

5V Tuning for PLL IC's 95 to 120 MHz

Features

- low phase noise
- 5V tuning voltage range
- linear tuning characteristics
- aqueous washable

Applications

- PLL circuitry
- measurement instrumentation
- frequency synthesizers



CASE STYLE: BK377
PRICE: Contact Sales Dept.

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)	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.
95	120	+8.8	0.5	5.0	-84	-105	-124	-145	1.0	0.2	7-10	-30	-20	0.11	12	20

Pin Connections

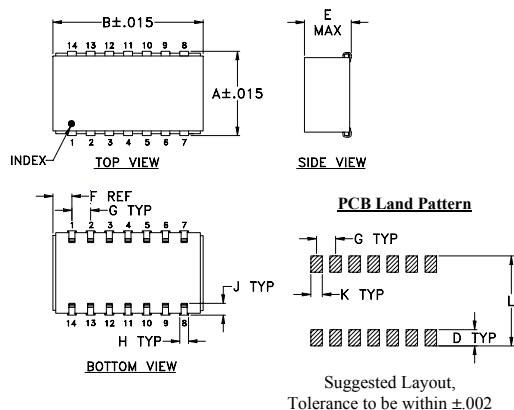
RF OUT	13
VCC	2
V-TUNE	5
GROUND	1,3,4,6,7,8,9,10,11,12,14

Maximum Ratings

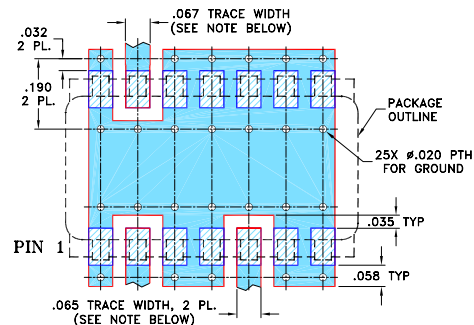
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+16V
Absolute Max. Tuning Voltage (Vtune)	+7V

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 & shipping online see web site



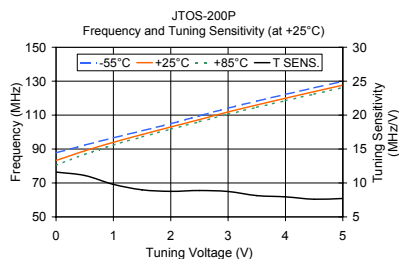
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Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained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

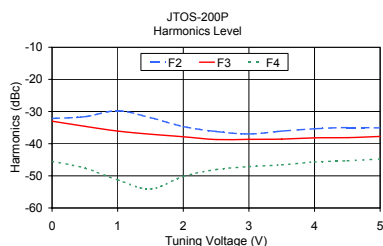
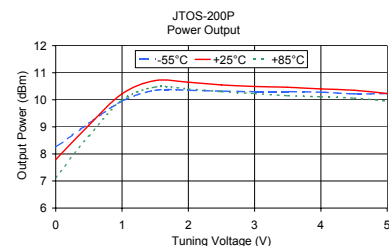
NON-CATALOG

Performance Data & Curves

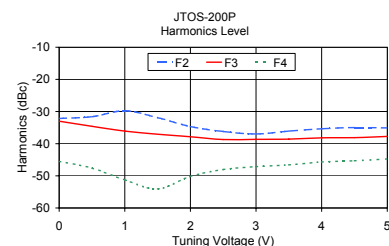
JTOS-200P



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	11.60	87.77	83.24	80.40	8.25	7.79	7.13
0.50	11.10	92.32	88.92	86.83	9.13	9.06	8.66
1.00	9.79	96.60	93.96	92.34	9.95	10.22	9.98
1.50	8.99	100.73	98.54	97.18	10.35	10.71	10.47
2.00	8.77	104.99	103.01	101.73	10.35	10.65	10.40
2.50	8.89	109.57	107.36	106.12	10.32	10.55	10.30
3.00	8.75	114.11	111.84	110.50	10.30	10.49	10.23
3.50	8.14	118.25	115.96	114.62	10.30	10.46	10.15
4.00	7.95	122.24	119.97	118.56	10.28	10.40	10.11
4.50	7.60	126.11	123.82	122.40	10.22	10.35	10.06
5.00	7.72	129.94	127.66	126.28	10.23	10.23	9.95



V TUNE	HARMONICS (dBc)			FREQ. PUSHING (MHz/V)
	F2	F3	F4	
0.00	-32.16	-33.00	-45.50	0.00
0.50	-31.60	-34.60	-47.60	0.00
1.00	-29.76	-36.09	-51.26	0.38
1.50	-31.90	-37.06	-54.06	0.38
2.00	-34.67	-37.84	-50.17	0.26
2.50	-36.20	-38.70	-48.03	0.26
3.00	-36.97	-38.64	-47.14	0.19
3.50	-36.08	-38.58	-46.58	0.19
4.00	-35.35	-38.18	-45.68	0.19
4.50	-34.97	-38.13	-45.30	0.06
5.00	-35.08	-37.75	-44.75	0.13



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