

Coaxial

Voltage Controlled Oscillator

ZX95-310A+

Wide Band 160 to 360 MHz

Features

- very wide band frequency
- low phase noise
- low pulling
- low pushing
- protected by US patent 6,790,049



CASE STYLE: GB956

Connectors	Model
SMA	ZX95-310A-S+

Applications

- R & D
- lab
- instrumentation
- wireline broadband access
- digital TV

+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.	Max.	Typ.
ZX95-310A+	160	360	+7.5	-81	-103	-125	-145	0.5	18.0	9 - 18	290	0.035	-90	-26	-18	0.2	0.4	10	22

Maximum Ratings

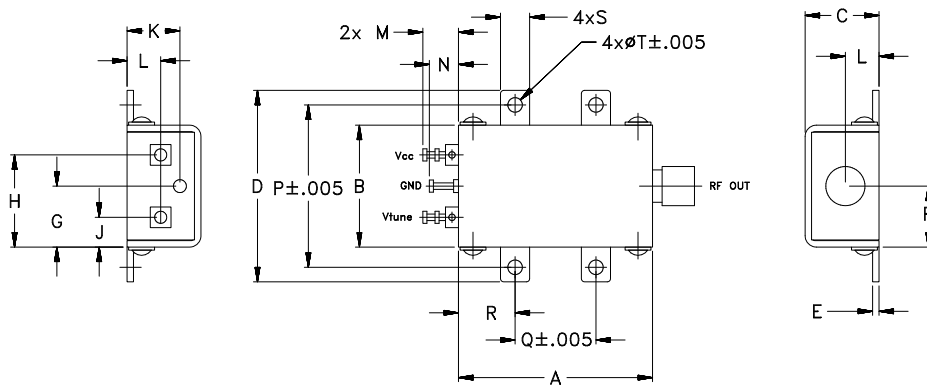
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	12V
Absolute Max. Tuning Voltage (Vtune)	20V
All specifications	50 ohm system

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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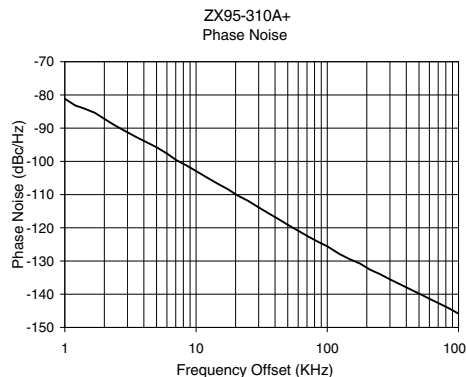
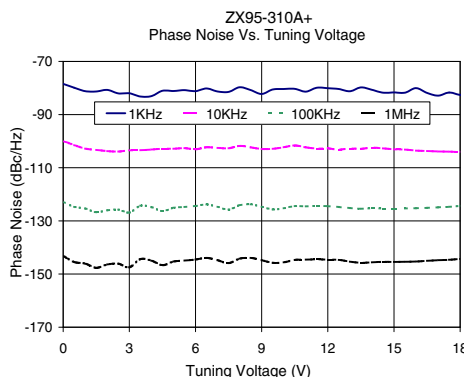
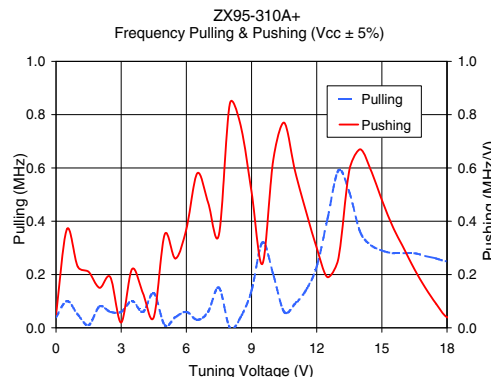
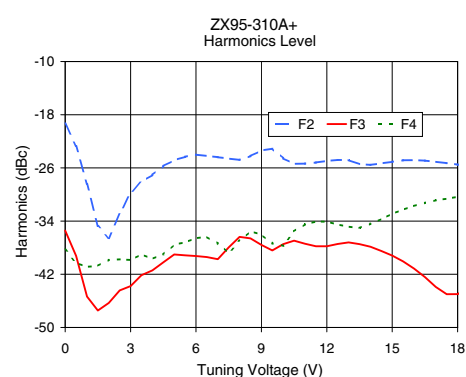
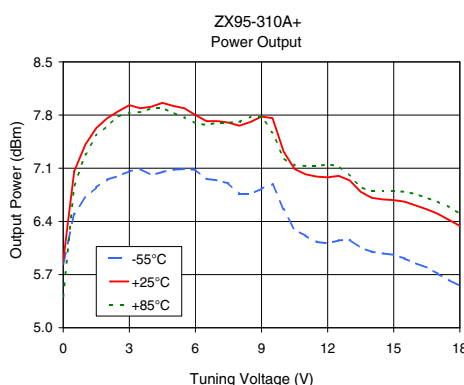
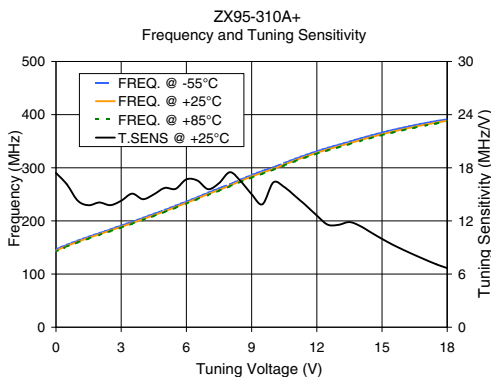
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Page 1 of 2

Performance Data & Curves*

ZX95-310A+

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 260 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	17.42	146.5	144.1	142.5	5.84	5.88	5.41	16.55	-19.3	-35.4	-38.3	0.05	0.04	-78.45	-100.0	-122.8	-143.2	1.0	-81.15
0.50	16.13	154.9	152.8	151.6	6.50	7.06	6.87	16.72	-22.7	-39.2	-40.3	0.37	0.10	-79.89	-101.5	-124.7	-145.5	2.0	-87.20
1.00	14.28	162.8	160.9	159.7	6.71	7.41	7.28	16.70	-28.4	-45.4	-40.9	0.23	0.05	-81.19	-102.8	-125.4	-146.1	3.5	-92.68
2.00	14.08	177.0	174.9	173.7	6.95	7.76	7.66	16.59	-36.6	-46.3	-39.8	0.15	0.08	-80.72	-103.7	-126.0	-146.4	6.0	-97.63
3.00	14.28	191.1	188.8	187.4	7.06	7.93	7.83	16.45	-29.7	-43.8	-39.9	0.02	0.06	-81.98	-103.5	-126.9	-147.5	8.5	-101.29
4.00	14.46	205.6	203.5	202.0	7.01	7.91	7.89	16.32	-27.1	-41.4	-39.7	0.13	0.06	-83.07	-103.2	-124.8	-144.9	10.0	-102.91
5.00	15.73	220.5	218.2	216.9	7.08	7.92	7.83	16.09	-24.9	-39.0	-37.5	0.35	0.01	-81.13	-102.9	-125.1	-145.3	20.8	-110.29
6.00	16.69	236.3	233.9	232.6	7.08	7.80	7.69	15.87	-24.0	-39.3	-36.6	0.37	0.06	-81.20	-103.1	-124.4	-144.6	35.5	-115.59
7.00	15.58	253.0	250.5	248.9	6.94	7.72	7.70	15.72	-24.4	-39.7	-37.4	0.47	0.06	-81.31	-102.5	-124.7	-144.8	60.7	-121.00
8.00	17.50	268.8	266.5	265.2	6.76	7.66	7.71	15.48	-24.8	-36.4	-37.0	0.84	0.00	-79.71	-101.8	-124.1	-144.2	86.7	-124.38
9.00	15.02	286.3	283.5	281.5	6.83	7.78	7.78	15.32	-23.4	-37.6	-36.0	0.51	0.14	-82.26	-103.0	-124.7	-144.8	100.0	-125.58
10.00	16.35	300.6	297.9	296.3	6.56	7.32	7.23	15.07	-24.6	-37.5	-37.7	0.63	0.20	-80.39	-102.3	-125.3	-145.6	148.1	-129.43
11.00	14.81	316.7	314.0	312.4	6.21	7.02	7.13	14.89	-25.4	-37.4	-34.5	0.59	0.09	-81.37	-102.3	-124.5	-144.6	177.0	-130.73
12.00	12.60	331.0	328.3	326.6	6.11	6.98	7.15	14.76	-25.0	-37.8	-34.1	0.30	0.23	-80.09	-102.7	-124.5	-144.6	211.6	-132.59
13.00	11.56	343.2	340.4	338.6	6.16	6.94	7.00	14.63	-24.8	-37.2	-34.8	0.26	0.59	-81.22	-102.8	-125.2	-145.3	302.4	-135.58
14.00	11.41	355.1	352.1	350.4	6.00	6.71	6.80	14.53	-25.6	-37.9	-34.4	0.67	0.36	-80.69	-102.4	-125.3	-145.6	361.5	-137.07
15.00	9.97	366.2	363.1	361.5	5.96	6.68	6.80	14.46	-25.1	-39.2	-32.9	0.48	0.29	-81.69	-103.1	-125.3	-145.5	507.5	-139.91
16.00	8.71	375.8	372.8	371.1	5.85	6.61	6.76	14.41	-24.8	-41.1	-31.7	0.30	0.28	-80.05	-103.5	-125.2	-145.3	606.7	-141.46
17.00	7.62	384.1	381.2	379.6	5.71	6.50	6.66	14.37	-25.1	-43.9	-30.9	0.15	0.27	-82.87	-103.9	-124.9	-144.8	851.6	-144.31
18.00	6.69	391.3	388.6	387.0	5.55	6.34	6.50	14.33	-25.5	-45.0	-30.4	0.04	0.25	-82.59	-104.0	-124.4	-144.3	1000.0	-145.85

*at 25°C unless mentioned otherwise



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