Coaxial

Voltage Controlled Oscillator

ZX95-715+

5V Tuning for PLL IC's 680 to 715 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	ZX95-715-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 dBr (MHz)	PUSHING (MHz/V)	DC OPERATING POWER	
				Typ.				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.
ZX95-715+	680	715	-0.5	-90	-113	-133	-152	0.5	5	12-13	50	60	-90	-22	-14	0.5	0.2	5	16

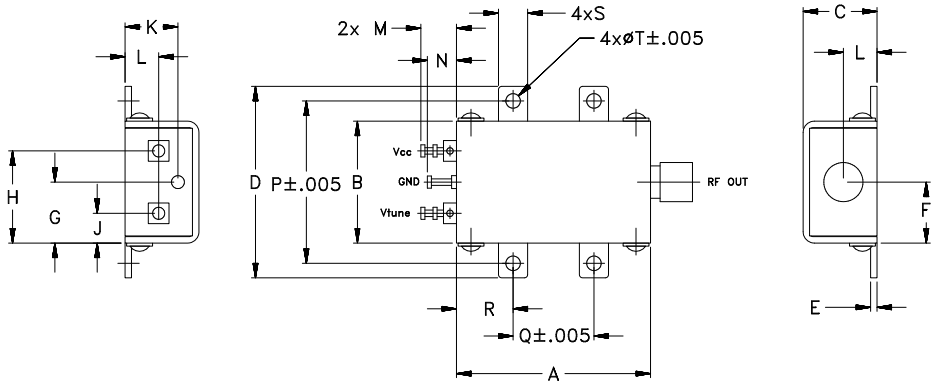
Maximum Ratings

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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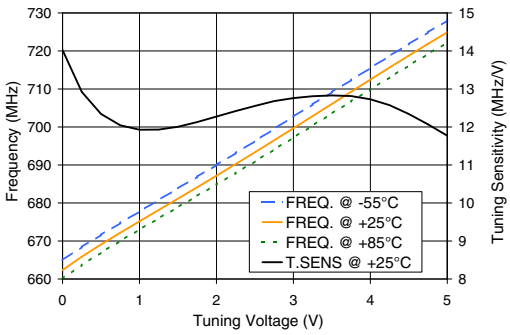
Performance Data & Curves*

ZX95-715+

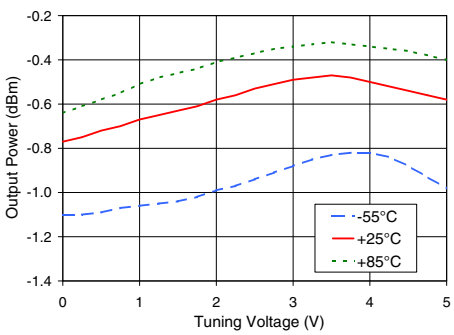
V TUNE	TUNE SENS (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)			Icc (mA)	HARMONICS (dBc)			FREQ. PUSH (MHz/V)	FREQ. PULL (MHz)	PHASE NOISE (dBc/Hz) at offsets				FREQ OFFSET (KHz)	PHASE NOISE at 692 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	14.02	665.0	662.3	660.1	-1.10	-0.77	-0.64	11.14	-21.0	-29.1	-28.2	0.08	0.12	-88.9	-111.4	-132.2	-152.3	1.0	-90.60
0.50	12.34	671.6	669.1	667.0	-1.09	-0.72	-0.58	11.18	-21.2	-29.6	-27.9	0.03	0.15	-89.0	-112.0	-132.6	-152.3	2.0	-98.37
0.75	12.04	674.7	672.2	670.0	-1.07	-0.70	-0.55	11.20	-21.4	-30.1	-27.8	0.07	0.16	-89.1	-112.1	-132.7	-152.2	3.5	-104.34
1.00	11.93	677.8	675.2	673.0	-1.06	-0.67	-0.51	11.22	-21.5	-30.5	-27.8	0.09	0.18	-89.0	-112.3	-132.9	-151.5	6.0	-106.74
1.25	11.93	680.8	678.2	676.0	-1.05	-0.65	-0.48	11.24	-21.6	-30.9	-27.8	0.12	0.20	-88.0	-112.8	-133.0	-152.3	8.5	-111.31
1.50	12.01	683.8	681.1	678.9	-1.04	-0.63	-0.46	11.26	-21.7	-31.2	-27.9	0.13	0.22	-89.8	-113.0	-132.9	-152.6	10.0	-112.92
1.75	12.13	686.9	684.1	681.9	-1.02	-0.61	-0.44	11.28	-21.6	-31.5	-27.8	0.15	0.24	-89.9	-112.9	-133.0	-152.1	20.8	-119.85
2.00	12.27	690.0	687.2	684.9	-0.99	-0.58	-0.41	11.30	-21.6	-31.7	-27.8	0.16	0.26	-89.7	-112.9	-133.1	-151.8	35.5	-124.12
2.25	12.42	693.1	690.2	687.9	-0.97	-0.56	-0.39	11.33	-21.6	-31.9	-27.8	0.16	0.28	-90.1	-113.0	-133.2	-151.9	60.7	-128.75
2.50	12.55	696.3	693.4	691.0	-0.94	-0.53	-0.37	11.35	-21.6	-32.1	-27.8	0.15	0.30	-89.7	-113.5	-133.2	-151.9	86.7	-132.01
2.75	12.68	699.5	696.5	694.1	-0.91	-0.51	-0.35	11.37	-21.6	-32.4	-28.0	0.14	0.32	-91.0	-113.4	-133.0	-151.9	100.0	-133.11
3.00	12.76	702.7	699.7	697.2	-0.88	-0.49	-0.34	11.39	-21.7	-32.6	-28.3	0.12	0.35	-90.1	-112.9	-132.9	-152.1	148.1	-136.92
3.25	12.81	706.0	702.9	700.4	-0.85	-0.48	-0.33	11.40	-21.7	-32.9	-28.5	0.09	0.39	-89.1	-112.8	-133.3	-152.1	177.0	-137.88
3.50	12.83	709.2	706.1	703.6	-0.83	-0.47	-0.32	11.42	-21.7	-33.2	-28.4	0.05	0.42	-90.5	-112.7	-132.9	-152.7	211.6	-139.48
3.75	12.81	712.4	709.3	706.7	-0.82	-0.48	-0.33	11.43	-21.7	-33.3	-28.2	0.00	0.46	-88.9	-112.7	-132.8	-151.9	302.4	-142.93
4.00	12.73	715.5	712.5	709.9	-0.82	-0.50	-0.34	11.44	-21.8	-33.5	-28.5	0.04	0.49	-88.7	-112.3	-132.8	-151.6	361.5	-144.61
4.25	12.57	718.7	715.6	713.1	-0.84	-0.52	-0.35	11.46	-21.9	-33.7	-28.7	0.06	0.51	-88.4	-112.4	-132.7	-151.7	507.5	-147.71
4.50	12.34	721.8	718.8	716.2	-0.88	-0.54	-0.36	11.47	-21.8	-33.9	-28.8	0.08	0.52	-86.6	-112.9	-132.8	-152.2	600.0	-148.50
4.75	12.07	724.9	721.9	719.2	-0.93	-0.56	-0.38	11.49	-21.8	-34.4	-28.7	0.08	0.53	-86.8	-112.2	-132.6	-152.7	851.6	-150.91
5.00	11.77	728.0	724.9	722.2	-0.98	-0.58	-0.40	11.50	-21.6	-34.4	-28.6	0.09	0.52	-87.7	-112.6	-132.7	-152.5	1000.0	-152.22

*at 25°C unless mentioned otherwise

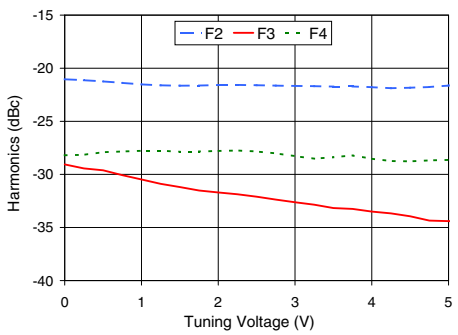
ZX95-715+
Frequency and Tuning Sensitivity



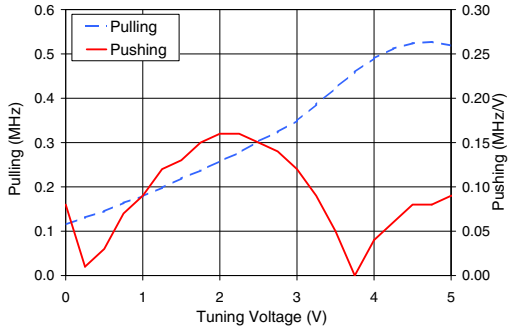
ZX95-715+
Power Output



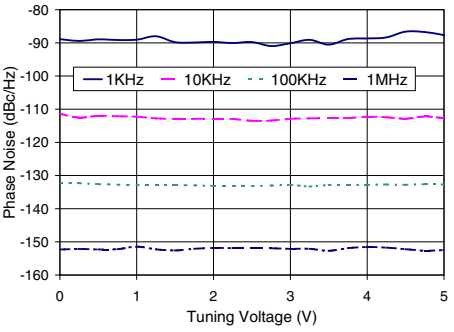
ZX95-715+
Harmonics Level



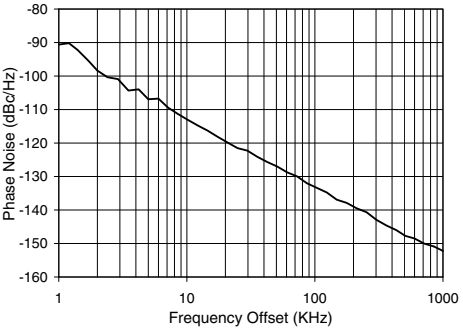
ZX95-715+
Frequency Pulling & Pushing (Vcc ± 5%)



ZX95-715+
Phase Noise Vs. Tuning Voltage



ZX95-715+
Phase Noise



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