

# Voltage Controlled Oscillator

## ZX95-5540C+

Frequency Doubling 5340 to 5540 MHz

### Features

- Frequency based on multiplication of Carrier Frequency
- Low phase noise
- Low pushing
- Low pulling
- 5V tuning voltage range
- Protected by US patent 6,790,049

### Applications

- R&D
- LAB
- Instrumentation
- Wireless communications
- Point-to-point systems



CASE STYLE: GB956

Connectors	Model	Price	Qty.
SMA	ZX95-5540C-S+	\$ 54.95 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

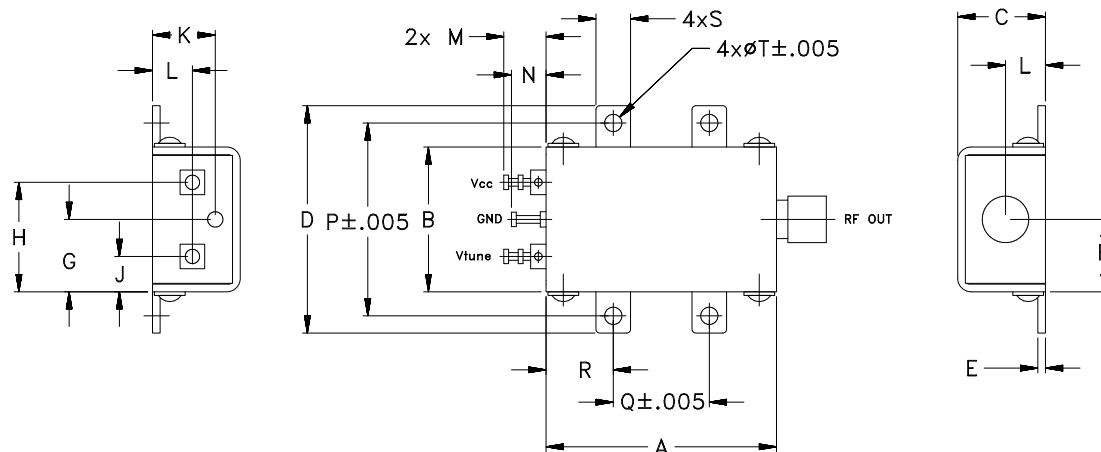
MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	PHASE NOISE dBc/Hz SSB at offset frequencies, kHz				TUNING				NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)			PULLING pk-pk @ 12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER		
	F 2X(1/2F)			Typ.				VOLTAGE RANGE (V)	SENSI- TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Max.					Vcc (volts)	Current (mA)	
	Min.	Max.		1	10	100	1000						Min.	Max.	Typ.					Typ.
ZX95-5540C+	5340	5540	+0.5	-74	-103	-124	-144	0.5	5	64 - 83	15	100	-90	-15	-15	-15	0.4	0.8	5	35

### 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).

# Performance Data & Curves\*

# ZX95-5540C+

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 5440 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F0.5	F1.5	F2			1kHz	10kHz	100kHz	1MHz		
0.00	65.19	5271.0	5256.4	5245.0	1.35	-0.47	-2.12	25.63	-30.3	-33.4	-27.6	0.69	0.28	-76.4	-103.8	-124.8	-143.8	1.0	-74.35
0.25	62.14	5286.8	5272.7	5261.7	1.54	-0.38	-2.18	25.70	-30.2	-31.1	-26.7	0.80	0.50	-76.9	-103.8	-124.9	-144.0	2.0	-83.60
0.50	60.82	5302.1	5288.2	5277.5	1.73	-0.15	-2.09	25.76	-30.3	-30.1	-27.2	0.87	0.55	-75.8	-103.9	-125.0	-144.2	3.5	-90.83
0.75	60.77	5317.1	5303.4	5292.8	1.87	0.06	-1.78	25.82	-30.2	-31.4	-27.1	0.90	0.40	-77.2	-103.7	-125.2	-144.6	6.0	-96.80
1.00	61.92	5332.4	5318.6	5308.0	1.93	0.10	-1.49	25.88	-30.0	-30.1	-26.2	0.93	0.08	-77.4	-103.7	-125.1	-143.9	8.5	-100.64
1.25	63.54	5347.9	5334.1	5323.3	1.83	0.16	-1.37	25.93	-29.7	-29.6	-26.3	0.96	0.25	-76.3	-103.6	-125.0	-144.9	10.0	-102.45
1.50	65.66	5363.9	5350.0	5338.9	1.67	0.01	-1.44	25.98	-29.3	-30.2	-26.2	1.00	0.39	-76.2	-103.6	-125.2	-144.3	20.8	-110.19
1.75	67.98	5380.5	5366.4	5355.1	1.87	-0.15	-1.49	26.03	-28.8	-28.6	-25.4	1.04	0.41	-75.8	-103.3	-125.4	-144.3	35.5	-115.35
2.00	70.24	5397.6	5383.4	5371.8	2.21	0.08	-1.64	26.09	-28.9	-29.2	-25.5	1.08	0.33	-76.2	-103.0	-125.2	-144.4	60.7	-119.26
2.25	72.87	5415.3	5400.9	5389.2	2.30	0.50	-1.38	26.15	-29.0	-30.3	-25.9	1.09	0.10	-75.1	-103.2	-124.9	-144.3	86.7	-123.56
2.50	76.07	5433.9	5419.2	5407.2	2.23	0.53	-0.94	26.21	-28.7	-28.9	-25.6	1.07	0.23	-75.1	-102.5	-125.2	-144.1	100.0	-124.88
2.75	78.99	5453.2	5438.2	5425.8	2.23	0.37	-0.77	26.26	-28.4	-29.8	-25.2	1.03	0.45	-74.1	-102.5	-124.6	-144.1	148.1	-128.34
3.00	81.21	5473.2	5457.9	5445.2	2.20	0.43	-1.15	26.31	-28.3	-29.8	-25.0	0.92	0.40	-74.0	-102.1	-124.5	-144.4	177.0	-129.74
3.25	82.34	5493.8	5478.2	5465.2	2.09	0.53	-1.04	26.37	-28.2	-29.5	-24.2	0.71	0.13	-74.2	-101.6	-124.0	-143.7	211.6	-131.36
3.50	83.02	5514.5	5498.8	5485.7	2.58	0.48	-0.90	26.43	-27.8	-29.7	-24.1	0.37	0.31	-73.3	-101.0	-123.9	-143.1	361.5	-136.03
3.75	82.78	5535.4	5519.6	5506.3	2.76	0.85	-0.56	26.47	-28.0	-31.1	-24.3	0.05	0.46	-72.6	-100.4	-123.0	-142.6	432.2	-137.54
4.00	81.99	5556.3	5540.3	5526.8	2.42	0.92	-0.68	26.51	-27.9	-30.8	-24.2	0.50	0.33	-71.9	-99.8	-122.2	-142.0	507.5	-139.33
4.25	80.03	5576.8	5560.8	5547.2	2.25	0.68	-0.53	26.55	-27.4	-31.0	-24.0	0.90	0.09	-71.1	-99.0	-121.6	-141.7	606.7	-140.65
4.50	77.39	5596.8	5580.8	5567.2	2.78	0.44	-0.63	26.58	-26.7	-31.8	-23.7	1.23	0.36	-71.9	-98.6	-121.2	-141.2	851.6	-143.49
5.00	70.84	5634.8	5618.6	5605.2	2.95	1.30	-0.39	26.62	-27.2	-33.1	-24.6	1.58	0.38	-70.3	-98.4	-120.6	-140.9	1000.0	-144.26

\*at 25°C unless mentioned otherwise

