

Surface Mount Voltage Controlled Oscillator

JTOS-150+ JTOS-150

Linear Tuning 75 to 150 MHz

Features

- wide frequency range, 75 to 150 MHz
- linear tuning characteristics
- excellent harmonic suppression, -23 dBc typ.
- low phase noise, -147 dBc/Hz at 1 MHz offset
- aqueous washable

Applications

- VHF
- test instruments
- mobile communications



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

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

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)	DC OPERATING POWER	
Min.	Max.	Typ.	Min.	Max.	1 kHz	10 kHz	100 kHz	1 MHz	Typ.	Typ.	Typ.	Typ.	Max.	Typ.	Vcc (volts)	Current (mA) Max.
75	150	+9.5	1	16	-82	-106	-127	-147	0.8	0.3	5.8-6.7	-23	-17	0.112	12	20

Pin Connections

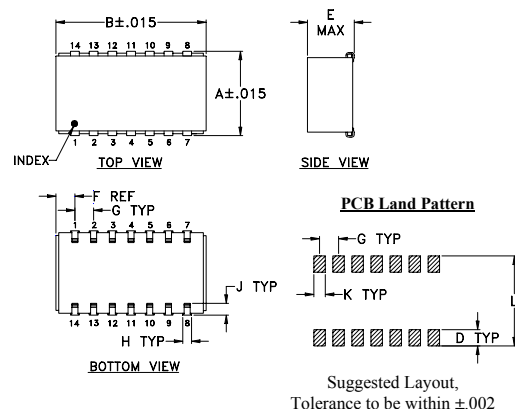
RF OUT	13
VCC	2
V-TUNE	5
GROUND	1,3,4,6,7,8,9,10,11,12,14

Maximum Ratings

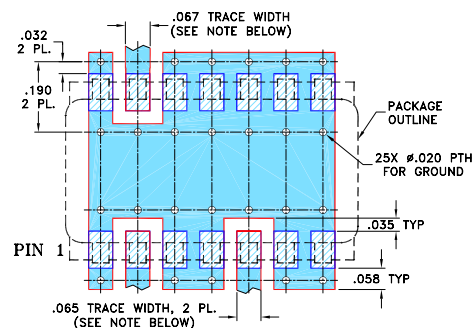
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+16V
Absolute Max. Tuning Voltage (Vtune)	+18V

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

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IF/RF MICROWAVE COMPONENTS

For detailed performance specs
& shopping online see web site



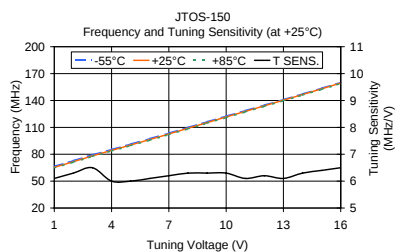
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Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained 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.

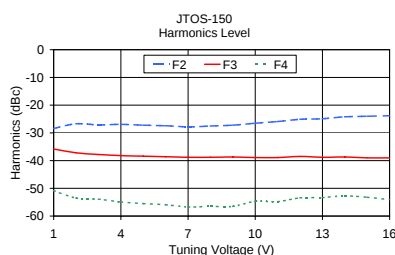
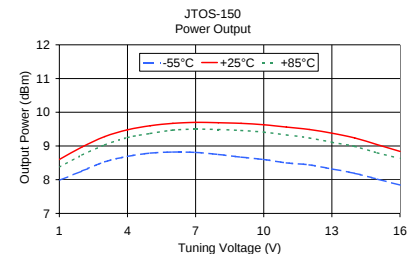
REV. B
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Performance Data & Curves

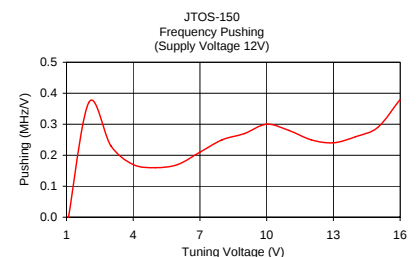
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V TUNE	TUNING SENS. (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)		
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C
1.00	6.10	66.63	65.35	64.63	7.98	8.60	8.37
2.00	6.30	72.93	71.66	71.18	8.26	8.97	8.73
3.00	6.50	79.40	78.21	77.65	8.53	9.28	9.03
4.00	6.00	85.40	84.28	83.65	8.69	9.48	9.25
5.00	6.00	91.36	90.28	89.62	8.79	9.60	9.37
6.00	6.10	97.45	96.38	95.70	8.82	9.67	9.47
7.00	6.20	103.66	102.60	101.92	8.81	9.70	9.50
8.00	6.30	110.00	108.93	108.25	8.75	9.69	9.49
9.00	6.30	116.31	115.30	114.62	8.67	9.67	9.46
10.00	6.30	122.58	121.62	120.93	8.60	9.63	9.41
11.00	6.10	128.71	127.81	127.16	8.50	9.56	9.33
12.00	6.20	134.91	134.06	133.41	8.44	9.49	9.24
13.00	6.10	141.03	140.28	139.66	8.32	9.38	9.11
14.00	6.30	147.35	146.58	146.00	8.19	9.24	8.99
15.00	6.40	153.73	153.01	152.43	8.02	9.04	8.80
16.00	6.50	160.21	159.51	158.95	7.84	8.84	8.63



V TUNE	HARMONICS (dBc)			FREQ. PUSHING (MHz/V)
	F2	F3	F4	
1.00	-28.40	-35.80	-50.80	-0.04
2.00	-26.70	-37.20	-53.50	0.37
3.00	-27.10	-37.80	-53.90	0.23
4.00	-26.90	-38.20	-54.90	0.17
5.00	-27.20	-38.40	-55.50	0.16
6.00	-27.40	-38.60	-55.90	0.17
7.00	-27.80	-38.80	-56.70	0.21
8.00	-27.50	-38.80	-56.50	0.25
9.00	-27.20	-38.70	-56.50	0.27
10.00	-26.50	-38.90	-54.70	0.30
11.00	-25.90	-38.90	-54.80	0.28
12.00	-25.10	-38.50	-53.40	0.25
13.00	-24.90	-38.80	-53.30	0.24
14.00	-24.20	-38.70	-52.70	0.26
15.00	-24.00	-39.00	-53.20	0.29
16.00	-23.80	-39.00	-54.10	0.38



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