

Coaxial

# Voltage Controlled Oscillator

## ZX95-2500WA+

Wide Band 1550 to 2500 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 communications
- CATV



CASE STYLE: GB956

Connectors	Model
SMA	ZX95-2500WA-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.
ZX95-2500WA+	1550	2500	+9.5	-73	-99	-121	-141	2	22	36-68	50	30	-90	-17	-	1.7	1.3	10	35

### Maximum Ratings

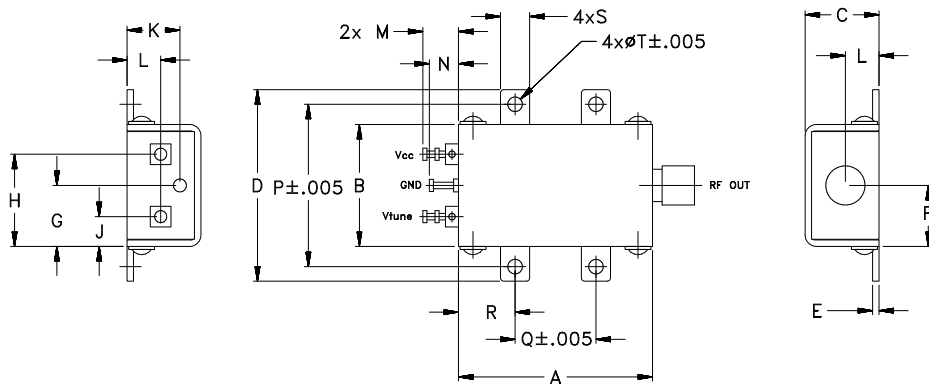
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	12V
Absolute Max. Tuning Voltage (Vtune)	24V
All specifications	50 ohm system

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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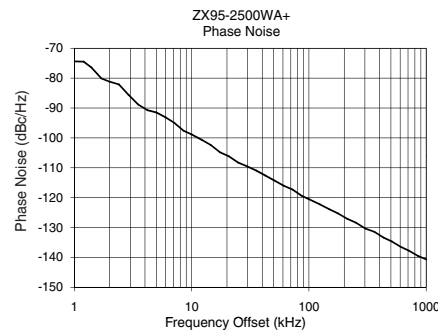
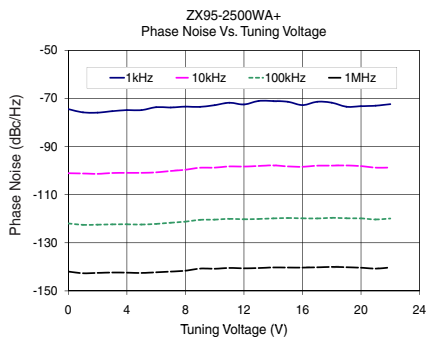
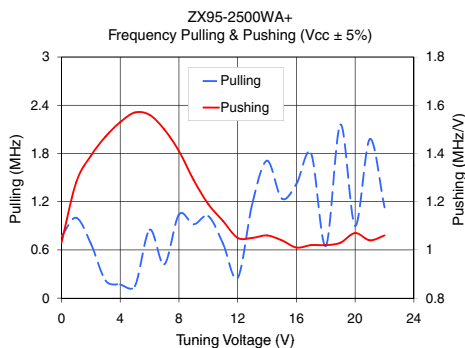
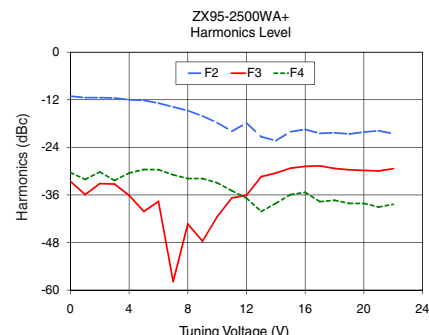
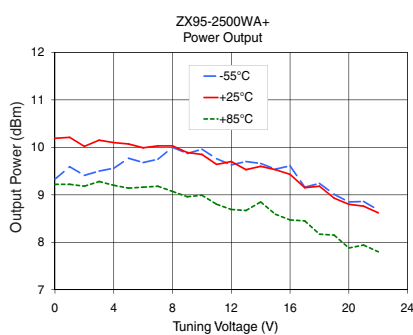
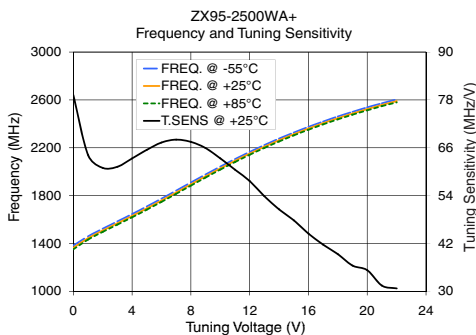
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ZX95-2500WA+  
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# Performance Data & Curves\*

# ZX95-2500WA+

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 2025 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	87.14	1315.0	1298.3	1283.6	10.30	9.78	8.51	25.03	-15.3	-26.8	-34.0	0.84	0.86	-72.3	-98.7	-119.4	-138.5	1.0	-73.47
0.50	81.41	1357.7	1341.8	1327.7	10.28	9.81	8.66	25.12	-14.9	-28.8	-36.6	0.94	0.64	-73.2	-98.9	-119.7	-138.8	2.0	-82.41
2.00	73.20	1476.2	1461.1	1447.3	10.24	9.87	8.95	25.38	-14.2	-30.4	-33.3	1.14	0.65	-75.7	-99.6	-120.4	-139.5	3.5	-90.08
3.00	73.10	1549.8	1534.3	1520.2	10.28	9.91	9.03	25.55	-14.0	-28.7	-33.4	1.23	0.55	-75.7	-100.2	-120.7	-139.9	6.0	-95.18
4.00	73.40	1623.1	1607.4	1593.0	10.29	9.91	9.04	25.70	-13.7	-28.8	-33.0	1.30	0.83	-74.7	-100.4	-121.1	-140.3	8.5	-99.19
6.00	71.79	1768.2	1753.7	1740.2	10.26	9.74	8.86	25.93	-14.3	-34.6	-30.7	1.40	0.96	-74.8	-100.9	-122.1	-141.1	10.0	-100.29
7.00	70.84	1839.6	1825.5	1812.5	10.17	9.67	8.78	25.98	-15.3	-37.4	-32.2	1.40	0.61	-75.1	-100.9	-122.4	-141.5	20.8	-108.12
8.00	69.90	1910.0	1896.4	1883.6	10.12	9.57	8.66	26.02	-15.8	-32.9	-33.5	1.42	1.23	-74.5	-100.7	-122.6	-141.6	35.5	-113.11
9.00	68.99	1979.6	1966.3	1953.8	9.99	9.41	8.57	26.06	-17.5	-34.0	-34.7	1.40	1.17	-73.1	-100.6	-122.5	-141.8	60.7	-117.39
10.00	67.51	2048.2	2035.3	2023.0	9.85	9.29	8.40	26.08	-18.2	-35.0	-33.8	1.35	1.47	-73.7	-100.5	-122.2	-141.3	86.7	-121.18
11.00	65.32	2115.5	2102.8	2090.5	9.64	9.04	8.28	26.10	-21.6	-35.6	-36.0	1.28	1.64	-73.6	-100.0	-122.1	-141.6	100.0	-122.36
12.00	62.10	2180.6	2168.1	2155.8	9.40	8.97	8.24	26.10	-21.1	-35.8	-36.7	1.21	1.41	-72.7	-99.9	-122.0	-141.6	148.1	-125.90
13.00	58.66	2242.5	2230.2	2218.1	9.42	9.03	8.18	26.10	-22.3	-33.2	-40.7	1.13	0.92	-72.4	-100.1	-122.1	-141.6	177.0	-127.39
14.00	54.66	2300.6	2288.9	2276.9	9.37	8.92	8.09	26.11	-21.7	-30.6	-40.0	1.08	0.61	-73.1	-99.9	-122.2	-141.7	211.6	-129.10
16.00	47.95	2406.1	2394.9	2383.0	9.03	8.67	7.93	26.08	-21.8	-35.3	-42.7	1.13	1.96	-73.6	-99.5	-121.9	-141.8	302.4	-132.13
17.00	43.69	2454.2	2442.8	2430.5	8.80	8.50	7.82	26.05	-23.4	-36.3	-42.0	1.18	0.56	-73.3	-99.3	-121.7	-141.6	361.5	-133.55
18.00	41.26	2497.7	2486.5	2474.7	8.76	8.31	7.57	26.03	-23.3	-36.0	-44.5	1.16	2.30	-73.3	-99.6	-121.9	-141.7	507.5	-136.57
19.00	37.50	2539.1	2527.8	2515.7	8.51	8.08	7.46	25.99	-23.0	-34.6	-44.2	1.19	1.24	-73.4	-100.1	-121.9	-142.1	606.7	-138.26
20.00	35.30	2576.7	2565.3	2553.3	8.46	8.03	7.23	25.94	-23.7	-33.4	-45.9	1.17	2.26	-72.3	-99.8	-121.7	-142.0	851.6	-141.01
22.00	29.45	2644.2	2632.5	2620.3	8.01	7.61	6.96	25.82	-29.1	-32.0	-42.2	1.10	2.50	-71.9	-99.8	-121.4	-141.6	1000.0	-141.53

\*at 25°C unless mentioned otherwise



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