

Coaxial

# Voltage Controlled Oscillator

## ZX95-1300+

Wide Band 400 to 1300 MHz

### Features

- very wide band frequency
- linear tuning characteristics
- low phase noise
- low pushing
- protected by US patent 6,790,049

### Applications

- r & d
- lab
- instrumentation
- wireless communications
- industrial communications
- test equipment



CASE STYLE: GB956

Connectors	Model	Price	Qty.
SMA	ZX95-1300-S+	\$49.95 ea.	(1-9)

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

### Electrical Specifications

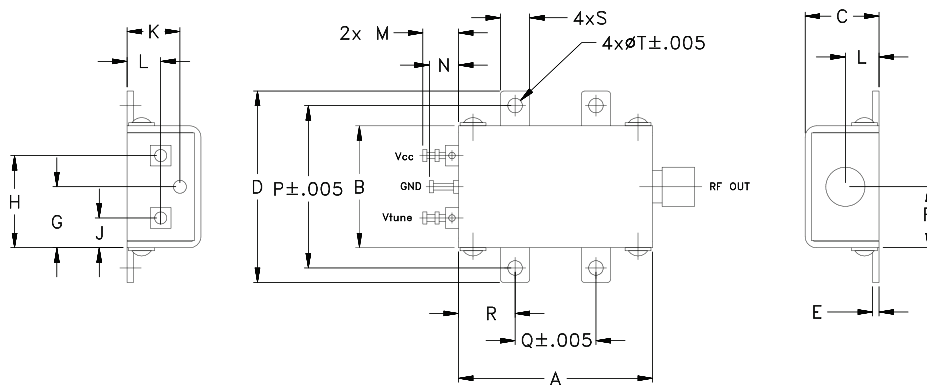
MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	PHASE NOISE dBc/Hz SSB at offset frequencies, kHz				TUNING					NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @ 12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER	
	Min.	Max.		Typ.	1	10	100	1000	VOLTAGE RANGE (V)	SENSI-TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Typ.	Typ.			Typ.	Typ.
ZX95-1300+	400	1300	+8	-65	-91	-120	-141	0.3	20	40 - 60	100	30	-90	-12	-	3.5	1.5	5	40

### 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)	22V
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).

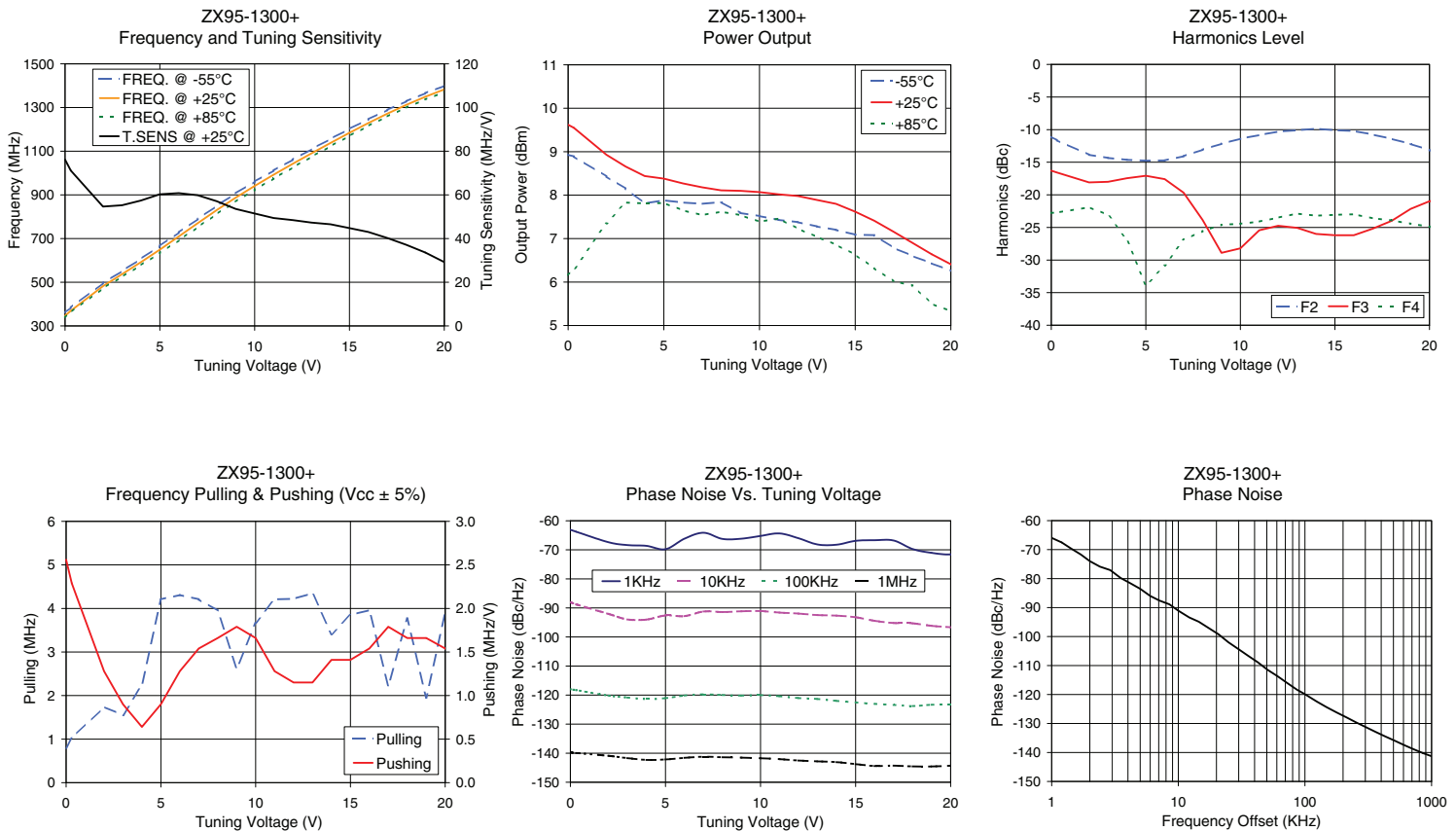
REV. OR  
M118009  
EDR-8340F2  
ZX95-1300+  
RAV  
120902  
Page 1 of 2

# Performance Data & Curves\*

# ZX95-1300+

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 850 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	76.16	361.3	346.5	339.1	8.93	9.62	6.16	29.90	-11.1	-16.3	-22.8	2.56	0.80	-63.1	-88.0	-118.0	-139.8	1.0	-65.96
0.30	71.15	383.9	369.3	361.9	8.89	9.55	6.29	30.05	-11.6	-16.6	-22.7	2.29	1.02	-63.7	-88.8	-118.3	-139.9	2.0	-73.98
2.00	54.66	496.1	482.1	472.6	8.43	8.93	7.35	30.89	-13.9	-18.1	-21.9	1.28	1.74	-67.4	-92.1	-120.2	-140.9	3.5	-79.77
3.00	55.23	551.2	536.8	524.9	8.15	8.66	7.83	31.31	-14.3	-18.0	-23.1	0.90	1.55	-68.4	-94.0	-120.9	-141.7	6.0	-85.98
4.00	57.41	607.4	592.0	578.0	7.81	8.44	7.81	31.68	-14.6	-17.5	-26.9	0.64	2.24	-68.6	-94.0	-121.4	-142.3	8.5	-88.86
5.00	60.29	666.6	649.4	633.6	7.88	8.38	7.82	31.93	-14.8	-17.1	-33.9	0.90	4.21	-69.8	-92.6	-121.1	-142.2	10.0	-91.08
6.00	60.80	728.1	709.7	692.4	7.83	8.27	7.65	32.09	-14.7	-17.6	-30.8	1.28	4.31	-66.2	-92.8	-120.2	-141.6	20.8	-99.24
7.00	59.84	789.8	770.5	752.5	7.80	8.18	7.54	32.16	-14.1	-19.7	-26.9	1.54	4.21	-64.1	-91.2	-119.8	-141.2	35.5	-106.61
8.00	57.09	849.9	830.3	812.2	7.84	8.11	7.62	32.23	-13.1	-23.8	-25.6	1.66	3.95	-66.2	-91.4	-120.0	-141.4	60.7	-113.68
9.00	53.57	907.2	887.4	869.2	7.59	8.10	7.54	32.30	-12.2	-28.9	-24.6	1.79	2.62	-66.2	-91.2	-120.2	-141.5	86.7	-118.37
10.00	51.46	960.8	941.0	923.3	7.52	8.07	7.39	32.25	-11.4	-28.2	-24.4	1.66	3.67	-65.2	-91.1	-120.0	-141.7	100.0	-119.89
11.00	49.41	1011.6	992.4	975.2	7.43	8.02	7.46	32.19	-10.8	-25.4	-24.1	1.28	4.21	-64.4	-91.6	-120.4	-142.1	148.1	-124.35
12.00	48.45	1061.1	1041.9	1025.2	7.38	7.98	7.23	32.03	-10.3	-24.7	-23.5	1.15	4.22	-66.0	-92.0	-121.0	-142.5	177.0	-126.14
13.00	47.30	1109.2	1090.3	1074.6	7.28	7.89	7.04	31.87	-10.1	-25.1	-22.9	1.15	4.35	-68.2	-92.5	-121.4	-142.8	211.6	-127.85
14.00	46.53	1156.4	1137.6	1122.7	7.20	7.80	6.86	31.69	-9.9	-26.0	-23.2	1.41	3.41	-68.2	-92.6	-122.0	-143.1	302.4	-131.25
15.00	44.80	1202.2	1184.1	1170.0	7.09	7.62	6.63	31.54	-10.1	-26.2	-23.1	1.41	3.85	-66.9	-93.2	-122.5	-143.8	361.5	-132.89
16.00	43.01	1246.3	1228.9	1215.6	7.08	7.41	6.32	31.41	-10.2	-26.2	-23.0	1.54	3.96	-66.7	-94.4	-123.0	-144.4	507.5	-135.86
17.00	40.26	1289.0	1271.9	1258.9	6.79	7.16	6.02	31.34	-10.8	-25.2	-23.6	1.79	2.22	-66.8	-95.2	-123.4	-144.3	606.7	-137.44
18.00	37.12	1328.7	1312.2	1299.6	6.60	6.90	5.92	31.31	-11.4	-24.0	-23.9	1.66	3.77	-69.7	-95.3	-123.8	-144.6	851.6	-140.19
20.00	29.25	1399.2	1382.9	1370.3	6.26	6.41	5.33	31.30	-13.1	-21.0	-24.9	1.54	3.89	-71.6	-96.7	-123.4	-144.3	1000.0	-141.30

\*at 25°C unless mentioned otherwise



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IF/RF MICROWAVE COMPONENTS

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