

Voltage Controlled Oscillator

ZX95-868+

50Ω 805 to 868 MHz

The Big Deal:

- Low Phase Noise
- Linear Tuning
- Robust design and construction
- Rigid unibody construction



CASE STYLE: GB956

Product Overview:

The ZX95-868+ is a Voltage Controlled Oscillator, designed to operate from 805 to 868 MHz for TV Broadcasting applications. The ZX95-868+ 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
Low Phase Noise: -116dBc/Hz typ at 10kHz offset	Low phase noise improves system EVM (Error Vector Magnitude).
Linear Tuning Sensitivity Ratio: 1.2:1 typ.	Optimal for loop filter design.
Excellent Pulling, 0.03MHz typ.	Improves immunity changes in output load.
Robust design and construction	Each internal component of the ZX95-868+ is bonded to the substrate, providing better immunity to microphonics and reduced phase hit.

Coaxial

Voltage Controlled Oscillator

ZX95-868+

Linear Tuning 805 to 868 MHz

Features

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

Applications

- r & d
- lab
- instrumentation
- wireless communications
- CDMA
- wireless radio, microphone & TV broadcasting



CASE STYLE: GB956

Connectors	Model	Price	Qty.
SMA	ZX95-868-S+	\$ 40.95 ea.	(1-9)

+RoHS Compliant

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

Electrical Specifications

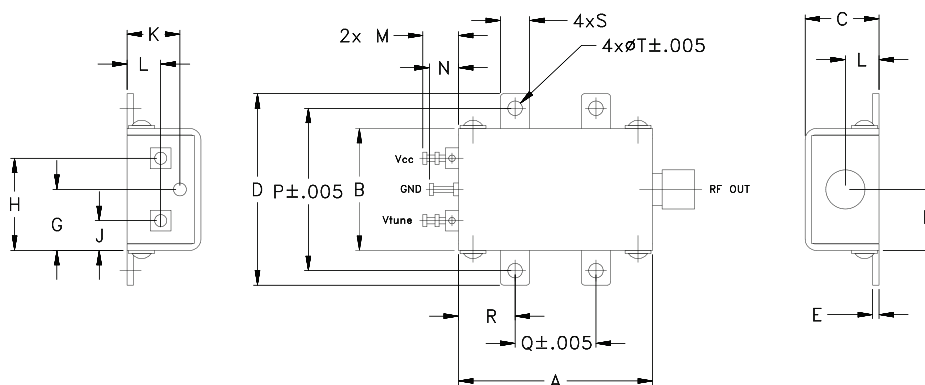
MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	PHASE NOISE dBc/Hz SSB at offset frequencies,kHz				TUNING					NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @ 12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER				
								VOLTAGE RANGE (V)	SENSI- TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)	Vcc (volts)						Current (mA)				
	Typ.			1		10	100	1000	Min.	Max.	Typ.	Typ.		Typ.	Typ.			Typ.	Max.	Typ.	Typ.	Max.
	Min.	Max.		Typ.	1	10	100	1000	Min.	Max.	Typ.	Typ.		Typ.	Typ.			Typ.	Max.	Typ.	Typ.	Max.
ZX95-868+	805	868	+0.5	-90	-116	-137	-158	0.25	14	7	47	87	-90	-18	-	0.03	0.5	5	30			

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)	16V
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	.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



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Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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.

For detailed performance specs & shopping online see web site

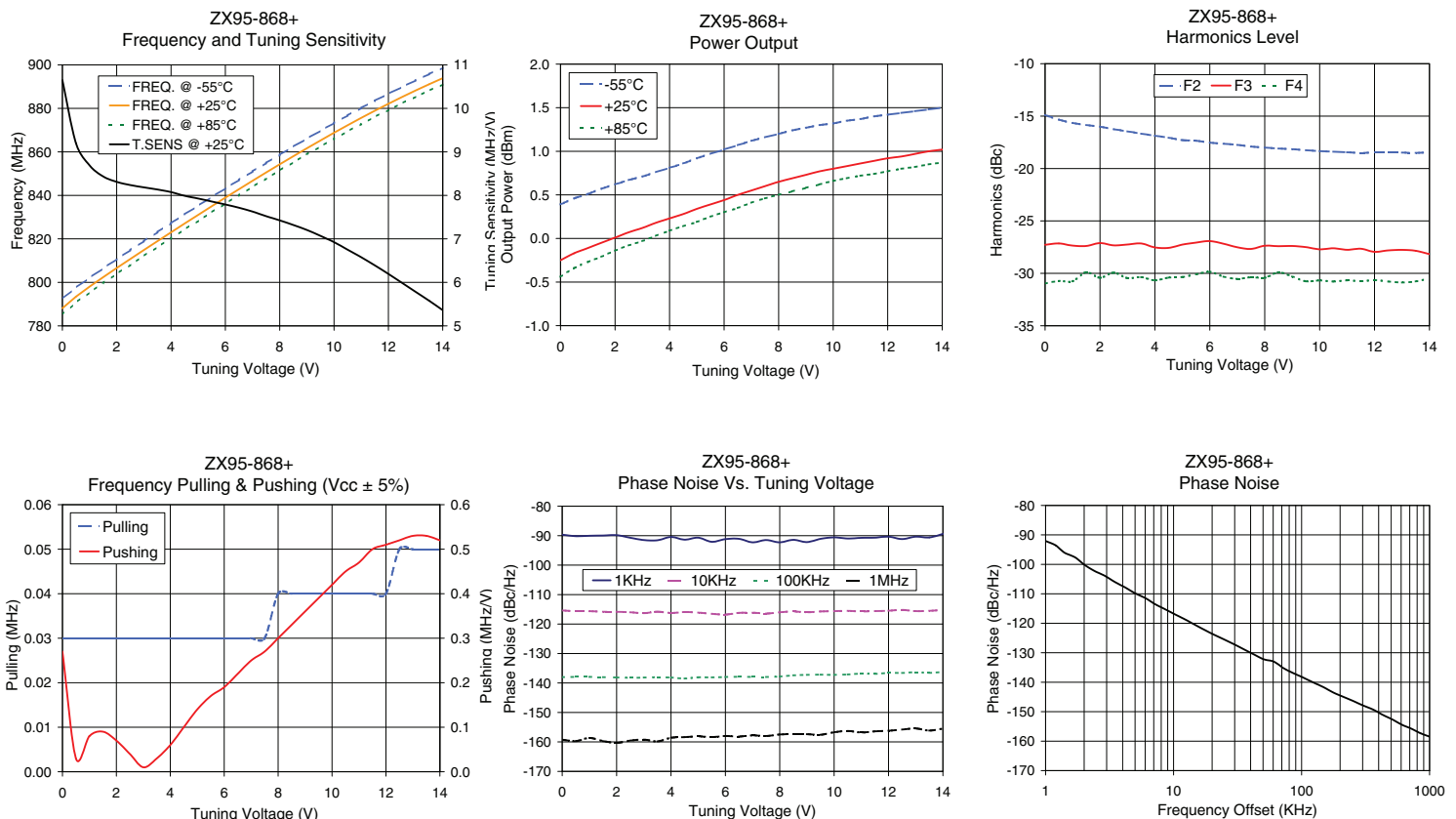
REV. OR
M127650
EDR-9991F2
ZX95-868+
RAV
120902
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Performance Data & Curves*

ZX95-868+

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 837 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	10.65	792.4	788.1	785.2	0.39	-0.25	-0.44	21.69	-14.9	-27.3	-31.0	0.27	0.03	-89.7	-115.4	-138.0	-159.2	1.0	-92.05
0.25	9.93	795.0	790.8	788.0	0.43	-0.21	-0.39	21.69	-15.1	-27.2	-30.9	0.12	0.03	-89.9	-115.5	-138.0	-159.5	2.0	-100.09
1.00	8.69	802.1	798.0	795.4	0.51	-0.11	-0.27	21.71	-15.7	-27.4	-30.8	0.08	0.03	-90.0	-115.6	-137.9	-158.7	3.5	-106.06
1.50	8.44	806.5	802.4	799.7	0.57	-0.05	-0.21	21.71	-15.9	-27.4	-29.9	0.09	0.03	-90.0	-115.8	-138.0	-159.7	6.0	-111.42
2.00	8.31	810.7	806.6	803.9	0.62	0.01	-0.14	21.71	-16.0	-27.1	-30.4	0.07	0.03	-89.8	-115.8	-138.1	-160.3	8.5	-115.14
3.00	8.18	819.0	814.9	812.2	0.71	0.12	-0.03	21.70	-16.5	-27.3	-30.5	0.01	0.03	-91.5	-116.3	-138.2	-159.2	10.0	-116.71
4.00	8.07	827.2	823.0	820.3	0.81	0.23	0.09	21.69	-16.9	-27.5	-30.7	0.06	0.03	-90.5	-116.2	-138.1	-158.6	20.8	-123.91
5.00	7.93	835.3	831.1	828.3	0.92	0.34	0.19	21.69	-17.3	-27.3	-30.4	0.14	0.03	-90.7	-116.1	-138.1	-158.1	35.5	-128.86
6.00	7.79	843.2	838.9	836.2	1.02	0.44	0.30	21.69	-17.5	-26.9	-29.9	0.19	0.03	-91.2	-116.8	-138.0	-158.0	60.7	-133.01
7.00	7.63	851.0	846.7	843.9	1.12	0.55	0.41	21.68	-17.7	-27.5	-30.5	0.25	0.03	-92.3	-116.2	-137.9	-157.8	86.7	-136.99
8.00	7.43	858.7	854.3	851.5	1.20	0.65	0.50	21.68	-18.0	-27.4	-30.4	0.30	0.04	-92.3	-116.0	-137.8	-157.5	100.0	-138.17
9.00	7.21	866.1	861.6	858.9	1.27	0.73	0.58	21.68	-18.2	-27.4	-30.3	0.36	0.04	-92.2	-116.0	-137.2	-157.4	148.1	-141.66
9.50	7.07	869.7	865.2	862.4	1.30	0.77	0.62	21.67	-18.3	-27.5	-30.8	0.39	0.04	-91.1	-115.7	-137.2	-157.6	177.0	-143.49
10.00	6.92	873.3	868.8	866.0	1.32	0.80	0.66	21.67	-18.3	-27.7	-30.7	0.42	0.04	-90.6	-115.6	-137.3	-156.7	211.6	-144.94
10.50	6.75	876.8	872.2	869.4	1.35	0.83	0.69	21.66	-18.4	-27.6	-30.8	0.45	0.04	-91.0	-115.5	-137.1	-156.3	302.4	-147.91
11.00	6.58	880.2	875.6	872.8	1.37	0.86	0.72	21.66	-18.5	-27.8	-30.7	0.47	0.04	-90.8	-115.7	-136.8	-156.8	361.5	-149.27
12.00	6.19	886.7	882.1	879.2	1.42	0.92	0.77	21.65	-18.5	-28.0	-30.7	0.51	0.04	-90.4	-115.5	-136.6	-156.2	507.5	-152.55
13.00	5.78	892.8	888.2	885.3	1.46	0.97	0.82	21.65	-18.5	-27.8	-30.9	0.53	0.05	-90.3	-115.6	-136.3	-155.4	606.7	-154.41
13.50	5.58	895.8	891.1	888.2	1.48	1.00	0.85	21.65	-18.5	-27.9	-30.8	0.53	0.05	-90.6	-115.5	-136.6	-156.2	851.6	-157.34
14.00	5.36	898.6	893.9	890.9	1.50	1.02	0.87	21.64	-18.5	-28.2	-30.5	0.52	0.05	-89.4	-115.2	-136.2	-155.5	1000.0	-158.49

*at 25°C unless mentioned otherwise



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