

Surface Mount

Voltage Controlled Oscillator

JTOS-1910+

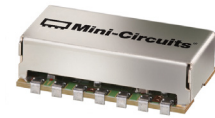
Linear Tuning 1625 to 1910 MHz

Features

- wide frequency range, 1625 to 1910 MHz
- linear tuning characteristics
- low phase noise, -137 dBc/Hz at 1 MHz offset, typ.
- aqueous washable

Applications

- PCS/DCS
- communications
- frequency synthesizers



CASE STYLE: BK377

+RoHS Compliant

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

Electrical Specifications

FREQUENCY (MHz)		POWER OUTPUT (dBm)	TUNING VOLTAGE (V)		PHASE NOISE (dBc/Hz) SSB at offset frequencies: Typ.				PULLING pk-pk @ 12 dB (MHz)	PUSHING (MHz/V)	TUNING SENSITIVITY (MHz/V)	HARMONICS (dBc)		3 dB MODULATION BANDWIDTH (MHz)	POWER SUPPLY	
Min.	Max.	Typ.	Min.	Max.	1 kHz	10 kHz	100 kHz	1 MHz	Typ.	Typ.	Typ.	Typ.	Max.	Typ.	Voltage (V)	Current (mA) Max.
1625	1910	+7.0	1	12	-69	-97	-117	-137	10	1.0	30-60	-20	-15	50	12	20

Pin Connections

RF OUT	13
VCC	2
V-TUNE	5
GROUND	1,3,4,6,7,8,9,10,11,12,14

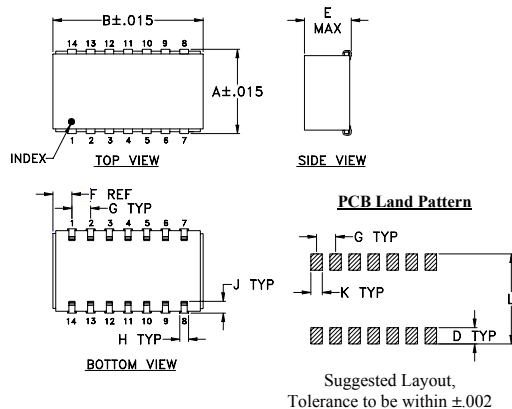
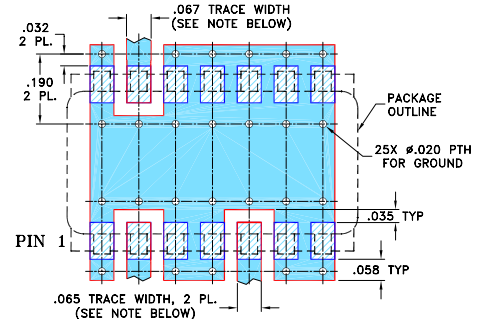
Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+15V
Absolute Max. Tuning Voltage (Vtune)	+15V

all specifications: 50 ohm system

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

Outline Drawing

Demo Board MCL P/N: TB-04
Suggested PCB Layout (PL-005)

- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS R04350B WITH DIELECTRIC THICKNESS .030" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

■ DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

■ DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Outline Dimensions (inch)

A	B	C	D	E	F	G	H	J	K	L	wt
.505	.800	--	.100	.250	.100	.100	.047	.065	.065	.525	grams
12.83	20.32	--	2.54	6.35	2.54	2.54	1.19	1.65	1.65	13.34	3.0

Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- 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

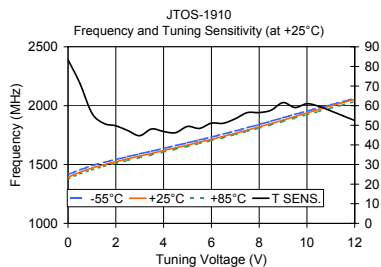


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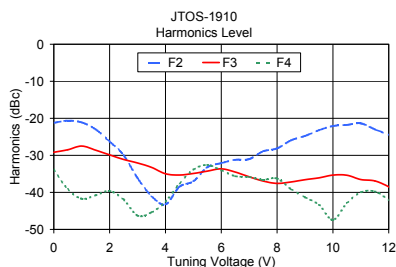
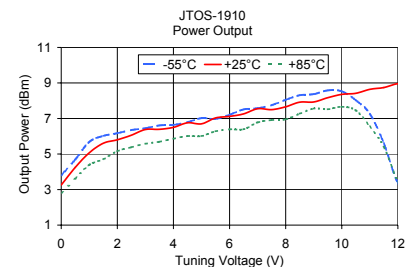
REV. G
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JTOS-1910+
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Page 1 of 2

Performance Data & Curves

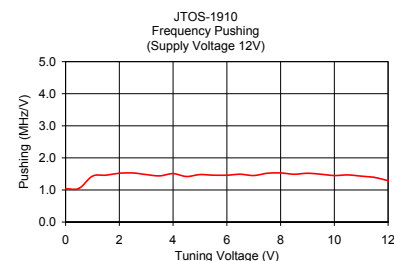
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V TUNE	TUNING SENS. (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)		
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C
0.00	83.40	1415.19	1392.90	1377.25	3.80	3.26	2.81
0.50	71.27	1454.28	1434.60	1420.51	4.69	4.25	3.61
1.00	56.21	1490.63	1470.24	1454.57	5.68	5.07	4.39
1.50	50.97	1517.64	1498.34	1483.74	6.02	5.61	4.71
2.00	49.77	1542.65	1523.83	1510.29	6.17	5.80	5.16
2.50	47.31	1566.75	1548.71	1535.05	6.35	6.06	5.38
3.00	44.70	1590.22	1572.36	1559.32	6.45	6.38	5.58
3.50	48.13	1613.55	1594.71	1582.83	6.61	6.39	5.69
4.00	46.84	1636.37	1618.77	1606.67	6.64	6.50	5.86
4.50	46.23	1660.59	1642.19	1630.22	6.79	6.76	6.01
5.00	49.40	1684.28	1665.31	1653.95	7.02	6.70	6.01
5.50	48.42	1708.12	1690.01	1678.70	6.98	7.03	6.28
6.00	51.08	1733.55	1714.22	1703.10	7.21	7.12	6.39
6.50	51.03	1758.71	1739.76	1728.41	7.51	7.26	6.39
7.00	53.33	1784.67	1765.27	1754.98	7.58	7.55	6.78
7.50	56.43	1812.32	1791.94	1781.31	7.75	7.50	6.91
8.00	56.49	1840.09	1820.15	1809.24	8.05	7.66	6.95
8.50	57.70	1868.23	1848.40	1837.75	8.31	7.92	7.27
9.00	61.58	1896.94	1877.25	1866.15	8.37	7.93	7.56
9.50	59.07	1926.11	1908.04	1894.72	8.58	8.17	7.52
10.00	60.98	1953.18	1937.58	1923.95	8.53	8.36	7.66
10.50	59.66	1980.79	1968.07	1950.63	8.03	8.42	7.46
11.00	57.33	2007.52	1997.90	1978.35	7.26	8.64	6.55
11.50	54.90	2033.65	2026.56	2006.34	5.61	8.74	5.41
12.00	52.47	2063.03	2054.02	2035.01	3.38	8.96	3.44



V TUNE	HARMONICS (dBc)			FREQ. PUSHING (MHz/V)
	F2	F3	F4	
0.00	-21.22	-29.17	-33.85	1.04
0.50	-20.64	-28.48	-39.10	1.05
1.00	-21.11	-27.49	-41.73	1.43
1.50	-22.98	-28.61	-40.78	1.46
2.00	-26.28	-29.86	-39.66	1.52
2.50	-29.97	-31.11	-41.94	1.53
3.00	-36.18	-32.06	-46.28	1.48
3.50	-41.02	-33.26	-45.40	1.44
4.00	-43.23	-34.98	-42.50	1.51
4.50	-38.51	-35.32	-37.58	1.42
5.00	-36.99	-34.90	-33.84	1.48
5.50	-33.21	-34.26	-32.58	1.46
6.00	-32.11	-33.65	-34.04	1.46
6.50	-31.21	-34.51	-35.62	1.49
7.00	-31.01	-35.79	-35.85	1.45
7.50	-28.91	-36.95	-36.62	1.52
8.00	-28.12	-37.58	-36.26	1.53
8.50	-25.95	-37.19	-39.13	1.49
9.00	-24.76	-36.57	-41.34	1.52
9.50	-23.21	-36.08	-43.34	1.49
10.00	-22.09	-35.33	-47.43	1.45
10.50	-21.78	-35.38	-42.90	1.47
11.00	-21.38	-36.53	-39.96	1.43
11.50	-22.96	-36.91	-39.76	1.39
12.00	-24.41	-38.48	-42.04	1.29



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