

Coaxial

# Voltage Controlled Oscillator

## ZX95-4720+

Linear Tuning 4680 to 4720 MHz

### Features

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

### Applications

- r & d
- lab
- instrumentation
- wireless communications



CASE STYLE: GB956

Connectors	Model
SMA	ZX95-4720-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)	SENSI-TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Typ.	Typ.			Max.	Typ.	Max.	Vcc (volts)	Current (mA)
ZX95-4720+	4680	4720	+7.5	-70	-96	-117	-138	0.5	11	15	30	120	-90	-26	-16	2.5	0.7	5	50			

### Maximum Ratings

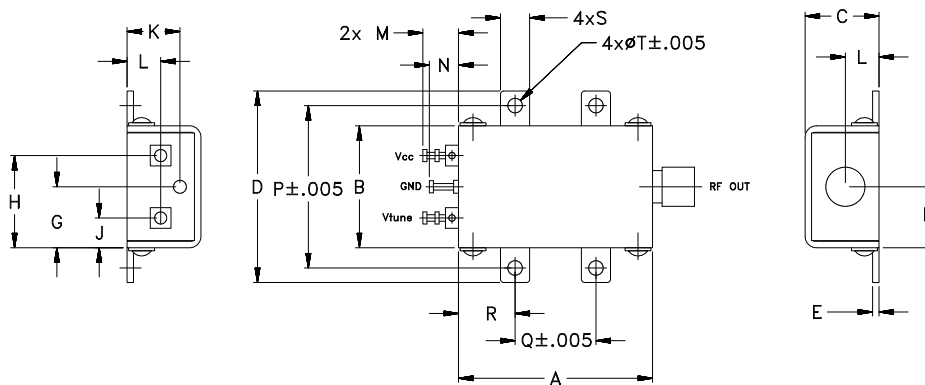
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	6V
Absolute Max. Tuning Voltage (Vtune)	13V
All specifications	50 ohm system

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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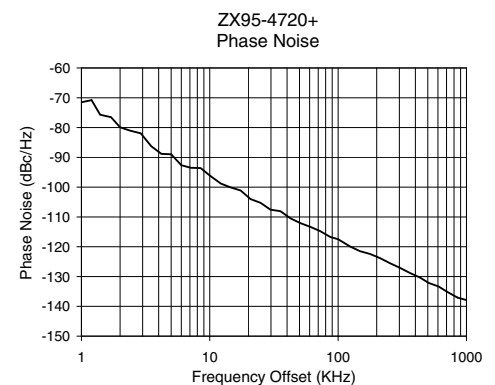
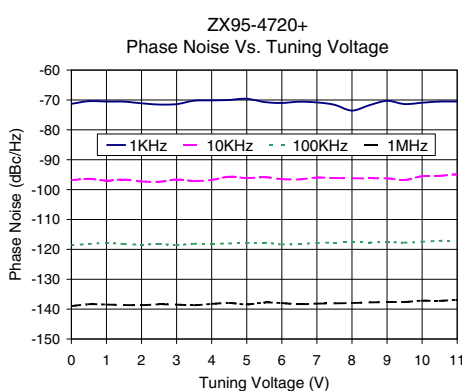
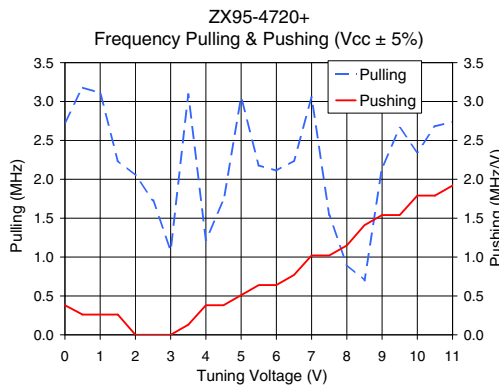
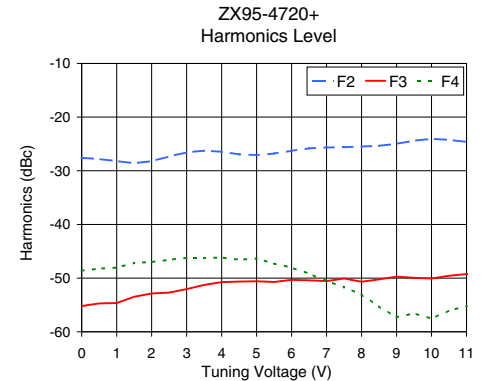
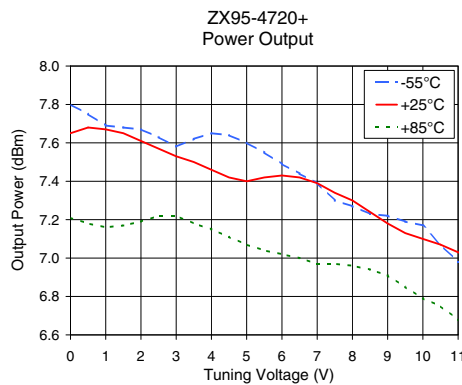
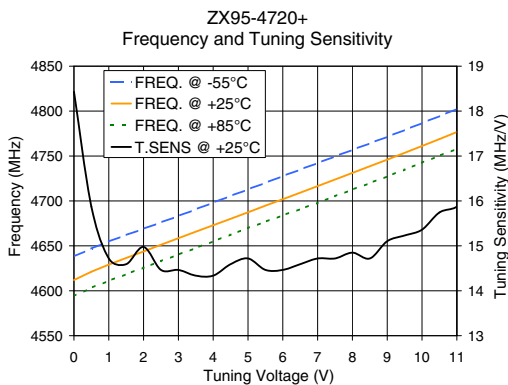
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# Performance Data & Curves\*

# ZX95-4720+

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 4700 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	18.43	4638.1	4612.0	4594.0	7.80	7.65	7.21	44.11	-27.6	-55.2	-48.6	0.38	2.73	-71.3	-96.8	-118.6	-139.0	1.0	-71.50
0.50	15.87	4646.9	4621.2	4603.3	7.75	7.68	7.18	44.10	-27.8	-54.7	-48.2	0.26	3.18	-70.4	-96.4	-118.2	-138.4	2.0	-79.92
1.00	14.72	4654.8	4629.1	4611.1	7.69	7.67	7.16	44.10	-28.2	-54.6	-48.0	0.26	3.11	-70.5	-97.0	-117.9	-138.5	3.5	-86.25
1.50	14.59	4662.0	4636.5	4618.4	7.68	7.65	7.17	44.10	-28.6	-53.5	-47.2	0.26	2.24	-70.6	-96.7	-118.2	-138.6	6.0	-92.64
2.00	14.98	4669.0	4643.8	4625.7	7.67	7.61	7.19	44.09	-28.2	-52.9	-47.0	0.00	2.05	-71.1	-97.3	-118.4	-138.7	8.5	-93.59
2.50	14.46	4676.0	4651.3	4633.0	7.63	7.57	7.22	44.10	-27.3	-52.7	-46.6	0.00	1.73	-71.5	-97.4	-118.2	-138.4	10.0	-96.09
3.00	14.46	4683.2	4658.5	4640.3	7.58	7.53	7.22	44.12	-26.6	-52.1	-46.2	0.00	1.09	-71.4	-96.6	-118.5	-138.5	20.8	-104.00
3.50	14.34	4690.6	4665.7	4647.5	7.62	7.50	7.18	44.13	-26.2	-51.3	-46.3	0.13	3.09	-70.3	-97.1	-118.1	-138.7	35.5	-108.07
4.50	14.59	4705.5	4680.1	4662.5	7.64	7.42	7.11	44.13	-27.0	-50.7	-46.6	0.38	1.73	-70.0	-95.7	-118.0	-138.0	60.7	-113.31
5.50	14.46	4720.2	4694.7	4676.9	7.55	7.42	7.04	44.10	-26.8	-50.7	-47.3	0.64	2.18	-70.7	-95.8	-117.8	-137.8	86.7	-116.70
6.50	14.59	4735.0	4709.2	4690.9	7.44	7.42	7.00	44.07	-25.8	-50.4	-49.2	0.77	2.24	-70.6	-96.6	-118.3	-138.3	100.0	-117.47
7.00	14.72	4742.2	4716.5	4698.0	7.39	7.39	6.97	44.05	-25.7	-50.6	-50.5	1.02	3.05	-70.8	-96.0	-117.9	-138.2	148.1	-121.49
7.50	14.72	4749.5	4723.8	4705.2	7.30	7.34	6.97	44.02	-25.6	-50.1	-51.7	1.02	1.54	-71.6	-96.1	-117.7	-138.1	177.0	-122.39
8.00	14.85	4756.8	4731.2	4712.5	7.27	7.30	6.96	44.00	-25.5	-50.7	-53.1	1.15	0.90	-73.6	-96.2	-117.7	-138.0	211.6	-123.78
8.50	14.72	4764.1	4738.6	4719.9	7.23	7.24	6.94	43.98	-25.4	-50.2	-55.3	1.41	0.70	-71.7	-96.2	-117.7	-137.8	302.4	-127.03
9.00	15.10	4771.5	4746.0	4727.3	7.22	7.18	6.91	43.95	-25.0	-49.7	-57.3	1.54	2.15	-70.3	-96.2	-117.5	-137.6	361.5	-128.76
9.50	15.23	4779.0	4753.5	4734.9	7.19	7.13	6.85	43.92	-24.4	-49.9	-56.6	1.54	2.66	-71.4	-96.8	-117.8	-137.6	507.5	-132.13
10.00	15.36	4786.7	4761.2	4742.6	7.17	7.10	6.79	43.88	-24.1	-50.1	-57.6	1.79	2.35	-70.9	-95.5	-117.5	-137.2	606.7	-133.32
10.50	15.74	4794.5	4768.8	4750.2	7.07	7.07	6.75	43.84	-24.2	-49.6	-56.0	1.79	2.68	-70.5	-95.4	-117.2	-137.3	851.6	-137.04
11.00	15.87	4802.4	4776.7	4758.0	6.98	7.03	6.68	43.79	-24.6	-49.2	-55.2	1.92	2.74	-70.5	-94.9	-117.1	-136.9	1000.0	-137.89

\*at 25°C unless mentioned otherwise



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