

Coaxial

# Voltage Controlled Oscillator

## ZX95-200A+

Linear Tuning 144 to 200 MHz

### Features

- high power output, +9dBm typ.
- low phase noise
- low pushing
- low pulling
- protected by US patent 6,790,049



CASE STYLE: GB956

### Applications

- R & D
- lab
- instrumentation
- military & avionics
- PMR / PAMR
- mobile satellite

Connectors	Model
SMA	ZX95-200A-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)		SENSITIVITY (MHz/V)	PORT CAP (pF)		3 dB MODULATION BANDWIDTH (MHz)	Typ.			Typ.	Max.	Typ.	Typ.	Vcc (volts)	Current (mA)
									Min.	Max.													
ZX95-200A+	144	200	+9	-97	-122	-142	-161	0.5	16	5	210	75	-90	-20	-10	0.1	0.1	12	33				

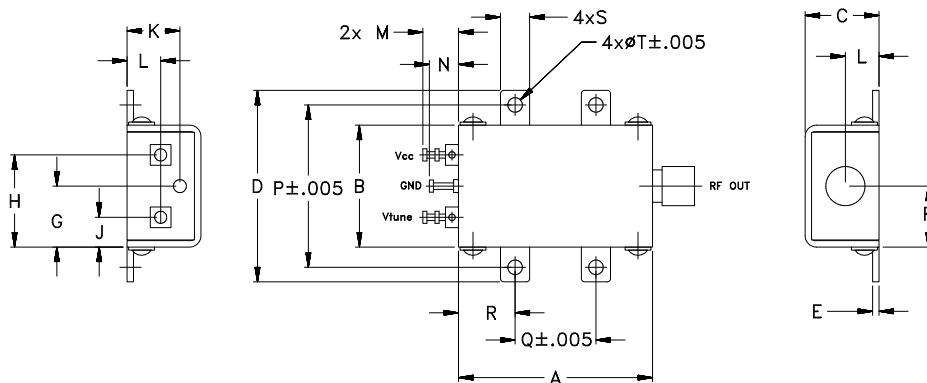
### Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	14V
Absolute Max. Tuning Voltage (Vtune)	18V
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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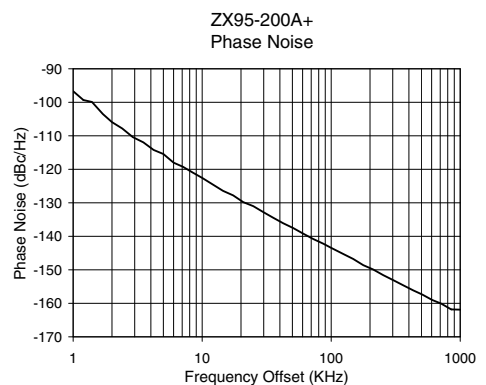
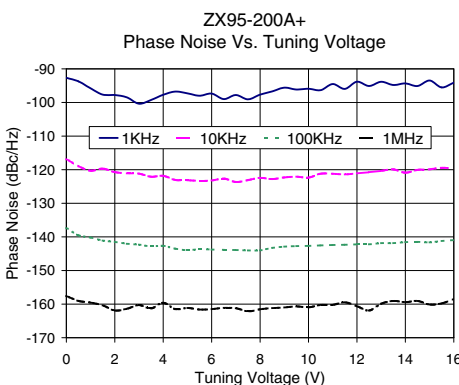
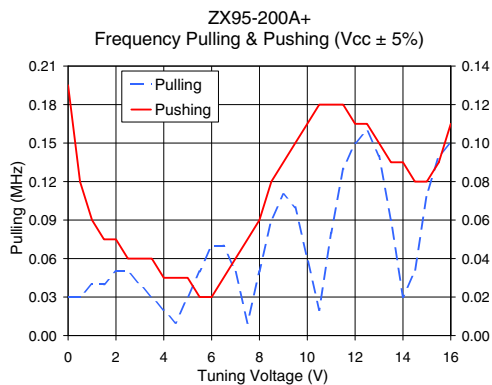
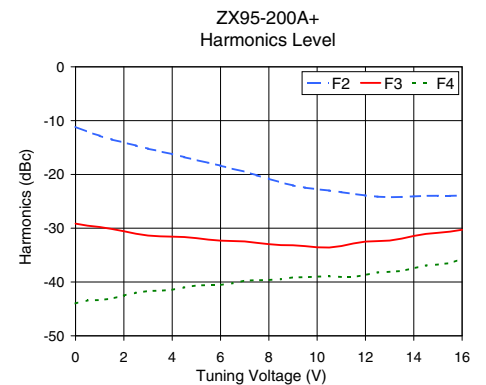
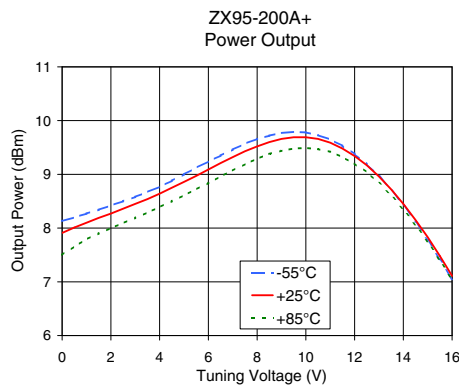
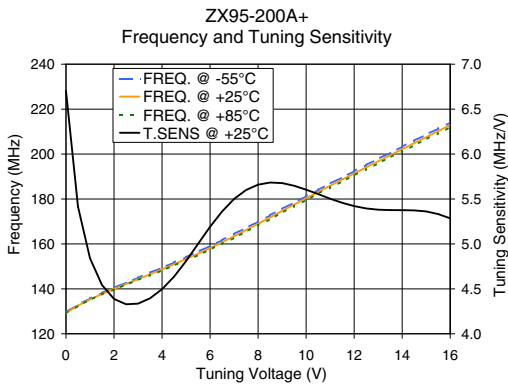
REV. A  
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ZX95-200A+  
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# Performance Data & Curves\*

# ZX95-200A+

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 172 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	6.70	129.6	129.2	129.1	8.13	7.91	7.50	25.77	-11.2	-29.2	-44.0	0.13	0.03	-92.7	-116.8	-137.3	-157.6	1.0	-96.70
0.50	5.41	133.0	132.6	132.4	8.20	8.01	7.66	25.86	-12.1	-29.5	-43.4	0.08	0.03	-93.7	-119.0	-139.5	-159.1	2.0	-105.93
1.00	4.84	135.7	135.3	135.1	8.27	8.10	7.79	25.94	-12.8	-29.8	-43.4	0.06	0.04	-95.8	-120.3	-140.2	-159.5	3.5	-111.96
1.50	4.54	138.2	137.7	137.5	8.34	8.19	7.90	26.00	-13.5	-30.1	-43.1	0.05	0.04	-97.7	-119.7	-141.1	-160.4	6.0	-118.02
2.00	4.39	140.5	140.0	139.7	8.42	8.27	8.00	26.05	-14.1	-30.6	-42.5	0.05	0.05	-97.8	-120.7	-141.5	-161.9	8.5	-121.03
3.00	4.34	145.0	144.3	143.9	8.58	8.45	8.19	26.16	-15.2	-31.4	-41.7	0.04	0.04	-100.4	-121.2	-142.3	-160.3	10.0	-122.57
4.00	4.50	149.4	148.7	148.2	8.77	8.64	8.39	26.27	-16.2	-31.6	-41.5	0.03	0.02	-97.7	-121.8	-142.6	-159.6	20.8	-129.79
5.00	4.81	154.1	153.3	152.7	9.00	8.86	8.61	26.38	-17.3	-31.9	-40.6	0.03	0.03	-97.3	-123.2	-144.0	-161.2	35.5	-134.46
6.00	5.19	159.1	158.2	157.5	9.24	9.09	8.84	26.49	-18.4	-32.3	-40.6	0.02	0.07	-97.4	-123.2	-143.8	-161.5	60.7	-139.21
7.00	5.50	164.4	163.4	162.7	9.46	9.32	9.07	26.60	-19.5	-32.5	-39.7	0.04	0.05	-97.8	-123.7	-143.9	-161.2	86.7	-142.19
8.00	5.66	169.9	169.0	168.2	9.66	9.52	9.29	26.69	-20.8	-33.0	-39.6	0.06	0.05	-97.7	-122.4	-144.0	-161.6	100.0	-143.46
8.50	5.68	172.8	171.8	171.0	9.72	9.60	9.38	26.73	-21.5	-33.1	-39.5	0.08	0.09	-96.7	-122.8	-143.3	-161.2	148.1	-146.77
9.00	5.68	175.6	174.7	173.9	9.77	9.66	9.44	26.77	-22.1	-33.2	-39.1	0.09	0.11	-95.6	-122.3	-142.9	-161.0	177.0	-148.61
10.00	5.60	181.2	180.3	179.5	9.78	9.69	9.49	26.83	-22.7	-33.5	-39.0	0.11	0.06	-95.9	-122.4	-142.7	-161.0	211.6	-149.91
11.00	5.50	186.8	185.9	185.1	9.65	9.59	9.42	26.87	-23.3	-33.3	-39.1	0.12	0.08	-94.5	-121.2	-142.4	-160.3	302.4	-153.07
12.00	5.42	192.4	191.4	190.5	9.38	9.34	9.20	26.91	-23.9	-32.5	-38.7	0.11	0.15	-93.8	-121.1	-142.2	-160.6	361.5	-154.62
13.00	5.38	197.9	196.8	195.9	9.97	9.86	9.84	26.95	-24.2	-32.3	-38.1	0.10	0.14	-93.9	-120.4	-141.9	-159.9	507.5	-157.36
14.00	5.38	203.3	202.2	201.2	8.43	8.45	8.35	26.99	-24.1	-31.4	-37.4	0.09	0.03	-94.3	-120.9	-141.6	-159.4	606.7	-158.99
15.00	5.36	208.7	207.5	206.6	7.78	7.83	7.75	27.04	-24.0	-30.9	-36.7	0.08	0.11	-93.5	-119.9	-141.6	-160.1	851.6	-161.82
16.00	5.28	214.0	212.9	211.9	7.05	7.11	7.04	27.09	-23.9	-30.3	-35.7	0.11	0.15	-94.1	-119.7	-140.9	-158.5	1000.0	-161.89

\*at 25°C unless mentioned otherwise



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