

Coaxial

# Voltage Controlled Oscillator

## ZX95-2490+

Linear Tuning 2280 to 2490 MHz

### Features

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

### Applications

- R&D
- LAB
- Instrumentation
- Wireless communications
- Military & avionics



CASE STYLE: GB956

Connectors	Model	Price	Qty.
SMA	ZX95-2490-S+	\$40.95 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

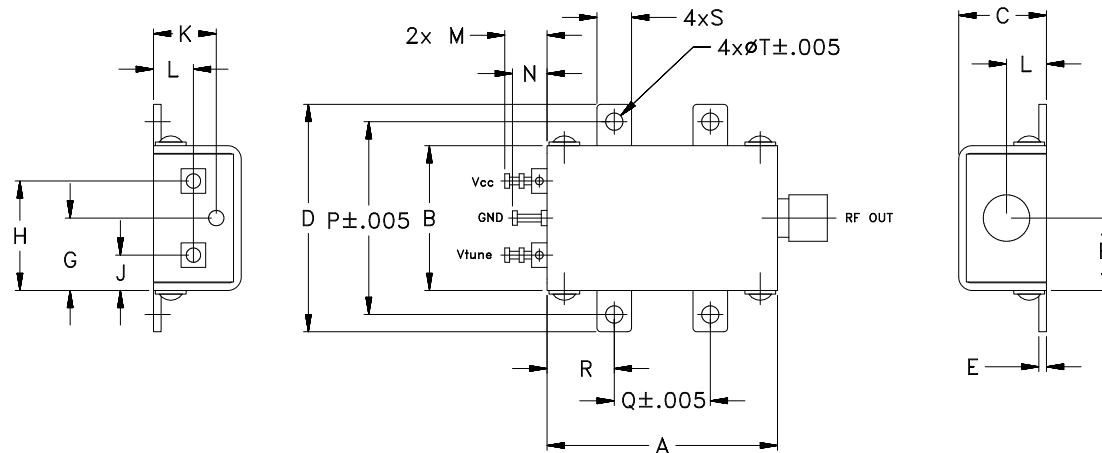
MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	PHASE NOISE dBc/Hz SSB at offset frequencies, kHz				TUNING					NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER					
	Min.	Max.		Typ.	1	10	100	1000	VOLTAGE RANGE (V)		PORT TIVITY (MHz/V)	CAP (pF)		3 dB MODULATION BANDWIDTH (MHz)	Typ.			Typ.	Max.	Typ.	Max.	Vcc (volts)	Current (mA)
									Min.	Max.													
ZX95-2490+	2280	2490	+8	-80	-104	-124	-144	0.5	10	30	37	22	140	-90	-20	-11	1	1	5	38			

### 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)	12V
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).

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ZX95-2490+  
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# Performance Data & Curves\*

# ZX95-2490+

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 2385 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	32.97	2227.6	2218.2	2210.9	7.44	7.64	7.69	30.93	-22.7	-29.7	-43.3	1.37	1.63	-80.3	-103.4	-123.9	-143.8	1.0	-80.04
0.50	30.02	2243.7	2234.7	2227.5	7.46	7.64	7.75	30.98	-23.7	-31.3	-39.1	1.42	0.97	-82.2	-103.6	-124.2	-143.8	2.0	-88.06
1.00	30.15	2259.1	2249.7	2242.6	7.59	7.75	7.84	31.04	-22.3	-28.5	-35.3	1.39	0.30	-82.1	-103.8	-124.4	-144.2	3.5	-93.59
1.50	31.28	2274.2	2264.8	2257.4	7.62	7.83	7.93	31.07	-21.4	-30.1	-36.9	1.42	0.72	-81.5	-103.6	-124.5	-144.3	6.0	-98.85
2.00	32.55	2290.2	2280.4	2272.7	7.58	7.83	7.98	31.12	-22.3	-29.5	-33.4	1.39	1.08	-80.7	-103.7	-124.6	-144.2	8.5	-102.03
2.50	34.34	2306.6	2296.7	2288.7	7.67	7.88	7.99	31.17	-22.3	-30.3	-34.6	1.37	1.21	-80.1	-103.7	-124.5	-144.1	10.0	-103.57
3.00	35.17	2324.0	2313.8	2305.4	7.75	7.92	8.08	31.20	-21.0	-28.7	-33.9	1.40	0.88	-80.3	-104.0	-124.7	-144.4	20.8	-110.64
3.50	36.22	2342.1	2331.4	2322.9	7.83	8.04	8.13	31.25	-20.6	-29.2	-31.8	1.31	0.43	-81.0	-103.8	-124.6	-144.4	35.5	-115.15
4.00	36.73	2360.5	2349.5	2340.5	7.80	8.05	8.18	31.26	-21.3	-30.3	-34.7	1.27	1.49	-80.4	-103.8	-124.5	-144.4	60.7	-119.88
4.50	36.53	2379.1	2367.9	2358.6	7.81	8.08	8.21	31.29	-21.0	-30.1	-34.6	1.20	1.66	-80.5	-103.9	-124.5	-144.2	86.7	-123.09
5.00	36.25	2397.4	2386.2	2376.7	7.81	8.02	8.18	31.32	-19.6	-27.5	-34.1	1.13	0.71	-79.9	-103.4	-124.4	-144.1	100.0	-124.36
5.50	34.86	2415.8	2404.3	2394.4	7.87	8.01	8.11	31.42	-19.4	-28.7	-35.8	1.00	0.93	-79.8	-103.5	-124.3	-144.2	148.1	-127.69
6.00	33.94	2433.0	2421.7	2411.9	8.05	8.15	8.13	31.47	-19.8	-30.3	-34.3	0.92	1.51	-80.1	-103.5	-124.5	-144.3	177.0	-129.37
6.50	33.05	2450.3	2438.7	2428.7	8.32	8.36	8.30	31.53	-20.1	-29.7	-35.1	0.85	1.53	-79.8	-103.4	-124.5	-144.3	211.6	-130.79
7.00	32.48	2466.7	2455.2	2445.1	8.47	8.62	8.49	31.57	-18.9	-29.5	-36.3	0.76	0.79	-79.2	-103.4	-124.4	-144.2	302.4	-134.04
7.50	31.19	2482.9	2471.5	2461.0	8.51	8.66	8.63	31.62	-19.3	-31.3	-33.0	0.72	0.80	-78.5	-103.5	-124.4	-144.1	361.5	-135.22
8.00	30.27	2498.8	2487.1	2476.7	8.56	8.79	8.74	31.70	-19.3	-31.1	-34.2	0.61	1.50	-79.2	-103.2	-124.4	-144.2	507.5	-138.36
8.50	29.64	2513.8	2502.2	2491.8	8.89	8.89	8.82	31.78	-19.0	-30.1	-31.6	0.54	1.73	-78.5	-103.5	-124.6	-144.4	606.7	-139.97
9.00	29.18	2528.9	2517.0	2506.5	9.09	9.01	8.91	31.80	-18.5	-29.7	-33.3	0.49	1.16	-77.9	-103.4	-124.5	-144.6	851.6	-142.92
10.00	28.61	2557.9	2545.9	2534.9	9.47	9.37	9.26	31.81	-18.9	-30.3	-32.0	0.40	0.95	-78.8	-103.0	-124.0	-144.1	1000.0	-144.12

\*at 25°C unless mentioned otherwise

