

Coaxial

# Voltage Controlled Oscillator

## ZX95-2500A-S+

5V Tuning for PLL ICs 2200 to 2495 MHz

### Features

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

### Applications

- r & d
- lab
- instrumentation
- wireless communications
- WiMAX 2.5 GHz
- transmission radio



Generic photo used for illustration purposes only  
CASE STYLE: GB956

Connectors	Model
SMA	ZX95-2500A-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.			Max.	Vcc (volts)	Current (mA)
ZX95-2500A-S+	2200	2495	+4.5	-68	-96	-119	-139	0.6	4.5	130	10	100	-90	-25	-15	6	2	5	35

### Maximum Ratings

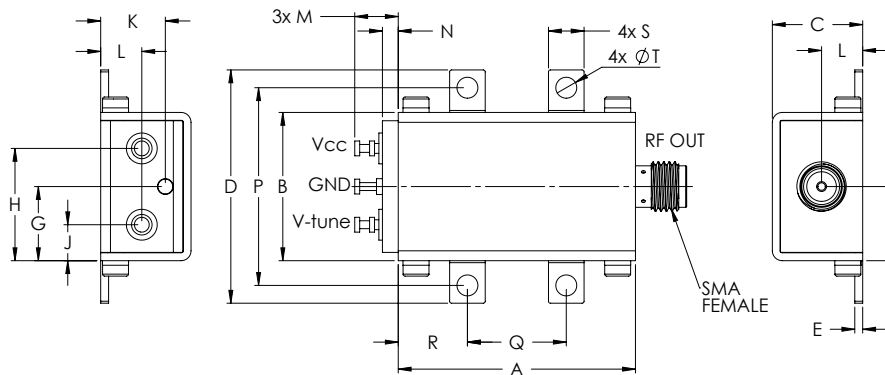
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	6V
Absolute Max. Tuning Voltage (Vtune)	7V
All specifications	50 ohm system

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	.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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 B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.  
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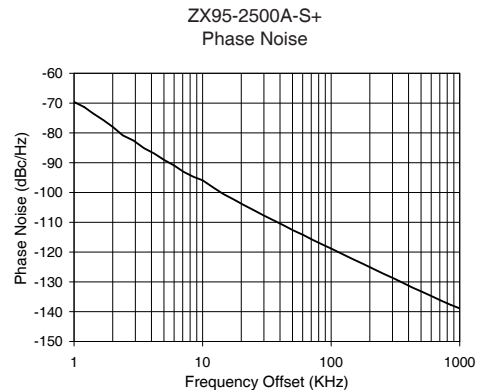
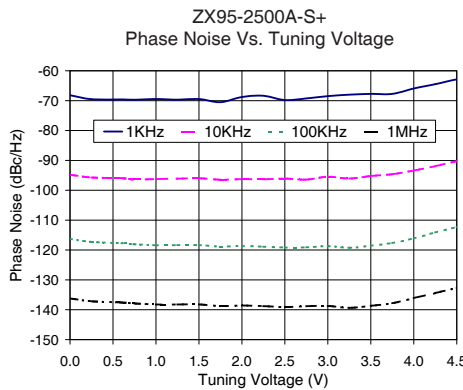
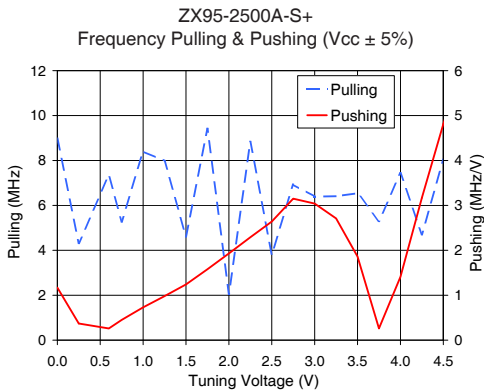
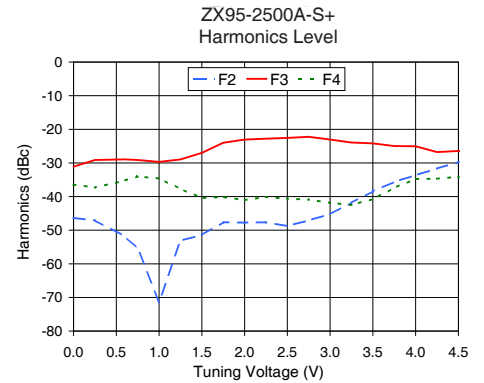
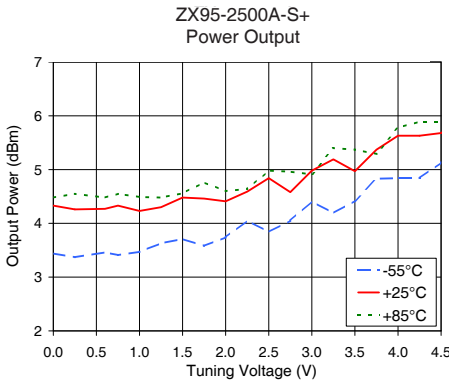
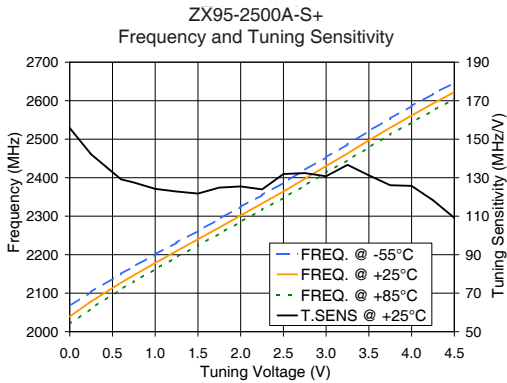


## Performance Data & Curves\*

## ZX95-2500A-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 2348 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	155.81	2066.4	2039.4	2019.6	3.44	4.33	4.48	27.48	-46.4	-31.1	-36.4	1.17	8.98	-68.2	-94.8	-116.3	-136.2	1.0	-69.63
0.25	142.19	2103.6	2078.4	2060.2	3.37	4.26	4.55	27.55	-47.1	-29.1	-37.3	0.37	4.32	-69.5	-95.7	-117.3	-137.2	2.0	-77.98
0.60	129.19	2150.1	2127.0	2110.2	3.46	4.27	4.48	27.68	-51.8	-28.9	-35.2	0.26	7.34	-69.6	-96.0	-117.7	-137.6	3.5	-85.14
0.75	127.49	2169.4	2146.5	2130.4	3.41	4.33	4.55	27.73	-55.5	-29.1	-34.0	0.45	5.28	-69.7	-96.4	-118.1	-137.9	6.0	-90.92
1.00	124.20	2200.8	2178.4	2162.2	3.47	4.23	4.49	27.80	-71.3	-29.7	-34.6	0.73	8.40	-69.5	-96.3	-118.4	-138.2	8.5	-94.75
1.25	122.82	2231.6	2209.4	2193.6	3.63	4.30	4.48	27.90	-53.1	-29.0	-37.7	0.98	7.98	-69.7	-96.1	-118.4	-138.2	10.0	-95.90
1.50	121.76	2261.7	2240.1	2224.3	3.71	4.48	4.56	28.03	-51.4	-27.0	-40.4	1.24	4.62	-69.5	-96.0	-118.3	-138.2	20.8	-104.15
1.75	124.85	2292.9	2270.6	2254.5	3.58	4.46	4.76	28.12	-47.6	-24.0	-40.1	1.58	9.41	-70.5	-96.5	-118.8	-138.8	35.5	-109.30
2.00	125.46	2324.2	2301.8	2285.4	3.74	4.41	4.60	28.26	-47.7	-23.0	-41.0	1.93	2.05	-68.8	-96.3	-118.7	-138.6	60.7	-114.24
2.25	123.93	2355.1	2333.2	2316.8	4.05	4.59	4.64	28.46	-47.7	-22.8	-40.1	2.29	8.83	-68.4	-96.3	-118.9	-138.8	86.7	-117.58
2.50	131.91	2386.9	2364.1	2348.0	3.84	4.84	4.98	28.61	-48.8	-22.5	-40.7	2.64	3.82	-69.8	-96.1	-119.2	-139.1	100.0	-118.81
2.75	132.40	2420.4	2397.1	2379.6	4.05	4.58	4.96	28.77	-47.1	-22.2	-40.9	3.15	6.93	-69.2	-96.4	-119.1	-138.8	177.0	-123.95
3.00	130.77	2452.9	2430.2	2413.3	4.41	4.98	4.91	29.06	-45.2	-23.0	-41.9	3.04	6.39	-68.5	-95.5	-118.7	-138.7	211.6	-125.57
3.25	136.66	2486.8	2462.9	2445.7	4.19	5.19	5.40	29.24	-41.8	-23.9	-42.5	2.71	6.41	-68.0	-96.1	-119.3	-139.4	302.4	-128.70
3.50	131.22	2521.2	2497.1	2478.7	4.42	4.97	5.37	29.45	-38.4	-24.2	-40.8	1.86	6.54	-67.7	-95.2	-118.5	-138.7	361.5	-130.31
3.75	126.07	2553.6	2529.9	2512.4	4.83	5.37	5.29	29.78	-35.7	-25.0	-37.4	0.26	5.30	-67.7	-94.6	-117.7	-137.8	507.5	-133.28
4.00	125.73	2586.2	2561.4	2543.6	4.84	5.63	5.78	29.93	-33.7	-25.1	-34.8	1.41	7.44	-65.9	-93.4	-116.1	-136.1	606.7	-134.82
4.25	118.29	2617.6	2592.8	2574.5	4.84	5.63	5.89	30.16	-31.7	-26.8	-34.7	3.17	4.71	-64.5	-91.9	-114.1	-134.4	851.6	-137.71
4.50	109.12	2646.7	2622.4	2604.5	5.13	5.68	5.89	30.44	-29.7	-26.5	-34.1	4.81	8.03	-62.9	-90.3	-112.4	-132.7	1000.0	-138.90

\*at 25°C unless mentioned otherwise



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