

Surface Mount Voltage Controlled Oscillator

JTOS-75P+

5V Tuning for PLL IC's 35 to 43 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: \$14.95 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)	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.
35	43	+9	0.5	5.0	-89	-110	-130	-140	0.15	0.11	2.5-4	-25	-20	0.125	12	20

Pin Connections

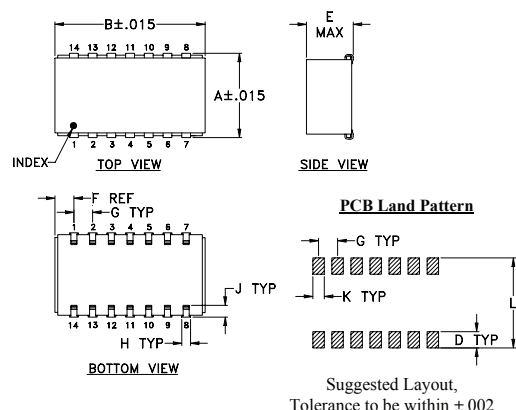
RF OUT	13
VCC	2
V-TUNE	5
GROUND	1,3,4,6,7,8,9,10,11,12,14

Maximum Ratings

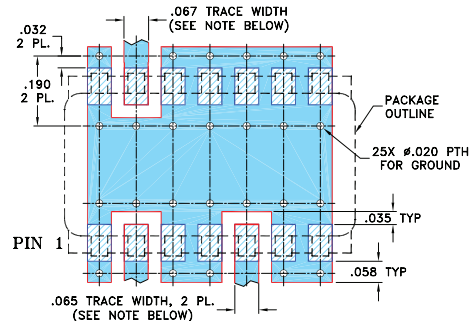
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+16V
Absolute Max. Tuning Voltage (Vtune)	+7V

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

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

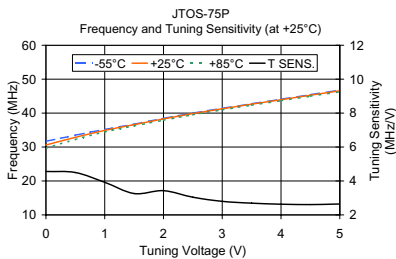


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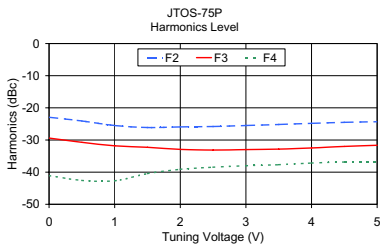
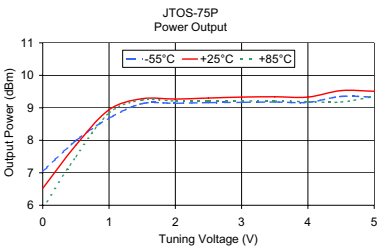
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Performance Data & Curves

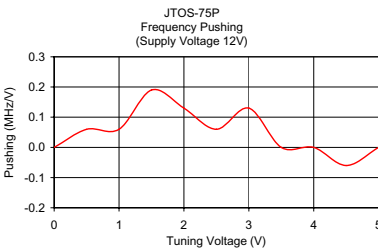
JTOS-75P+



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	4.56	31.69	30.60	29.65	7.04	6.52	5.91
0.50	4.50	33.49	32.86	32.22	7.99	7.85	7.50
1.00	3.92	35.18	34.90	34.44	8.68	8.94	8.84
1.50	3.26	36.74	36.61	36.22	9.13	9.28	9.24
2.00	3.43	38.45	38.30	37.90	9.14	9.27	9.21
2.50	3.04	39.99	39.86	39.51	9.16	9.30	9.21
3.00	2.80	41.40	41.28	40.95	9.17	9.33	9.21
3.50	2.69	42.76	42.63	42.32	9.18	9.34	9.21
4.00	2.63	44.10	43.96	43.66	9.17	9.33	9.19
4.50	2.61	45.43	45.26	44.98	9.35	9.53	9.18
5.00	2.64	46.78	46.59	46.30	9.33	9.51	9.35



V TUNE	HARMONICS (dBc)			FREQ. PUSHING (MHz/V)
	F2	F3	F4	
0.00	-22.90	-29.40	-41.07	0.00
0.50	-24.07	-30.73	-42.57	0.06
1.00	-25.49	-31.82	-42.66	0.06
1.50	-26.11	-32.27	-40.44	0.19
2.00	-25.93	-32.93	-39.10	0.13
2.50	-25.79	-33.13	-38.46	0.06
3.00	-25.49	-32.99	-37.99	0.13
3.50	-25.17	-32.83	-37.67	0.00
4.00	-24.82	-32.49	-37.16	0.00
4.50	-24.50	-32.00	-36.83	-0.06
5.00	-24.31	-31.65	-36.81	0.00



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