

Coaxial

# Voltage Controlled Oscillator

ZX95-330+

Linear Tuning 244 to 340 MHz

## Features

- High power output, +9dBm typ.
- Linear tuning characteristics
- Low phase noise
- Low pulling
- Low pushing
- Protected by US patent 6,790,049



CASE STYLE: GB956

## Applications

- R&D
- LAB
- Instrumentation
- Wireless communications
- Radio

Connectors	Model	Price	Qty.
SMA	ZX95-330-S+	\$ 40.95 ea.	(1-9)

**+ RoHS compliant in accordance with EU Directive (2002/95/EC)**

*The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.*

## Electrical Specifications

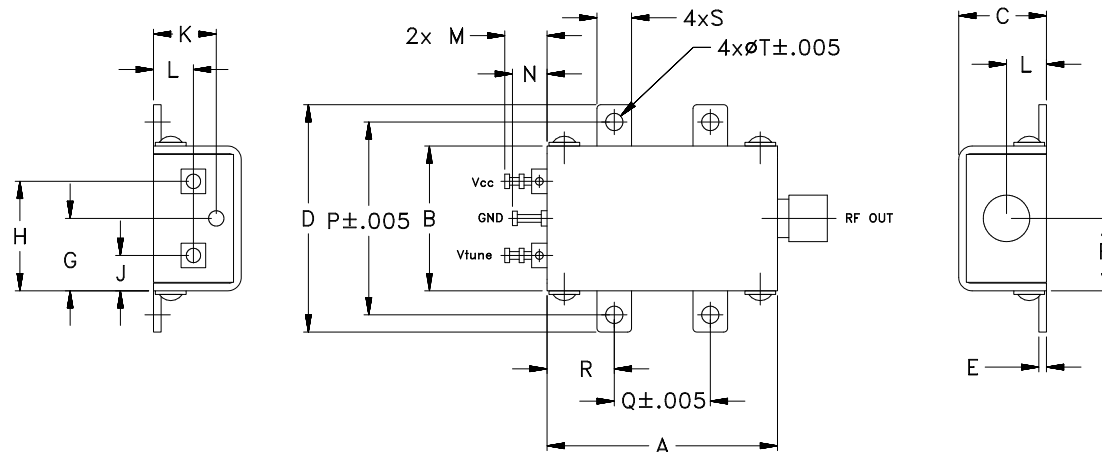
MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	PHASE NOISE dBc/Hz SSB at offset frequencies, kHz				TUNING				NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @ 12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER		
	Min.	Max.		Typ.	1	10	100	1000	VOLTAGE RANGE (V)	SENSI-TIVITY (MHz/V)	PORT CAP (pF)		3 dB MODULATION BANDWIDTH (MHz)	Typ.			Typ.	Max.	Typ.
ZX95-330+	244	340	+9	-91	-118	-139	-158	4	16	7 - 10	170	1.5	-90	-23	-10	0.2	0.2	12	31

## Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	13.5V
Absolute Max. Tuning Voltage (Vtune)	18.0V
All specifications	50 ohm system

Permanent damage may occur if any of these limits are exceeded.

## 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	.45	.57	.18	.33	.21	.22	.18	1.00	.50	.35	.18	.106	GRAM
30.48	19.05	11.68	29.97	1.02	9.65	11.43	14.48	4.57	8.38	5.33	5.59	4.57	25.40	12.70	8.89	4.57	2.69	35.0



For detailed performance specs & shopping online see web site

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at [minicircuits.com](http://minicircuits.com)

**Notes:** 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp).

REV. OR  
M120402  
EDR-8767F2  
ZX95-330+  
RAV  
090903  
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# Performance Data & Curves\*

# ZX95-330+

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 292 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	12.64	200.7	200.1	200.1	7.99	7.39	5.82	25.15	-12.1	-38.8	-47.0	0.23	0.22	-86.7	-111.2	-131.4	-151.9	1.0	-91.46
1.00	9.50	212.5	211.7	211.2	7.95	7.58	6.89	25.25	-13.5	-36.8	-45.3	0.14	0.17	-90.2	-115.4	-135.8	-156.6	2.0	-100.49
2.00	8.83	221.9	220.9	220.3	7.94	7.68	7.17	25.32	-14.9	-36.6	-43.9	0.11	0.15	-92.4	-117.2	-137.7	-156.7	3.5	-106.40
3.00	8.91	230.9	229.7	229.0	8.01	7.78	7.37	25.37	-16.4	-36.2	-42.3	0.09	0.12	-92.5	-118.6	-138.8	-157.3	6.0	-113.54
4.00	9.31	240.1	238.7	237.8	8.15	7.93	7.57	25.43	-17.2	-35.7	-40.9	0.08	0.10	-93.2	-118.5	-139.3	-159.2	8.5	-117.00
5.00	9.77	249.6	248.2	247.1	8.38	8.15	7.83	25.47	-18.7	-35.7	-38.3	0.08	0.07	-93.3	-119.1	-139.7	-157.8	10.0	-118.04
6.00	10.10	259.6	258.0	256.9	8.70	8.44	8.16	25.52	-20.0	-35.4	-35.3	0.10	0.03	-92.6	-118.8	-139.9	-157.7	20.8	-125.37
6.50	10.18	264.6	263.1	261.9	8.86	8.61	8.34	25.54	-20.7	-35.0	-33.6	0.12	0.03	-92.3	-118.9	-139.8	-158.2	35.5	-130.38
7.00	10.21	269.7	268.2	267.0	9.03	8.78	8.52	25.56	-21.4	-35.1	-31.3	0.14	0.04	-91.5	-118.8	-139.8	-157.9	60.7	-135.15
8.00	10.09	279.9	278.4	277.1	9.28	9.07	8.83	25.60	-22.5	-34.8	-27.5	0.17	0.10	-91.4	-118.4	-139.6	-159.3	86.7	-138.28
8.50	9.98	285.0	283.4	282.2	9.36	9.18	8.94	25.61	-23.0	-34.6	-28.4	0.18	0.13	-90.8	-118.3	-139.6	-159.2	100.0	-139.46
9.00	9.85	290.0	288.4	287.1	9.42	9.27	9.02	25.63	-23.5	-34.2	-30.7	0.19	0.16	-91.5	-118.4	-139.6	-158.7	148.1	-143.11
9.50	9.69	294.9	293.3	292.1	9.46	9.32	9.07	25.64	-23.8	-34.0	-33.1	0.20	0.18	-91.1	-117.8	-139.4	-158.6	177.0	-144.35
10.00	9.53	299.8	298.2	296.9	9.48	9.35	9.09	25.65	-24.0	-33.7	-35.1	0.21	0.19	-92.0	-118.2	-139.4	-157.9	211.6	-146.01
11.00	9.16	309.3	307.6	306.4	9.47	9.32	9.08	25.67	-24.8	-32.5	-38.4	0.24	0.17	-91.1	-117.8	-139.0	-157.5	302.4	-148.87
12.00	8.72	318.3	316.7	315.4	9.39	9.19	8.98	25.69	-25.1	-31.5	-40.8	0.27	0.13	-90.6	-117.3	-138.5	-157.3	361.5	-150.14
13.00	8.21	326.8	325.2	323.9	9.18	8.96	8.79	25.71	-25.7	-30.1	-42.0	0.29	0.10	-90.2	-116.9	-138.5	-158.4	507.5	-153.93
14.00	7.63	334.9	333.3	331.9	8.79	8.60	8.47	25.73	-25.8	-28.4	-42.9	0.30	0.17	-90.3	-116.6	-138.5	-157.8	606.7	-154.48
15.00	7.01	342.4	340.8	339.4	8.23	8.12	8.02	25.75	-25.6	-26.7	-43.5	0.31	0.22	-90.6	-116.8	-138.3	-157.1	851.6	-157.61
16.00	6.38	349.4	347.6	346.1	7.60	7.56	7.49	25.77	-25.3	-25.0	-43.5	0.29	0.21	-91.2	-116.4	-138.5	-156.2	1000.0	-159.44

\*at 25°C unless mentioned otherwise

