

Voltage Controlled Oscillator

ZX95-3800AR-S+

50Ω 1900 to 3700 MHz

The Big Deal:

- Wide Band
- Low Phase Noise
- Robust design and construction
- Rigid unibody construction



CASE STYLE: GB956

Product Overview:

The ZX95-3800AR-S+ is a Voltage Controlled Oscillator, designed to operate from 1900 to 3700 MHz for point-to-point system applications. The ZX95-3800AR-S+ is built using Mini-Circuits proven unibody construction (size of 1.20" x .75" x .46") which integrates the RF connectors with the case body to shield against unwanted signals and noise.

Key Features

Feature	Advantages
Wide Band: from 1900 to 3700 MHz	The model's wide bandwidth makes it suitable for a wide variety of applications, such as: CATV, military, test equipment etc...
Low Phase Noise: -88 dBc/Hz typ at 10 kHz offset	Low phase noise improves system EVM (Error Vector Magnitude).
High Power Output, +6 dBm typ.	Reduces amplification requirements and improves immunity to external noise sources.
Good Pulling, 2 MHz typ.	Improves immunity against changes in output load.

Coaxial

Voltage Controlled Oscillator

ZX95-3800AR-S+

Wide Band 1900 to 3700 MHz

Features

- low phase noise, -88 dBc/Hz typ. @ 10kHz offset
- high power output, +6 dBm typ.
- low pulling, 2 MHz typ.
- wide band
- protected by US patent 6,790,049

Applications

- wireless communications
- point-to-point systems
- r & d
- instrumentation



CASE STYLE: GB956

Connectors	Model
SMA	ZX95-3800AR-S+

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

Electrical Specifications

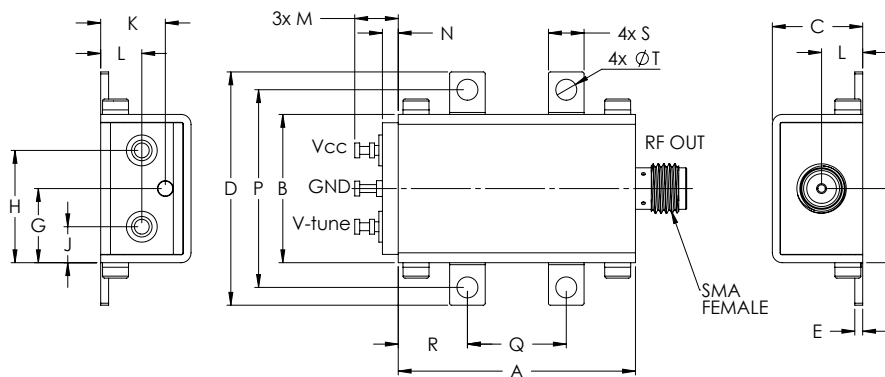
MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	PHASE NOISE dBc/Hz SSB at offset frequencies, kHz				TUNING					NON HARMONIC SPURIOUS (dBc)		HARMONICS (dBc)		PULLING pk-pk @12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER				
	Min.	Max.		Typ.	1	10	100	1000	VOLTAGE RANGE (V)		SENSI- TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)	Typ.	Typ.	Typ.			Max.	Typ.	Max.	Vcc	Current (mA)
									Min.	Max.													
ZX95-3800AR-S+	1900	3700	+6	-61	-88	-110	-130	0.5	20	60 - 150	50	10	-90	-22	-10	2	6	6	55				

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)	21V
All specifications	50 ohm system

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

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

Performance Data & Curves*

ZX95-3800AR-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 2800 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	214.35	1770.9	1722.4	1681.7	6.58	6.57	6.40	44.58	-16.1	-25.8	-35.5	1.03	1.09	-59.59	-84.5	-105.1	-124.9	1.0	-63.74
1.00	173.25	1964.8	1924.9	1889.5	6.40	6.35	5.85	44.93	-16.8	-25.5	-50.4	0.32	0.90	-59.69	-85.4	-106.4	-126.3	2.0	-71.82
2.00	153.28	2128.6	2092.6	2063.7	6.04	5.75	5.64	45.25	-17.9	-25.9	-68.7	0.68	0.74	-63.81	-87.3	-107.7	-127.6	3.5	-77.09
3.00	139.98	2276.7	2242.3	2216.1	5.91	5.53	5.25	45.47	-22.7	-23.8	-52.1	1.07	0.67	-64.23	-88.6	-108.8	-128.7	6.0	-82.63
4.00	144.47	2414.1	2381.0	2356.6	5.60	5.25	4.86	45.46	-24.0	-27.4	-54.5	1.98	0.36	-64.38	-88.3	-109.1	-129.0	8.5	-86.31
5.00	138.71	2558.4	2524.6	2499.0	6.49	5.40	4.84	45.55	-25.0	-38.6	-42.3	3.18	0.48	-64.51	-87.5	-108.5	-128.7	10.0	-87.49
6.00	132.90	2693.5	2661.5	2636.1	6.52	5.83	4.93	45.70	-24.7	-36.2	-44.9	2.95	0.24	-66.54	-88.0	-108.9	-129.2	20.8	-94.58
7.00	129.47	2824.7	2793.4	2768.9	6.60	5.89	5.17	45.77	-23.9	-36.6	-39.3	3.09	0.16	-63.87	-87.7	-109.0	-129.4	35.5	-99.44
8.00	126.13	2952.6	2922.6	2898.9	6.67	6.23	5.54	46.04	-22.4	-38.9	-40.0	3.64	0.22	-63.06	-87.8	-109.3	-129.7	60.7	-105.00
9.00	122.90	3077.6	3047.8	3025.5	6.93	6.52	6.10	46.50	-19.9	-41.4	-40.4	4.70	0.32	-61.04	-87.5	-109.6	-130.3	86.7	-107.74
10.00	114.85	3196.8	3168.0	3146.7	7.22	6.79	6.39	46.93	-19.2	-47.8	-42.4	6.46	0.45	-60.43	-85.8	-109.4	-130.5	100.0	-109.05
11.00	104.10	3307.1	3280.6	3260.9	7.37	6.90	6.57	47.25	-20.1	-46.8	-43.3	8.40	0.86	-58.60	-86.9	-109.7	-131.3	148.1	-112.88
12.00	91.57	3406.8	3382.8	3364.6	7.27	6.88	6.60	47.20	-21.8	-32.1	-42.3	9.99	1.54	-59.97	-86.5	-109.9	-131.7	177.0	-113.88
13.00	79.70	3496.0	3473.1	3456.8	7.25	6.88	6.48	46.90	-25.3	-35.6	-40.7	9.06	1.90	-59.90	-87.8	-111.3	-133.3	211.6	-115.99
14.00	69.71	3573.7	3551.4	3537.3	7.08	6.73	6.39	46.58	-30.1	-38.0	-42.1	7.39	1.53	-59.49	-88.0	-112.6	-134.4	302.4	-118.97
15.50	57.83	3668.7	3650.6	3638.4	7.01	6.54	6.14	46.35	-36.7	-38.1	-44.8	3.27	1.81	-59.85	-89.3	-113.9	-134.7	355.1	-120.24
17.00	47.01	3752.9	3731.6	3716.7	6.48	6.07	5.79	46.14	-31.1	-36.5	-51.2	1.88	3.91	-62.66	-88.9	-113.1	-134.4	498.5	-123.17
17.50	40.29	3777.1	3755.1	3738.5	6.34	5.97	5.64	46.07	-30.8	-35.9	-53.3	1.77	0.93	-64.56	-89.7	-114.4	-135.4	595.9	-124.64
19.00	32.78	3836.4	3809.8	3792.1	5.96	5.71	5.47	45.81	-28.7	-36.3	-63.1	1.64	3.80	-61.26	-88.7	-113.5	-134.8	982.3	-129.13
20.00	26.49	3867.4	3840.1	3820.8	5.72	5.59	5.33	45.66	-29.1	-34.7	-62.9	1.49	0.95	-60.48	-89.0	-113.9	-135.5	1000.0	-129.28

*at 25°C unless mentioned otherwise

