

Voltage Controlled Oscillator

ZX95-485A+

5V Tuning for PLL IC's 450 to 485 MHz

Features

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

Applications

- r & d
- lab
- instrumentation
- wireless communications
- point-to-multipoint



CASE STYLE: GB956

Connectors	Model
SMA	ZX95-485A-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.			Max.	Typ.	Max.	Vcc (volts)	Current (mA)
	Typ.																					
ZX95-485A+	450	485	+4	-89	-119	-139	-159	0.25	5	12	100	20	-90	-20	-10	0.2	0.4	5	28			

Maximum Ratings

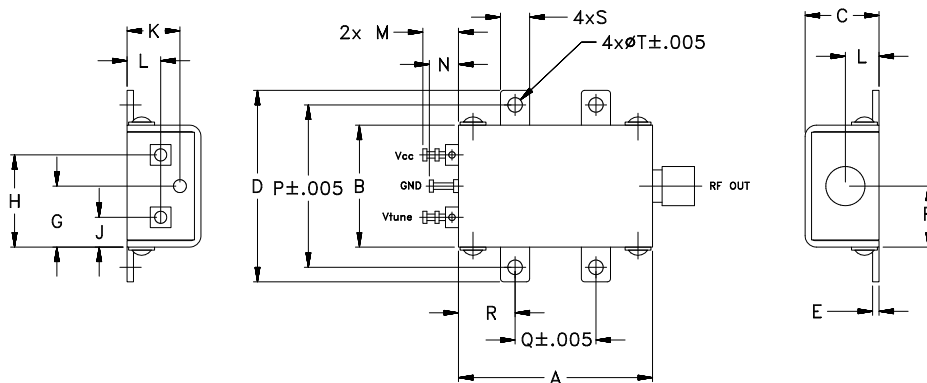
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	7V
Absolute Max. Tuning Voltage (Vtune)	7V
All specifications	50 ohm system

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



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

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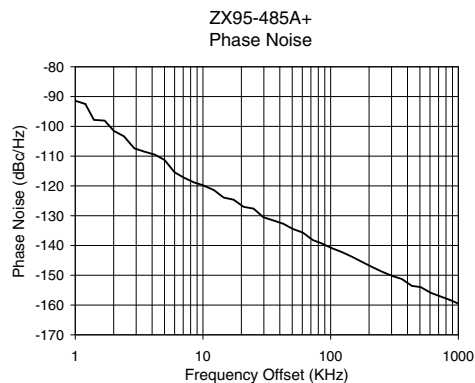
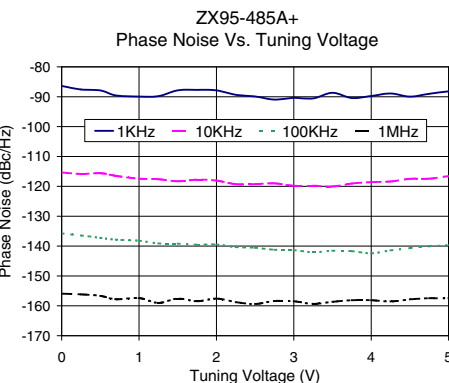
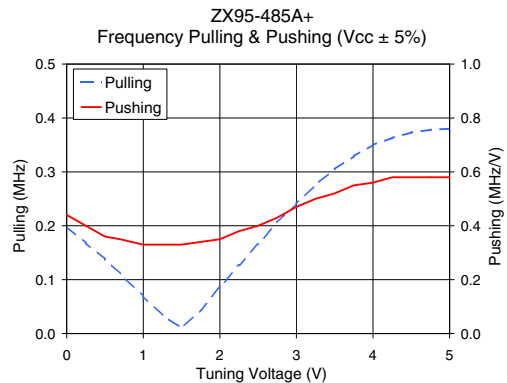
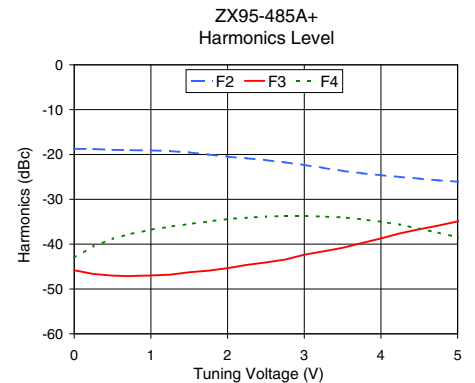
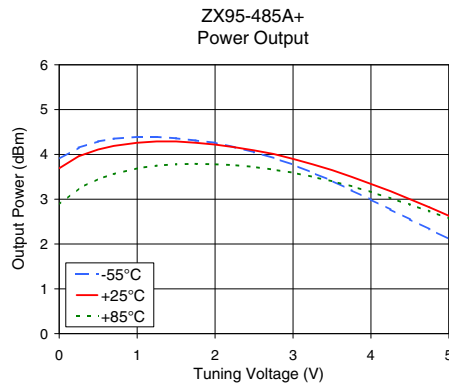
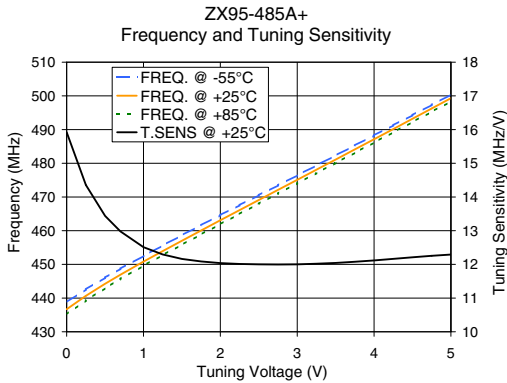


Performance Data & Curves*

ZX95-485A+

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 468 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	15.92	438.8	436.7	435.2	3.90	3.69	2.88	21.24	-18.8	-45.8	-43.1	0.44	0.20	-86.4	-115.4	-135.7	-155.9	1.0	-91.42
0.50	13.44	446.1	444.2	443.0	4.29	4.11	3.45	21.81	-19.0	-47.0	-38.8	0.36	0.14	-87.9	-115.6	-137.2	-156.7	2.0	-101.50
0.70	12.98	448.7	446.9	445.7	4.35	4.19	3.56	21.97	-19.0	-47.1	-37.8	0.35	0.11	-89.6	-116.5	-137.9	-157.8	3.5	-108.54
1.00	12.51	452.5	450.8	449.6	4.39	4.26	3.69	22.18	-19.1	-47.0	-36.8	0.33	0.07	-89.9	-117.4	-138.2	-157.4	6.0	-115.43
1.25	12.29	455.6	454.0	452.7	4.39	4.29	3.75	22.31	-19.2	-46.8	-36.1	0.33	0.03	-89.8	-117.6	-139.1	-159.0	8.5	-118.82
1.50	12.16	458.6	457.0	455.8	4.36	4.29	3.78	22.41	-19.6	-46.3	-35.5	0.33	0.01	-87.9	-118.3	-139.2	-157.6	10.0	-119.78
1.75	12.09	461.6	460.1	458.9	4.31	4.26	3.79	22.49	-20.0	-45.9	-35.0	0.34	0.04	-87.7	-117.8	-139.5	-158.5	20.8	-127.03
2.00	12.04	464.6	463.1	461.9	4.26	4.22	3.78	22.54	-20.5	-45.4	-34.4	0.35	0.09	-87.9	-118.1	-139.5	-157.6	35.5	-131.57
2.25	12.01	467.6	466.1	465.0	4.16	4.16	3.76	22.57	-20.9	-44.6	-34.1	0.38	0.13	-89.4	-119.3	-140.3	-158.8	60.7	-135.70
2.50	12.00	470.5	469.1	468.0	4.05	4.09	3.72	22.58	-21.3	-44.1	-33.9	0.40	0.17	-89.9	-119.3	-140.6	-159.4	86.7	-139.46
2.75	12.00	473.5	472.1	471.0	3.92	4.01	3.66	22.57	-21.8	-43.4	-33.7	0.43	0.21	-91.0	-119.0	-141.2	-158.4	100.0	-140.74
3.00	12.00	476.4	475.1	474.0	3.77	3.90	3.59	22.56	-22.4	-42.4	-33.7	0.47	0.24	-90.4	-119.8	-141.4	-158.5	148.1	-143.85
3.25	12.02	479.4	478.1	477.1	3.59	3.78	3.50	22.52	-23.0	-41.6	-33.9	0.50	0.28	-90.6	-119.8	-142.1	-159.3	177.0	-145.57
3.50	12.04	482.3	481.1	480.1	3.41	3.65	3.40	22.47	-23.7	-40.8	-34.0	0.52	0.31	-88.7	-120.1	-141.6	-158.6	211.6	-147.23
3.75	12.08	485.3	484.1	483.1	3.20	3.50	3.29	22.41	-24.2	-39.8	-34.5	0.55	0.33	-90.4	-119.0	-141.7	-158.1	302.4	-150.21
4.00	12.12	488.3	487.1	486.2	2.99	3.34	3.16	22.35	-24.6	-38.7	-35.0	0.56	0.35	-89.8	-118.6	-142.4	-158.1	361.5	-151.28
4.25	12.16	491.3	490.2	489.2	2.77	3.18	3.02	22.27	-25.0	-37.6	-35.7	0.58	0.36	-88.9	-118.4	-141.4	-158.5	507.5	-153.97
4.50	12.21	494.3	493.2	492.2	2.55	3.00	2.88	22.19	-25.4	-36.7	-36.6	0.58	0.37	-90.0	-117.5	-140.7	-157.8	606.7	-155.87
4.75	12.25	497.3	496.3	495.3	2.33	2.82	2.73	22.09	-25.8	-35.9	-37.4	0.58	0.38	-89.0	-117.5	-140.0	-157.4	851.6	-158.22
5.00	12.29	500.4	499.3	498.3	2.11	2.63	2.57	21.99	-26.1	-34.9	-38.5	0.58	0.38	-88.2	-116.6	-139.7	-157.5	1000.0	-159.51

*at 25°C unless mentioned otherwise



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