

Coaxial

# Voltage Controlled Oscillator

## ZX95-535+

Linear Tuning 300 to 520 MHz



CASE STYLE: GB956

Connectors	Model
SMA	ZX95-535-S+

**+RoHS Compliant**  
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

### Features

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

### Applications

- r & d
- lab
- instrumentation
- test equipment

### 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 Br (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.	Typ.
ZX95-535+	300	520	+6	-79	-101	-120	-140	1	17	12-23	550	0.18	-90	-25	-15	0.5	0.2	12	21

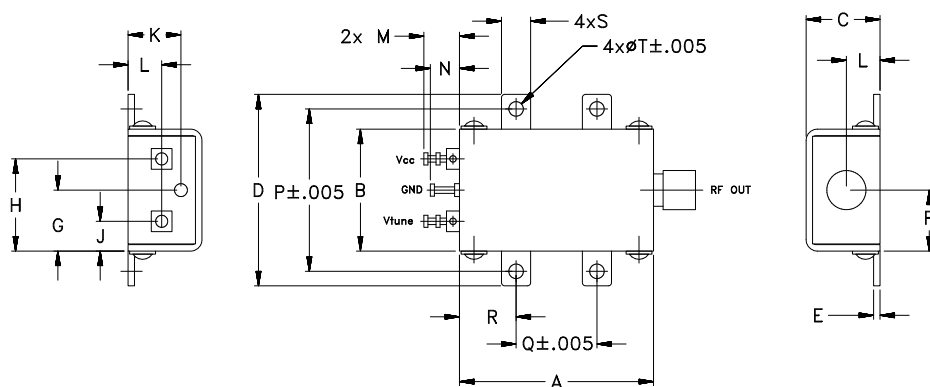
### Maximum Ratings

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	.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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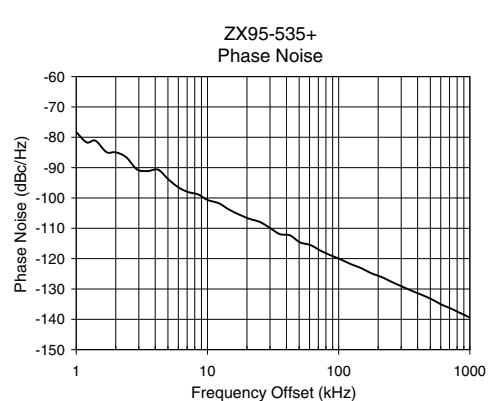
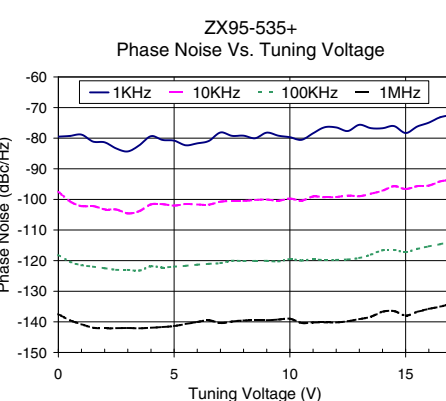
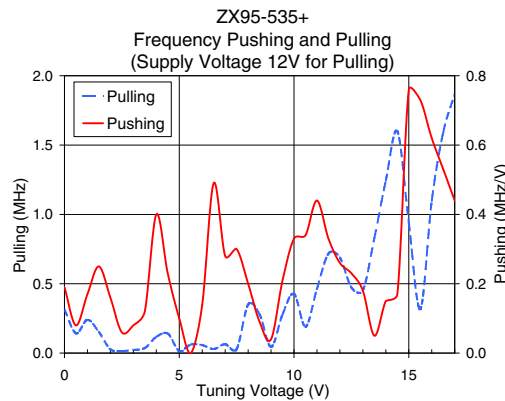
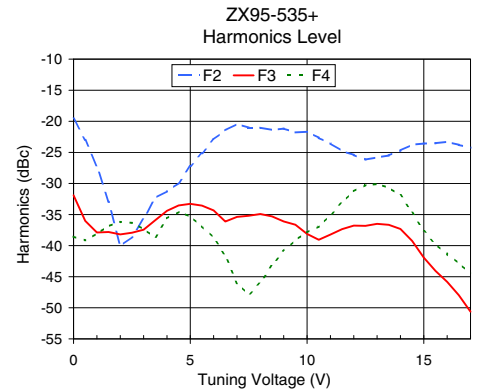
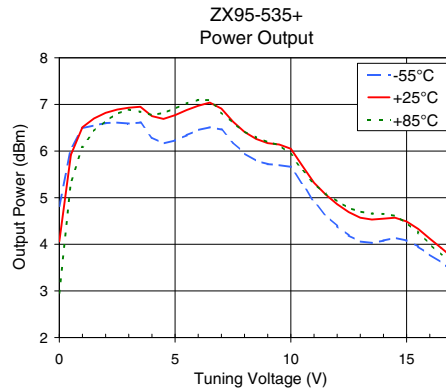
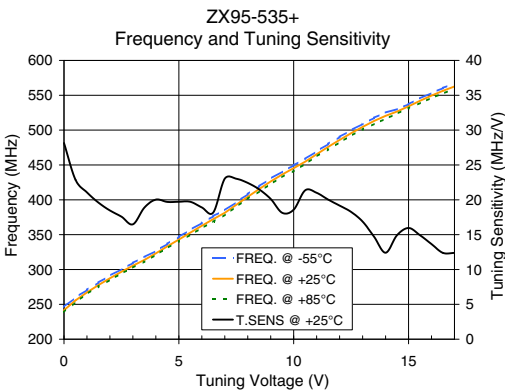
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# Performance Data & Curves\*

# ZX95-535+

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 412 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	28.15	246.4	241.6	238.6	4.82	4.06	2.96	16.68	-19.6	-31.9	-38.6	0.19	0.31	-79.5	-97.4	-118.1	-137.5	1.0	-78.30
0.50	22.87	259.8	255.7	253.2	6.06	5.92	5.33	16.80	-23.0	-36.0	-39.2	0.08	0.14	-79.3	-100.6	-120.4	-139.5	2.0	-84.94
1.00	21.06	270.8	267.2	265.0	6.49	6.51	6.09	16.84	-27.3	-37.9	-38.0	0.17	0.24	-78.8	-102.2	-121.5	-140.8	3.5	-91.14
2.00	18.47	291.1	287.5	285.1	6.60	6.82	6.65	16.87	-40.1	-38.2	-36.2	0.16	0.03	-81.3	-103.3	-122.5	-142.2	6.0	-96.50
3.00	16.49	309.4	305.5	302.6	6.59	6.93	6.89	16.86	-35.7	-37.4	-37.4	0.08	0.02	-84.3	-104.6	-123.0	-142.0	8.5	-98.83
4.00	20.03	326.6	323.2	321.1	6.29	6.75	6.77	16.73	-31.3	-34.4	-35.6	0.40	0.12	-79.4	-101.6	-121.9	-141.9	10.0	-100.65
5.00	19.72	346.8	343.1	340.3	6.23	6.77	6.91	16.68	-27.2	-33.3	-35.3	0.10	0.01	-80.8	-102.0	-122.0	-141.4	20.8	-106.86
6.00	18.90	366.9	362.8	359.4	6.45	6.97	7.10	16.62	-22.9	-34.3	-38.7	0.14	0.06	-81.7	-101.7	-121.3	-140.1	35.5	-111.90
7.00	23.04	385.0	381.3	378.8	6.46	6.91	6.83	16.40	-20.4	-35.4	-46.1	0.28	0.06	-78.1	-100.7	-120.8	-140.4	60.7	-115.48
8.00	22.42	408.2	404.4	401.3	5.95	6.41	6.42	16.31	-21.0	-34.9	-46.0	0.20	0.35	-79.2	-100.5	-120.1	-139.5	86.7	-118.89
8.50	21.49	419.6	415.6	412.3	5.79	6.26	6.29	16.28	-21.4	-35.3	-43.2	0.09	0.28	-80.0	-100.2	-120.1	-139.5	100.0	-119.96
9.00	20.12	430.5	426.3	422.7	5.72	6.17	6.19	16.24	-21.2	-36.1	-40.9	0.04	0.04	-78.2	-100.1	-120.1	-139.5	211.6	-126.02
10.00	18.59	449.4	445.4	441.6	5.66	6.05	5.93	16.13	-21.7	-38.1	-37.9	0.33	0.43	-79.7	-99.8	-119.5	-139.0	253.0	-127.64
11.00	21.01	469.6	465.4	462.2	4.91	5.32	5.30	16.02	-23.6	-38.2	-35.1	0.44	0.46	-78.4	-99.1	-119.5	-140.2	361.5	-130.62
12.00	19.16	490.2	485.9	482.4	4.39	4.86	4.92	15.97	-25.4	-36.8	-31.3	0.26	0.69	-76.5	-99.2	-119.8	-140.2	432.2	-131.98
13.00	16.88	509.0	504.6	500.8	4.06	4.57	4.70	15.92	-25.8	-36.5	-30.1	0.18	0.45	-75.6	-99.0	-119.1	-139.1	507.5	-133.31
14.00	12.40	525.1	520.4	516.2	4.08	4.55	4.65	15.85	-24.7	-37.3	-31.9	0.15	1.24	-76.8	-97.2	-116.6	-136.7	600.0	-135.03
15.00	15.95	537.1	534.1	531.3	4.08	4.49	4.46	15.77	-23.6	-41.9	-37.7	0.76	0.94	-78.3	-96.6	-117.2	-138.0	712.4	-136.40
16.00	13.64	553.3	549.5	546.1	3.78	4.12	4.01	15.74	-23.3	-45.8	-41.4	0.62	1.10	-74.9	-95.5	-115.4	-135.8	851.6	-137.99
17.00	12.38	566.8	562.5	558.6	3.43	3.71	3.52	15.73	-24.2	-50.6	-44.4	0.44	1.87	-72.5	-93.6	-113.8	-134.0	1000.0	-139.43

\*at 25°C unless mentioned otherwise



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