

Coaxial

# Voltage Controlled Oscillator

## ZX95-630+

5V Tuning for PLL IC's 595 to 630 MHz

### Features

- Linear tuning characteristics
- Low phase noise
- Low pushing
- Low pulling
- 0.5-5V tuning voltage range
- Protected by US patent 6,790,049



CASE STYLE: GB956

Connectors	Model	Price	Qty.
SMA	ZX95-630-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.*

### Applications

- R&D
- LAB
- Instrumentation
- PLL circuitry
- Wireless microphones

### Electrical Specifications

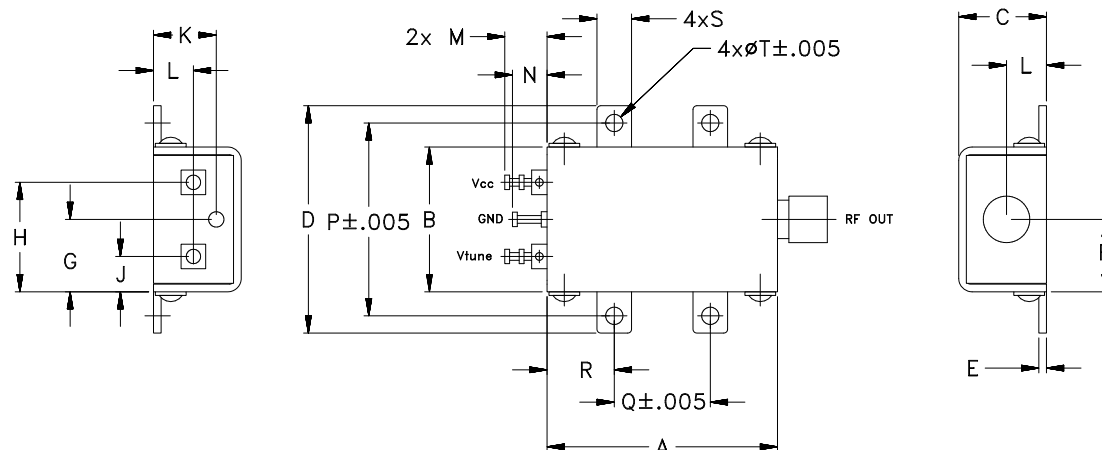
MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	PHASE NOISE dBc/Hz SSB at offset frequencies, KHz				TUNING					NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @ 12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER	
	Min.	Max.		Typ.	1	10	100	1000	VOLTAGE RANGE (V)	SENSITIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Typ.	Typ.			Max.	Typ.
ZX95-630+	595	630	0	-90	-113	-133	-153	0.5	5	11 - 12	60	80	-90	-23	-15	0.4	0.1	5	18

### 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)	7V
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



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).

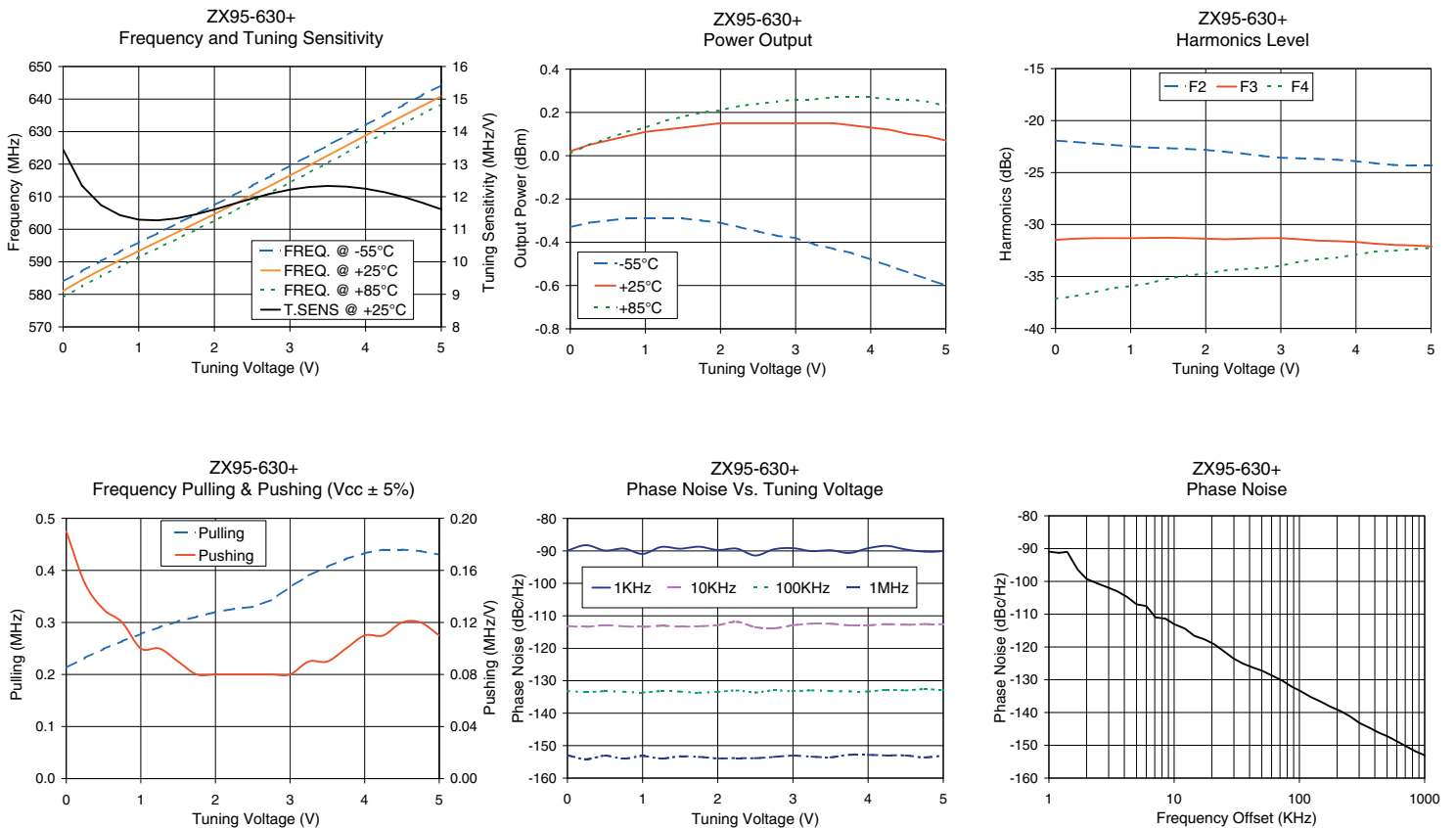
Rev. OR  
M108877  
EDR-7747/14  
ZX95-630+  
RAV  
090907  
page 1 of 2

# Performance Data & Curves\*

# ZX95-630+

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 614 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	13.45	584.0	581.1	579.0	-0.33	0.02	0.01	12.61	-21.9	-31.5	-37.1	0.19	0.21	-89.9	-113.2	-133.2	-153.0	1.0	-90.94
0.50	11.75	590.2	587.5	585.6	-0.30	0.07	0.08	12.63	-22.2	-31.3	-36.6	0.13	0.25	-89.9	-112.9	-133.3	-153.1	2.0	-99.23
0.75	11.43	593.1	590.5	588.6	-0.29	0.09	0.11	12.65	-22.3	-31.3	-36.1	0.12	0.26	-89.3	-113.2	-133.4	-154.0	3.5	-102.99
1.00	11.29	596.0	593.3	591.4	-0.29	0.11	0.13	12.66	-22.5	-31.3	-35.9	0.10	0.28	-90.9	-113.4	-133.6	-153.2	6.0	-107.52
1.25	11.27	598.8	596.1	594.2	-0.29	0.12	0.16	12.67	-22.6	-31.3	-35.7	0.10	0.29	-88.8	-113.1	-133.2	-154.0	8.5	-111.33
1.50	11.34	601.6	599.0	597.0	-0.29	0.13	0.18	12.68	-22.7	-31.3	-35.2	0.09	0.30	-89.3	-113.3	-133.4	-153.3	10.0	-113.04
1.75	11.46	604.5	601.8	599.8	-0.30	0.14	0.20	12.69	-22.7	-31.3	-34.9	0.08	0.31	-88.7	-113.2	-133.7	-153.5	20.8	-119.13
2.00	11.61	607.4	604.7	602.6	-0.31	0.15	0.21	12.70	-22.8	-31.4	-34.7	0.08	0.32	-89.7	-112.9	-133.4	-153.9	35.5	-125.10
2.25	11.78	610.4	607.6	605.5	-0.33	0.15	0.23	12.72	-23.0	-31.4	-34.4	0.08	0.33	-89.3	-111.8	-133.0	-153.9	60.7	-128.78
2.50	11.94	613.4	610.5	608.4	-0.35	0.15	0.24	12.72	-23.2	-31.4	-34.3	0.08	0.33	-91.4	-113.5	-133.6	-153.9	86.7	-132.09
2.75	12.10	616.4	613.5	611.4	-0.37	0.15	0.25	12.73	-23.4	-31.3	-34.2	0.08	0.34	-89.5	-113.9	-132.9	-153.5	100.0	-133.28
3.00	12.22	619.5	616.5	614.3	-0.38	0.15	0.26	12.74	-23.6	-31.3	-34.0	0.08	0.37	-89.2	-112.9	-133.3	-153.1	148.1	-136.68
3.25	12.30	622.6	619.6	617.4	-0.41	0.15	0.26	12.75	-23.6	-31.4	-33.6	0.09	0.39	-90.1	-112.4	-133.0	-153.4	177.0	-138.22
3.50	12.33	625.7	622.6	620.4	-0.43	0.15	0.27	12.77	-23.7	-31.6	-33.3	0.09	0.41	-89.8	-112.4	-133.2	-153.6	211.6	-139.50
3.75	12.31	628.9	625.7	623.4	-0.45	0.14	0.27	12.78	-23.8	-31.6	-33.2	0.10	0.42	-90.6	-112.9	-133.3	-152.8	302.4	-143.22
4.00	12.25	632.0	628.8	626.5	-0.48	0.13	0.27	12.79	-23.9	-31.7	-32.9	0.11	0.43	-89.2	-112.9	-133.3	-152.9	361.5	-144.64
4.25	12.14	635.1	631.9	629.5	-0.51	0.12	0.26	12.80	-24.1	-31.8	-32.6	0.11	0.44	-88.5	-112.6	-132.8	-153.0	507.5	-147.29
4.50	11.99	638.2	634.9	632.5	-0.54	0.10	0.26	12.81	-24.3	-32.0	-32.5	0.12	0.44	-89.6	-112.8	-133.0	-153.0	600.0	-148.76
4.75	11.81	641.2	637.9	635.5	-0.57	0.09	0.25	12.82	-24.3	-32.0	-32.4	0.12	0.44	-90.2	-112.6	-132.6	-153.6	851.6	-151.90
5.00	11.61	644.2	640.9	638.4	-0.60	0.07	0.23	12.83	-24.3	-32.1	-32.2	0.11	0.43	-90.0	-112.6	-132.9	-153.1	1000.0	-153.02

\*at 25°C unless mentioned otherwise



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