

Coaxial

Voltage Controlled Oscillator

ZX95-2420+

Wide Band 1220 to 2420 MHz

Features

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

Applications

- lab
- instrumentation
- wireless communications
- test equipment



CASE STYLE: GB956

Connectors	Model
SMA	ZX95-2420-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 Typ.				TUNING				NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER		
								VOLTAGE RANGE (V)	SENSI- TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)						Vcc (volts)	Current (mA)	
	Min.	Max.	Typ.	1	10	100	1000	Min.	Max.	Typ.	Typ.	Typ.	Typ.	Typ.	Max.	Typ.	Typ.	Max.	
ZX95-2420+	1220	2420	+5	-70	-95	-117	-138	0.5	20	50-82	73	90	-90	-20	-10	1.5	1.5	5	47

Maximum Ratings

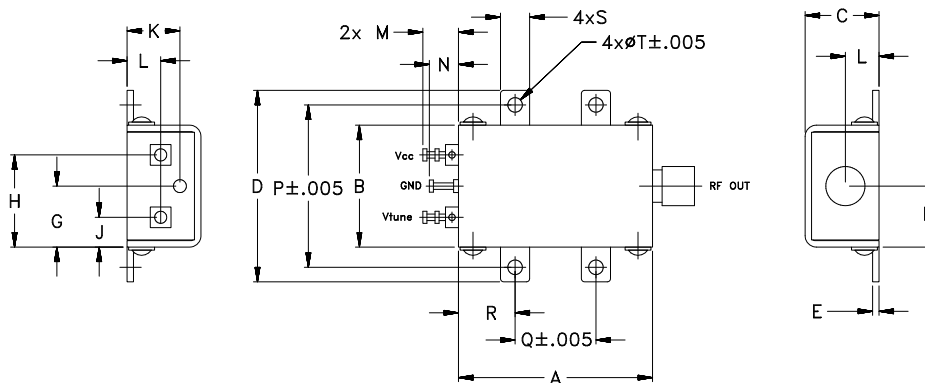
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	6V
Absolute Max. Tuning Voltage (Vtune)	22V
All specifications	50 ohm system

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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 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.
 C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp



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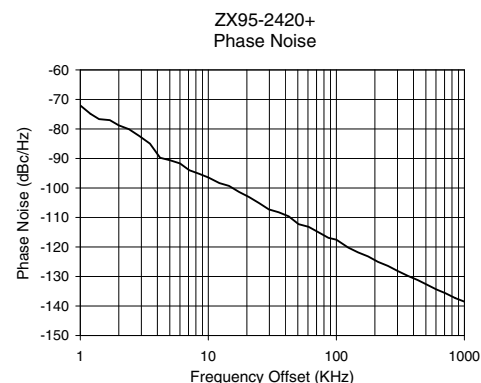
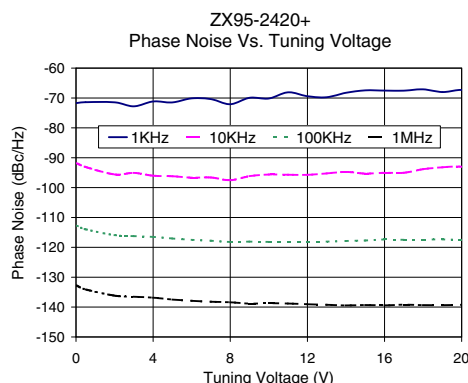
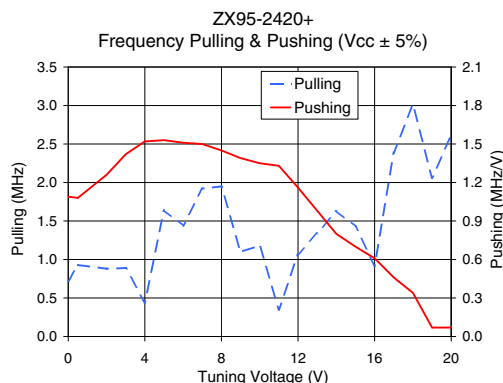
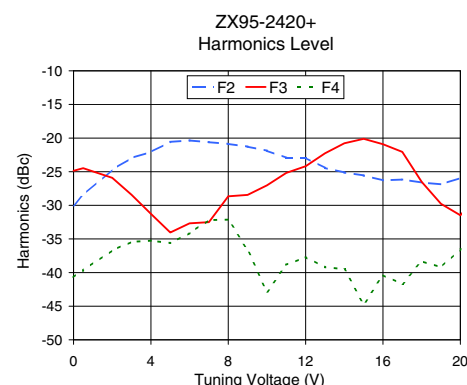
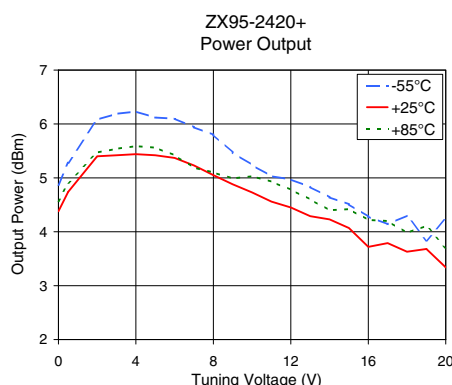
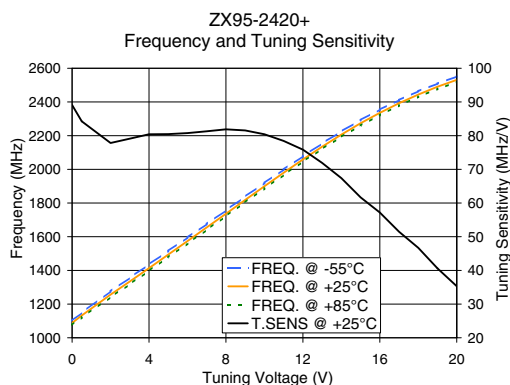
REV. A
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ZX95-2420+
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Performance Data & Curves*

ZX95-2420+

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 1820 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	89.09	1101.8	1087.9	1076.8	4.87	4.38	4.57	38.32	-30.0	-24.9	-40.7	1.09	0.72	-71.7	-91.7	-112.7	-132.7	1.0	-72.04
0.50	84.24	1148.1	1132.5	1120.2	5.28	4.74	4.91	38.40	-28.5	-24.5	-39.7	1.08	0.93	-71.4	-93.1	-114.0	-134.1	2.0	-78.79
2.00	77.82	1276.3	1256.4	1241.3	6.08	5.40	5.47	38.60	-24.7	-25.9	-36.7	1.26	0.88	-71.5	-95.6	-115.9	-136.2	3.5	-84.99
3.00	79.10	1355.8	1334.2	1318.3	6.19	5.42	5.54	38.68	-23.0	-28.4	-35.4	1.42	0.89	-72.8	-95.1	-116.2	-136.5	6.0	-91.68
4.00	80.42	1435.6	1413.3	1397.5	6.23	5.44	5.59	38.74	-22.1	-31.3	-35.3	1.52	0.44	-71.2	-96.0	-116.5	-136.8	8.5	-95.23
5.00	80.45	1515.5	1493.7	1478.3	6.12	5.42	5.56	38.80	-20.6	-34.0	-35.6	1.53	1.64	-71.5	-96.2	-117.0	-137.5	10.0	-96.43
6.00	80.75	1595.4	1574.2	1559.3	6.10	5.37	5.42	38.84	-20.4	-32.7	-34.1	1.51	1.44	-70.1	-96.7	-117.5	-137.9	20.8	-103.08
7.00	81.29	1675.7	1654.9	1640.6	5.94	5.23	5.19	38.88	-20.6	-32.5	-32.2	1.50	1.92	-70.4	-96.6	-117.8	-138.2	35.5	-108.24
8.00	81.88	1756.9	1736.2	1722.4	5.80	5.05	5.10	38.91	-20.9	-28.7	-32.1	1.45	1.95	-72.1	-97.5	-118.2	-138.4	60.7	-113.16
9.00	81.54	1838.4	1818.1	1804.5	5.47	4.88	4.99	38.95	-21.3	-28.5	-36.6	1.39	1.10	-69.9	-96.2	-118.1	-138.8	86.7	-116.89
10.00	80.40	1919.4	1899.7	1886.3	5.24	4.73	5.03	38.99	-21.9	-27.0	-42.9	1.35	1.18	-70.2	-95.6	-118.2	-138.7	100.0	-117.53
11.00	78.43	1999.5	1980.1	1967.0	5.03	4.56	4.93	39.05	-22.9	-25.2	-38.9	1.33	0.35	-68.1	-95.7	-118.2	-138.8	148.1	-121.84
12.00	75.83	2078.0	2058.5	2045.7	4.97	4.45	4.78	39.11	-22.9	-24.2	-37.7	1.16	1.07	-69.4	-95.7	-118.1	-139.1	177.0	-123.19
13.00	71.91	2153.5	2134.3	2121.3	4.83	4.29	4.60	39.18	-24.4	-22.3	-39.2	0.98	1.34	-69.7	-95.3	-118.1	-139.2	211.6	-125.04
14.00	67.40	2225.2	2206.2	2193.0	4.64	4.23	4.40	39.26	-25.1	-20.8	-39.5	0.80	1.63	-68.3	-94.8	-117.9	-139.4	302.4	-128.16
15.00	61.67	2292.4	2273.6	2260.0	4.51	4.07	4.42	39.34	-25.6	-20.1	-44.7	0.70	1.43	-67.4	-95.3	-117.7	-139.3	361.5	-129.78
16.00	57.19	2354.5	2335.3	2322.0	4.28	3.72	4.22	39.40	-26.3	-20.9	-40.4	0.61	0.92	-67.5	-95.0	-117.4	-139.4	507.5	-132.72
17.00	51.47	2411.2	2392.5	2378.9	4.14	3.79	4.20	39.51	-26.2	-22.1	-41.7	0.46	2.39	-67.6	-95.0	-117.5	-139.2	606.7	-134.42
18.00	46.69	2463.8	2444.0	2430.5	4.30	3.63	3.98	39.56	-26.6	-26.5	-38.3	0.34	3.01	-67.1	-93.8	-117.4	-139.3	851.6	-137.34
20.00	35.32	2551.3	2531.2	2517.2	4.24	3.34	3.70	39.66	-25.9	-31.5	-36.5	0.07	2.61	-67.3	-93.0	-117.5	-139.2	1000.0	-138.52

*at 25°C unless mentioned otherwise



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