

Coaxial

# Voltage Controlled Oscillator

## ZX95-4077+

5V Tuning for PLL IC's 3876 to 4077 MHz

### Features

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



CASE STYLE: GB956

### Applications

- r & d
- lab
- instrumentation
- wireless communications
- WiMAX

Connectors	Model
SMA	ZX95-4077-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.				VOLTAGE RANGE (V)	SENSI- TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Typ.	Max.			Vcc	Current	
				1	10	100	1000	Min.	Max.	Typ.	Typ.		Typ.					Max.	Max.
ZX95-4077+	3876	4077	+3.5	-70	-97	-118	-138	0.5	5	62-78	14	140	-90	-22	-14	1.5	2	5	48

### Maximum Ratings

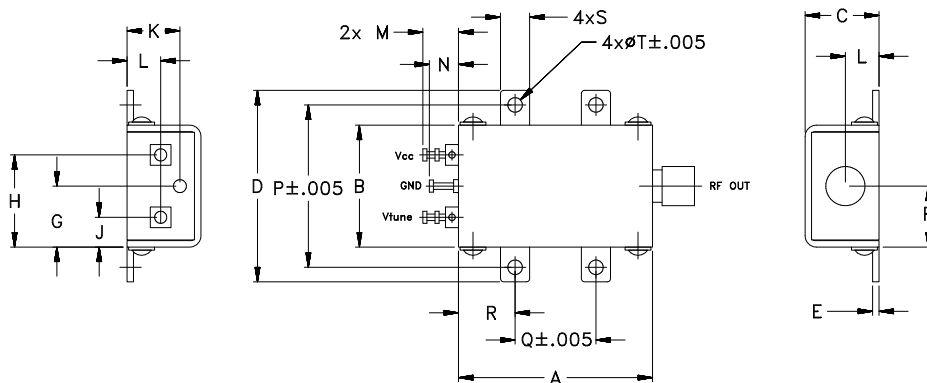
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	6V
Absolute Max. Tuning Voltage (Vtune)	7V
All specifications	50 ohm system

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-Circuits' applicable established test performance criteria and measurement instructions.
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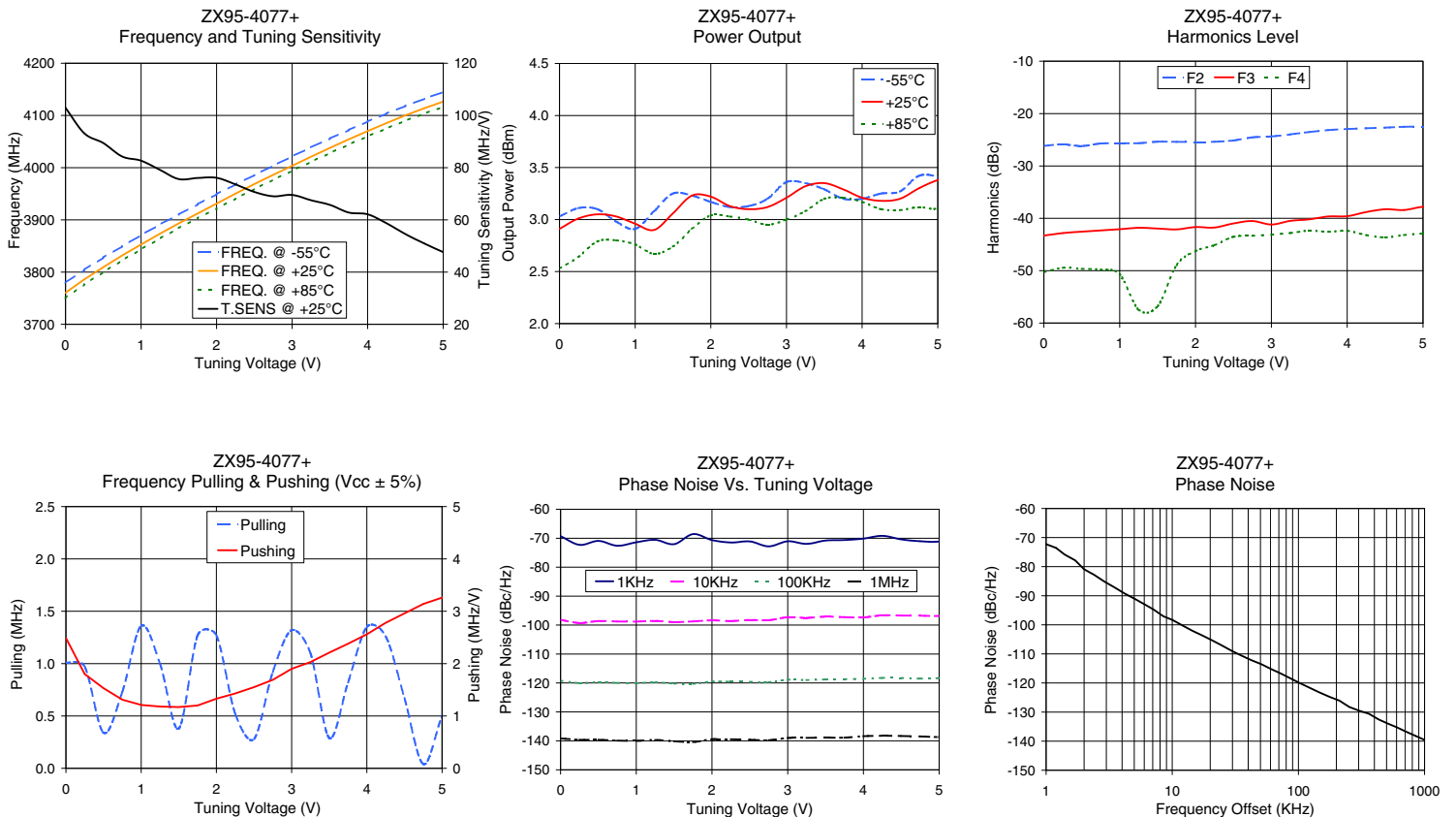
REV. B  
M152326  
EDR-10183F2  
ZX95-4077+  
RAV  
150923  
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# Performance Data & Curves\*

# ZX95-4077+

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 3977 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	102.93	3779.6	3760.4	3750.3	3.03	2.91	2.53	40.11	-26.2	-43.3	-50.3	2.49	1.01	-69.3	-98.2	-119.2	-139.2	1.0	-72.27
0.50	89.44	3827.8	3809.4	3799.9	3.10	3.05	2.79	40.22	-26.2	-42.6	-49.7	1.53	0.34	-70.9	-98.6	-119.7	-139.6	2.0	-80.89
0.75	84.28	3849.5	3831.8	3822.6	2.98	3.03	2.80	40.25	-25.7	-42.3	-49.8	1.31	0.73	-72.6	-98.8	-120.0	-139.9	3.5	-87.18
1.00	82.68	3870.9	3852.9	3843.7	2.91	2.96	2.76	40.29	-25.7	-42.1	-50.7	1.21	1.36	-71.4	-98.8	-120.1	-140.0	6.0	-92.89
1.25	79.15	3891.1	3873.5	3864.2	3.08	2.90	2.67	40.34	-25.7	-41.8	-57.5	1.18	1.00	-70.6	-98.5	-119.8	-139.7	8.5	-97.06
1.50	75.63	3910.2	3893.3	3884.2	3.25	3.06	2.74	40.40	-25.4	-42.0	-56.8	1.17	0.38	-72.1	-99.0	-120.2	-140.1	10.0	-98.28
1.75	76.06	3929.8	3912.2	3903.2	3.23	3.23	2.91	40.46	-25.4	-42.1	-48.9	1.20	1.27	-68.6	-98.7	-120.3	-140.4	20.8	-105.39
2.00	76.13	3949.2	3931.2	3921.7	3.17	3.22	3.04	40.45	-25.4	-41.7	-46.3	1.33	1.27	-70.6	-98.4	-119.5	-139.4	35.5	-110.61
2.25	73.59	3967.9	3950.3	3940.7	3.12	3.13	3.03	40.51	-25.4	-41.8	-45.1	1.43	0.52	-71.5	-98.6	-119.6	-139.5	60.7	-115.20
2.50	70.70	3985.9	3968.7	3959.1	3.13	3.10	3.00	40.58	-25.1	-41.0	-43.5	1.55	0.28	-71.1	-98.2	-119.6	-139.6	86.7	-118.43
2.75	69.04	4003.7	3986.3	3977.0	3.20	3.12	2.95	40.66	-24.5	-40.5	-43.3	1.69	0.92	-72.8	-98.3	-119.7	-139.8	100.0	-119.82
3.00	69.56	4021.5	4003.6	3994.0	3.36	3.21	3.00	40.69	-24.4	-41.2	-43.1	1.90	1.32	-71.1	-97.3	-118.9	-139.0	148.1	-123.31
3.25	67.53	4038.8	4021.0	4011.2	3.35	3.32	3.08	40.74	-24.0	-40.5	-42.8	2.03	1.10	-71.9	-97.5	-119.0	-139.0	177.0	-124.77
3.50	65.76	4055.8	4037.9	4027.9	3.29	3.35	3.20	40.79	-23.5	-40.2	-42.3	2.21	0.29	-70.8	-97.1	-118.8	-138.9	211.6	-126.09
3.75	62.79	4072.2	4054.3	4044.3	3.20	3.29	3.21	40.86	-23.2	-39.7	-42.6	2.38	0.82	-70.6	-97.3	-118.7	-138.9	302.4	-129.51
4.00	62.13	4088.4	4070.0	4060.1	3.20	3.21	3.17	40.92	-22.9	-39.6	-42.4	2.56	1.35	-70.2	-97.4	-118.6	-138.4	361.5	-130.57
4.25	58.69	4103.7	4085.5	4075.2	3.25	3.18	3.10	40.97	-22.8	-38.8	-43.2	2.78	1.26	-69.2	-96.6	-118.3	-138.2	507.5	-133.89
4.50	54.57	4118.2	4100.2	4090.0	3.27	3.20	3.09	41.03	-22.7	-38.3	-43.7	2.96	0.67	-70.4	-96.7	-118.3	-138.3	606.7	-135.29
4.75	50.93	4131.9	4113.9	4103.7	3.42	3.30	3.12	41.09	-22.5	-38.4	-43.2	3.14	0.04	-71.0	-96.8	-118.5	-138.5	851.6	-138.24
5.00	47.66	4145.0	4126.6	4116.4	3.41	3.38	3.11	41.11	-22.5	-37.8	-42.9	3.26	0.50	-71.1	-96.9	-118.4	-138.7	1000.0	-139.57

\*at 25°C unless mentioned otherwise



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