

Coaxial

# Voltage Controlled Oscillator

## ZX95-1150C+

Ultra Low Noise 1146 to 1154 MHz

### Features

- ultra low phase noise
- linear tuning characteristics
- very low pushing
- very low pulling
- protected by US patent 6,790,049



CASE STYLE: GB956

Connectors	Model
SMA	ZX95-1150C-S+

### Applications

- r & d
- lab
- instrumentation
- wireless communications
- airborne telecom system

**+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 dBc (MHz)	PUSHING (MHz/V)	DC OPERATING POWER			
	Min.	Max.		Typ.				VOLTAGE RANGE (V)	SENSI- TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)	Typ.		Typ.	Max.			Typ.	Max.	Vcc (volts)	Current (mA)
				1	10	100	1000	Min.	Max.	Typ.	Typ.	Typ.		Typ.	Typ.			Typ.	Typ.	Max.	
ZX95-1150C+	1146	1154	+2.5	-98	-121	-141	-160	0.5	11	3	55	45	-90	-20	-10	0.1	0.1	5	35		

### Maximum Ratings

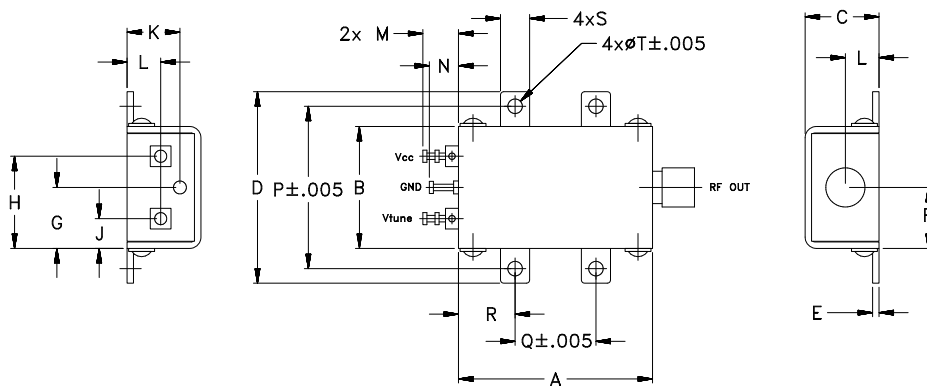
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	6.5V
Absolute Max. Tuning Voltage (Vtune)	13.0V
All specifications	50 ohm system

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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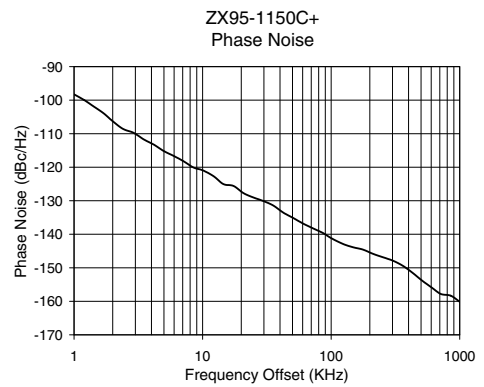
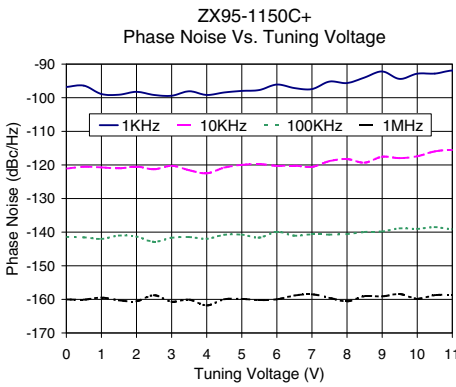
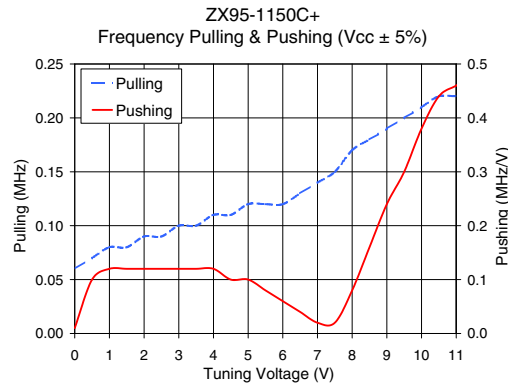
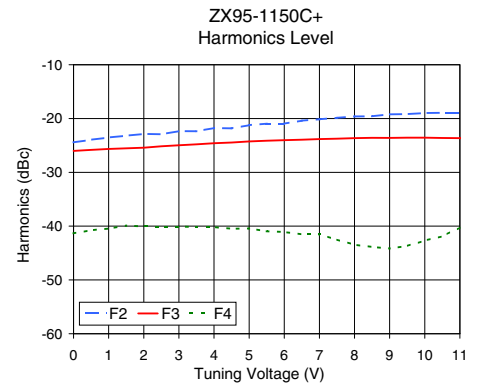
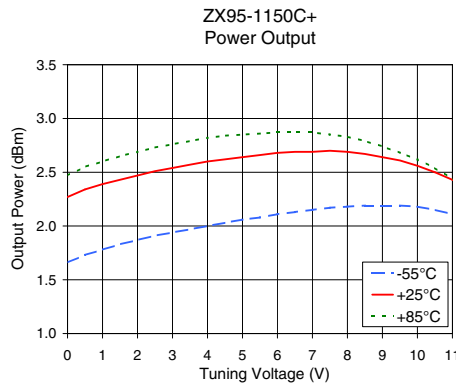
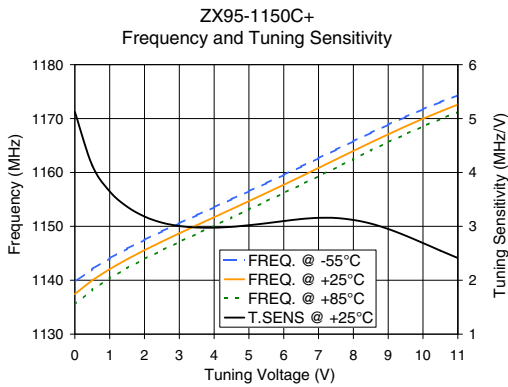
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ZX95-1150C+  
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# Performance Data & Curves\*

# ZX95-1150C+

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 1150 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1KHz	10KHz	100KHz	1MHz		
0.00	5.12	1139.7	1137.4	1135.5	1.66	2.27	2.47	23.14	-24.4	-26.0	-41.3	0.01	0.06	-96.8	-121.1	-141.4	-160.0	1.0	-98.27
0.50	4.13	1142.1	1140.0	1138.2	1.73	2.34	2.55	23.30	-24.0	-25.8	-40.8	0.10	0.07	-96.4	-120.6	-141.6	-160.1	2.0	-106.29
1.00	3.65	1144.1	1142.1	1140.4	1.78	2.39	2.60	23.42	-23.5	-25.7	-40.4	0.12	0.08	-98.9	-120.7	-142.0	-159.5	3.5	-111.77
1.50	3.37	1145.8	1143.9	1142.2	1.83	2.43	2.65	23.53	-23.2	-25.5	-39.9	0.12	0.08	-99.1	-121.0	-141.0	-160.3	6.0	-116.69
2.00	3.18	1147.5	1145.6	1143.9	1.87	2.47	2.69	23.64	-22.9	-25.4	-40.1	0.12	0.09	-98.2	-120.5	-141.3	-160.6	8.5	-120.09
2.50	3.07	1149.1	1147.2	1145.6	1.91	2.51	2.73	23.73	-22.9	-25.2	-40.1	0.12	0.09	-99.2	-121.3	-142.9	-158.8	10.0	-120.92
3.00	3.01	1150.6	1148.7	1147.1	1.94	2.54	2.76	23.83	-22.4	-25.0	-40.1	0.12	0.10	-99.4	-120.3	-141.7	-160.7	20.8	-127.75
3.50	2.98	1152.1	1150.2	1148.6	1.97	2.57	2.79	23.91	-22.4	-24.8	-40.2	0.12	0.10	-98.1	-121.6	-141.5	-160.1	35.5	-131.44
4.00	2.98	1153.5	1151.7	1150.1	2.00	2.60	2.82	24.00	-21.8	-24.6	-40.2	0.12	0.11	-99.2	-122.5	-142.0	-161.8	60.7	-136.84
4.50	2.99	1155.0	1153.2	1151.6	2.03	2.62	2.84	24.08	-21.8	-24.5	-40.5	0.10	0.11	-98.4	-120.8	-140.8	-160.0	86.7	-139.66
5.00	3.02	1156.5	1154.7	1153.1	2.06	2.64	2.85	24.16	-21.2	-24.3	-40.4	0.10	0.12	-98.0	-120.0	-140.8	-159.9	100.0	-141.17
5.50	3.06	1158.0	1156.2	1154.6	2.08	2.66	2.86	24.25	-21.0	-24.1	-41.0	0.08	0.12	-97.7	-119.8	-141.6	-160.2	148.1	-143.88
6.00	3.10	1159.5	1157.7	1156.2	2.11	2.68	2.87	24.32	-21.0	-24.0	-41.1	0.06	0.12	-96.1	-120.3	-139.9	-160.0	177.0	-144.59
6.50	3.14	1161.1	1159.3	1157.7	2.13	2.69	2.87	24.39	-20.4	-23.9	-41.5	0.04	0.13	-97.1	-120.2	-141.1	-158.9	211.6	-145.85
7.00	3.16	1162.6	1160.8	1159.3	2.15	2.69	2.87	24.45	-20.1	-23.8	-41.6	0.02	0.14	-97.4	-120.6	-140.6	-158.5	302.4	-147.89
7.50	3.15	1164.2	1162.4	1160.9	2.17	2.70	2.85	24.50	-19.9	-23.7	-42.5	0.02	0.15	-95.2	-118.9	-140.8	-159.6	361.5	-149.43
8.00	3.12	1165.8	1164.0	1162.5	2.18	2.69	2.83	24.54	-19.6	-23.7	-43.5	0.08	0.17	-95.6	-118.3	-140.6	-160.6	507.5	-153.77
9.00	2.95	1168.9	1167.1	1165.6	2.19	2.64	2.74	24.60	-19.2	-23.6	-44.2	0.24	0.19	-92.2	-117.6	-139.8	-159.1	606.7	-155.94
10.00	2.69	1171.7	1170.0	1168.5	2.18	2.56	2.62	24.60	-19.0	-23.6	-42.7	0.38	0.21	-92.8	-117.4	-139.0	-159.8	851.6	-158.34
11.00	2.41	1174.3	1172.6	1171.2	2.11	2.43	2.44	24.55	-18.9	-23.7	-40.3	0.46	0.22	-91.9	-115.6	-139.1	-158.7	1000.0	-160.15

\*at 25°C unless mentioned otherwise



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