

Coaxial

# Voltage Controlled Oscillator

## ZX95-3388+

Linear Tuning 3080 to 3380 MHz

### Features

- Low pulling
- Low pushing
- Protected by US patent 6,790,049



CASE STYLE: GB956

### Applications

- R&D
- LAB
- Instrumentation
- WIMAX
- Outdoor units 8GHz
- Satellite systems
- Radar and navigation systems

Connectors	Model	Price	Qty.
SMA	ZX95-3388-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

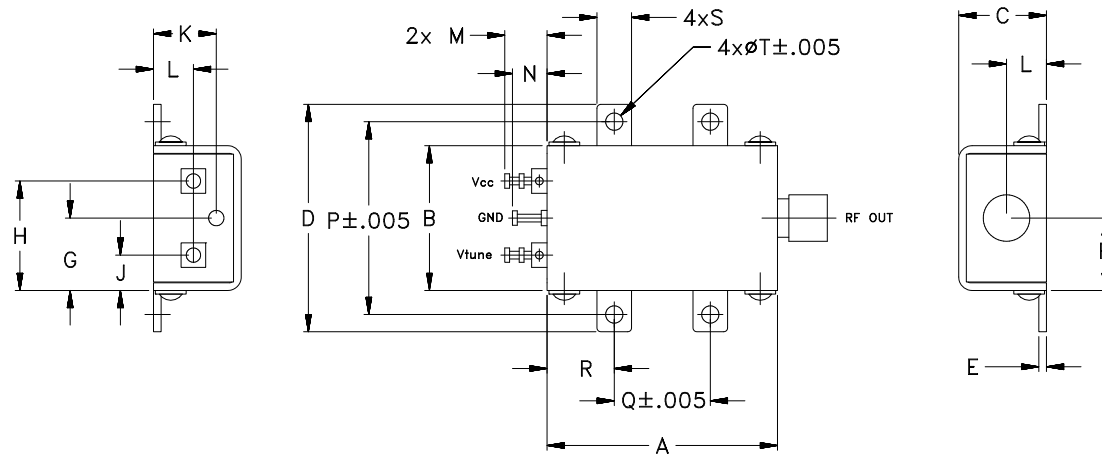
MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	PHASE NOISE dBc/Hz SSB at offset frequencies, kHz				TUNING					NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER	
	Min.	Max.		Typ.	1	10	100	1000	VOLTAGE RANGE (V)	SENSITIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Typ.	Typ.			Max.	Vcc (volts)
ZX95-3388+	3080	3380	+5	-74	-99	-120	-140	0.5	13	30 - 37	30	60	-90	-30	-20	1.5	2	5	42

### 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)	15V
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

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**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).

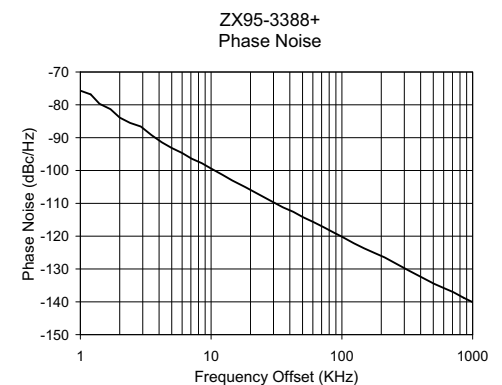
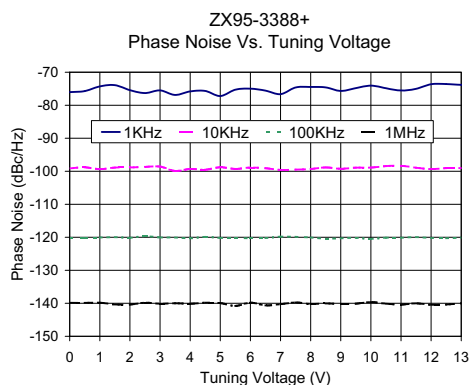
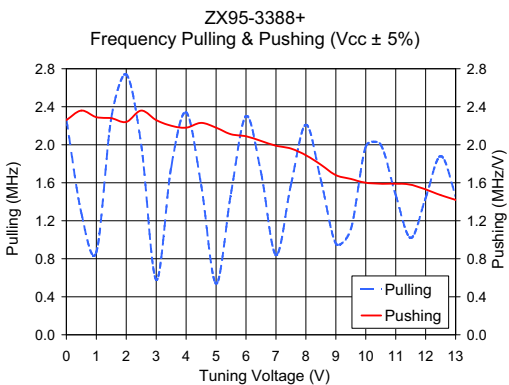
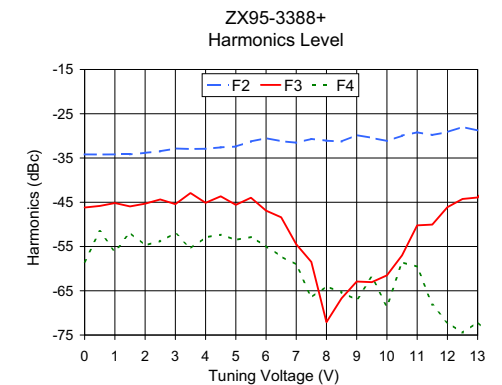
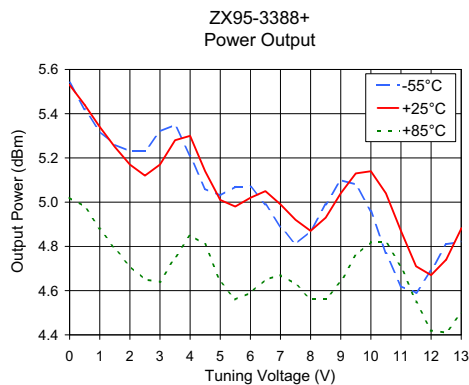
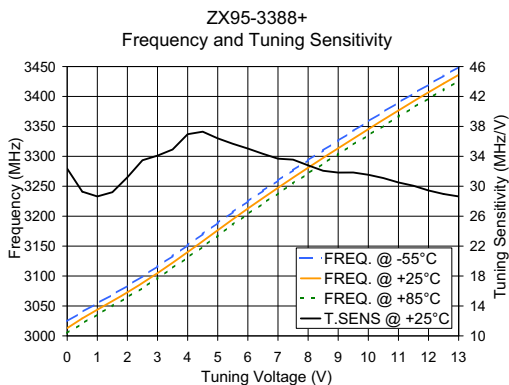
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M110356  
EDR-8439F2  
ZX95-3388+  
RAV  
090903  
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# Performance Data & Curves\*

# ZX95-3388+

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 3225 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	32.35	3024.5	3013.0	3004.9	5.54	5.53	5.02	33.79	-34.2	-46.2	-58.4	2.26	2.27	-76.0	-99.1	-120.1	-139.9	1.0	-75.68
0.50	29.28	3040.1	3029.2	3020.8	5.42	5.44	4.98	33.78	-34.2	-45.8	-51.6	2.36	1.28	-75.7	-98.8	-120.1	-139.9	2.0	-83.90
1.00	28.64	3054.5	3043.9	3035.7	5.32	5.34	4.88	33.81	-34.2	-45.2	-56.1	2.29	0.87	-74.3	-99.4	-120.1	-139.8	3.5	-89.23
1.50	29.20	3068.9	3058.2	3050.1	5.26	5.25	4.79	33.83	-34.2	-45.9	-51.9	2.28	2.28	-73.9	-98.9	-120.0	-140.4	6.0	-94.68
2.00	31.20	3083.6	3072.8	3064.7	5.23	5.17	4.71	33.86	-33.8	-45.3	-54.7	2.24	2.74	-75.4	-98.9	-120.2	-140.4	8.5	-97.79
2.50	33.47	3099.7	3088.4	3079.9	5.23	5.12	4.65	33.87	-33.5	-44.4	-53.8	2.36	2.00	-76.3	-98.7	-119.7	-139.8	10.0	-99.41
3.00	34.09	3116.3	3105.1	3096.5	5.32	5.17	4.64	33.91	-32.9	-45.4	-52.0	2.26	0.58	-75.5	-98.6	-120.0	-140.1	20.8	-106.33
4.00	36.96	3151.5	3139.6	3131.0	5.21	5.30	4.85	33.98	-32.9	-45.1	-52.9	2.18	2.34	-75.8	-99.3	-120.3	-140.1	35.5	-111.25
5.00	36.40	3188.8	3176.7	3167.6	5.03	5.01	4.64	34.04	-32.4	-45.6	-53.5	2.18	0.54	-77.2	-98.8	-120.2	-139.9	60.7	-115.73
6.00	35.04	3224.9	3212.8	3203.6	5.07	5.02	4.59	34.15	-30.5	-46.9	-54.9	2.09	2.30	-75.0	-98.9	-120.3	-139.8	86.7	-118.91
6.50	34.33	3242.5	3230.3	3221.1	4.99	5.05	4.65	34.19	-31.2	-48.4	-57.3	2.04	1.71	-75.6	-99.1	-120.2	-140.6	100.0	-120.18
7.00	33.69	3259.7	3247.5	3238.2	4.89	4.99	4.67	34.24	-31.6	-54.5	-59.1	1.99	0.84	-76.6	-99.6	-119.8	-140.3	148.1	-123.72
8.00	32.79	3293.6	3281.1	3271.5	4.87	4.87	4.56	34.32	-31.1	-72.1	-64.0	1.89	2.21	-74.5	-99.3	-120.1	-140.2	177.0	-125.09
9.00	31.83	3326.1	3313.5	3303.9	5.10	5.04	4.64	34.42	-29.8	-62.9	-67.0	1.68	0.96	-75.7	-99.3	-120.3	-140.2	211.6	-126.45
9.50	31.84	3342.4	3329.4	3319.6	5.08	5.13	4.76	34.46	-30.5	-63.1	-61.9	1.64	1.11	-74.8	-98.9	-120.2	-140.1	302.4	-129.71
10.00	31.54	3358.5	3345.4	3335.3	4.96	5.14	4.82	34.49	-31.2	-61.5	-68.5	1.60	1.98	-74.1	-98.9	-120.5	-139.6	361.5	-131.46
10.50	31.09	3374.3	3361.1	3350.9	4.77	5.04	4.82	34.54	-30.0	-57.0	-58.6	1.59	2.00	-74.9	-98.4	-120.1	-140.1	507.5	-134.51
11.00	30.51	3389.8	3376.7	3366.4	4.62	4.87	4.71	34.60	-29.2	-50.2	-59.6	1.59	1.47	-75.5	-98.3	-120.2	-140.4	606.7	-135.88
12.50	28.96	3434.6	3421.7	3411.4	4.81	4.74	4.41	34.80	-28.0	-44.3	-74.5	1.47	1.88	-73.6	-99.1	-120.3	-140.4	851.6	-138.75
13.00	28.64	3449.2	3436.2	3425.8	4.82	4.88	4.50	34.85	-28.8	-43.9	-72.1	1.42	1.46	-73.8	-99.0	-120.1	-140.0	1000.0	-140.11

\*at 25°C unless mentioned otherwise



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