

Surface Mount Voltage Controlled Oscillator

JTOS-200+ JTOS-200

Linear Tuning 100 to 200 MHz

Features

- wide frequency range, 100 to 200 MHz
- linear tuning characteristics
- excellent harmonic suppression, -25 dBc typ.
- low phase noise, -145 dBc/Hz at 1 MHz offset
- aqueous washable

Applications

- VHF
- FM broadcasting



CASE STYLE: BK377
PRICE: \$13.95 ea. QTY (5-49)

+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 _r (MHz)	PUSHING (MHz/V)	TUNING SENSITIVITY (MHz/V)		HARMONICS (dBc)		3 dB MODULATION BANDWIDTH (MHz)	DC OPERATING POWER	
Min.	Max.	Typ.	Min.	Max.	1 kHz	10 kHz	100 kHz	1 MHz	Typ.	Typ.	Typ.	Typ.	Max.	Typ.		V _{cc} (volts)	Current (mA) Max.
100	200	+10.0	1	16	-84	-105	-124	-145	1.0	0.2	6-10	-25	-20	0.11		12	20

Pin Connections

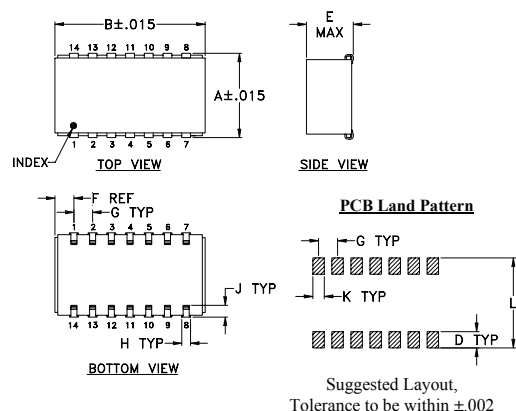
RF OUT	13
VCC	2
V-TUNE	5
GROUND	1,3,4,6,7,8,9,10,11,12,14

Maximum Ratings

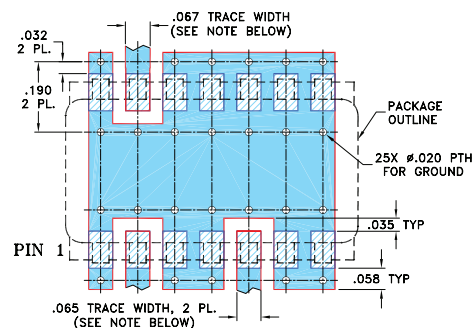
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+16V
Absolute Max. Tuning Voltage (Vtune)	+18V

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/mm)

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

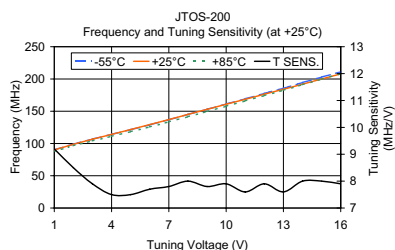
Notes

- 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

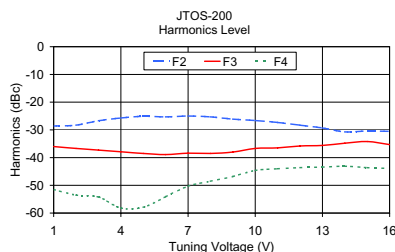
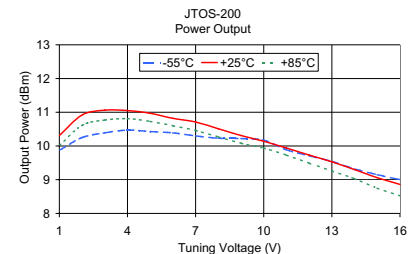


Performance Data & Curves

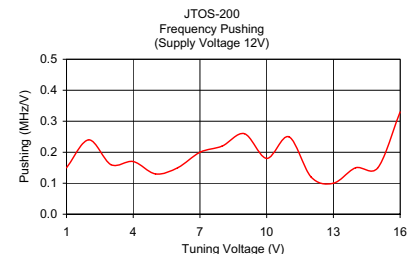
JTOS-200+ JTOS-200



V TUNE	TUNING SENS. (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)		
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C
1.00	9.20	90.26	90.12	87.80	9.87	10.31	10.02
2.00	8.50	99.05	98.66	96.63	10.25	10.92	10.61
3.00	7.90	106.85	106.58	104.12	10.39	11.06	10.77
4.00	7.50	114.18	114.08	111.21	10.47	11.05	10.81
5.00	7.50	121.53	121.62	118.38	10.43	10.97	10.73
6.00	7.70	129.06	129.30	125.81	10.39	10.82	10.60
7.00	7.80	136.93	137.10	133.58	10.30	10.71	10.46
8.00	8.00	145.12	145.10	141.55	10.23	10.51	10.27
9.00	7.80	153.05	152.95	149.75	10.22	10.31	10.08
10.00	7.90	161.31	160.83	157.85	10.17	10.14	9.94
11.00	7.60	169.31	168.47	166.06	9.89	9.94	9.73
12.00	7.90	177.63	176.36	174.38	9.71	9.73	9.49
13.00	7.60	185.60	183.96	182.60	9.54	9.53	9.26
14.00	8.00	194.50	191.96	191.25	9.32	9.30	9.03
15.00	8.00	202.95	200.00	199.71	9.15	9.06	8.75
16.00	7.90	211.21	207.87	208.18	9.00	8.86	8.52



V TUNE	HARMONICS (dBc)			FREQ. PUSHING (MHz/V)
	F2	F3	F4	
1.00	-28.60	-36.00	-51.50	0.15
2.00	-28.30	-36.70	-53.50	0.24
3.00	-26.70	-37.30	-54.20	0.16
4.00	-25.70	-37.90	-58.20	0.17
5.00	-25.10	-38.50	-57.90	0.13
6.00	-25.30	-38.90	-54.10	0.15
7.00	-25.00	-38.40	-50.30	0.20
8.00	-25.30	-38.50	-48.50	0.22
9.00	-26.10	-38.00	-46.80	0.26
10.00	-26.60	-36.70	-44.60	0.18
11.00	-27.30	-36.50	-44.00	0.25
12.00	-28.30	-35.80	-43.60	0.12
13.00	-29.30	-35.60	-43.40	0.10
14.00	-30.70	-34.80	-43.10	0.15
15.00	-30.40	-34.20	-43.60	0.15
16.00	-30.50	-35.30	-43.90	0.33



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