

# Surface Mount Voltage Controlled Oscillator

# JTOS-300P+ JTOS-300P

5V Tuning for PLL IC's 148 to 174 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: \$16.95 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)	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.
148	174	+10	0.5	5.0	-82	-102	-122	-142	1.0	0.2	10-14	-27	-20	0.12	12	20

## Pin Connections

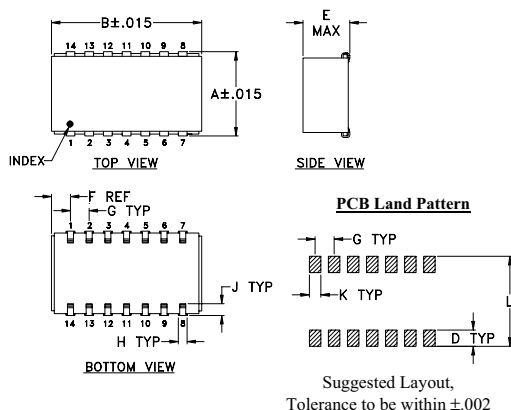
RF OUT	13
VCC	2
V-TUNE	5
GROUND	1,3,4,6,7,8,9,10,11,12,14

## Maximum Ratings

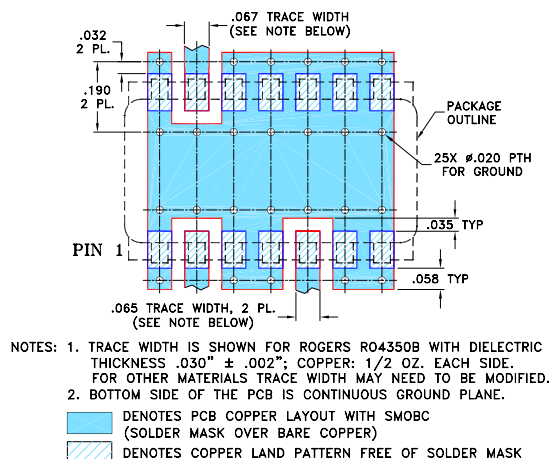
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+16V
Absolute Max. Tuning Voltage (Vtune)	+7V

all specifications: 50 ohm system

## Outline Drawing



## Demo Board MCL PIN: TB-04 Suggested PCB Layout (PL-005)



## 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



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site



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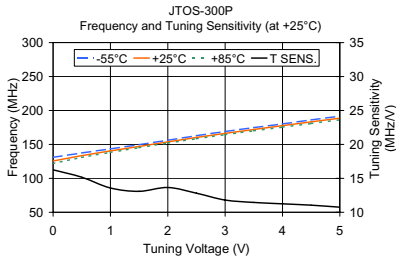
RF/IF MICROWAVE COMPONENTS



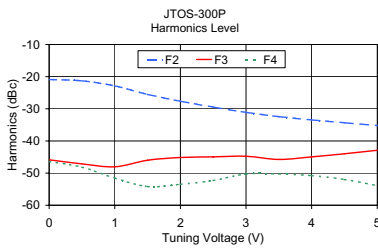
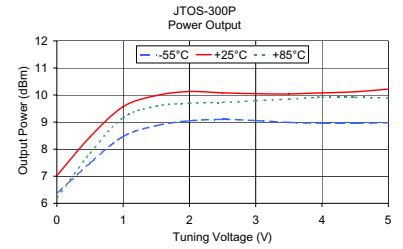
REV. B  
M102713  
JTOS-300P  
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071219  
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# JTOS-300P+ JTOS-300P

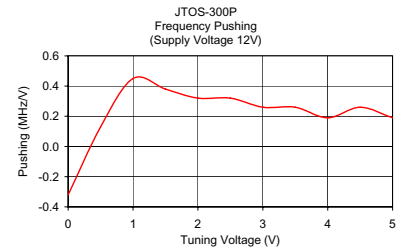
## Performance Data & Curves



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	16.26	130.97	125.58	121.94	6.36	7.02	6.21
0.50	15.16	137.44	133.44	130.82	7.48	8.45	7.85
1.00	13.58	143.41	140.40	138.32	8.47	9.57	9.16
1.50	13.09	149.57	147.01	145.24	8.87	9.98	9.59
2.00	13.65	156.17	153.67	152.09	9.05	10.13	9.70
2.50	12.81	162.85	160.26	158.44	9.10	10.08	9.73
3.00	11.80	169.07	166.24	164.40	9.06	10.05	9.79
3.50	11.45	174.77	172.00	170.06	8.99	10.04	9.85
4.00	11.24	180.29	177.66	175.50	8.96	10.08	9.92
4.50	11.05	186.11	183.22	180.88	8.96	10.12	9.92
5.00	10.75	191.68	188.65	186.34	8.98	10.22	9.89



V TUNE	HARMONICS (dBc)			FREQ. PUSHING (MHz/V)
	F2	F3	F4	
0.00	-20.87	-45.87	-46.37	-0.32
0.50	-21.30	-47.14	-48.14	0.13
1.00	-22.87	-48.04	-51.54	0.45
1.50	-25.50	-46.00	-54.17	0.38
2.00	-27.65	-45.15	-53.48	0.32
2.50	-29.45	-44.95	-52.29	0.32
3.00	-31.10	-44.77	-50.27	0.26
3.50	-32.42	-45.76	-50.26	0.26
4.00	-33.45	-44.95	-50.79	0.19
4.50	-34.33	-43.99	-51.99	0.26
5.00	-35.22	-42.89	-53.89	0.19



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