

Surface Mount

Voltage Controlled Oscillator

JTOS-1300

Linear Tuning 900 to 1300 MHz

Features

- wide frequency range, 900 to 1300 MHz
- linear tuning characteristics
- low phase noise, -141 dBc/Hz at 1 MHz offset
- aqueous washable

Applications

- measurement instrumentation
- cellular
- PCS
- GPS



CASE STYLE: BK377
PRICE: Contact Sales Dept.

Electrical Specifications

MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	PHASE NOISE dBc/Hz SSB at offset frequencies, kHz				TUNING					NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @ 12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER			
	Min.	Max.		Typ.	1	10	100	1000	VOLTAGE RANGE (V)		PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Typ.	Typ.			Typ.	Typ.	Vcc (volts)	Current (mA)
	Min.	Max.							Min.	Max.											
JTOS-1300	900	1300	+6	-73	-100	-121	-141	1	20	36 - 50	90	10	-90	-28	-17	6	1	12	30		

Pin Connections

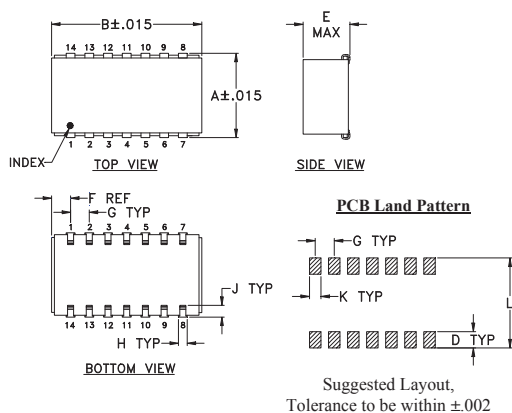
RF OUT	13
VCC	2
V-TUNE	5
GROUND	1,3,4,6,7,8,9,10,11,12,14

Maximum Ratings

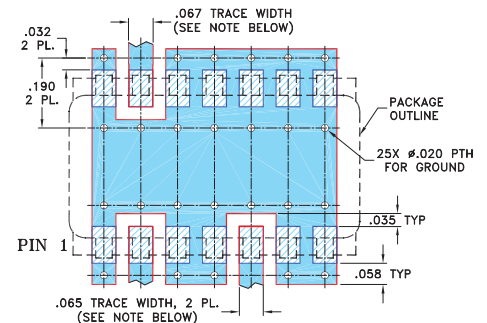
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+13V
Absolute Max. Tuning Voltage (Vtune)	+22V

all specifications: 50 ohm system
Permanent damage may occur if any of these limits are exceeded.

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

Notes

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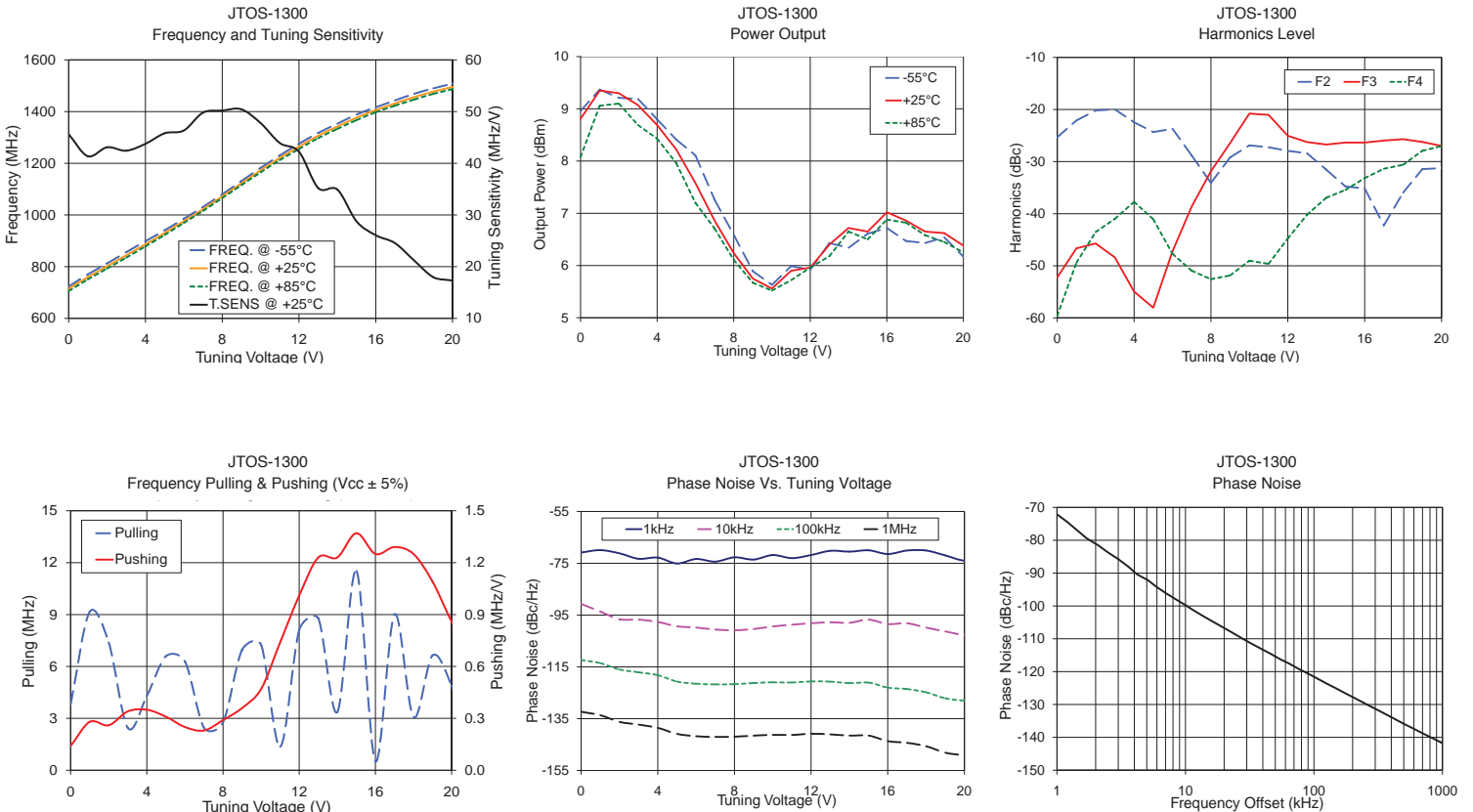


Performance Data & Curves

JTOS-1300

V TUNE	TUNE SENS (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)			Icc (mA)	HARMONICS (dBc)			FREQ. PUSH (MHz/V)	FREQ. PULL (MHz)	PHASE NOISE (dBc/Hz) at offsets				FREQ OFFSET (kHz)	PHASE NOISE at 1100 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	45.63	723.0	713.8	705.4	8.96	8.81	8.08	23.26	-25.3	-52.3	-59.6	0.14	3.81	-70.84	-90.7	-112.3	-132.3	1.0	-72.13
2.00	43.09	812.3	800.8	792.7	9.21	9.30	9.10	23.40	-20.2	-45.7	-43.5	0.26	7.39	-71.15	-96.6	-116.0	-136.2	2.5	-83.76
3.00	42.43	856.0	843.9	835.2	9.19	9.07	8.69	23.46	-20.0	-48.4	-41.0	0.34	2.45	-73.26	-96.8	-117.1	-137.3	4.2	-90.36
4.00	43.76	898.4	886.4	878.4	8.80	8.69	8.43	23.52	-22.4	-55.0	-37.7	0.35	4.29	-72.81	-97.7	-118.2	-138.6	7.1	-96.22
5.00	45.80	940.7	930.1	922.8	8.41	8.22	7.96	23.58	-24.3	-58.0	-41.1	0.31	6.59	-75.07	-99.3	-120.7	-140.9	10.0	-99.77
6.00	46.34	985.3	975.9	968.9	8.11	7.58	7.20	23.64	-23.7	-47.2	-47.7	0.25	6.29	-73.32	-99.8	-121.5	-141.8	11.7	-101.47
7.00	49.78	1030.8	1022.3	1015.7	7.26	6.86	6.71	23.73	-28.8	-38.6	-51.0	0.23	2.46	-74.36	-100.6	-121.8	-142.0	23.1	-108.11
8.00	50.19	1080.1	1072.0	1065.4	6.59	6.24	6.11	23.85	-34.1	-31.9	-52.6	0.29	2.77	-72.70	-100.9	-121.7	-142.0	38.8	-113.04
9.00	50.44	1130.8	1122.2	1115.2	5.89	5.75	5.67	24.02	-29.2	-26.4	-51.9	0.36	6.96	-73.55	-100.4	-121.2	-141.6	64.0	-117.53
10.00	47.77	1182.0	1172.7	1165.1	5.63	5.56	5.52	24.28	-26.9	-20.8	-49.0	0.47	7.24	-71.81	-99.4	-121.0	-141.3	89.8	-120.56
11.00	43.92	1230.1	1220.4	1212.2	5.99	5.90	5.72	24.65	-27.3	-21.0	-49.6	0.74	1.36	-73.01	-98.7	-121.0	-141.3	100.0	-121.54
12.00	42.22	1275.5	1264.4	1255.3	5.92	5.96	5.96	24.96	-27.9	-25.0	-44.8	1.01	8.11	-71.81	-98.2	-120.6	-140.8	150.8	-125.20
13.00	35.20	1317.4	1306.6	1297.3	6.43	6.40	6.18	25.47	-28.4	-26.3	-40.2	1.23	8.78	-70.18	-97.8	-120.7	-141.1	177.0	-126.66
14.00	34.91	1352.7	1341.8	1332.9	6.34	6.72	6.65	25.75	-31.6	-26.7	-37.0	1.23	3.36	-70.50	-98.0	-121.3	-141.5	211.6	-128.22
15.00	28.75	1388.6	1376.7	1367.1	6.61	6.65	6.50	26.12	-34.8	-26.4	-35.4	1.37	11.52	-69.99	-96.8	-121.1	-141.5	297.1	-131.22
16.00	26.07	1416.4	1405.4	1397.3	6.72	7.02	6.88	26.39	-35.2	-26.4	-33.2	1.25	0.51	-71.43	-98.5	-123.0	-143.7	348.8	-132.63
17.00	24.56	1443.1	1431.5	1422.7	6.47	6.86	6.82	26.37	-42.3	-26.0	-31.4	1.29	9.01	-70.08	-98.2	-123.6	-144.3	489.7	-135.70
18.00	21.19	1468.6	1456.1	1446.8	6.43	6.65	6.58	26.44	-36.0	-25.7	-30.6	1.25	3.07	-70.07	-99.9	-124.8	-145.6	585.4	-137.21
19.00	17.96	1489.8	1477.3	1468.5	6.54	6.62	6.45	26.60	-31.5	-26.2	-27.9	1.09	6.64	-71.97	-101.3	-127.1	-148.1	964.9	-141.44
20.00	17.26	1508.0	1495.2	1486.6	6.17	6.38	6.25	26.46	-31.2	-27.0	-27.0	0.86	4.89	-74.00	-102.7	-128.0	-149.0	1000.0	-141.74

*at 25°C unless mentioned otherwise



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