

Coaxial

Voltage Controlled Oscillator

ZX95-1960+

Ultra Low Noise 1960 to 1966 MHz

Features

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

Applications

- r & d
- lab
- instrumentation
- wireless communications
- medical equipment



CASE STYLE: GB956

Connectors	Model
SMA	ZX95-1960-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				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)		PORT TIVITY (MHz/V)	CAP (pF)		3 dB MODULATION BANDWIDTH (MHz)	Typ.			Typ.	Typ.	Max.	Vcc (volts)	Current (mA)
	Min.	Max.							Min.	Max.												
ZX95-1960+	1960	1966	+5	-92	-119	-139	-158	0.5	5	7.5	17	150	-90	-26	-17	0.5	0.1	5	40			

Maximum Ratings

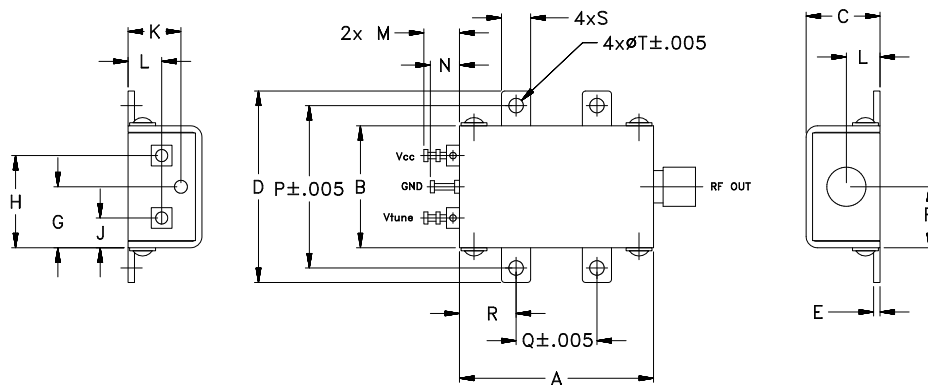
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	5.5V
Absolute Max. Tuning Voltage (Vtune)	7V
All specifications	50 ohm system

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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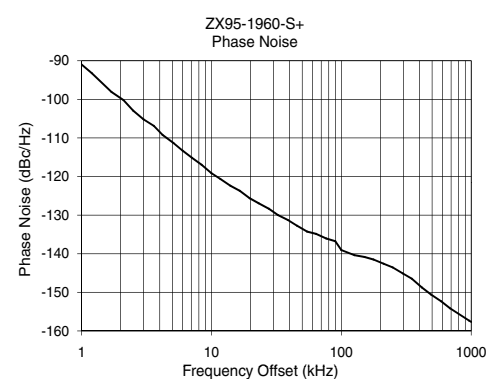
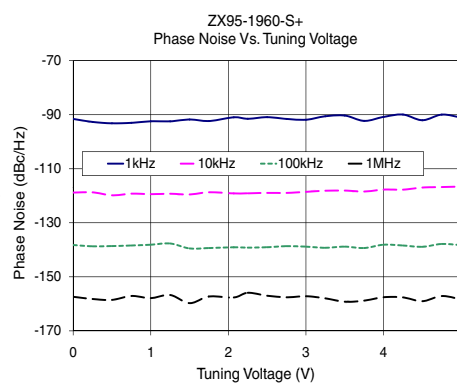
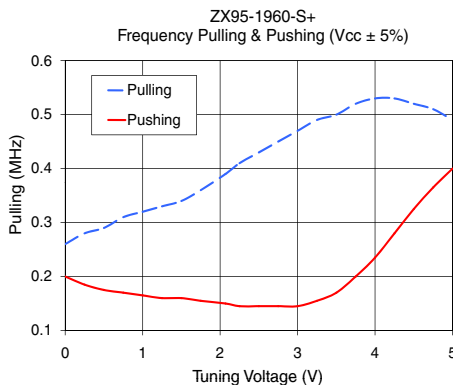
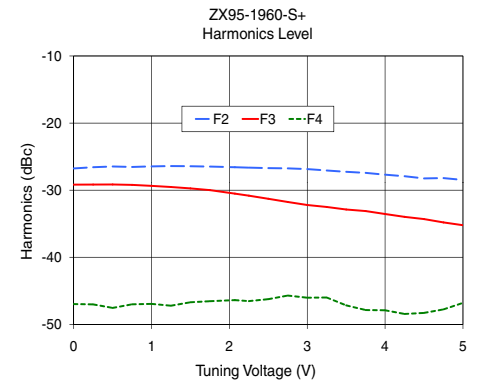
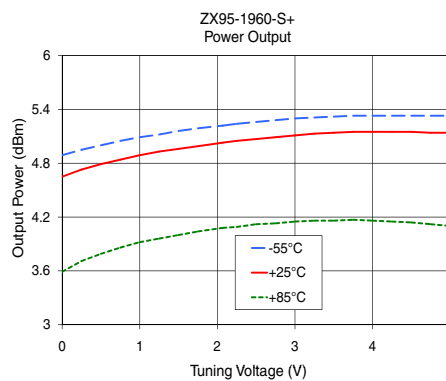
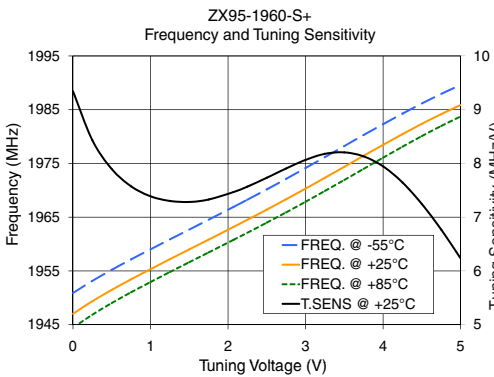
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Performance Data & Curves*

ZX95-1960+

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 1963 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	9.34	1950.9	1947.0	1944.4	4.89	4.65	3.59	29.69	-26.8	-29.2	-47.0	0.20	0.26	-91.58	-118.8	-138.2	-157.4	1.0	-90.96
0.50	7.90	1955.2	1951.5	1949.0	5.00	4.79	3.79	29.74	-26.5	-29.2	-47.5	0.15	0.29	-93.18	-119.8	-138.6	-158.5	2.5	-102.95
0.75	7.58	1957.1	1953.4	1951.0	5.05	4.84	3.86	29.75	-26.5	-29.2	-47.0	0.14	0.31	-93.00	-119.2	-138.4	-157.1	4.2	-109.21
1.00	7.39	1959.0	1955.3	1952.9	5.09	4.89	3.92	29.76	-26.5	-29.4	-46.9	0.13	0.32	-92.45	-119.4	-138.1	-157.9	7.1	-115.17
1.25	7.30	1960.9	1957.2	1954.8	5.12	4.93	3.96	29.77	-26.4	-29.5	-47.2	0.12	0.33	-92.46	-119.3	-137.7	-156.7	10.0	-119.13
1.50	7.28	1962.7	1959.0	1956.6	5.16	4.96	4.00	29.78	-26.4	-29.7	-46.7	0.12	0.34	-91.77	-119.5	-139.5	-159.7	11.7	-120.61
1.75	7.33	1964.5	1960.8	1958.4	5.19	4.99	4.04	29.78	-26.5	-30.0	-46.5	0.11	0.36	-92.34	-118.7	-139.3	-157.3	23.1	-126.92
2.07	7.47	1966.9	1963.2	1960.8	5.22	5.03	4.08	29.78	-26.6	-30.5	-46.4	0.10	0.39	-90.96	-119.1	-139.1	-157.7	38.8	-131.26
2.25	7.57	1968.3	1964.5	1962.1	5.24	5.05	4.09	29.78	-26.6	-30.8	-46.5	0.09	0.41	-91.51	-119.1	-139.2	-155.9	64.0	-134.85
2.50	7.73	1970.2	1966.4	1964.0	5.26	5.07	4.12	29.78	-26.7	-31.3	-46.2	0.09	0.43	-90.92	-118.9	-139.0	-157.0	89.8	-136.75
2.75	7.91	1972.1	1968.3	1965.9	5.28	5.09	4.13	29.77	-26.8	-31.8	-45.7	0.09	0.45	-91.56	-118.9	-138.7	-157.6	100.0	-139.06
3.00	8.07	1974.1	1970.3	1967.9	5.30	5.11	4.15	29.76	-26.9	-32.2	-46.0	0.09	0.47	-91.86	-118.6	-138.8	-157.2	150.8	-140.83
3.25	8.18	1976.2	1972.3	1969.9	5.31	5.13	4.16	29.75	-27.1	-32.5	-46.0	0.11	0.49	-90.58	-118.1	-139.2	-158.0	177.0	-141.50
3.50	8.21	1978.2	1974.4	1971.9	5.32	5.14	4.16	29.74	-27.3	-32.9	-47.2	0.14	0.50	-90.32	-118.1	-138.8	-159.2	211.6	-142.59
3.75	8.13	1980.3	1976.4	1974.0	5.33	5.15	4.17	29.73	-27.4	-33.1	-47.9	0.20	0.52	-92.29	-118.4	-139.4	-158.8	297.1	-145.10
4.00	7.94	1982.3	1978.5	1976.1	5.33	5.15	4.16	29.71	-27.7	-33.6	-47.9	0.27	0.53	-90.83	-117.7	-138.1	-157.6	348.8	-146.47
4.25	7.65	1984.3	1980.5	1978.1	5.33	5.15	4.15	29.70	-27.9	-34.0	-48.4	0.36	0.53	-89.95	-117.7	-138.4	-157.6	489.7	-150.54
4.50	7.24	1986.2	1982.4	1980.1	5.33	5.15	4.14	29.69	-28.2	-34.3	-48.3	0.45	0.52	-92.06	-117.0	-138.9	-159.0	585.4	-152.30
4.75	6.77	1987.9	1984.2	1982.0	5.33	5.14	4.12	29.67	-28.2	-34.8	-47.8	0.53	0.51	-89.97	-116.8	-137.9	-157.1	964.9	-157.33
5.00	6.23	1989.6	1985.9	1983.7	5.33	5.14	4.10	29.65	-28.5	-35.2	-46.8	0.60	0.49	-91.05	-116.6	-138.3	-158.4	1000.0	-157.65

*at 25°C unless mentioned otherwise



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