

Coaxial

Voltage Controlled Oscillator

ZX95-2650+

Linear Tuning 2165 to 2650 MHz

Features

- wide frequency range, 2165 to 2650 MHz
- low phase noise, -101dBc/Hz at 10 kHz offset
- linear tuning, 37-46 MHz/V typ.
- protected by US patent 6,790,049

Applications

- r & d
- lab
- instrumentation
- test equipment



CASE STYLE: GB956

Connectors	Model
SMA	ZX95-2650-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 Vcc Current (volts) (mA)	
								VOLTAGE RANGE (V)	SENSI- TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)								
	Min.	Max.	Typ.	1	10	100	1000	Min.	Max.	Typ.	Typ.	Typ.	Typ.	Typ.	Max.	Typ.	Typ.	Max.	
ZX95-2650+	2165	2650	+5	-75	-101	-122	-142	0.5	19	37-46	75	28	-90	-25	-15	7	1.4	12	27

Maximum Ratings

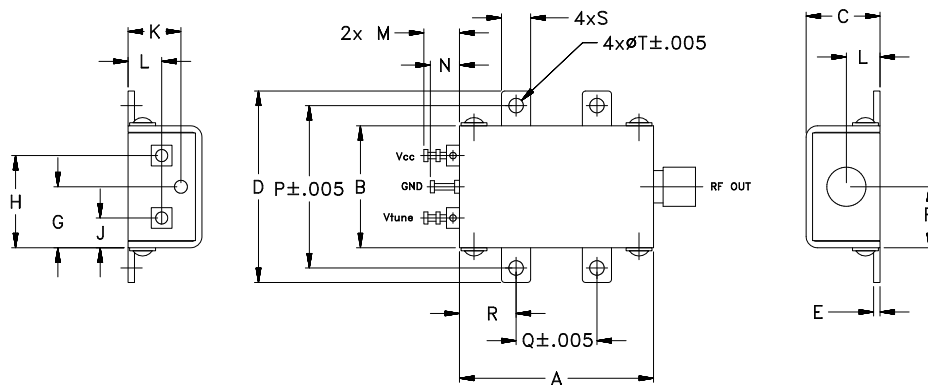
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	13V
Absolute Max. Tuning Voltage (Vtune)	20V
All specifications	50 ohm system

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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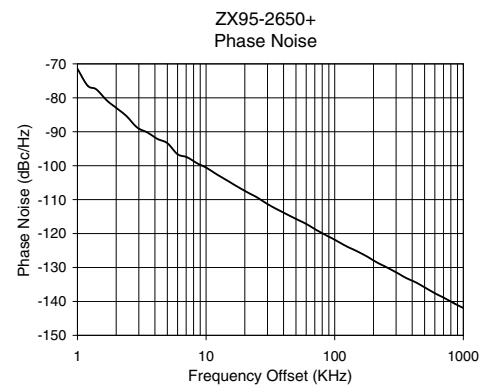
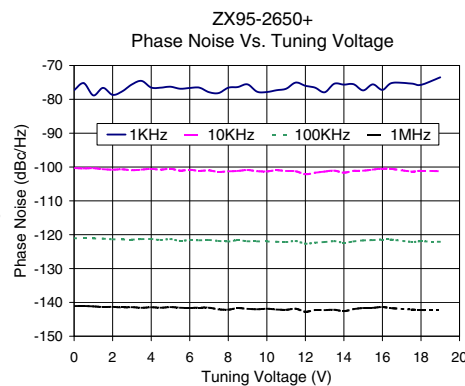
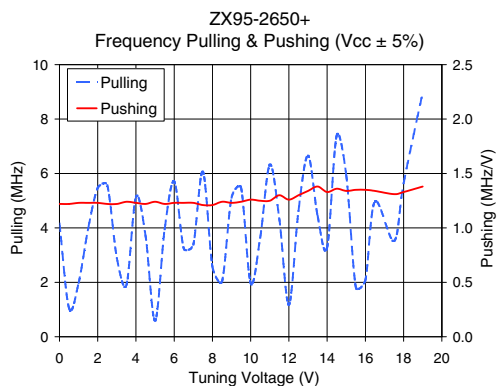
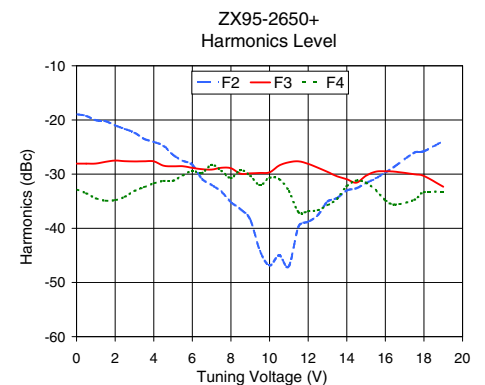
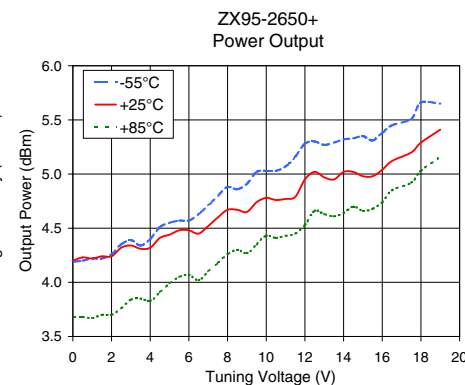
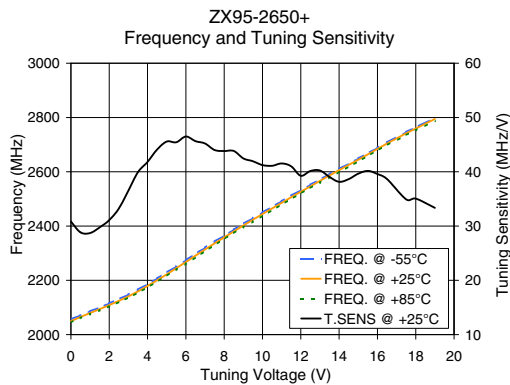
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Performance Data & Curves*

ZX95-2650+

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 2408 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	30.84	2056.3	2049.7	2045.3	4.19	4.20	3.68	21.64	-18.9	-28.1	-32.9	1.22	4.16	-77.3	-100.3	-121.0	-141.1	1.0	-71.46
0.50	28.84	2071.5	2065.1	2061.0	4.20	4.23	3.68	21.64	-19.3	-28.1	-33.5	1.22	1.05	-75.2	-100.4	-121.1	-141.1	2.0	-82.95
1.00	28.71	2085.9	2079.5	2075.4	4.22	4.22	3.67	21.65	-20.1	-28.1	-34.5	1.23	1.98	-78.8	-100.4	-121.1	-141.2	3.5	-90.24
3.00	36.52	2147.4	2140.9	2136.3	4.39	4.34	3.84	21.67	-22.3	-27.7	-33.1	1.22	2.89	-75.6	-101.0	-121.5	-141.4	6.0	-96.62
3.50	39.93	2165.9	2159.2	2154.2	4.34	4.31	3.85	21.67	-23.5	-27.6	-32.4	1.24	1.90	-74.6	-100.8	-121.3	-141.6	8.5	-99.28
4.00	41.81	2185.9	2179.2	2174.0	4.40	4.32	3.83	21.68	-24.1	-27.6	-31.7	1.23	5.13	-76.5	-100.6	-121.3	-141.4	10.0	-100.56
5.00	45.57	2229.0	2222.1	2216.5	4.55	4.44	3.99	21.70	-26.4	-28.6	-31.2	1.24	0.59	-76.3	-100.5	-121.3	-141.4	20.8	-107.78
6.00	46.50	2274.5	2267.6	2261.7	4.57	4.48	4.07	21.72	-28.3	-28.8	-29.4	1.23	5.70	-76.6	-100.8	-121.6	-141.7	35.5	-112.82
8.00	43.81	2364.8	2358.3	2352.1	4.88	4.67	4.26	21.76	-35.2	-28.9	-30.7	1.21	2.57	-76.6	-101.3	-122.0	-142.2	60.7	-117.27
9.00	42.46	2408.5	2402.1	2395.7	4.91	4.65	4.27	21.78	-38.4	-29.9	-30.3	1.23	5.11	-75.6	-100.9	-121.9	-141.9	86.7	-120.60
9.50	41.95	2429.4	2423.3	2417.0	5.02	4.74	4.35	21.80	-44.2	-29.8	-32.0	1.24	5.47	-77.7	-101.2	-122.0	-142.1	100.0	-121.82
10.00	41.24	2450.2	2444.3	2437.7	5.03	4.78	4.43	21.81	-46.9	-29.7	-30.7	1.26	1.97	-77.9	-101.3	-122.0	-141.9	148.1	-125.17
11.00	41.53	2491.6	2485.5	2479.1	5.07	4.77	4.43	21.82	-47.0	-27.8	-33.1	1.25	6.32	-76.9	-101.2	-122.2	-142.2	177.0	-126.68
12.00	39.27	2532.3	2526.8	2520.2	5.28	4.95	4.53	21.86	-38.8	-28.1	-36.8	1.26	1.18	-76.0	-102.1	-122.7	-142.8	211.6	-128.45
14.00	38.15	2610.9	2606.1	2599.5	5.32	5.02	4.64	21.88	-33.0	-30.9	-32.2	1.33	3.28	-75.6	-101.7	-122.4	-142.6	302.4	-131.49
14.50	38.65	2629.9	2625.2	2618.7	5.33	5.02	4.70	21.87	-32.6	-31.6	-31.2	1.36	7.39	-75.5	-101.2	-122.0	-142.0	361.5	-133.15
15.00	39.66	2648.9	2644.5	2638.4	5.35	4.98	4.66	21.86	-31.6	-30.3	-31.6	1.34	5.93	-77.4	-101.1	-121.7	-141.7	507.5	-136.01
16.00	39.58	2688.3	2684.4	2678.6	5.38	5.04	4.74	21.84	-29.7	-29.5	-34.8	1.35	2.08	-77.2	-100.5	-121.4	-141.4	606.7	-137.68
18.00	35.06	2763.8	2759.4	2752.8	5.66	5.29	5.03	21.98	-25.8	-30.4	-33.3	1.33	5.64	-75.7	-101.1	-122.0	-142.3	851.6	-140.62
19.00	33.36	2798.8	2794.5	2787.0	5.65	5.41	5.16	22.02	-23.9	-32.3	-33.3	1.38	8.98	-73.5	-101.3	-122.1	-142.3	1000.0	-141.94

*at 25°C unless mentioned otherwise



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