

Coaxial

# Voltage Controlled Oscillator

## ZX95-1303+

Linear Tuning 1011 to 1270 MHz

### Features

- low phase noise
- low pushing
- protected by US patent 6,790,049

### Applications

- r & d
- lab
- instrumentation
- industrial communications
- wireless communications
- personal communications



CASE STYLE: GB956

Connectors	Model
SMA	ZX95-1303-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.	Typ.	Typ.	Vcc (volts)	Current (mA)
									Min.	Max.												
ZX95-1303+	1011	1270	+7	-82	-109	-130	-150	0.5	12	26-39	40	80	-90	-24	-14	1.5	1	5	36			

### Maximum Ratings

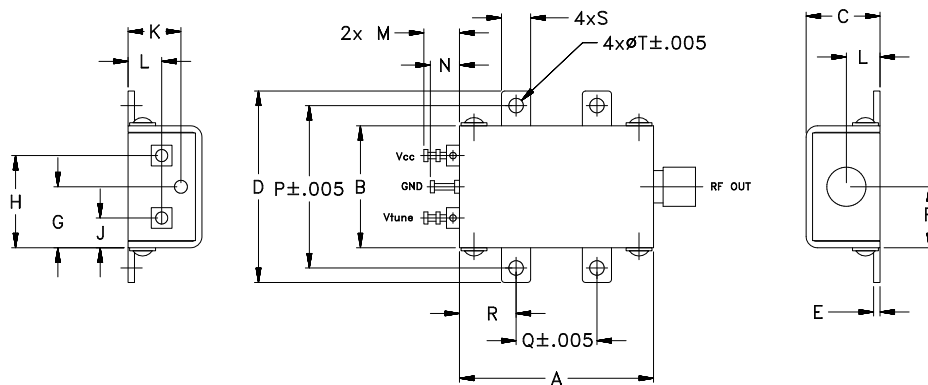
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	7V
Absolute Max. Tuning Voltage (Vtune)	14V
All specifications	50 ohm system

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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- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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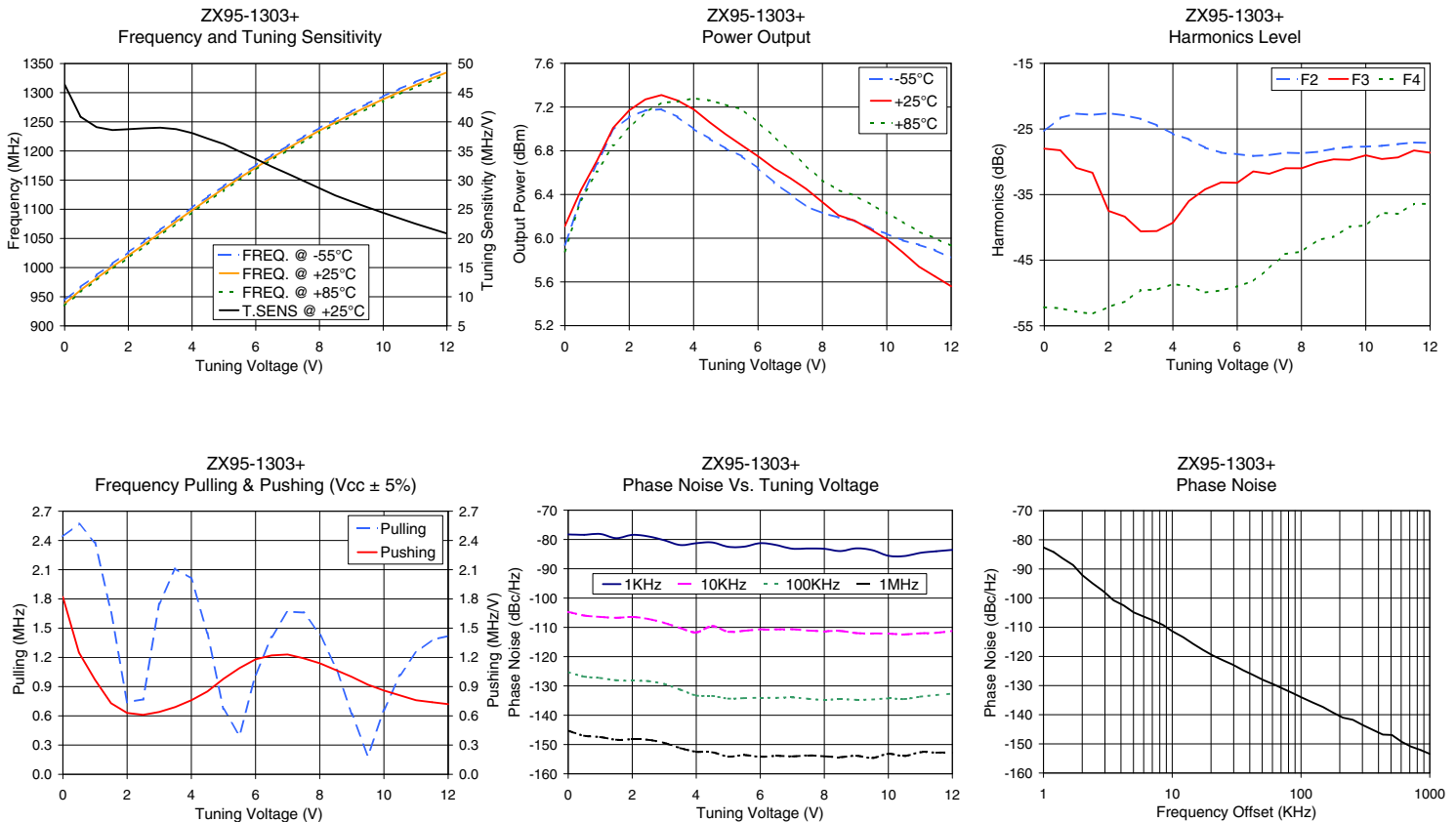
REV. A  
M152326  
EDR-8498F2  
ZX95-1303+  
RAV  
150923  
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# Performance Data & Curves\*

# ZX95-1303+

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 1157 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	46.42	943.7	938.2	934.6	5.94	6.11	5.88	26.26	-25.3	-28.0	-52.2	1.82	2.44	-78.3	-104.7	-125.3	-145.3	1.0	-82.60
0.50	40.87	966.6	961.4	957.9	6.36	6.44	6.35	26.61	-23.3	-28.3	-52.3	1.25	2.57	-78.4	-106.0	-126.8	-147.0	2.0	-92.10
1.00	39.09	987.0	981.8	978.2	6.68	6.71	6.61	26.87	-22.7	-30.9	-52.9	0.97	2.38	-78.1	-106.4	-127.3	-147.5	3.5	-100.75
1.50	38.59	1006.8	1001.3	997.6	6.99	7.01	6.85	27.13	-22.8	-31.7	-53.2	0.73	1.67	-79.6	-106.7	-128.1	-148.4	6.0	-106.34
2.00	38.73	1026.3	1020.6	1016.8	7.11	7.17	7.01	27.39	-22.6	-37.5	-52.1	0.63	0.74	-78.4	-106.5	-128.2	-148.2	8.5	-109.24
2.50	38.89	1045.6	1040.0	1036.1	7.17	7.27	7.15	27.60	-22.9	-38.4	-51.3	0.61	0.77	-79.0	-107.1	-128.4	-148.4	10.0	-111.36
3.00	39.00	1064.8	1059.5	1055.5	7.18	7.31	7.24	27.77	-23.5	-40.6	-49.6	0.64	1.75	-80.3	-108.5	-129.3	-149.5	20.8	-119.75
4.00	38.08	1103.1	1098.3	1094.7	7.00	7.18	7.28	27.99	-25.8	-39.3	-48.6	0.76	2.01	-81.3	-111.7	-133.3	-152.5	35.5	-124.75
5.00	36.19	1140.2	1135.9	1132.5	6.82	6.95	7.22	28.37	-27.8	-34.2	-49.9	0.98	0.67	-82.5	-111.5	-134.3	-154.1	60.7	-129.50
6.00	33.65	1175.8	1171.5	1168.1	6.64	6.75	7.06	28.72	-28.8	-33.2	-49.0	1.18	1.02	-81.3	-110.7	-134.0	-154.2	86.7	-132.63
7.00	31.12	1208.9	1204.5	1201.1	6.40	6.55	6.80	29.03	-29.0	-31.8	-46.2	1.23	1.67	-83.2	-110.7	-133.9	-154.1	100.0	-133.98
8.00	28.62	1239.5	1235.0	1231.5	6.23	6.33	6.53	29.27	-28.7	-31.0	-43.7	1.14	1.44	-83.2	-111.3	-134.8	-154.0	148.1	-137.36
8.50	27.37	1253.9	1249.3	1245.7	6.19	6.21	6.44	29.38	-28.5	-30.1	-41.9	1.07	1.10	-84.0	-111.2	-134.5	-154.3	177.0	-139.26
9.00	26.34	1267.8	1262.9	1259.4	6.16	6.16	6.39	29.47	-28.0	-29.6	-41.4	1.00	0.62	-83.0	-112.0	-134.7	-153.8	211.6	-141.00
9.50	25.36	1281.1	1276.1	1272.5	6.09	6.08	6.31	29.53	-27.7	-29.7	-39.9	0.92	0.19	-83.7	-112.1	-134.6	-154.6	302.4	-143.58
10.00	24.39	1293.9	1288.8	1285.2	6.04	5.99	6.23	29.59	-27.7	-29.0	-39.7	0.86	0.66	-85.5	-112.1	-134.3	-153.2	361.5	-145.19
10.50	23.47	1306.2	1301.0	1297.3	5.98	5.87	6.15	29.65	-27.6	-29.6	-37.8	0.81	1.02	-85.7	-112.4	-134.5	-153.9	507.5	-146.95
11.00	22.54	1318.0	1312.7	1309.0	5.94	5.74	6.06	29.71	-27.3	-29.3	-37.9	0.76	1.25	-84.6	-112.1	-133.7	-152.6	606.7	-149.32
11.50	21.69	1329.4	1324.0	1320.2	5.89	5.65	6.00	29.76	-27.1	-28.3	-36.4	0.74	1.38	-84.0	-111.9	-133.1	-152.8	851.6	-152.12
12.00	20.85	1340.4	1334.8	1331.0	5.82	5.56	5.93	29.79	-27.1	-28.6	-36.4	0.72	1.42	-83.6	-111.2	-132.6	-152.6	1000.0	-153.43

\*at 25°C unless mentioned otherwise



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