

Voltage Controlled Oscillator

ZX95-700+

5V Tuning for PLL IC's 665 to 700 MHz

Features

- linear tuning characteristics
- low phase noise
- low pushing
- low pulling
- 0.5-5V tuning voltage range
- protected by US patent 6,790,049

Applications

- r & d
- lab
- instrumentation
- PLL circuitry
- wireless microphones



CASE STYLE: GB956

Connectors	Model
SMA	ZX95-700-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	
	Min.	Max.		Typ.	1	10	100	1000	VOLTAGE RANGE (V)	SENSI- TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Typ.	Typ.			Typ.	Typ.
ZX95-700+	665	700	0	-89	-113	-133	-153	0.5	5	12-13	70	80	-90	-21	-13	0.4	0.1	5	17

Maximum Ratings

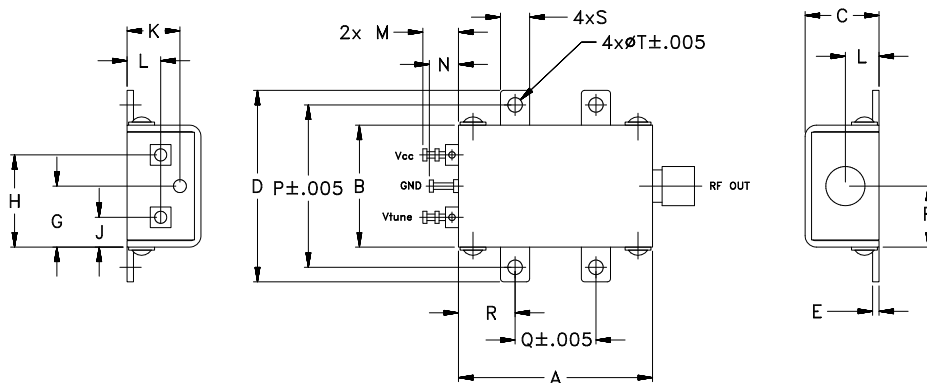
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	7V
Absolute Max. Tuning Voltage (Vtune)	7V
All specifications	50 ohm system

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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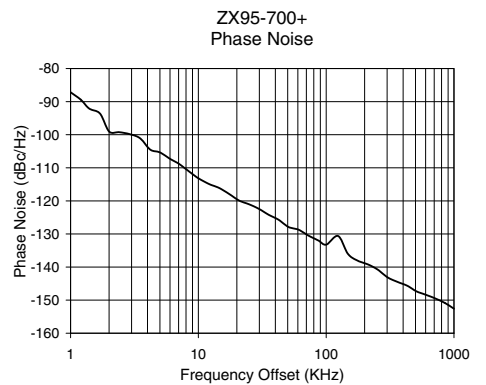
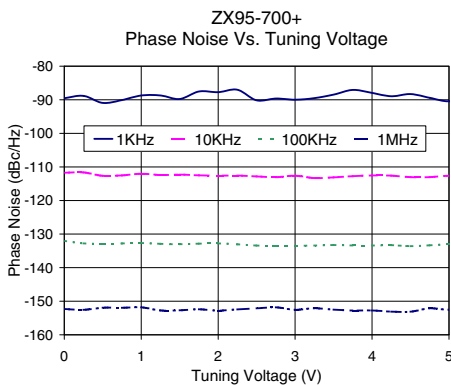
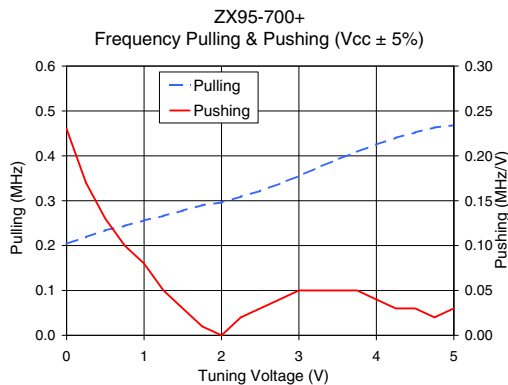
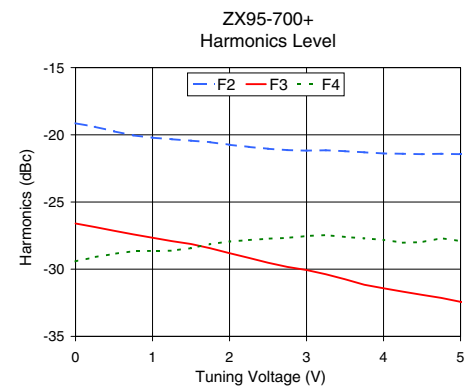
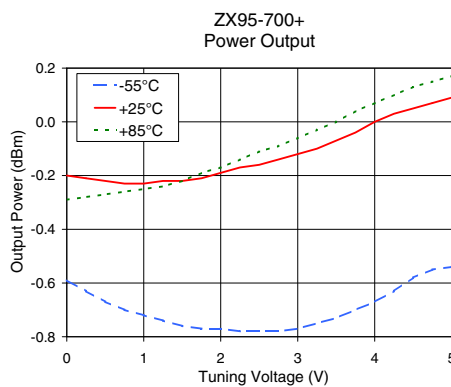
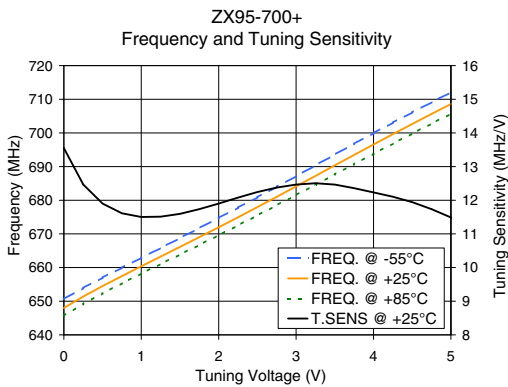


Performance Data & Curves*

ZX95-700+

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 680 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	13.55	650.6	648.0	645.7	-0.59	-0.20	-0.29	11.73	-19.1	-26.6	-29.4	0.23	0.20	-89.5	-111.7	-132.0	-152.3	1.0	-87.18
0.50	11.90	657.0	654.5	652.3	-0.67	-0.22	-0.27	11.75	-19.7	-27.1	-28.9	0.13	0.23	-90.9	-112.6	-132.9	-151.9	2.0	-99.02
0.75	11.61	660.0	657.5	655.3	-0.70	-0.23	-0.26	11.76	-20.0	-27.4	-28.7	0.10	0.24	-90.1	-112.5	-132.8	-152.0	3.5	-101.09
1.00	11.50	662.9	660.4	658.2	-0.72	-0.23	-0.25	11.78	-20.2	-27.7	-28.6	0.08	0.26	-88.7	-112.0	-132.7	-151.8	6.0	-107.28
1.25	11.51	665.8	663.3	661.0	-0.74	-0.22	-0.24	11.79	-20.3	-27.9	-28.6	0.05	0.27	-88.7	-112.4	-132.9	-152.7	8.5	-111.18
1.50	11.60	668.7	666.1	663.9	-0.76	-0.22	-0.22	11.80	-20.4	-28.1	-28.4	0.03	0.28	-89.8	-112.3	-133.0	-152.7	10.0	-113.17
1.75	11.74	671.7	669.0	666.7	-0.77	-0.21	-0.19	11.82	-20.6	-28.4	-28.1	0.01	0.29	-87.5	-112.5	-132.9	-152.4	20.8	-119.89
2.00	11.90	674.7	672.0	669.6	-0.77	-0.19	-0.17	11.84	-20.7	-28.8	-27.9	0.00	0.30	-87.7	-112.6	-132.8	-152.8	35.5	-124.21
2.25	12.08	677.8	674.9	672.5	-0.78	-0.17	-0.14	11.86	-20.9	-29.2	-27.8	0.02	0.31	-87.0	-112.6	-133.1	-152.5	60.7	-128.70
2.50	12.24	680.9	678.0	675.5	-0.78	-0.16	-0.11	11.88	-21.0	-29.5	-27.7	0.03	0.32	-90.2	-112.8	-133.4	-152.1	86.7	-131.95
2.75	12.38	684.0	681.0	678.5	-0.78	-0.14	-0.09	11.90	-21.1	-29.8	-27.7	0.04	0.34	-89.6	-113.1	-133.4	-151.8	100.0	-133.24
3.00	12.46	687.2	684.1	681.5	-0.77	-0.12	-0.06	11.92	-21.2	-30.1	-27.5	0.05	0.36	-90.0	-112.6	-133.5	-152.5	148.1	-136.05
3.25	12.51	690.4	687.2	684.6	-0.75	-0.10	-0.03	11.95	-21.2	-30.4	-27.5	0.05	0.37	-89.5	-113.3	-133.4	-152.1	177.0	-138.10
3.50	12.47	693.6	690.4	687.7	-0.73	-0.07	0.00	11.97	-21.2	-30.8	-27.6	0.05	0.39	-88.5	-113.1	-133.3	-152.5	211.6	-139.18
3.75	12.36	696.8	693.5	690.7	-0.70	-0.04	0.04	12.00	-21.3	-31.2	-27.7	0.05	0.41	-87.1	-112.8	-133.4	-152.8	302.4	-143.13
4.00	12.23	699.9	696.6	693.8	-0.67	0.00	0.07	12.03	-21.4	-31.4	-27.8	0.04	0.43	-88.0	-112.5	-133.4	-152.8	361.5	-144.49
4.25	12.10	703.0	699.6	696.8	-0.63	0.03	0.10	12.05	-21.4	-31.7	-28.0	0.03	0.44	-89.0	-112.6	-133.3	-153.1	507.5	-147.33
4.50	11.94	706.1	702.6	699.8	-0.58	0.05	0.13	12.07	-21.4	-31.9	-28.0	0.03	0.45	-88.3	-113.0	-133.6	-153.1	600.0	-148.37
4.75	11.74	709.1	705.6	702.8	-0.55	0.07	0.15	12.09	-21.4	-32.1	-27.7	0.02	0.46	-89.4	-113.0	-133.3	-152.1	851.6	-150.89
5.00	11.49	712.1	708.6	705.7	-0.54	0.09	0.17	12.11	-21.4	-32.4	-27.9	0.03	0.47	-90.4	-112.7	-133.1	-152.5	1000.0	-152.59

*at 25°C unless mentioned otherwise



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