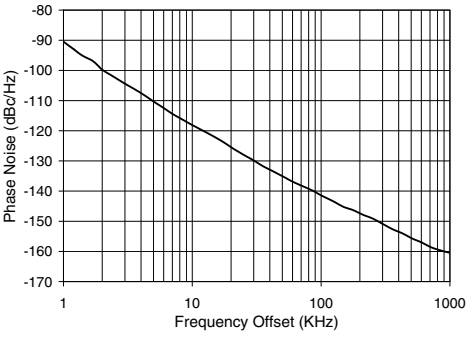
Phase Noise



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