

Voltage Controlled Oscillator

ZX95-2015+

5V Tuning for PLL IC's 1975 to 2015 MHz

Features

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



CASE STYLE: GB956

Applications

- r & d
- lab
- instrumentation
- wireless communications
- point-to-point radio

Connectors	Model
SMA	ZX95-2015-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.	Max.	Typ.	Max.			Vcc (volts)	Current (mA)
ZX95-2015+	1975	2015	+7.5	-85	-108	-129	-149	0.5	5	16-18	20	110	-90	-30	-20	0.6	1	5	35	

Maximum Ratings

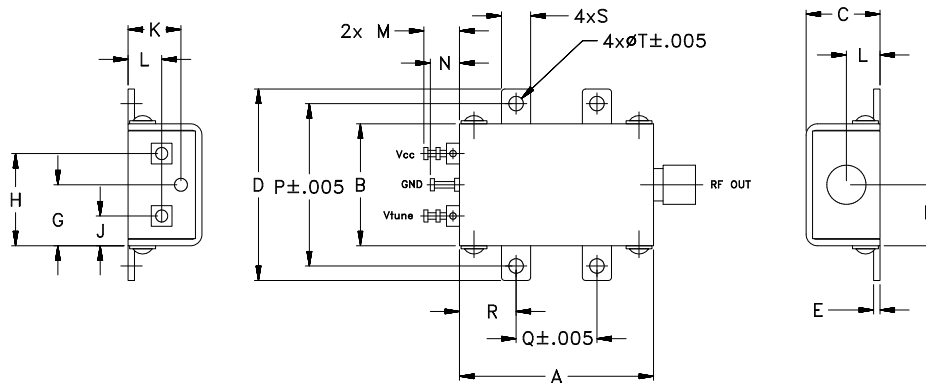
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	6.5V
Absolute Max. Tuning Voltage (Vtune)	7.0V
All specifications	50 ohm system

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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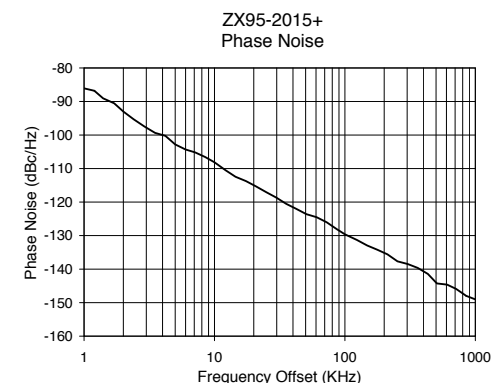
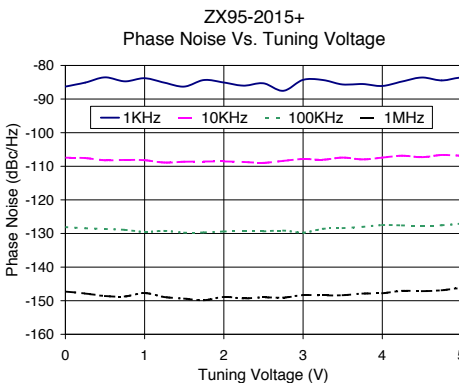
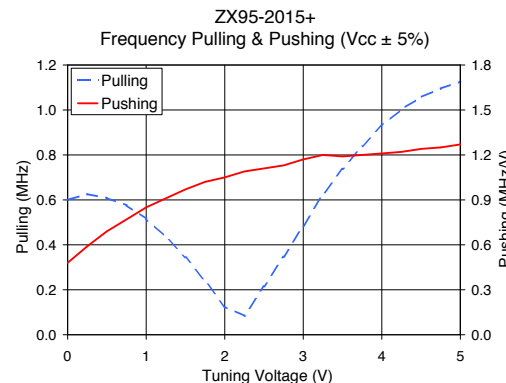
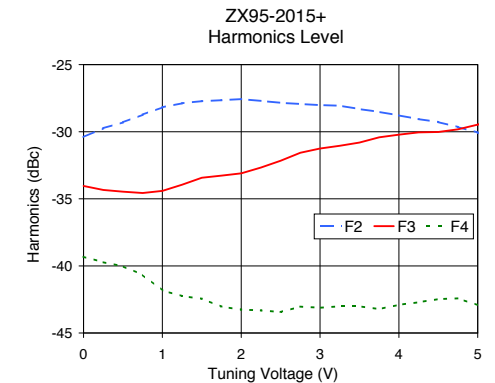
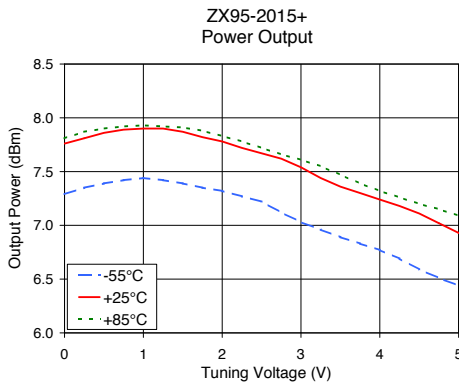
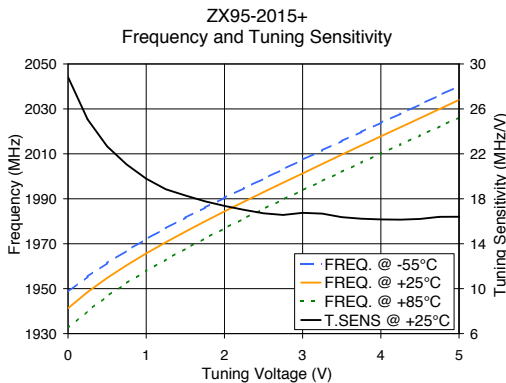


Performance Data & Curves*

ZX95-2015+

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 1989 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	28.83	1948.5	1941.3	1932.4	7.29	7.76	7.81	28.39	-30.4	-34.0	-39.3	0.48	0.60	-86.3	-107.5	-128.1	-147.3	1.0	-86.07
0.50	22.66	1961.4	1954.8	1946.6	7.39	7.86	7.90	28.57	-29.3	-34.5	-40.0	0.69	0.61	-83.6	-108.2	-128.7	-148.6	2.0	-93.00
0.75	21.06	1966.9	1960.4	1952.5	7.42	7.89	7.92	28.63	-28.7	-34.6	-40.7	0.77	0.58	-84.7	-108.1	-128.9	-148.7	3.5	-99.35
1.00	19.79	1972.1	1965.7	1957.9	7.44	7.90	7.93	28.69	-28.2	-34.4	-41.8	0.85	0.52	-83.8	-108.2	-129.6	-147.7	6.0	-104.33
1.25	18.85	1976.9	1970.6	1962.9	7.42	7.90	7.92	28.74	-27.9	-34.0	-42.3	0.91	0.43	-85.1	-108.9	-129.2	-148.9	8.5	-106.57
1.50	18.29	1981.6	1975.4	1967.7	7.39	7.87	7.91	28.78	-27.7	-33.4	-42.5	0.97	0.34	-86.3	-108.7	-129.8	-149.4	10.0	-108.14
1.75	17.78	1986.1	1979.9	1972.4	7.35	7.82	7.88	28.81	-27.7	-33.3	-43.0	1.02	0.24	-84.3	-108.6	-129.7	-149.9	20.8	-115.32
2.00	17.37	1990.5	1984.4	1976.8	7.32	7.78	7.83	28.84	-27.6	-33.1	-43.3	1.05	0.12	-85.1	-108.6	-129.4	-148.9	35.5	-120.54
2.25	17.01	1994.7	1988.7	1981.2	7.27	7.72	7.78	28.86	-27.7	-32.7	-43.3	1.09	0.08	-86.0	-108.7	-129.3	-149.3	60.7	-124.52
2.50	16.71	1998.9	1993.0	1985.5	7.22	7.67	7.72	28.87	-27.9	-32.2	-43.4	1.11	0.22	-85.3	-109.0	-129.4	-149.0	86.7	-128.09
2.75	16.56	2003.1	1997.1	1989.7	7.12	7.62	7.66	28.89	-27.9	-31.6	-43.0	1.13	0.35	-87.5	-108.4	-129.1	-149.1	100.0	-129.62
3.00	16.75	2007.4	2001.3	1993.8	7.03	7.54	7.61	28.90	-28.0	-31.3	-43.1	1.17	0.48	-84.3	-107.9	-129.7	-148.3	148.1	-132.96
3.25	16.68	2011.6	2005.5	1997.9	6.96	7.44	7.55	28.91	-28.1	-31.1	-43.0	1.20	0.62	-84.3	-108.1	-128.6	-148.4	177.0	-134.20
3.50	16.36	2015.7	2009.6	2002.0	6.89	7.36	7.47	28.92	-28.3	-30.8	-43.0	1.19	0.74	-85.7	-107.4	-128.4	-148.4	211.6	-135.58
3.75	16.22	2019.7	2013.7	2006.1	6.83	7.30	7.39	28.93	-28.5	-30.4	-43.2	1.20	0.84	-85.5	-108.0	-128.0	-147.9	302.4	-138.47
4.00	16.16	2023.8	2017.8	2010.2	6.77	7.24	7.32	28.93	-28.8	-30.2	-42.9	1.21	0.93	-86.1	-107.4	-127.5	-147.8	361.5	-139.63
4.25	16.14	2027.8	2021.8	2014.2	6.69	7.18	7.26	28.94	-29.1	-30.1	-42.7	1.22	1.00	-84.8	-106.9	-127.6	-147.1	507.5	-144.28
4.50	16.20	2031.9	2025.9	2018.2	6.59	7.11	7.20	28.95	-29.3	-30.0	-42.5	1.24	1.06	-83.6	-107.3	-127.7	-147.2	606.7	-144.63
4.75	16.39	2036.1	2029.9	2022.2	6.51	7.02	7.15	28.95	-29.7	-29.8	-42.4	1.25	1.10	-84.5	-106.7	-127.5	-146.9	851.6	-147.99
5.00	16.40	2040.1	2034.0	2026.2	6.44	6.93	7.09	28.96	-30.1	-29.5	-42.9	1.27	1.13	-83.6	-106.9	-127.1	-146.3	1000.0	-149.02

*at 25°C unless mentioned otherwise



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