

Voltage Controlled Oscillator

ZX95-665+

5V Tuning for PLL IC's 630 to 665 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



CASE STYLE: GB956

Connectors	Model
SMA	ZX95-665-S+

Applications

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

+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.
ZX95-665+	630	665	0	-90	-113	-133	-153	0.5	5	12-13	60	60	-90	-24	-16	0.4	0.1	5	18

Maximum Ratings

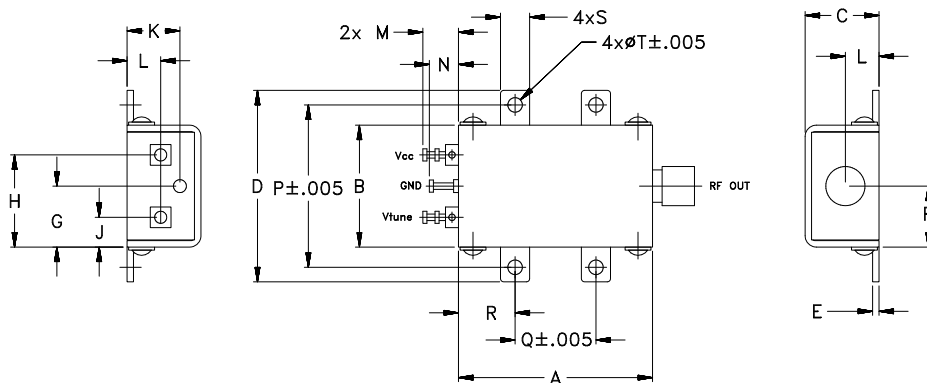
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	7V
Absolute Max. Tuning Voltage (Vtune)	7V
All specifications	50 ohm system

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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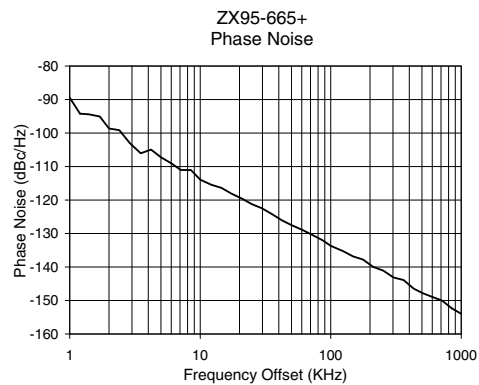
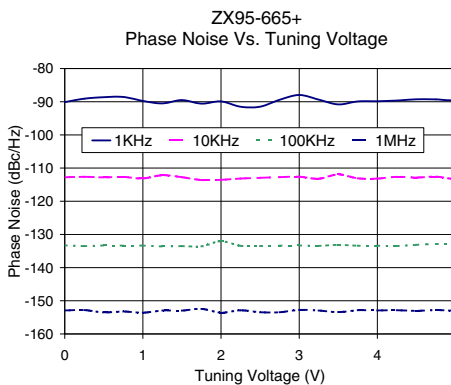
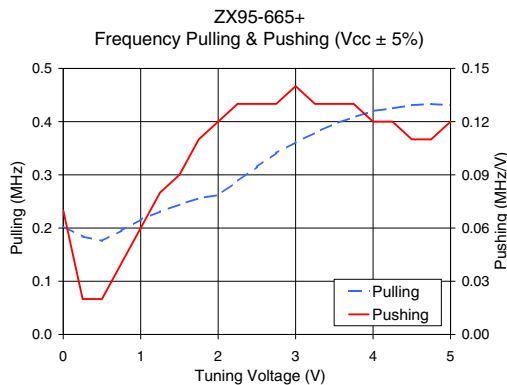
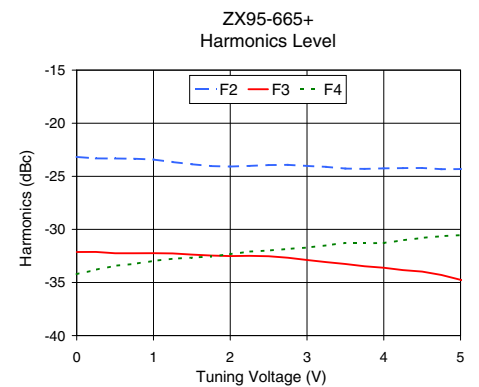
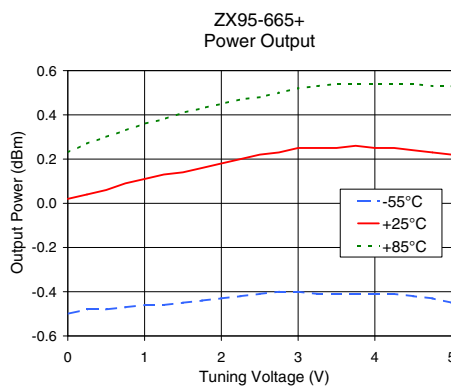
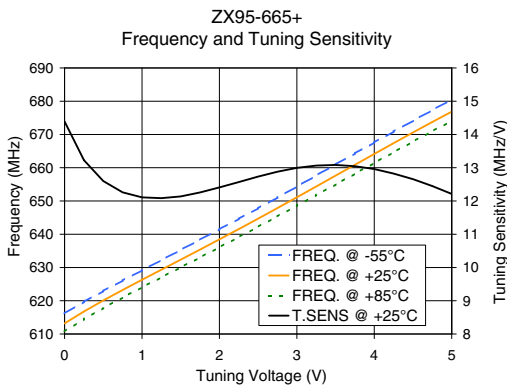


Performance Data & Curves*

ZX95-665+

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 644 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	14.39	616.2	613.2	610.8	-0.50	0.02	0.23	12.34	-23.2	-32.1	-34.2	0.07	0.20	-90.1	-112.8	-133.3	-152.9	1.0	-89.44
0.50	12.60	622.9	620.1	617.8	-0.48	0.06	0.30	12.37	-23.3	-32.3	-33.4	0.02	0.18	-88.6	-112.8	-133.3	-153.5	2.0	-98.65
0.75	12.26	626.1	623.2	621.0	-0.47	0.09	0.33	12.39	-23.3	-32.3	-33.2	0.04	0.20	-88.6	-112.7	-133.4	-153.2	3.5	-106.04
1.00	12.11	629.2	626.3	624.0	-0.46	0.11	0.36	12.40	-23.4	-32.2	-33.0	0.06	0.22	-89.8	-113.1	-133.4	-153.6	6.0	-109.04
1.25	12.08	632.2	629.3	627.0	-0.46	0.13	0.38	12.42	-23.7	-32.3	-32.8	0.08	0.23	-90.5	-112.2	-133.6	-153.0	8.5	-111.05
1.50	12.14	635.3	632.4	630.0	-0.45	0.14	0.41	12.44	-23.9	-32.4	-32.7	0.09	0.24	-89.5	-112.8	-133.5	-153.0	10.0	-113.93
1.75	12.26	638.4	635.4	633.0	-0.44	0.16	0.43	12.46	-24.0	-32.5	-32.6	0.11	0.26	-90.6	-113.6	-133.6	-152.5	20.8	-119.54
2.00	12.41	641.5	638.5	636.1	-0.43	0.18	0.45	12.47	-24.1	-32.5	-32.3	0.12	0.26	-89.9	-113.5	-132.1	-153.6	35.5	-124.22
2.25	12.57	644.6	641.6	639.1	-0.42	0.20	0.47	12.49	-24.0	-32.5	-32.1	0.13	0.29	-91.5	-113.2	-133.4	-152.9	60.7	-128.94
2.50	12.73	647.8	644.7	642.2	-0.41	0.22	0.48	12.50	-23.9	-32.5	-32.0	0.13	0.32	-91.5	-112.9	-133.5	-153.5	86.7	-132.02
2.75	12.88	651.1	647.9	645.4	-0.40	0.23	0.50	12.52	-23.9	-32.7	-31.8	0.13	0.34	-89.4	-112.7	-133.4	-153.5	100.0	-133.67
3.00	13.00	654.4	651.1	648.6	-0.40	0.25	0.52	12.53	-24.0	-32.9	-31.7	0.14	0.36	-88.0	-112.6	-133.3	-152.8	148.1	-136.83
3.25	13.06	657.7	654.3	651.8	-0.41	0.25	0.53	12.55	-24.1	-33.1	-31.5	0.13	0.38	-89.4	-113.2	-133.5	-153.0	177.0	-137.78
3.50	13.08	661.0	657.6	655.0	-0.41	0.25	0.54	12.57	-24.3	-33.3	-31.3	0.13	0.40	-90.8	-111.9	-133.1	-153.4	211.6	-139.97
3.75	13.04	664.3	660.9	658.2	-0.41	0.26	0.54	12.58	-24.3	-33.5	-31.3	0.13	0.41	-89.9	-113.1	-133.4	-152.9	302.4	-143.13
4.00	12.96	667.6	664.1	661.4	-0.41	0.25	0.54	12.60	-24.3	-33.6	-31.3	0.12	0.42	-89.9	-113.2	-133.4	-152.9	361.5	-143.89
4.25	12.82	670.9	667.4	664.7	-0.41	0.25	0.54	12.61	-24.2	-33.8	-31.0	0.12	0.43	-89.7	-112.6	-133.5	-152.8	507.5	-147.83
4.50	12.66	674.1	670.6	667.8	-0.42	0.24	0.54	12.63	-24.2	-34.0	-30.8	0.11	0.43	-89.3	-112.9	-133.2	-153.0	600.0	-148.93
4.75	12.45	677.3	673.8	671.0	-0.43	0.23	0.53	12.64	-24.3	-34.3	-30.6	0.11	0.43	-89.3	-112.6	-132.9	-152.8	851.6	-152.41
5.00	12.21	680.5	676.9	674.1	-0.45	0.22	0.53	12.66	-24.3	-34.8	-30.5	0.12	0.43	-89.6	-113.3	-132.9	-153.0	1000.0	-153.95

*at 25°C unless mentioned otherwise



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