

Coaxial

# Voltage Controlled Oscillator

## ZX95-1850+

5V Tuning for PLL IC's 1847 to 1850 MHz

### Features

- Linear tuning characteristics
- Low phase noise
- Low pulling
- Low pushing
- Protected by US patent 6,790,049

### Applications

- R&D
- LAB
- Instrumentation
- Wireless communications
- Personal and home communications



CASE STYLE: GB956

Connectors	Model	Price	Qty.
SMA	ZX95-1850-S+	\$44.95 ea.	(1-9)

**+ RoHS compliant in accordance with EU Directive (2002/95/EC)**

*The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.*

### Electrical Specifications

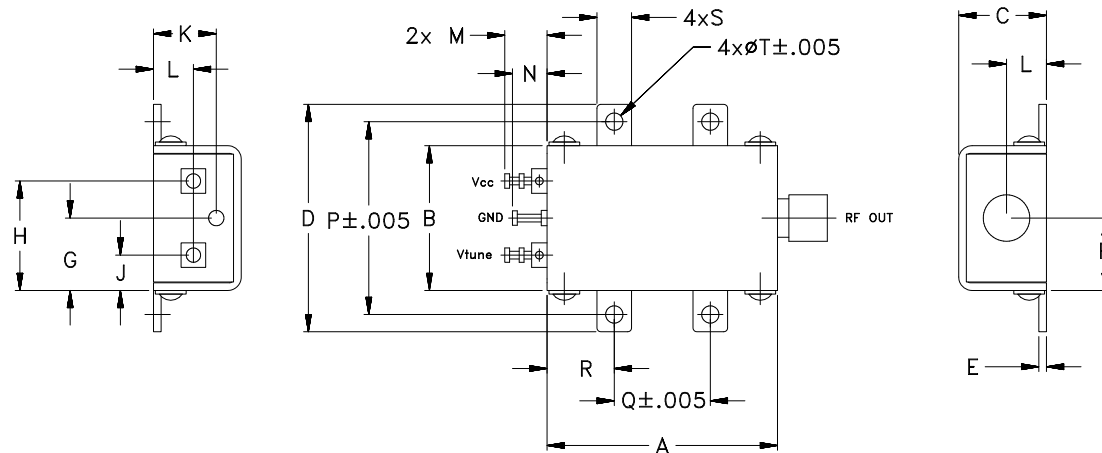
MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	PHASE NOISE dBc/Hz SSB at offset frequencies, kHz				TUNING				NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @ 12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER		
	Min.	Max.		Typ.	1	10	100	1000	VOLTAGE RANGE (V)	SENSI-TIVITY (MHz/V)	PORT CAP (pF)		3 dB MODULATION BANDWIDTH (MHz)	Typ.			Max.	Vcc (volts)	Current (mA)
ZX95-1850+	1847	1850	+5	-85	-109	-130	-150	0.5	2.5	18	16	130	-90	-18	-12	0.1	0.4	8	35

### Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	9.5V
Absolute Max. Tuning Voltage (Vtune)	5.0V
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	.45	.57	.18	.33	.21	.22	.18	1.00	.50	.35	.18	.106	GRAM
30.48	19.05	11.68	29.97	1.02	9.65	11.43	14.48	4.57	8.38	5.33	5.59	4.57	25.40	12.70	8.89	4.57	2.69	35.0



For detailed performance specs & shopping online see web site

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at [minicircuits.com](http://minicircuits.com)

**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](http://www.minicircuits.com/MCLStore/terms.jsp).

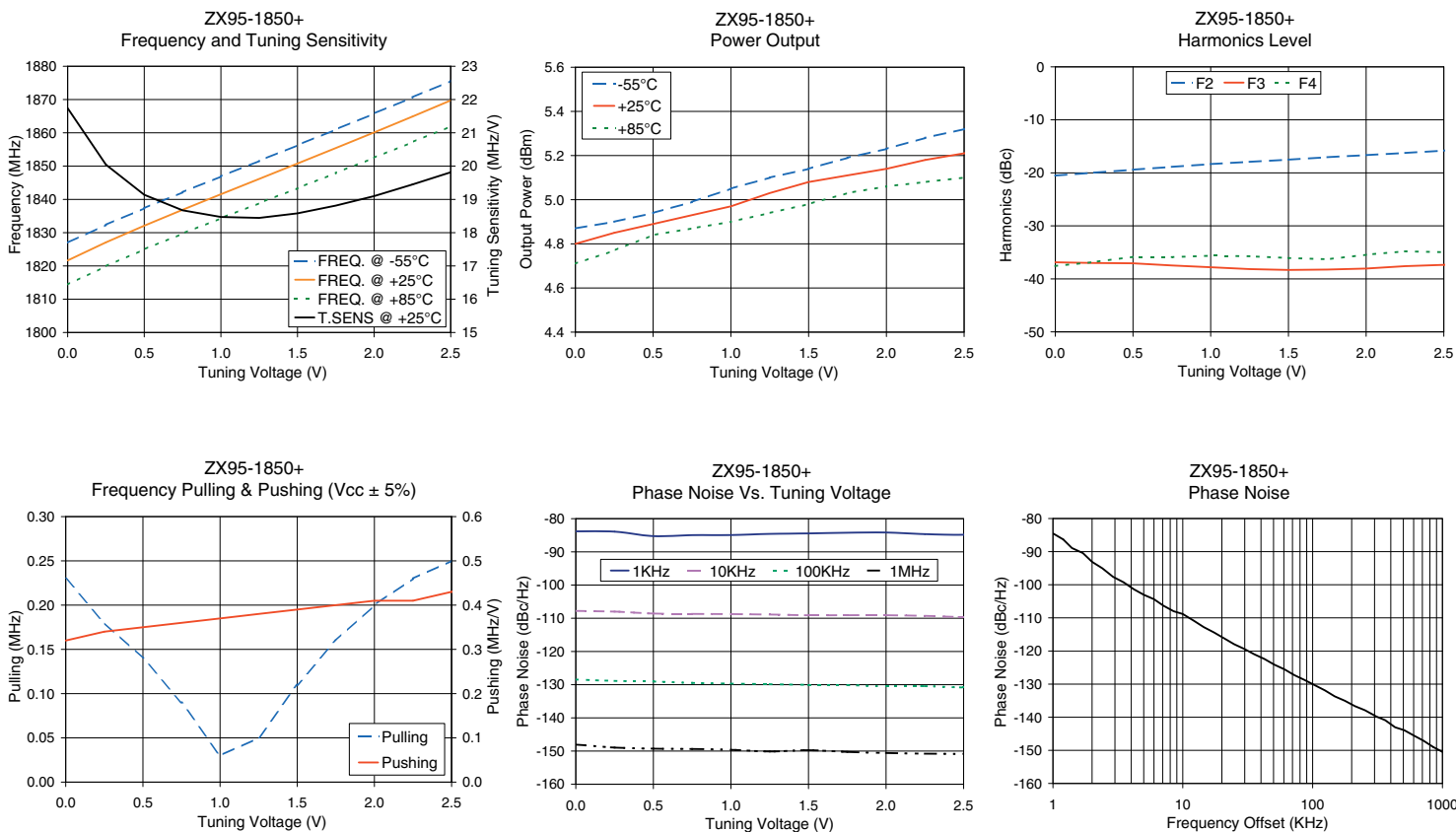
REV. OR  
M114893  
EDR-8213/1F2  
ZX95-1850+  
RAV  
090830  
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# Performance Data & Curves\*

# ZX95-1850+

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 1849MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	21.74	1827.0	1821.6	1814.4	4.87	4.80	4.71	29.60	-20.5	-36.9	-37.6	0.32	0.23	-83.8	-107.8	-128.5	-148.0	1.0	-84.49
0.25	20.04	1832.3	1827.1	1819.9	4.90	4.85	4.77	29.65	-20.0	-37.0	-36.8	0.34	0.18	-83.9	-108.0	-128.9	-149.0	3.5	-99.26
0.50	19.14	1837.3	1832.1	1825.0	4.94	4.89	4.84	29.70	-19.4	-37.1	-35.8	0.35	0.14	-85.3	-108.6	-129.1	-149.3	8.5	-108.00
0.75	18.67	1842.2	1836.9	1829.7	4.99	4.93	4.87	29.74	-18.9	-37.5	-35.9	0.36	0.09	-85.0	-108.7	-129.5	-149.4	10.0	-108.83
1.00	18.47	1846.9	1841.5	1834.3	5.05	4.97	4.90	29.79	-18.3	-37.8	-35.6	0.37	0.03	-84.9	-108.7	-129.7	-149.6	35.5	-120.99
1.25	18.44	1851.6	1846.2	1838.8	5.10	5.03	4.94	29.83	-17.9	-38.2	-35.7	0.38	0.05	-84.6	-108.9	-129.9	-150.1	86.7	-128.76
1.50	18.58	1856.3	1850.8	1843.4	5.14	5.08	4.98	29.88	-17.5	-38.3	-36.1	0.39	0.11	-84.4	-109.1	-130.1	-149.8	100.0	-130.02
1.75	18.81	1861.0	1855.4	1847.9	5.19	5.11	5.03	29.93	-17.1	-38.2	-36.3	0.40	0.16	-84.2	-109.1	-130.1	-150.3	211.6	-136.66
2.00	19.10	1865.8	1860.1	1852.5	5.23	5.14	5.06	29.97	-16.7	-38.1	-35.4	0.41	0.20	-84.2	-109.1	-130.5	-150.6	310.0	-139.79
2.25	19.45	1870.6	1864.9	1857.2	5.28	5.18	5.08	30.01	-16.3	-37.6	-34.8	0.41	0.23	-84.7	-109.3	-130.5	-150.8	606.7	-145.61
2.50	19.82	1875.6	1869.8	1862.0	5.32	5.21	5.10	30.05	-15.8	-37.4	-35.0	0.43	0.25	-84.8	-109.6	-130.9	-150.9	1000.0	-150.47

\*at 25°C unless mentioned otherwise



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