

Coaxial

# Voltage Controlled Oscillator

## ZX95-3050C+

Linear Tuning 2856 to 3050 MHz

### Features

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

### Applications

- r & d
- lab
- instrumentation
- defense systems
- digital radio



CASE STYLE: GB956

Connectors	Model
SMA	ZX95-3050C-S+

**+RoHS Compliant**  
The +Suffix identifies 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)	SENSI- TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Typ.	Typ.			Typ.	Typ.	Max.	Vcc	Current (mA)
ZX95-3050C+	2856	3050	+5	-80	-106	-127	-147	0.5	20	10-20	40	110	-90	-23	-13	1	0.6	8	35			

### Maximum Ratings

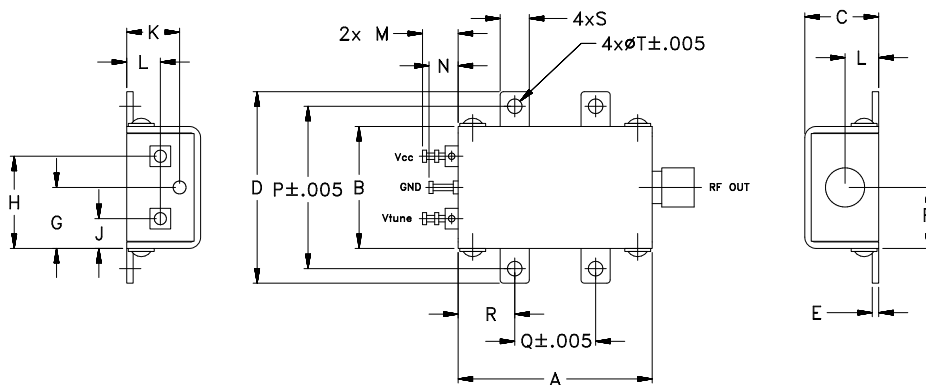
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	10V
Absolute Max. Tuning Voltage (Vtune)	22V
All specifications	50 ohm system

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



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

### 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	.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

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



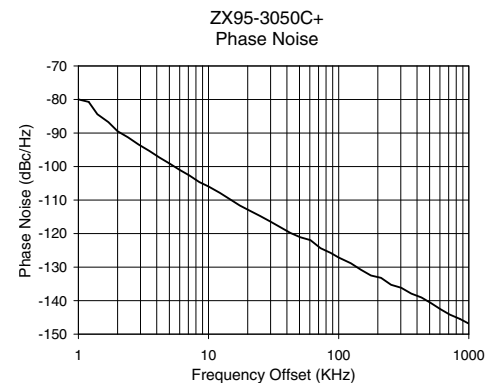
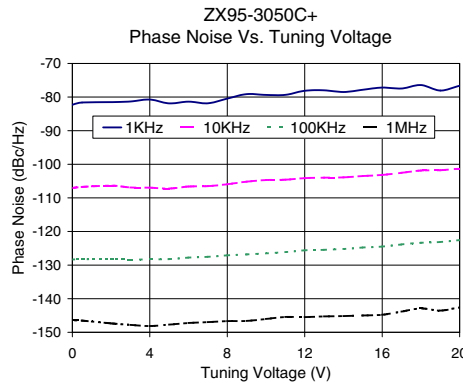
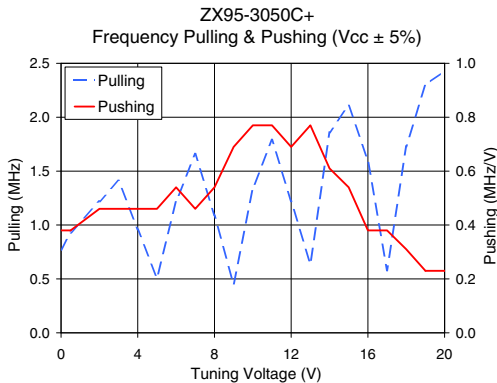
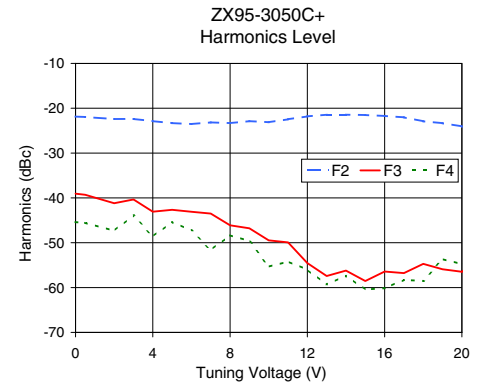
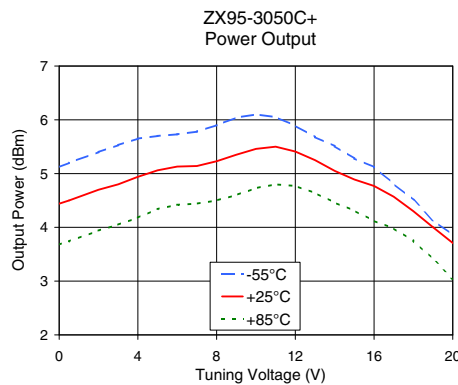
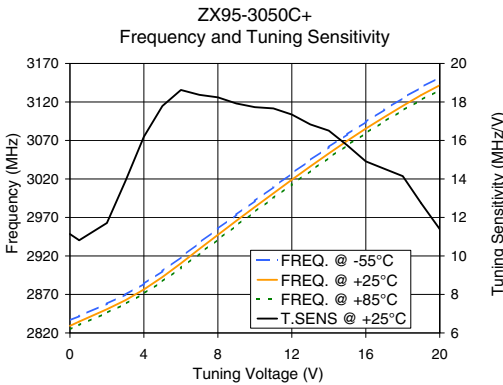
# NON-CATALOG

## Performance Data & Curves\*

## ZX95-3050C+

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 2953 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	11.14	2836.4	2829.2	2824.7	5.12	4.44	3.68	28.05	-21.9	-39.1	-45.4	0.38	0.77	-82.3	-107.1	-128.3	-146.5	1.0	-79.98
0.50	10.82	2841.9	2834.8	2830.3	5.20	4.50	3.74	28.06	-22.0	-39.3	-45.6	0.38	0.93	-81.6	-106.8	-128.3	-146.5	2.0	-89.48
2.00	11.71	2857.9	2850.8	2846.2	5.40	4.70	3.94	28.10	-22.4	-41.2	-47.3	0.46	1.22	-81.5	-106.4	-128.3	-147.4	3.5	-95.33
3.00	13.89	2869.8	2862.5	2857.7	5.53	4.80	4.05	28.12	-22.4	-40.4	-43.9	0.46	1.41	-81.3	-106.9	-128.4	-147.8	6.0	-101.00
4.00	16.19	2883.8	2876.4	2871.2	5.65	4.94	4.18	28.11	-22.9	-43.1	-48.6	0.46	0.96	-80.8	-107.0	-128.3	-148.1	8.5	-104.64
5.00	17.79	2900.3	2892.6	2886.9	5.70	5.06	4.34	28.09	-23.3	-42.7	-45.4	0.46	0.51	-81.9	-107.2	-128.2	-147.7	10.0	-105.95
6.00	18.62	2918.3	2910.4	2904.5	5.73	5.13	4.42	28.06	-23.5	-43.1	-47.3	0.54	1.22	-81.4	-106.6	-127.8	-147.2	20.8	-113.18
7.00	18.37	2937.0	2929.0	2922.9	5.78	5.14	4.44	28.03	-23.2	-43.5	-51.6	0.46	1.66	-81.9	-106.5	-127.5	-147.0	35.5	-118.07
8.00	18.24	2955.4	2947.4	2941.3	5.90	5.23	4.50	27.98	-23.3	-46.1	-48.3	0.54	1.09	-80.5	-105.9	-127.1	-146.7	60.7	-121.96
9.00	17.92	2973.6	2965.6	2959.4	6.04	5.35	4.60	27.94	-22.9	-46.8	-49.6	0.69	0.45	-79.1	-105.2	-126.8	-146.6	86.7	-125.76
10.00	17.73	2991.6	2983.6	2977.3	6.10	5.46	4.73	27.88	-23.1	-49.5	-55.3	0.77	1.34	-79.4	-104.7	-126.5	-146.0	100.0	-127.14
11.00	17.66	3009.5	3001.3	2995.2	6.05	5.50	4.80	27.82	-22.5	-49.9	-54.2	0.77	1.79	-79.3	-104.6	-126.1	-145.4	148.1	-130.77
12.00	17.34	3027.1	3018.9	3012.8	5.89	5.41	4.77	27.77	-21.8	-54.5	-56.0	0.69	1.22	-78.1	-104.1	-125.6	-145.5	177.0	-132.51
13.00	16.83	3044.5	3036.3	3030.3	5.68	5.25	4.64	27.72	-21.5	-57.4	-59.3	0.77	0.64	-78.0	-104.0	-125.5	-145.3	211.6	-133.20
14.00	16.51	3061.4	3053.1	3047.3	5.51	5.05	4.46	27.68	-21.5	-56.2	-57.4	0.61	1.86	-78.5	-103.9	-125.2	-145.2	302.4	-136.17
15.00	15.74	3078.1	3069.6	3063.7	5.28	4.89	4.31	27.64	-21.5	-58.5	-60.5	0.54	2.11	-77.8	-103.5	-124.8	-145.0	361.5	-137.92
16.00	14.91	3094.1	3085.4	3079.5	5.12	4.77	4.12	27.61	-21.7	-56.4	-60.1	0.38	1.60	-77.2	-103.2	-124.5	-144.8	507.5	-140.64
17.00	14.53	3109.8	3100.3	3094.7	4.81	4.57	3.98	27.57	-22.0	-56.8	-58.3	0.38	0.58	-77.5	-102.5	-123.9	-143.9	606.7	-142.58
18.00	14.14	3124.9	3114.8	3109.1	4.51	4.30	3.75	27.54	-22.9	-54.7	-58.5	0.31	1.73	-76.4	-101.9	-123.4	-142.9	851.6	-145.43
20.00	11.39	3152.0	3141.7	3135.4	3.86	3.71	3.04	27.51	-24.1	-56.5	-54.8	0.23	2.43	-76.6	-101.4	-122.6	-142.6	1000.0	-146.85

\*at 25°C unless mentioned otherwise



### 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-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)

