

Coaxial

# Voltage Controlled Oscillator

## ZX95-3500+

Linear Tuning 3090 to 3500 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
- satellite systems



CASE STYLE: GB956

Connectors	Model	Price	Qty.
SMA	ZX95-3500-S+	\$40.95 ea.	(1-9)

**+RoHS Compliant**  
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

### Electrical Specifications

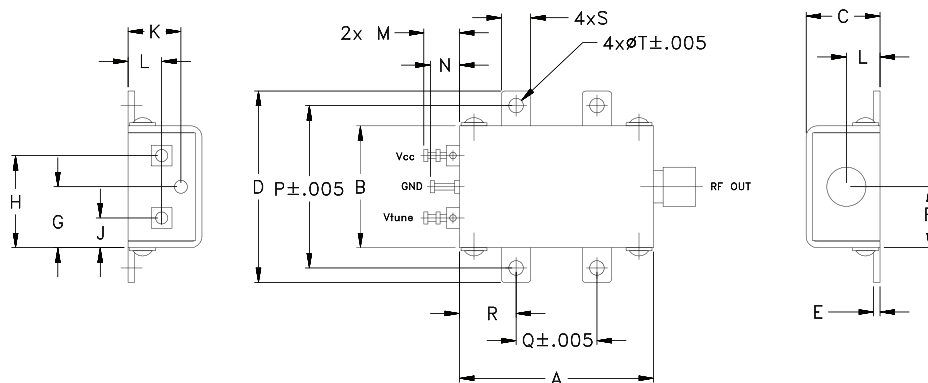
MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	PHASE NOISE dBc/Hz SSB at offset frequencies, KHz				TUNING					NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @ 12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER	
	Min.	Max.		Typ.	1	10	100	1000	VOLTAGE RANGE (V)	SENSI-TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Typ.	Typ.			Typ.	Typ.
ZX95-3500+	3090	3500	+3	-70	-96	-117	-137	0.5	11	64-71	10	500	-90	-24	-14	1	2	10	41

### Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	12V
Absolute Max. Tuning Voltage (Vtune)	13V
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	.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



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).

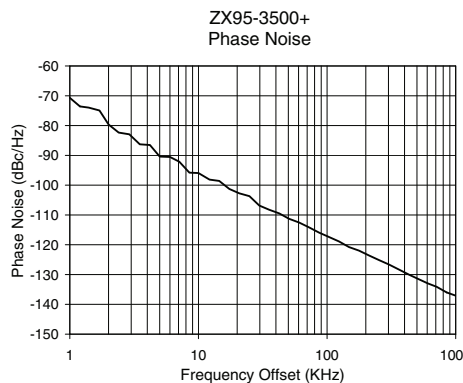
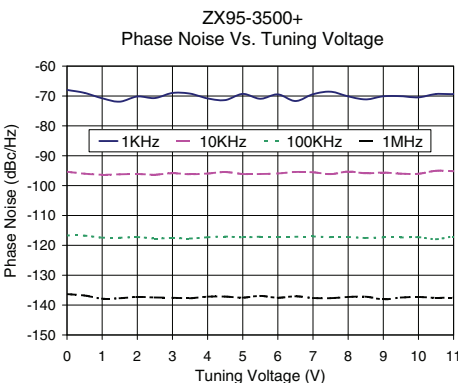
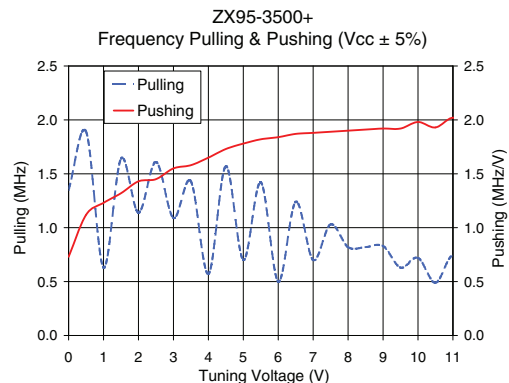
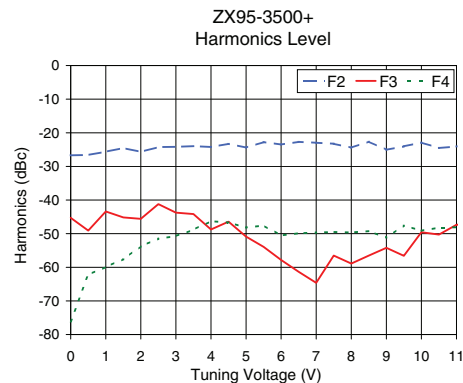
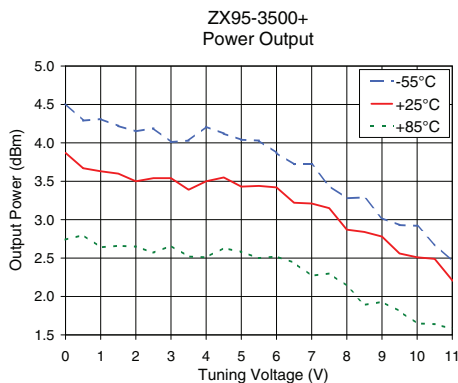
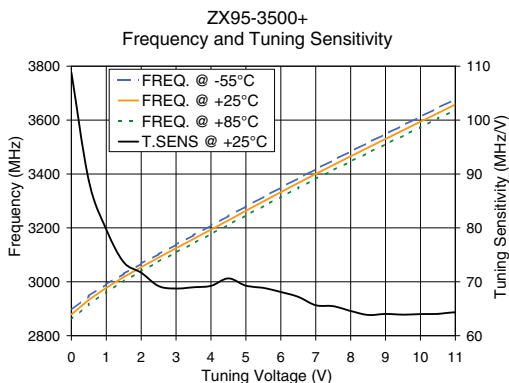
REV. OR  
M108616  
EDR-8368  
ZX95-3500+  
RAV  
120905  
Page 1 of 2

# Performance Data & Curves\*

# ZX95-3500+

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 3300 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	108.85	2895.2	2878.8	2859.9	4.51	3.87	2.74	35.15	-26.7	-45.3	-76.1	0.73	1.35	-68.0	-95.4	-116.7	-136.3	1.0	-70.70
0.50	88.78	2947.2	2933.2	2916.5	4.29	3.67	2.80	35.17	-26.6	-49.1	-62.2	1.12	1.89	-69.0	-96.0	-116.8	-136.8	2.0	-79.63
1.00	79.71	2990.9	2977.6	2962.2	4.31	3.63	2.64	35.21	-25.6	-43.4	-59.9	1.23	0.63	-70.8	-96.3	-117.4	-137.8	3.5	-86.28
1.50	73.63	3029.6	3017.4	3002.4	4.22	3.60	2.66	35.24	-24.5	-45.2	-57.6	1.32	1.64	-71.9	-96.2	-117.4	-137.7	6.0	-90.53
2.00	71.70	3067.2	3054.3	3039.0	4.15	3.50	2.65	35.26	-25.7	-45.6	-53.7	1.43	1.14	-70.2	-96.1	-117.2	-137.3	8.5	-95.80
2.50	69.20	3102.6	3090.1	3074.9	4.19	3.54	2.57	35.29	-24.3	-41.2	-51.5	1.45	1.61	-70.7	-96.4	-117.7	-137.4	10.0	-95.94
3.00	68.75	3137.5	3124.7	3108.6	4.01	3.54	2.66	35.32	-24.2	-43.7	-50.7	1.55	1.09	-69.0	-95.9	-117.5	-137.5	20.8	-102.74
3.50	68.99	3173.1	3159.1	3143.0	4.03	3.39	2.52	35.35	-24.0	-44.2	-48.8	1.58	1.43	-69.2	-96.2	-117.7	-137.6	35.5	-108.26
4.00	69.24	3208.6	3193.6	3177.1	4.21	3.50	2.51	35.38	-24.2	-48.8	-46.3	1.65	0.57	-70.8	-96.0	-117.3	-137.2	60.7	-112.54
4.50	70.62	3244.2	3228.2	3211.9	4.12	3.55	2.63	35.40	-23.3	-46.4	-46.7	1.73	1.57	-71.4	-95.5	-117.1	-137.2	86.7	-115.93
5.00	69.27	3279.5	3263.5	3246.4	4.04	3.43	2.58	35.42	-24.4	-50.9	-48.2	1.78	0.70	-69.3	-96.1	-117.4	-137.5	100.0	-117.12
5.50	68.86	3314.8	3298.1	3280.7	4.03	3.44	2.50	35.43	-22.8	-53.9	-47.6	1.82	1.42	-70.9	-96.1	-117.1	-136.9	148.1	-120.79
6.00	68.11	3349.5	3332.6	3314.8	3.87	3.42	2.52	35.45	-23.5	-57.8	-50.5	1.84	0.50	-69.5	-95.9	-117.2	-137.6	177.0	-121.96
6.50	67.21	3383.9	3366.6	3348.2	3.72	3.22	2.44	35.45	-22.7	-61.3	-49.9	1.87	1.24	-71.7	-95.4	-117.1	-137.1	211.6	-123.57
7.00	65.65	3417.7	3400.2	3381.7	3.72	3.21	2.27	35.46	-23.0	-64.6	-49.7	1.88	0.70	-69.4	-95.5	-117.0	-137.6	302.4	-126.62
7.50	65.47	3450.7	3433.1	3414.1	3.44	3.15	2.30	35.46	-23.3	-56.5	-49.5	1.89	1.03	-68.6	-96.2	-117.3	-137.7	361.5	-128.29
8.00	64.58	3483.7	3465.8	3446.6	3.28	2.87	2.14	35.46	-24.4	-58.9	-49.6	1.90	0.82	-70.1	-95.3	-117.2	-137.3	507.5	-131.41
9.00	64.03	3548.2	3530.0	3510.5	3.02	2.78	1.93	35.46	-25.1	-54.2	-51.2	1.92	0.83	-70.1	-95.7	-117.3	-138.1	606.7	-132.97
10.00	64.01	3612.5	3594.0	3573.9	2.92	2.51	1.65	35.48	-22.9	-49.6	-49.1	1.98	0.72	-70.5	-96.0	-117.3	-137.3	851.6	-136.01
11.00	64.32	3677.3	3658.0	3637.4	2.46	2.21	1.58	35.51	-24.1	-47.4	-48.1	2.02	0.74	-69.4	-95.2	-117.1	-137.5	1000.0	-137.09

\*at 25°C unless mentioned otherwise



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).