

Coaxial

# Voltage Controlled Oscillator

## ZX95-369+

5V Tuning for PLL IC's 370 to 400 MHz

### Features

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

### Applications

- R & D
- lab
- instrumentation
- wireless communication
- base station



CASE STYLE: GB956

Connectors	Model
SMA	ZX95-369-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.	Vcc (volts)	Current (mA)
	Min.	Max.							Min.	Max.												
ZX95-369+	370	400	+3	-90	-117	-138	-159	0.5	5	15	50	70	-90	-25	-18	0.1	1	5	25			

### Maximum Ratings

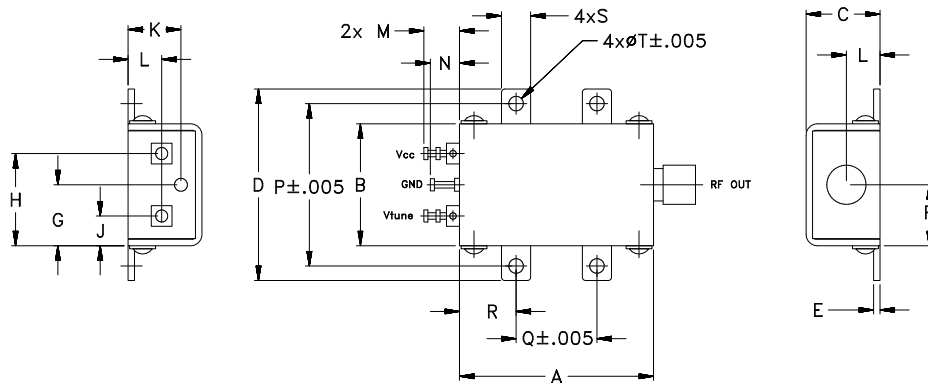
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	7V
Absolute Max. Tuning Voltage (Vtune)	7V
All specifications	50 ohm system

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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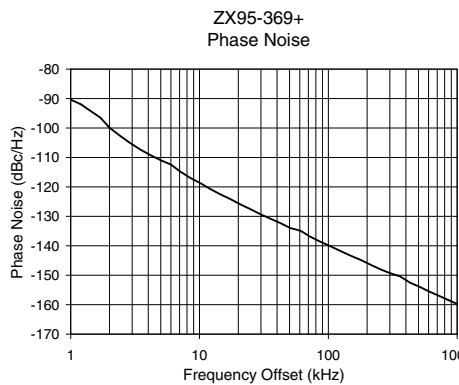
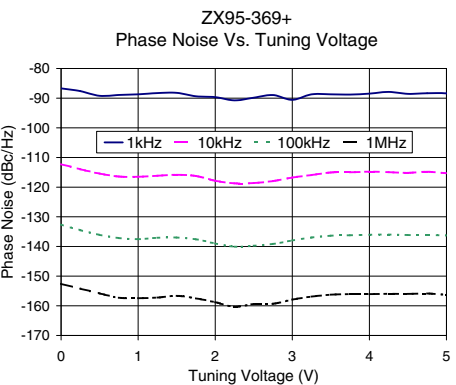
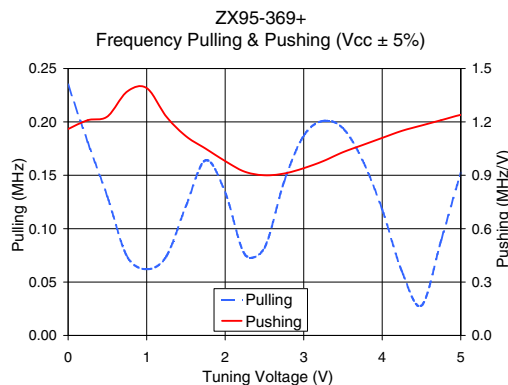
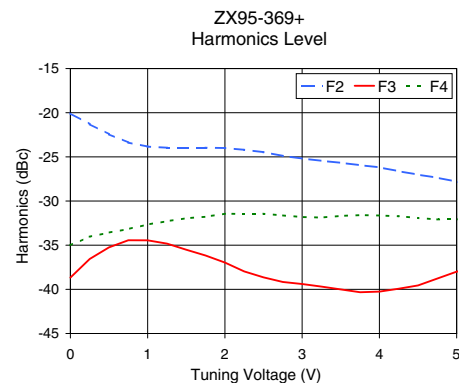
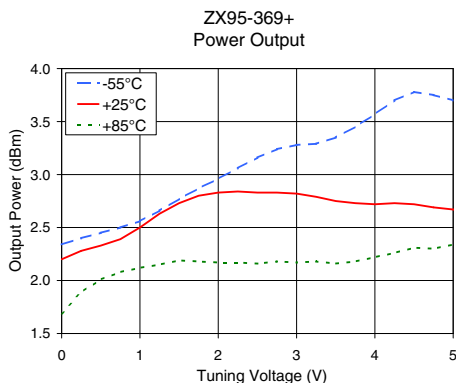
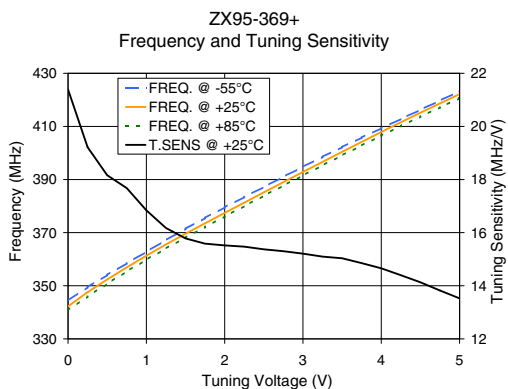
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# Performance Data & Curves\*

# ZX95-369+

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 385 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	21.39	344.4	342.2	340.8	2.34	2.20	1.69	19.18	-20.1	-38.7	-35.0	1.16	0.24	-86.7	-112.2	-132.6	-152.6	1.0	-90.37
0.25	19.22	349.5	347.6	346.0	2.40	2.28	1.89	19.31	-21.3	-36.6	-34.0	1.21	0.18	-87.6	-114.0	-134.5	-154.2	2.0	-99.89
0.50	18.16	354.1	352.4	350.8	2.45	2.33	2.01	19.42	-22.4	-35.3	-33.6	1.23	0.13	-89.2	-115.4	-136.1	-155.8	3.5	-107.40
0.75	17.68	358.5	356.9	355.4	2.50	2.39	2.08	19.51	-23.4	-34.4	-33.2	1.37	0.07	-88.9	-116.4	-137.2	-157.3	6.0	-112.41
1.00	16.84	362.8	361.3	359.8	2.56	2.50	2.12	19.53	-23.8	-34.5	-32.7	1.39	0.06	-88.7	-116.5	-137.5	-157.5	8.5	-116.97
1.25	16.18	367.2	365.5	364.0	2.66	2.63	2.15	19.53	-24.0	-34.8	-32.3	1.23	0.07	-88.3	-116.2	-137.1	-157.2	10.0	-118.57
1.50	15.78	371.4	369.6	368.1	2.77	2.73	2.19	19.53	-24.0	-35.5	-32.0	1.12	0.12	-88.2	-115.9	-137.0	-156.7	20.8	-125.97
1.75	15.58	375.5	373.5	372.1	2.87	2.80	2.18	19.52	-24.0	-36.2	-31.8	1.05	0.16	-89.4	-116.2	-137.6	-157.5	35.5	-130.80
2.00	15.52	379.5	377.4	376.1	2.96	2.83	2.17	19.51	-24.0	-37.0	-31.4	0.98	0.13	-89.7	-117.8	-139.0	-158.8	60.7	-134.87
2.25	15.47	383.4	381.3	380.0	3.06	2.84	2.17	19.51	-24.2	-38.0	-31.5	0.92	0.08	-90.7	-118.7	-140.1	-160.3	86.7	-138.62
2.50	15.37	387.2	385.2	383.9	3.16	2.83	2.16	19.51	-24.5	-38.6	-31.4	0.90	0.08	-89.9	-118.6	-139.8	-159.4	100.0	-139.84
2.75	15.30	391.0	389.0	387.7	3.24	2.83	2.18	19.51	-24.9	-39.2	-31.6	0.91	0.14	-88.9	-118.0	-139.2	-159.3	148.1	-143.32
3.00	15.21	394.8	392.8	391.5	3.28	2.82	2.17	19.52	-25.2	-39.4	-31.8	0.94	0.19	-90.6	-116.8	-138.0	-157.9	177.0	-144.75
3.25	15.10	398.5	396.7	395.3	3.29	2.79	2.18	19.53	-25.4	-39.7	-31.9	0.98	0.20	-88.7	-115.9	-137.0	-156.9	211.6	-146.39
3.50	15.04	402.2	400.4	399.1	3.35	2.75	2.16	19.54	-25.7	-40.0	-31.7	1.03	0.19	-88.7	-115.0	-136.4	-156.3	302.4	-149.32
3.75	14.85	405.8	404.2	402.8	3.45	2.73	2.18	19.56	-25.9	-40.3	-31.6	1.07	0.16	-88.8	-115.0	-136.2	-156.1	361.5	-150.42
4.00	14.66	409.3	407.9	406.5	3.57	2.72	2.22	19.57	-26.2	-40.3	-31.6	1.11	0.12	-88.5	-114.8	-136.1	-156.1	507.5	-153.86
4.25	14.40	412.8	411.6	410.1	3.70	2.73	2.26	19.59	-26.6	-39.9	-31.7	1.15	0.06	-87.9	-114.9	-136.0	-156.0	606.7	-155.55
4.50	14.13	416.3	415.2	413.7	3.78	2.72	2.31	19.60	-27.0	-39.6	-31.9	1.18	0.03	-88.6	-115.2	-136.1	-156.0	851.6	-158.40
5.00	13.52	423.2	422.1	420.6	3.70	2.67	2.34	19.63	-27.8	-38.0	-32.1	1.24	0.15	-88.4	-115.3	-136.3	-156.2	1000.0	-159.76

\*at 25°C unless mentioned otherwise



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