

Coaxial

# Voltage Controlled Oscillator

# ZX95-3050A-S+

Linear Tuning 2150 to 3050 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
- synthesizer sensor equipment



Generic photo used for illustration purposes only  
CASE STYLE: GB956

Connectors	Model
SMA	ZX95-3050A-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 dBc (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.
ZX95-3050A-S+	2150	3050	+7	-67	-94	-115	-135	0.5	11.5	98-122	25	200	-90	-20	-10	2	1.7	5	49

### Maximum Ratings

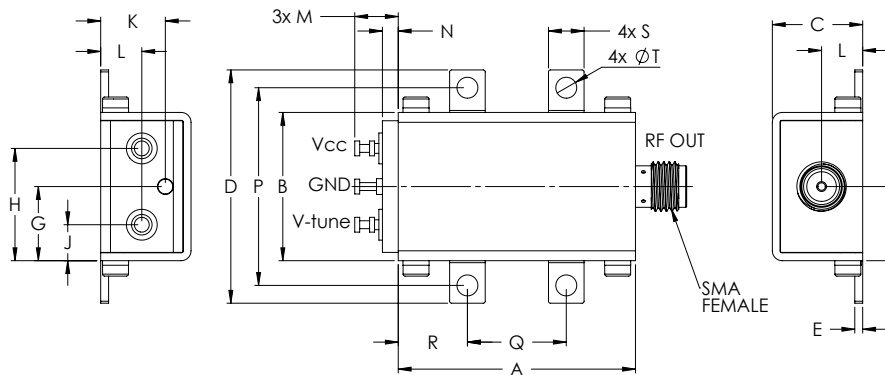
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	6V
Absolute Max. Tuning Voltage (Vtune)	13.5V
All specifications	50 ohm system

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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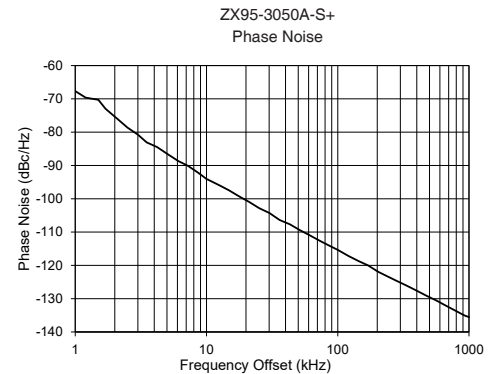
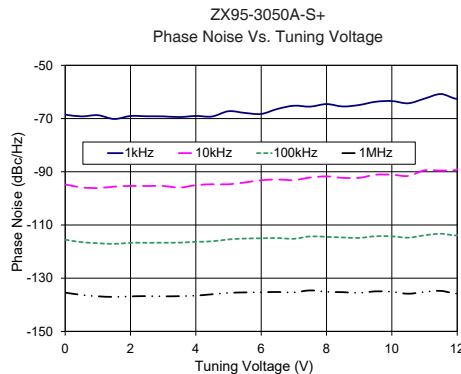
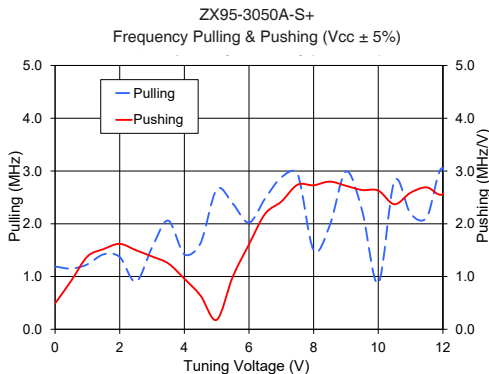
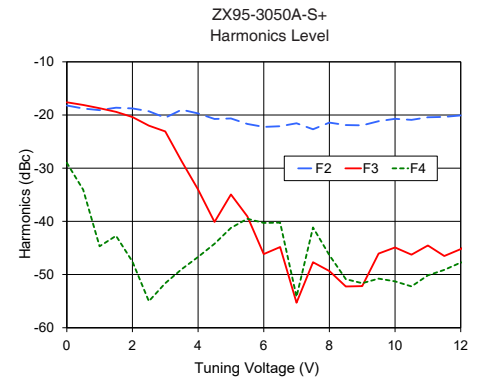
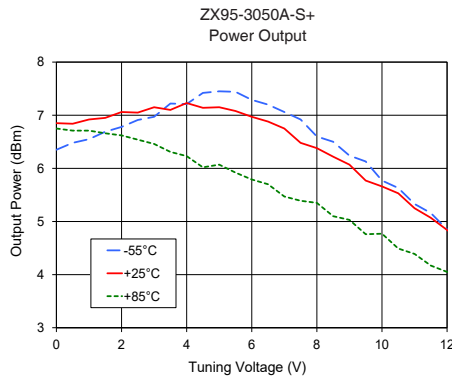
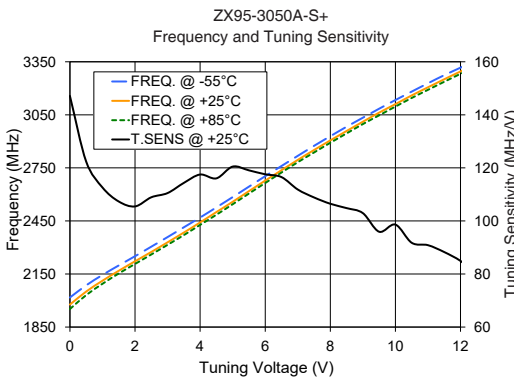


## Performance Data & Curves\*

## ZX95-3050A-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 2600 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	147.11	2016.7	1976.9	1951.8	6.35	6.85	6.75	41.84	-18.2	-17.6	-29.0	0.49	1.19	-68.54	-94.7	-115.5	-135.4	1.0	-67.69
0.50	122.37	2085.5	2050.4	2030.4	6.48	6.84	6.71	41.72	-18.8	-18.1	-34.1	0.92	1.15	-69.19	-95.9	-116.5	-136.3	2.1	-76.04
1.00	112.61	2144.2	2111.6	2094.3	6.55	6.92	6.71	41.68	-19.1	-18.7	-44.7	1.38	1.23	-68.74	-96.1	-116.8	-136.8	3.5	-83.07
1.50	107.32	2197.9	2167.9	2152.5	6.69	6.95	6.66	41.66	-18.6	-19.4	-42.7	1.52	1.42	-70.16	-95.6	-117.1	-137.0	6.1	-88.67
2.00	105.46	2250.2	2221.6	2206.5	6.78	7.06	6.62	41.50	-18.8	-20.4	-47.6	1.62	1.37	-69.04	-95.3	-116.7	-136.8	8.7	-92.26
3.00	110.49	2358.3	2328.8	2314.6	6.97	7.15	6.46	41.39	-20.5	-23.1	-51.6	1.38	1.55	-69.18	-95.3	-116.7	-136.8	10.0	-94.05
3.50	114.33	2413.7	2384.0	2369.7	7.22	7.10	6.31	41.36	-19.0	-28.7	-49.0	1.25	2.06	-69.44	-95.9	-116.6	-136.8	21.1	-100.95
4.00	117.49	2469.0	2441.2	2427.2	7.21	7.23	6.23	41.36	-19.7	-34.0	-46.7	0.96	1.42	-69.03	-95.0	-116.3	-136.6	36.1	-106.40
4.50	116.04	2526.3	2499.9	2484.8	7.42	7.14	6.02	41.25	-20.7	-40.1	-44.2	0.64	1.63	-69.22	-94.7	-116.1	-136.0	61.6	-111.04
5.00	120.47	2584.4	2558.0	2544.0	7.45	7.15	6.07	41.22	-20.6	-34.9	-41.2	0.18	2.65	-67.24	-94.7	-115.4	-135.5	86.4	-114.09
6.00	117.58	2702.8	2677.7	2664.2	7.29	6.97	5.79	41.16	-22.2	-46.2	-40.3	1.61	2.02	-68.27	-93.2	-115.0	-135.3	100.0	-115.35
6.50	116.52	2760.3	2736.5	2723.6	7.20	6.88	5.70	41.19	-22.1	-44.8	-40.2	2.19	2.48	-66.38	-92.9	-114.9	-135.2	145.0	-118.77
7.00	111.84	2817.7	2794.8	2781.8	7.06	6.75	5.47	41.19	-21.6	-55.3	-54.2	2.42	2.88	-65.18	-93.1	-115.2	-135.4	170.2	-120.01
7.50	108.85	2874.3	2850.7	2836.9	6.92	6.48	5.39	41.12	-22.7	-47.7	-41.1	2.74	2.95	-65.51	-92.2	-114.3	-134.6	203.5	-121.93
8.00	106.47	2928.8	2905.1	2891.6	6.60	6.38	5.35	41.16	-21.4	-49.4	-46.4	2.73	1.50	-64.56	-91.7	-114.5	-135.1	285.6	-124.78
9.00	102.94	3033.4	3010.8	2997.4	6.24	6.07	5.03	41.15	-21.9	-52.2	-51.6	2.72	2.99	-64.90	-92.3	-114.9	-135.5	335.4	-126.10
9.50	95.92	3084.3	3062.2	3047.0	6.13	5.77	4.76	41.06	-21.2	-46.1	-50.8	2.64	2.25	-63.69	-91.1	-114.2	-135.0	470.7	-129.06
10.50	91.77	3181.1	3159.5	3145.0	5.63	5.53	4.49	41.05	-20.9	-46.3	-52.2	2.37	2.81	-64.26	-91.6	-114.8	-135.8	562.6	-130.53
11.00	90.86	3228.1	3205.4	3191.1	5.33	5.25	4.39	40.98	-20.4	-44.5	-50.2	2.59	2.19	-62.51	-89.5	-113.9	-135.2	927.2	-135.07
11.50	88.27	3274.0	3250.8	3236.7	5.16	5.07	4.17	40.91	-20.4	-46.5	-49.1	2.69	2.12	-60.78	-89.5	-113.3	-134.8	1000.0	-135.54

\*at 25°C unless mentioned otherwise



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