

Coaxial

# Voltage Controlled Oscillator

## ZX95-1505+

5V Tuning for PLL IC's 1505 MHz

### Features

- Low phase noise
- Low pulling
- Low pushing
- Protected by US patent 6,790,049

### Applications

- R&D
- LAB
- Instrumentation
- Wireless communications
- Cellular infrastructure



CASE STYLE: GB956

Connectors	Model	Price	Qty.
SMA	ZX95-1505-S+	\$44.95 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

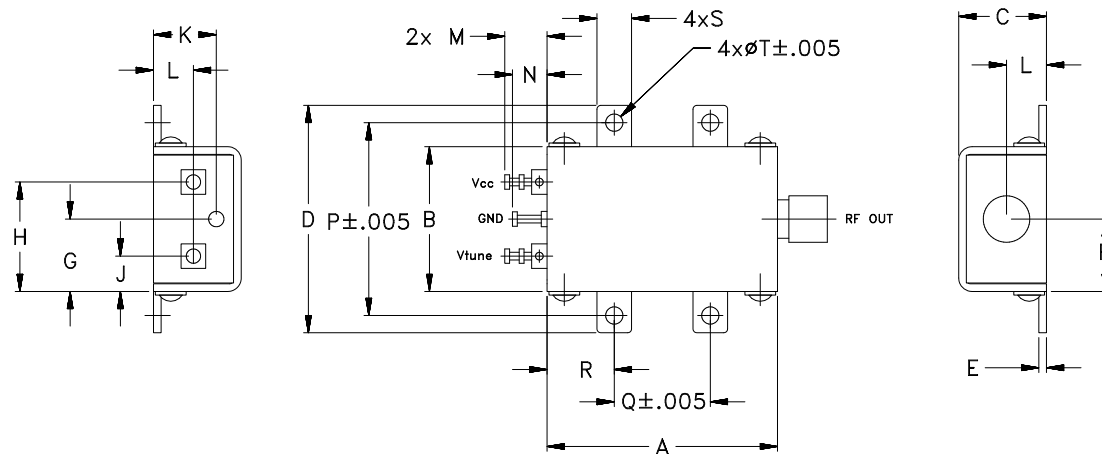
MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	PHASE NOISE dBc/Hz SSB at offset frequencies, kHz				TUNING					NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @ 12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER				
	Min.	Max.		Typ.	1	10	100	1000	VOLTAGE RANGE (V)	SENSITIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Typ.	Typ.			Max.	Typ.	Typ.	Vcc (volts)	Current (mA)
ZX95-1505+	1505		-0.5	-85	-111	-132	-150	1	3.9	17	24	100	-90	-19	-10	0.5	0.5	5	35			

### 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)	6V
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

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ISO 9001 ISO 14001 AS 9100 CERTIFIED

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IF/RF MICROWAVE COMPONENTS

For detailed performance specs & shopping online see web site

**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).

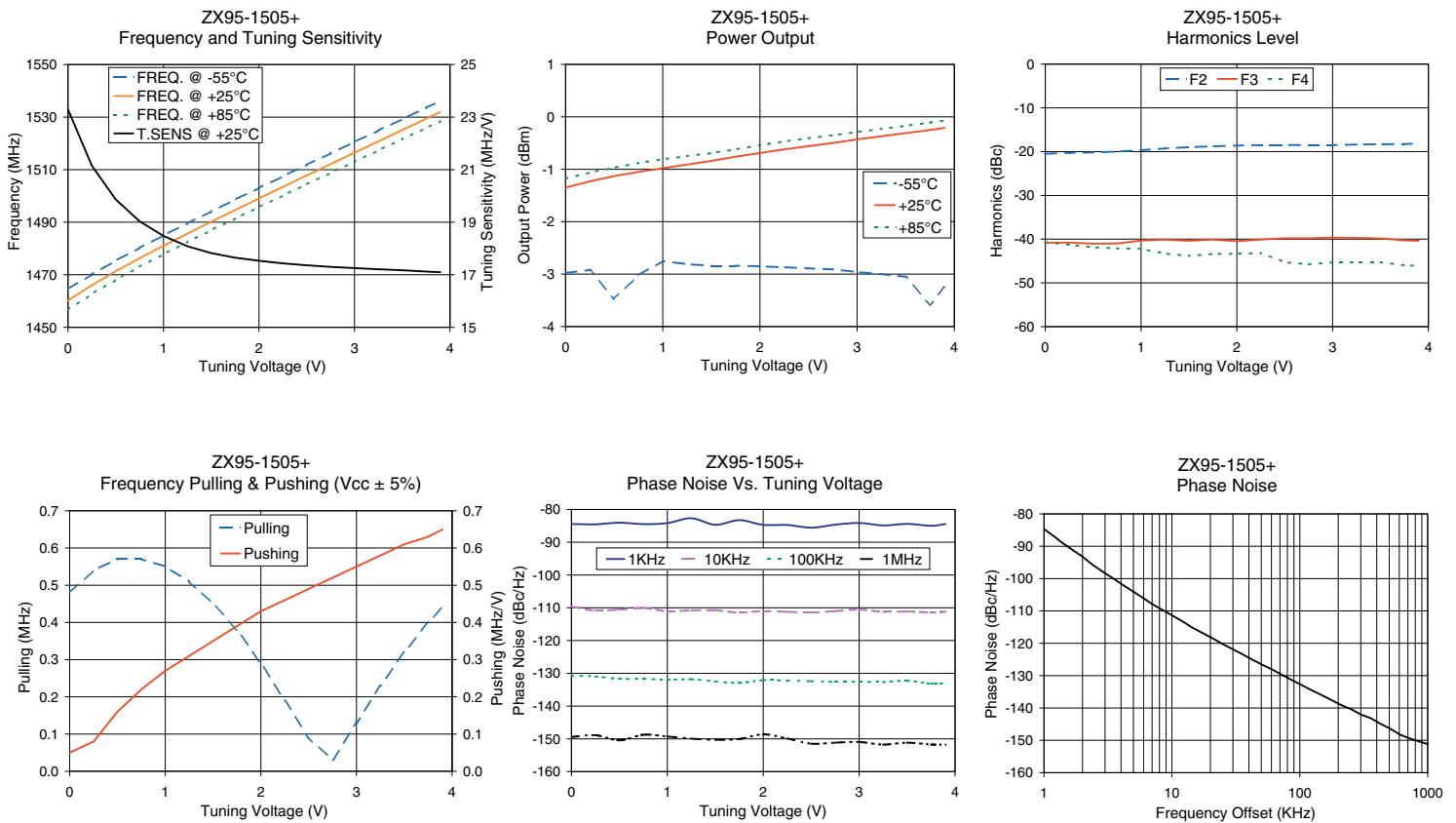
REV. OR  
M111586  
EDR-8590/1F2  
ZX95-1505+  
RAV  
090830  
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# Performance Data & Curves\*

# ZX95-1505+

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 1505MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	23.29	1464.6	1460.2	1456.7	-2.98	-1.35	-1.18	24.76	-20.5	-40.8	-40.7	0.05	0.48	-84.4	-109.7	-130.7	-149.4	1.0	-84.69
0.25	21.15	1470.2	1466.0	1462.7	-2.92	-1.23	-1.06	24.86	-20.3	-40.8	-41.3	0.08	0.54	-84.5	-110.9	-131.0	-148.9	2.0	-93.21
0.50	19.87	1475.3	1471.3	1468.1	-3.47	-1.13	-0.97	24.95	-20.2	-41.0	-41.9	0.16	0.57	-84.0	-110.6	-131.7	-150.5	3.5	-100.00
0.75	19.04	1480.2	1476.3	1473.1	-3.02	-1.05	-0.88	25.03	-20.0	-41.0	-42.1	0.22	0.57	-84.5	-110.1	-131.7	-148.8	6.0	-106.09
1.00	18.48	1485.0	1481.0	1477.8	-2.75	-0.98	-0.81	25.11	-19.7	-40.3	-42.2	0.27	0.55	-84.2	-111.1	-132.0	-149.3	8.5	-109.78
1.25	18.09	1489.6	1485.7	1482.5	-2.81	-0.91	-0.75	25.19	-19.3	-40.1	-43.3	0.31	0.51	-82.7	-110.8	-131.8	-149.9	10.0	-111.33
1.50	17.82	1494.1	1490.2	1487.0	-2.84	-0.84	-0.69	25.26	-19.0	-40.4	-43.8	0.35	0.45	-84.7	-110.8	-132.5	-150.3	20.8	-118.48
1.75	17.65	1498.6	1494.6	1491.4	-2.84	-0.76	-0.62	25.34	-18.8	-40.1	-43.4	0.39	0.38	-83.3	-111.5	-133.0	-150.1	35.5	-123.36
2.00	17.53	1503.0	1499.0	1495.8	-2.85	-0.69	-0.54	25.41	-18.6	-40.5	-43.4	0.43	0.29	-84.7	-111.0	-132.1	-148.6	60.7	-128.07
2.25	17.43	1507.4	1503.4	1500.1	-2.87	-0.62	-0.47	25.48	-18.5	-40.1	-43.2	0.46	0.19	-84.7	-111.2	-132.3	-149.9	86.7	-131.36
2.50	17.36	1511.8	1507.8	1504.4	-2.89	-0.56	-0.41	25.56	-18.5	-39.8	-45.3	0.49	0.09	-85.6	-111.5	-132.4	-151.5	100.0	-132.62
2.75	17.30	1516.2	1512.1	1508.7	-2.91	-0.50	-0.35	25.63	-18.5	-39.8	-45.7	0.52	0.03	-84.6	-111.0	-132.6	-151.2	211.6	-139.15
3.00	17.26	1520.5	1516.5	1513.0	-2.96	-0.43	-0.29	25.70	-18.5	-39.7	-45.3	0.55	0.13	-84.1	-110.5	-132.6	-151.0	361.5	-143.22
3.25	17.21	1524.9	1520.8	1517.3	-3.00	-0.37	-0.23	25.77	-18.4	-39.7	-45.3	0.58	0.23	-84.9	-111.2	-132.7	-151.8	507.5	-146.38
3.50	17.17	1529.2	1525.1	1521.6	-3.05	-0.31	-0.17	25.85	-18.3	-39.8	-45.3	0.61	0.32	-84.4	-111.2	-132.3	-151.2	606.7	-148.22
3.75	17.12	1533.5	1529.4	1525.9	-3.58	-0.25	-0.11	25.92	-18.3	-40.3	-46.0	0.63	0.40	-85.0	-111.4	-133.1	-151.7	851.6	-150.33
3.90	17.10	1536.1	1531.9	1528.4	-3.25	-0.21	-0.07	25.97	-18.2	-40.4	-46.1	0.65	0.44	-84.5	-111.2	-133.0	-151.8	1000.0	-151.19

\*at 25°C unless mentioned otherwise



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