

Coaxial

Voltage Controlled Oscillator

ZX95-1300+

Wide Band 400 to 1300 MHz

Features

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



CASE STYLE: GB956

Connectors	Model
SMA	ZX95-1300-S+

Applications

- r & d
- lab
- instrumentation
- wireless communications
- industrial communications
- test equipment

+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.
ZX95-1300+	400	1300	+8	-70	-95	-120	-141	0.3	20	25-65	120	30	-90	-11	-	3.5	3	5	42

Maximum Ratings

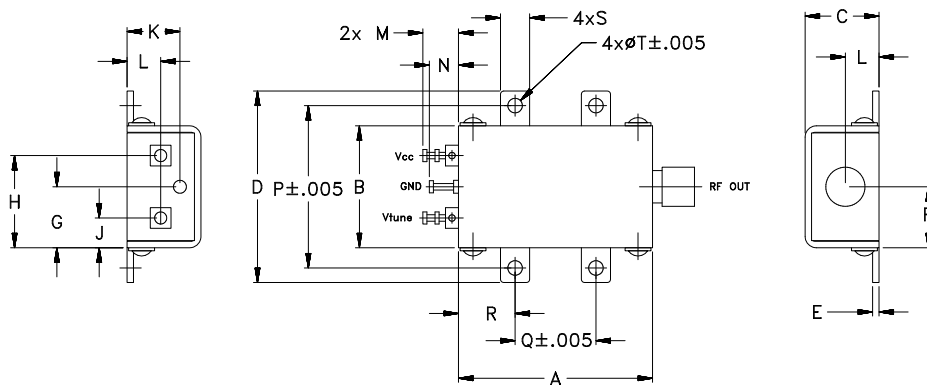
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	6V
Absolute Max. Tuning Voltage (Vtune)	22V
All specifications	50 ohm system

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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REV. A
M152815
EDR-11366
ZX95-1300+
RAV
150909
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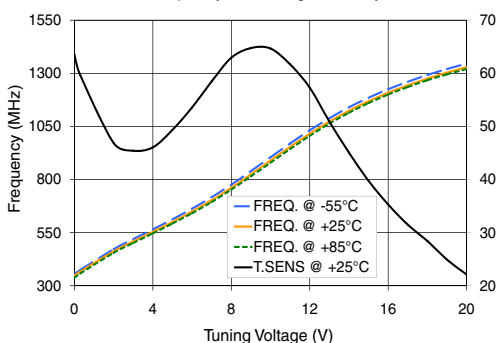
Performance Data & Curves*

ZX95-1300+

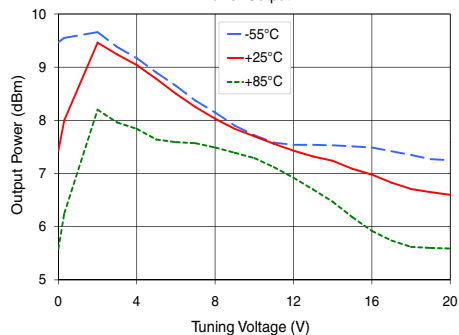
V TUNE	TUNE SENS (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)			Icc (mA)	HARMONICS (dBc)			FREQ. PUSH (MHz/V)	FREQ. PULL (MHz)	PHASE NOISE (dBc/Hz) at offsets				FREQ OFFSET (kHz)	PHASE NOISE at 850 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	63.57	354.3	347.6	337.7	9.47	7.43	5.58	34.27	-9.0	-17.2	-25.6	2.98	0.81	-70.31	-93.2	-119.1	-141.2	1.0	-74.08
0.30	59.68	374.3	366.7	357.5	9.55	8.00	6.25	34.19	-9.1	-16.7	-23.7	3.13	1.02	-70.09	-93.1	-118.6	-140.4	2.5	-85.49
2.00	46.89	472.0	461.8	454.6	9.66	9.46	8.20	34.13	-9.8	-15.6	-19.4	2.07	4.23	-71.65	-95.8	-120.3	-140.9	4.2	-90.81
3.00	45.43	519.8	508.7	501.3	9.38	9.24	7.96	34.25	-10.4	-16.0	-21.5	1.86	4.51	-72.21	-96.1	-120.1	-140.7	7.3	-96.47
4.00	46.07	565.7	554.1	546.8	9.17	9.04	7.84	34.39	-10.7	-16.1	-24.5	1.81	1.24	-73.65	-96.5	-120.0	-140.7	10.0	-99.68
5.00	49.34	612.8	600.2	592.7	8.90	8.78	7.64	34.50	-11.2	-16.8	-29.1	1.79	3.75	-73.57	-96.9	-120.1	-140.7	12.0	-101.64
6.00	53.58	662.7	649.5	641.6	8.65	8.50	7.59	34.66	-11.1	-18.0	-29.7	1.63	5.25	-73.57	-97.5	-121.1	-141.7	23.6	-108.41
7.00	58.48	717.3	703.1	694.4	8.37	8.25	7.57	34.82	-10.5	-20.2	-26.1	1.36	3.56	-74.90	-98.4	-121.6	-142.2	39.5	-113.69
8.00	62.94	775.9	761.6	752.6	8.15	8.03	7.49	35.00	-10.1	-23.8	-24.4	1.15	3.43	-73.96	-99.0	-122.5	-143.1	65.2	-118.85
9.00	64.76	839.5	824.5	814.9	7.90	7.84	7.39	35.08	-9.7	-29.0	-23.2	1.16	2.66	-73.99	-99.7	-123.0	-143.6	100.0	-123.15
10.00	64.67	904.9	889.3	879.2	7.72	7.70	7.29	35.12	-9.1	-31.5	-22.6	1.32	2.66	-74.25	-99.3	-123.1	-143.6	109.3	-124.17
12.00	57.31	1031.6	1015.6	1005.7	7.54	7.43	6.92	34.72	-8.9	-34.0	-22.4	2.50	3.14	-72.83	-98.7	-123.1	-143.8	153.5	-127.25
13.00	50.94	1088.6	1073.0	1063.5	7.54	7.32	6.70	34.49	-9.2	-36.2	-22.3	2.83	3.23	-73.57	-98.6	-123.1	-144.0	180.2	-128.78
14.00	45.07	1140.3	1123.9	1114.7	7.53	7.24	6.47	34.25	-9.8	-40.2	-23.4	2.85	3.22	-73.23	-98.2	-122.8	-143.7	215.4	-130.44
15.00	39.74	1185.1	1169.0	1160.4	7.51	7.09	6.18	34.12	-10.6	-37.4	-24.1	2.58	3.43	-71.75	-97.8	-122.5	-143.6	302.4	-133.34
16.00	35.29	1225.2	1208.7	1200.4	7.49	6.98	5.92	34.03	-11.3	-35.9	-25.3	2.35	2.66	-71.87	-97.7	-122.3	-143.3	355.1	-134.84
17.00	31.49	1260.3	1244.0	1236.1	7.42	6.83	5.74	34.01	-11.9	-33.4	-25.6	2.15	3.69	-71.15	-97.8	-122.2	-143.2	498.5	-137.79
18.00	28.41	1292.1	1275.5	1267.5	7.35	6.71	5.62	34.01	-12.8	-31.0	-26.2	2.06	2.04	-72.71	-97.9	-122.1	-143.1	595.9	-139.36
19.00	24.92	1320.5	1303.9	1295.7	7.27	6.65	5.60	34.05	-13.6	-28.6	-26.5	2.05	3.54	-70.71	-97.4	-121.9	-142.9	982.3	-143.60
20.00	22.09	1345.7	1328.8	1320.5	7.25	6.60	5.59	34.08	-14.4	-27.0	-27.0	2.06	4.05	-71.44	-97.4	-121.7	-142.6	1000.0	-143.76

*at 25°C unless mentioned otherwise

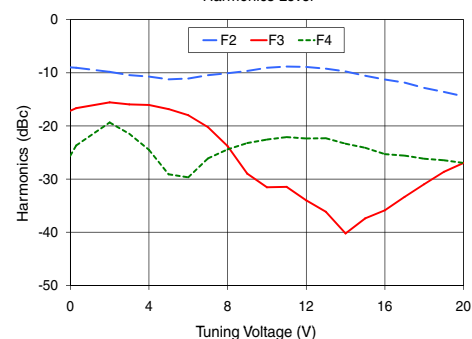
ZX95-1300+
Frequency and Tuning Sensitivity



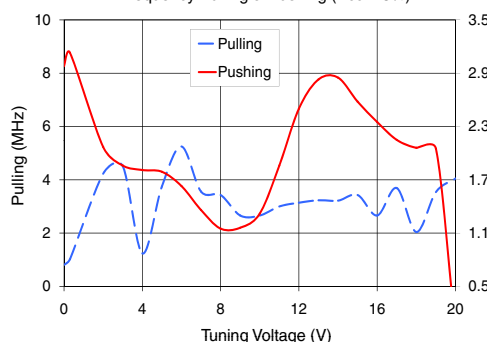
ZX95-1300+
Power Output



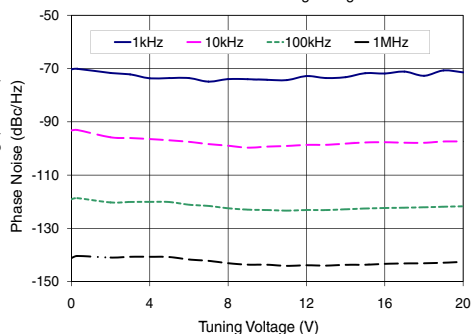
ZX95-1300+
Harmonics Level



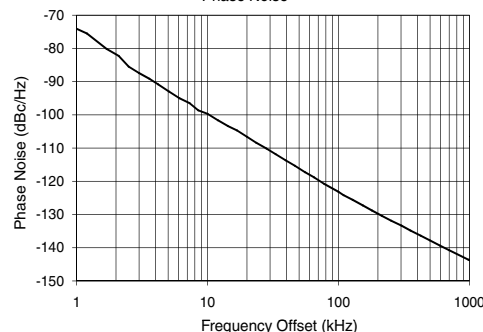
ZX95-1300+
Frequency Pulling & Pushing (Vcc ± 5%)



ZX95-1300+
Phase Noise Vs. Tuning Voltage



ZX95-1300+
Phase Noise



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