NON-CATALOG

Coaxial

Voltage Controlled Oscillator

ZX95-386-S+

Linear Tuning 295 to 386 MHz

Features

- high power output, +9.5 dBm typ.
- low phase noise
- low pulling
- low pushing
- protected by US patent 6,790,049

Applications

- R&D
- lab
- instrumentation
- wireless communication
- military & avionics

Generic photo used for illustration purposes only

CASE STYLE: GB956

Connectors	Model
SMA	ZX95-386-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 Typ.				TUNING					NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @12 dBr (MHz)	PUSHING (MHz/V)	DC OPERATING POWER	
								VOLTAGE RANGE (V)		SENSI-TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)						Vcc (volts)	Current (mA)
	Min.	Max.	Typ.	1	10	100	1000	Min.	Max.	Typ.	Typ.	Typ.	Typ.	Typ.	Max.	Typ.	Typ.		Max.
ZX95-386-S+	295	386	+9.5	-90	-117	-138	-158	4	16	10	170	18	-90	-23	-12	0.2	0.4	12	31

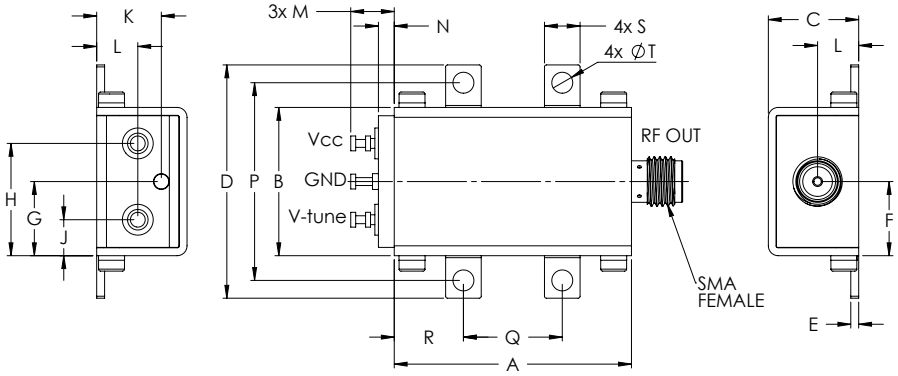
Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	13V
Absolute Max. Tuning Voltage (Vtune)	18V
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**	**.08**	**1.00**	**.50**	**.35**	**.18**	**.106**	grams
30.48	19.15	11.61	30.07	1.02	9.53	9.53	14.43	4.62	8.31	5.28	5.59	2.03	25.40	12.70	8.89	4.57	2.69	35.0

Notes

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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.
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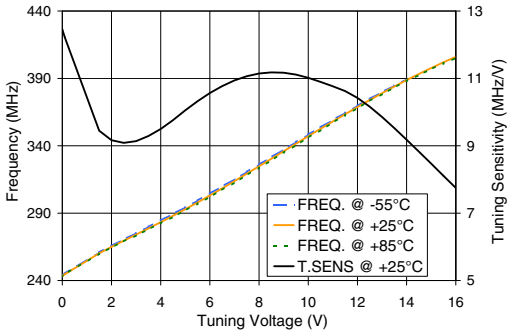
Performance Data & Curves*

ZX95-386-S+

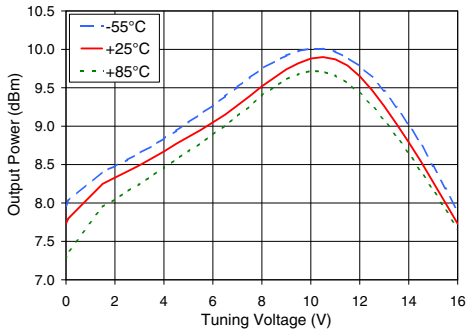
V TUNE	TUNE SENS (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)			Icc (mA)	HARMONICS (dBc)			FREQ. PUSH (MHz/V)	FREQ. PULL (MHz)	PHASE NOISE (dBc/Hz) at offsets				FREQ OFFSET (KHz)	PHASE NOISE at 341 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	12.45	243.9	243.3	243.4	7.96	7.73	7.29	25.25	-12.5	-33.8	-48.7	0.07	0.20	-89.3	-112.5	-132.9	-152.6	1.0	-90.96
0.10	12.22	245.1	244.6	244.6	8.03	7.80	7.37	25.30	-12.6	-33.5	-48.4	0.13	0.19	-90.1	-115.6	-136.5	-156.7	2.0	-100.07
1.50	9.45	260.9	260.2	259.9	8.41	8.25	7.95	25.62	-14.4	-32.0	-45.5	0.23	0.03	-89.5	-116.8	-137.6	-157.1	3.5	-105.69
2.00	9.17	265.8	265.0	264.5	8.48	8.33	8.05	25.67	-15.0	-32.3	-44.7	0.20	0.07	-90.9	-117.9	-138.5	-158.0	6.0	-112.42
3.00	9.14	275.1	274.1	273.5	8.65	8.49	8.25	25.76	-16.5	-32.2	-43.5	0.17	0.12	-90.9	-118.3	-139.6	-159.9	8.5	-115.81
4.00	9.50	284.5	283.3	282.5	8.84	8.67	8.46	25.84	-17.3	-32.5	-42.2	0.15	0.14	-92.3	-119.8	-140.5	-159.2	10.0	-117.68
5.00	10.05	294.3	292.9	292.0	9.05	8.86	8.67	25.92	-18.5	-32.7	-41.1	0.15	0.13	-92.6	-119.9	-140.9	-160.3	20.8	-124.85
6.00	10.56	304.5	303.1	302.1	9.27	9.05	8.89	26.00	-19.7	-32.3	-40.1	0.17	0.10	-92.6	-120.5	-141.2	-159.7	35.5	-130.05
7.00	10.94	315.1	313.8	312.7	9.51	9.27	9.13	26.07	-20.8	-32.4	-39.4	0.21	0.01	-92.8	-119.6	-141.3	-159.7	60.7	-134.75
8.00	11.15	326.0	324.8	323.7	9.75	9.52	9.40	26.14	-21.8	-32.6	-39.2	0.26	0.14	-91.9	-119.8	-141.1	-159.6	86.7	-138.30
9.00	11.17	337.1	336.0	334.8	9.92	9.74	9.61	26.20	-22.8	-32.6	-39.0	0.32	0.22	-90.2	-118.8	-139.9	-158.5	100.0	-139.03
9.50	11.11	342.7	341.5	340.5	9.98	9.82	9.68	26.21	-23.2	-32.3	-39.0	0.35	0.20	-91.8	-118.0	-139.5	-159.0	148.1	-142.98
10.00	11.02	348.2	347.1	346.1	10.01	9.88	9.72	26.22	-23.4	-32.5	-39.0	0.38	0.17	-90.4	-117.1	-139.4	-158.1	177.0	-144.28
11.00	10.77	359.1	358.0	357.2	9.97	9.87	9.66	26.22	-23.9	-32.1	-39.0	0.50	0.14	-89.9	-115.3	-137.6	-158.1	211.6	-145.95
12.00	10.42	369.6	368.7	368.0	9.78	9.65	9.43	26.22	-24.3	-31.4	-37.6	0.68	0.34	-88.2	-113.7	-135.9	-156.2	302.4	-149.04
13.00	9.85	379.8	379.0	378.3	9.46	9.26	9.08	26.26	-24.9	-31.2	-36.0	0.77	0.27	-87.3	-113.2	-135.5	-155.3	361.5	-150.60
14.00	9.18	389.4	388.7	388.0	9.02	8.79	8.65	26.31	-24.5	-31.1	-34.8	0.80	0.27	-86.8	-113.3	-135.0	-155.5	507.5	-153.59
15.00	8.47	398.4	397.7	396.9	8.48	8.27	8.17	26.36	-24.7	-30.9	-34.0	0.80	0.32	-84.3	-112.3	-134.8	-155.2	606.7	-155.41
15.50	8.11	402.7	402.0	401.1	8.19	8.00	7.91	26.39	-24.5	-30.8	-33.6	0.80	0.33	-86.2	-113.1	-134.5	-155.1	851.6	-157.91
16.00	7.75	406.8	406.0	405.1	7.89	7.73	7.66	26.42	-24.2	-30.5	-33.3	0.79	0.31	-87.9	-113.0	-134.5	-154.9	1000.0	-159.82

*at 25°C unless mentioned otherwise

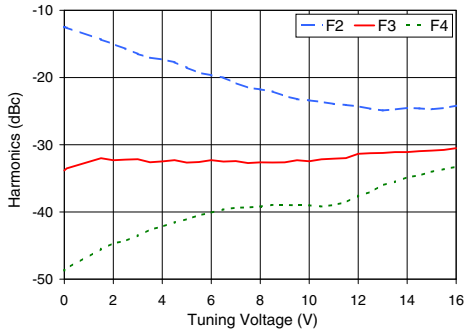
ZX95-386-S+
Frequency and Tuning Sensitivity



ZX95-386-S+
Power Output

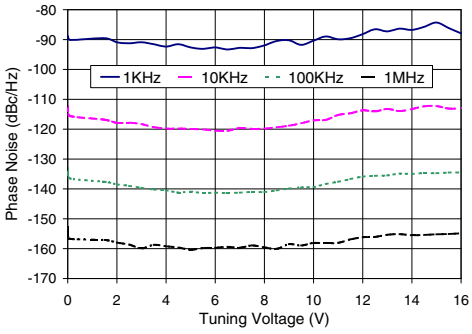


ZX95-386-S+
Harmonics Level



ZX95-386-S+
Frequency Pulling & Pushing (Vcc ± 5%)

ZX95-386-S+
Phase Noise Vs. Tuning Voltage



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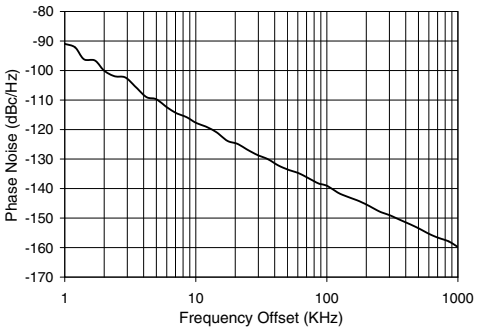
Phase Noise



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