# **Voltage Controlled Oscillator**

ZX95-2536C+

5V Tuning for PLL IC's 2315 to 2536 MHz

#### **Features**

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

### **Applications**

- r & d
- lah
- instrumentation
- · industrial scientific and medical
- WiMAX
- TD-SCDMA / HSDPA



CASE STYLE: GB956

Connectors	Model
SMA	ZX95-2536C-S+

+RoHS Compliant

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

NOTE: When soldering the DC connections, caution must be used to avoid overheating the DC terminals. See Application Note  $\underline{\text{AN-40-10}}$ .

#### **Electrical Specifications**

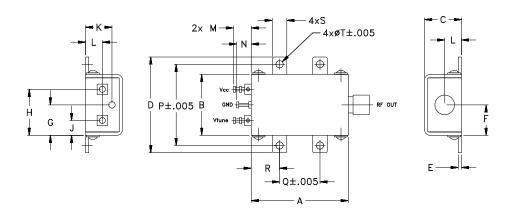
MODEL NO.	FRI (M		POWER OUTPUT (dBm)	PHASE NOISE dBc/Hz SSB at offset frequencies,kHz				l		TU SENSI- TIVITY		3 dB MODULATION	HARMONIC SPURIOUS	HARMONICS (dBc)		PULLING pk-pk @12 dBr (MHz)	(MHz/V)	DC OPERATING POWER	
						Тур.			(V)		(MHz/V)	(pF)	BANDWIDTH (MHz)						Vcc (volts)
	Min.	Max.	Тур.	1	10	100	1000	Min.	Max.	Тур.	Тур.	Тур.	Тур.	Тур.	Max.	Тур.	Тур.		Max.
ZX95-2536C+	2315	2536	+6	-75	-105	-128	-148	0.5	5	57-77	13.6	70	-90	-18	-10	2.5	2.5	5	45

#### **Maximum Ratings**

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage	(Vcc) 5.6V
Absolute Max. Tuning Voltage	(Vtune) 7.0V
All specifications	50 ohm system

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

#### **Outline Drawing**



#### Outline Dimensions (inch )

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

A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.

B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.

C. The parts covered by this specification document are subject to Mini-Circuit's standard limit 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

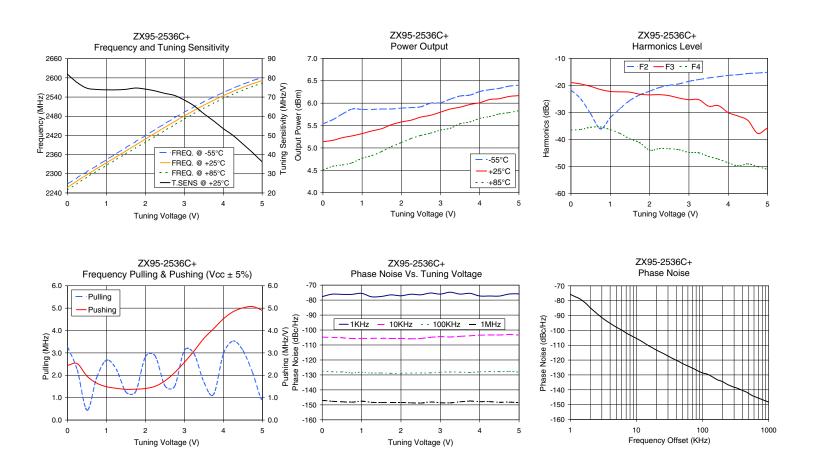


# Performance Data & Curves\*

# ZX95-2536C+

V TUNE	TUNE SENS (MHz/V)		EQUEN (MHz)	POWER OUTPUT (dBm) (mA)			HARMONICS (dBc)			FREQ. PUSH (MHz/V)	FREQ. PULL (MHz)	PHASE NOISE (dBc/Hz) at offsets				FREQ OFFSET (KHz)	PHASE NOISE at 2432 MHz		
	(	-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4		(	1kHz	10kHz	100kHz	1MHz	(11112)	(dBc/Hz)
0.00 0.50 0.75 1.00 1.25 1.50 1.75 2.00 2.25 2.50	81.90 74.61 73.96 73.76 73.75 74.01 74.71 74.15 73.21 71.91	2267.6 2306.7 2325.2 2344.0 2362.7 2381.6 2400.7 2419.7 2438.5	2257.4 2297.3 2315.9 2334.4 2352.9	2249.2 2289.5 2308.2 2326.4 2344.6 2362.6 2380.6 2398.9 2417.2	5.54 5.76 5.87 5.86 5.86 5.87 5.89 5.90 5.92	5.14 5.23 5.27 5.32 5.38 5.43 5.52 5.58 5.62 5.69	4.51 4.62 4.67 4.77 4.83 4.92 5.03 5.12 5.21 5.28	36.63 37.11 37.29 37.45 37.57 37.67 37.73 37.80 37.87 37.92	-21.7 -30.5 -36.1 -32.0 -28.6 -25.6 -23.5 -22.2 -20.8 -20.0	-19.0 -20.4 -21.6 -22.3 -22.4 -22.5 -23.3 -23.5 -23.5 -23.9	-36.6 -35.5 -35.4 -36.4 -37.9 -39.9 -41.2 -44.0 -43.4 -43.5	2.44 1.96 1.65 1.49 1.42 1.37 1.38 1.41 1.51 1.75	3.28 0.44 1.90 2.67 2.27 1.25 1.27 2.83 2.86 1.53	-77.7 -76.2 -76.2 -75.5 -77.8 -76.5 -77.1 -76.1 -76.5	-104.8 -105.1 -105.7 -105.6 -105.5 -105.6 -105.6 -105.6 -105.9 -105.6	-127.5 -128.0 -128.6 -128.2 -128.7 -128.7 -128.9 -128.9 -128.8 -128.7	-147.0 -147.9 -148.2 -147.6 -148.3 -148.4 -148.5 -148.4 -148.6 -148.8	1.0 2.0 3.5 6.0 8.5 10.0 20.8 35.5 60.7 85.2	-75.73 -84.74 -93.54 -99.82 -103.77 -105.41 -113.60 -118.96 -124.10 -127.31
2.75 3.00 3.25 3.50 3.75 4.00 4.25 4.50 4.75 5.00	70.82 68.45 65.44 61.36 57.60 53.56 50.01 45.62 41.10 36.26	2492.6 2509.4 2525.2	2498.1 2514.5 2529.8 2544.2 2557.6 2570.1 2581.5	2471.1 2488.3 2504.9 2520.7 2535.4 2549.0 2561.7 2573.3	6.00 6.01 6.09 6.16 6.18 6.26 6.30 6.33 6.38 6.40	5.73 5.80 5.87 5.91 5.97 6.01 6.08 6.10 6.15 6.17	5.33 5.40 5.44 5.54 5.58 5.66 5.70 5.76 5.79 5.83	37.95 37.97 37.99 38.02 38.06 38.06 38.05 38.05 38.05	-19.5 -18.5 -17.9 -17.3 -16.8 -16.3 -16.1 -15.6 -15.5 -15.5	-24.7 -25.3 -25.3 -27.7 -27.5 -30.1 -31.4 -33.0 -37.8 -35.9	-43.9 -44.9 -45.0 -46.3 -47.3 -48.7 -49.8 -49.1 -50.1	2.12 2.58 3.09 3.65 4.08 4.52 4.84 5.01 5.07 4.89	1.51 3.12 2.95 1.69 1.15 2.96 3.53 3.11 2.11 0.87	-75.3 -76.0 -74.7 -76.0 -75.5 -77.2 -77.3 -76.0 -75.8	-104.9 -104.4 -104.6 -104.2 -103.9 -103.4 -103.2 -103.3 -103.0 -103.4	-128.6 -128.3 -128.1 -128.2 -128.4 -128.0 -127.7 -127.8 -127.6 -128.1	-148.1 -148.6 -148.7 -148.0 -147.5 -147.9 -147.8 -148.3 -148.2 -148.4	100.0 142.9 167.8 200.6 281.6 330.7 464.2 554.9 914.6 1000.0	-128.68 -131.46 -133.29 -134.52 -137.84 -138.85 -141.63 -143.78 -147.64 -148.33

<sup>\*</sup>at 25°C unless mentioned otherwise



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