

Coaxial

Voltage Controlled Oscillator

ZX95-1410+

Linear Tuning 850 to 1410 MHz

Features

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

Applications

- r & d
- lab
- instrumentation
- test equipment



CASE STYLE: GB956

Connectors	Model
SMA	ZX95-1410-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.	
ZX95-1410+	850	1410	+8	-74	-101	-123	-143	0.5	11	57-95	170	100	-90	-17	-10	10	0.5	12	30

Maximum Ratings

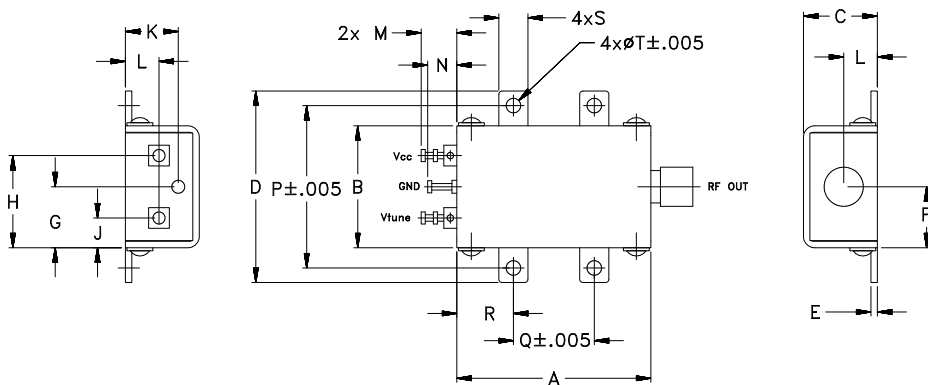
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	13V
Absolute Max. Tuning Voltage (Vtune)	13V
All specifications	50 ohm system

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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 C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp



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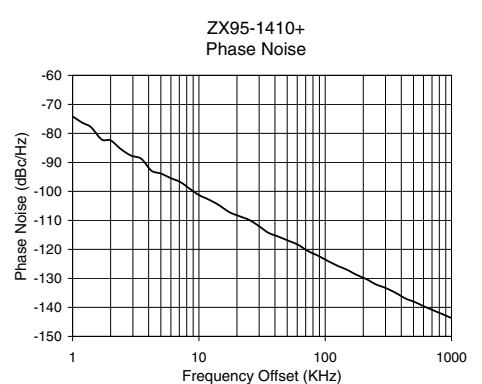
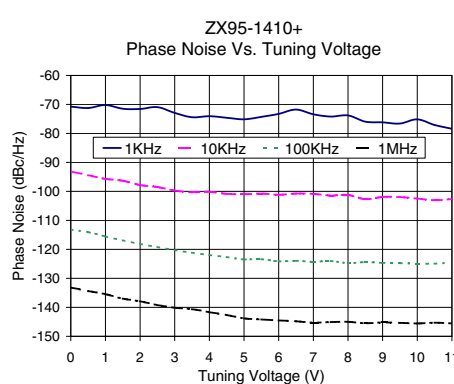
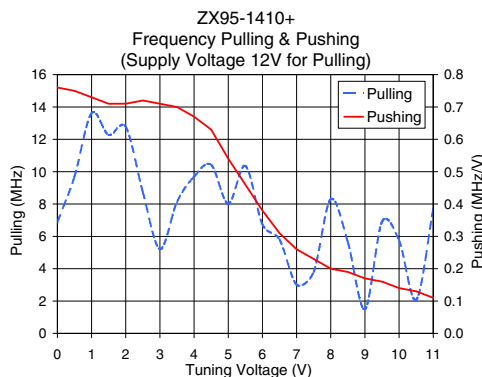
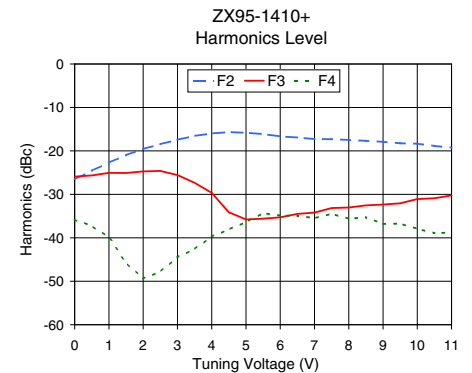
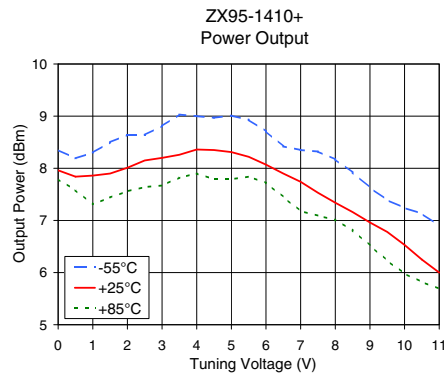
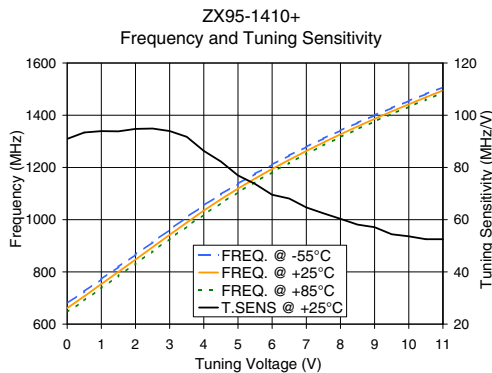
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 Page 1 of 2

Performance Data & Curves*

ZX95-1410+

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 1130 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	90.94	679.6	661.1	645.4	8.35	7.96	7.79	21.78	-26.6	-25.9	-35.9	0.76	6.87	-70.8	-93.1	-113.2	-133.2	1.0	-74.14
0.50	93.39	725.1	706.6	690.8	8.19	7.84	7.58	21.79	-24.6	-25.6	-37.3	0.75	9.70	-71.2	-94.4	-114.1	-134.4	2.0	-82.40
1.00	93.93	772.2	753.3	737.6	8.30	7.86	7.31	21.80	-22.7	-25.1	-39.9	0.73	13.62	-70.2	-95.7	-115.5	-135.4	3.5	-88.79
1.50	93.84	819.1	800.2	784.6	8.50	7.90	7.44	21.83	-21.0	-25.1	-45.7	0.71	12.27	-71.5	-96.3	-116.9	-137.0	6.0	-95.45
2.00	94.75	866.4	847.2	831.8	8.64	8.01	7.56	21.86	-19.6	-24.7	-49.4	0.71	12.78	-71.6	-97.8	-118.1	-137.9	8.5	-99.15
2.50	94.92	914.0	894.5	879.0	8.64	8.15	7.64	21.91	-18.5	-24.6	-47.8	0.72	8.73	-70.9	-98.5	-119.2	-139.2	10.0	-101.26
3.00	93.94	961.5	942.0	926.6	8.81	8.20	7.67	21.96	-17.4	-25.6	-44.5	0.71	5.22	-72.9	-99.7	-120.2	-140.1	20.8	-108.51
3.50	91.73	1009.3	989.0	973.6	9.03	8.26	7.82	22.01	-16.5	-27.3	-42.6	0.70	8.12	-74.4	-100.3	-121.2	-140.7	35.5	-114.27
4.00	86.35	1054.5	1034.8	1019.3	9.00	8.36	7.90	22.08	-16.0	-29.7	-39.7	0.67	9.69	-74.1	-100.2	-121.9	-141.7	60.7	-118.36
5.00	76.95	1137.4	1119.1	1104.8	9.01	8.31	7.79	22.16	-15.8	-35.8	-36.4	0.54	8.02	-75.1	-101.0	-123.5	-143.8	86.7	-122.07
5.50	73.69	1175.4	1157.6	1144.4	8.93	8.22	7.84	22.18	-16.1	-35.6	-34.3	0.46	10.36	-74.3	-100.8	-123.4	-144.2	100.0	-123.50
6.00	69.54	1210.6	1194.5	1181.8	8.71	8.07	7.72	22.20	-16.7	-35.3	-34.9	0.38	6.74	-73.3	-101.2	-124.1	-144.5	148.1	-126.99
7.00	64.68	1278.7	1263.3	1251.8	8.35	7.74	7.18	22.19	-17.3	-34.2	-35.5	0.26	3.01	-73.4	-100.9	-124.3	-145.3	211.6	-130.24
8.00	60.33	1341.4	1326.8	1316.2	8.17	7.34	7.01	22.16	-17.5	-33.0	-35.6	0.20	8.29	-73.8	-101.2	-124.8	-145.0	361.5	-135.02
8.50	58.12	1371.0	1357.0	1346.7	7.92	7.16	6.81	22.14	-17.7	-32.5	-35.3	0.19	5.64	-75.9	-102.7	-124.4	-145.5	432.2	-136.94
9.00	57.12	1399.9	1386.1	1376.1	7.63	6.96	6.52	22.12	-17.9	-32.3	-36.8	0.17	1.50	-76.2	-101.9	-124.7	-145.2	507.5	-138.10
9.50	54.41	1427.6	1414.6	1404.8	7.39	6.78	6.23	22.11	-18.3	-32.1	-36.7	0.16	6.90	-76.6	-102.0	-124.8	-145.4	600.0	-139.57
10.00	53.62	1454.7	1441.8	1432.4	7.24	6.53	5.98	22.09	-18.3	-31.1	-37.9	0.14	5.74	-75.2	-102.5	-125.0	-145.6	712.4	-140.95
10.50	52.53	1481.3	1468.6	1459.5	7.13	6.25	5.82	22.06	-18.9	-30.9	-38.9	0.13	2.08	-77.1	-103.1	-124.9	-145.3	851.6	-142.37
11.00	52.53	1507.1	1494.9	1485.8	6.90	6.00	5.69	22.04	-19.3	-30.3	-38.8	0.11	7.70	-78.4	-102.7	-124.6	-145.5	1000.0	-143.68

*at 25°C unless mentioned otherwise



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