

Coaxial

NON-CATALOG

Voltage Controlled Oscillator

ZX95-2050+

Wide Band 1020 to 1980 MHz

Features

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

Applications

- r & d
- lab
- instrumentation
- wireless communications
- wireless broadband access



CASE STYLE: GB956

Connectors	Model
SMA	ZX95-2050-S+

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Electrical Specifications

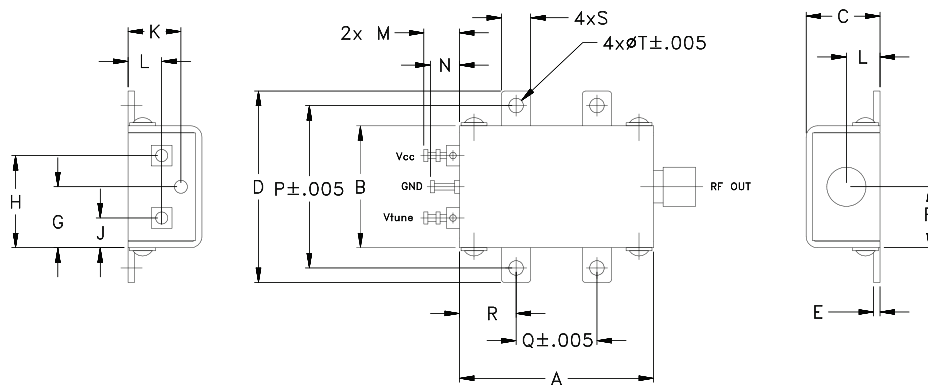
MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	PHASE NOISE dBc/Hz SSB at offset frequencies,kHz Typ.				TUNING					NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER Vcc Current (volts) (mA)	
								VOLTAGE RANGE (V)	SENSI- TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)								
	Min.	Max.	Typ.	1	10	100	1000	Min.	Max.	Typ.	Typ.	Typ.	Typ.	Typ.	Max.	Typ.	Typ.	Max.	
ZX95-2050+	1020	1980	+4	-71	-99	-121	-141	0.5	15	57-105	70	15	-90	-17	-	0.4	0.3	10	37

Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	11.0V
Absolute Max. Tuning Voltage (Vtune)	17.0V
All specifications	50 ohm system

Permanent damage may occur if any of these limits are exceeded.

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

Mini-Circuits®
ISO 9001 ISO 14001 AS 9100 CERTIFIED

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I/F/RF MICROWAVE COMPONENTS

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REV. B
M137599
RDF-1810F1
ZX95-2050+
RAV
120723
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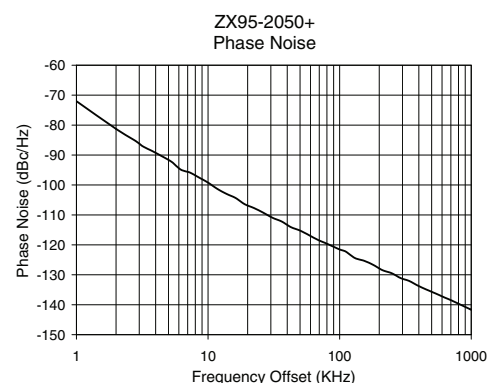
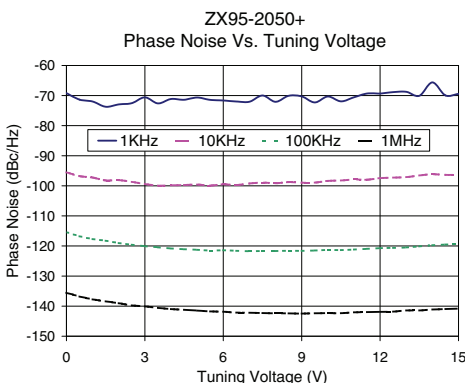
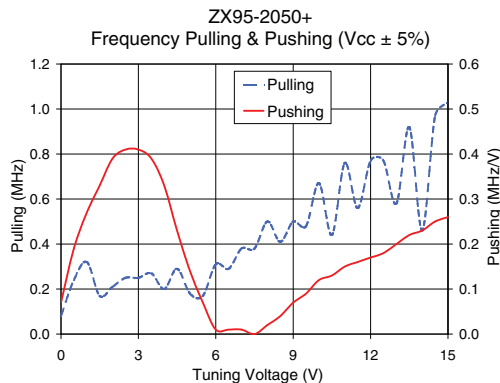
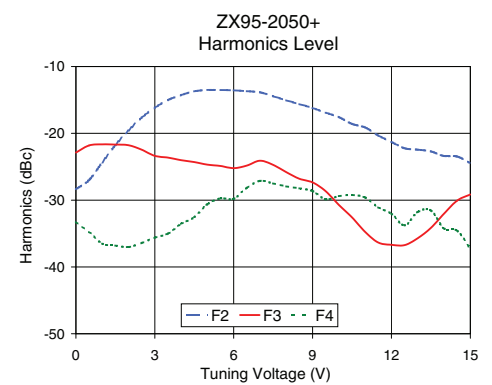
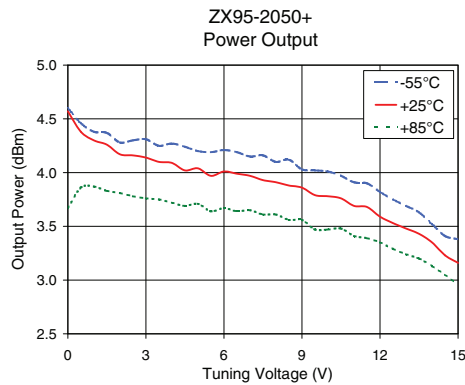
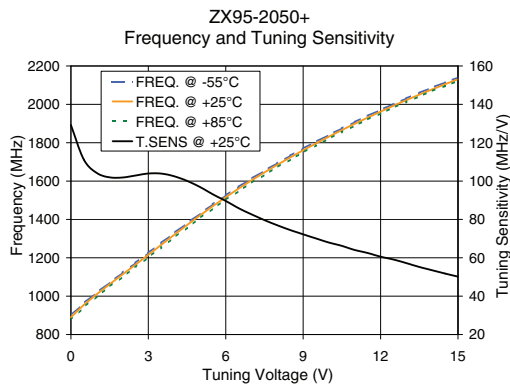
NON-CATALOG

Performance Data & Curves*

ZX95-2050+

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 1500 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	129.18	899.7	890.1	875.7	4.60	4.57	3.67	30.06	-28.4	-22.9	-33.3	0.07	0.08	-69.2	-95.5	-115.4	-135.6	1.0	-72.03
0.50	111.24	963.5	954.7	942.0	4.46	4.38	3.86	30.12	-27.0	-21.8	-34.8	0.19	0.24	-71.4	-96.8	-116.8	-136.8	2.0	-81.27
1.00	104.22	1019.0	1010.3	997.9	4.38	4.30	3.87	30.17	-24.4	-21.7	-36.5	0.27	0.32	-72.0	-97.3	-117.7	-137.7	3.2	-87.11
2.00	101.85	1122.5	1113.4	1100.4	4.28	4.17	3.81	30.29	-19.6	-21.8	-37.0	0.39	0.21	-72.9	-98.1	-119.0	-139.0	6.2	-94.84
3.00	103.93	1225.4	1215.7	1202.0	4.31	4.14	3.76	30.42	-16.2	-23.4	-35.6	0.41	0.25	-70.6	-99.4	-120.1	-140.1	8.5	-97.46
4.00	102.51	1329.5	1319.7	1305.6	4.27	4.09	3.72	30.54	-14.3	-24.0	-33.6	0.33	0.20	-71.2	-99.8	-120.8	-141.0	10	-99.22
5.00	96.93	1430.6	1421.0	1407.2	4.20	4.04	3.71	30.65	-13.5	-24.7	-30.6	0.14	0.18	-70.7	-99.6	-121.3	-141.5	19.0	-106.44
5.50	93.12	1478.9	1469.4	1456.0	4.19	3.97	3.64	30.70	-13.5	-24.9	-29.7	0.07	0.17	-71.4	-99.9	-121.5	-141.8	36.2	-112.18
6.00	89.64	1525.4	1516.0	1503.0	4.21	4.01	3.67	30.73	-13.6	-25.2	-29.8	0.01	0.31	-71.6	-99.5	-121.4	-141.9	58.5	-116.77
7.00	82.65	1612.9	1603.8	1591.4	4.15	3.97	3.65	30.79	-13.9	-24.1	-27.1	0.01	0.38	-72.1	-99.2	-121.7	-142.2	80.7	-119.68
8.00	76.96	1694.0	1684.9	1673.2	4.10	3.91	3.61	30.81	-15.1	-25.8	-27.9	0.02	0.50	-72.1	-99.2	-121.7	-142.4	100.0	-121.53
9.00	72.23	1769.6	1760.6	1749.4	4.03	3.86	3.56	30.80	-16.2	-27.3	-28.7	0.07	0.50	-70.3	-99.0	-121.6	-142.5	153.5	-125.31
10.00	67.95	1840.8	1831.8	1821.1	4.01	3.78	3.47	30.78	-17.6	-30.7	-29.4	0.12	0.67	-70.3	-98.4	-121.3	-142.3	180.2	-126.71
11.00	64.08	1907.8	1898.9	1888.7	3.91	3.69	3.41	30.75	-19.1	-34.8	-29.6	0.15	0.76	-70.6	-97.9	-121.2	-142.1	211.6	-128.45
12.00	60.60	1971.3	1962.2	1952.5	3.82	3.59	3.35	30.70	-21.3	-36.7	-32.0	0.17	0.77	-69.3	-97.5	-120.7	-141.9	291.8	-131.15
12.50	59.10	2001.6	1992.5	1983.1	3.75	3.53	3.29	30.67	-22.2	-36.7	-33.8	0.18	0.77	-68.8	-97.3	-120.6	-141.8	336.6	-132.03
13.00	57.25	2031.2	2022.0	2012.7	3.69	3.48	3.24	30.64	-22.5	-35.7	-31.8	0.20	0.58	-68.8	-97.1	-120.5	-141.4	535.4	-136.23
13.50	55.22	2059.8	2050.6	2041.5	3.63	3.43	3.20	30.61	-22.7	-34.2	-31.5	0.22	0.92	-70.1	-96.6	-120.1	-141.5	617.6	-137.44
14.00	53.50	2087.6	2078.2	2069.3	3.52	3.35	3.13	30.58	-23.4	-32.0	-34.2	0.23	0.46	-65.6	-96.2	-119.8	-141.1	725.2	-138.79
15.00	50.19	2140.4	2130.9	2122.2	3.38	3.16	2.96	30.51	-24.5	-29.2	-37.3	0.26	1.03	-69.4	-96.4	-119.5	-140.8	1000.0	-141.71

*at 25°C unless mentioned otherwise



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