

Voltage Controlled Oscillator

JTOS-3000+

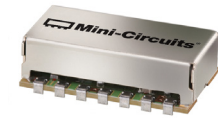
Wide Band 2300 to 3000 MHz

Features

- wide frequency range, 2300 to 3000 MHz
- low phase noise, -130 dBc/Hz at 1 MHz offset, typ.
- aqueous washable

Applications

- measurement instrumentation
- ISM
- wireless
- satellite systems



CASE STYLE: BK377

+RoHS Compliant
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

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)	SENSI-TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Typ.	Typ.			Typ.	Max.
JTOS-3000+	2300	3000	+10	-60	-86	-109	-130	0.5	12	45-160	23	55	-90	-26	-12	20	16	5	28

Pin Connections

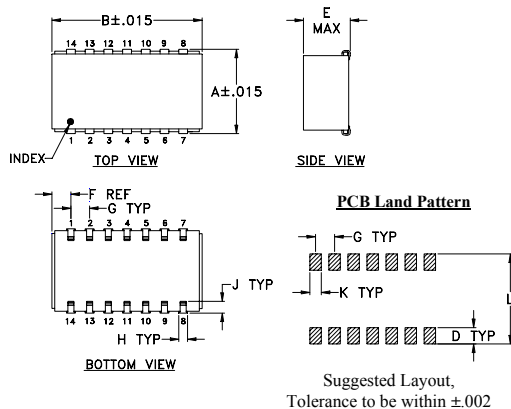
RF OUT	13
VCC	2
V-TUNE	5
GROUND	1,3,4,6,7,8,9,10,11,12,14

Maximum Ratings

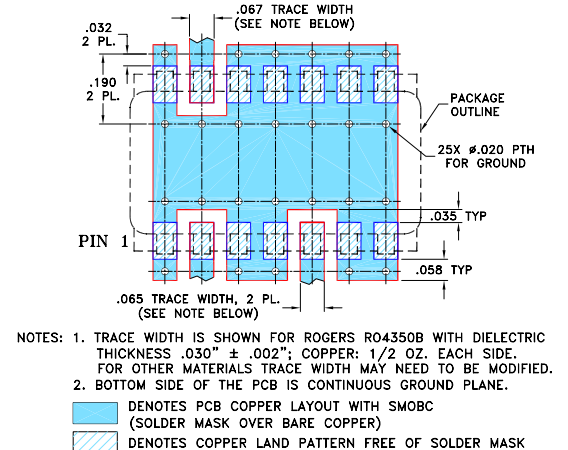
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+6.5V
Absolute Max. Tuning Voltage (Vtune)	+15V

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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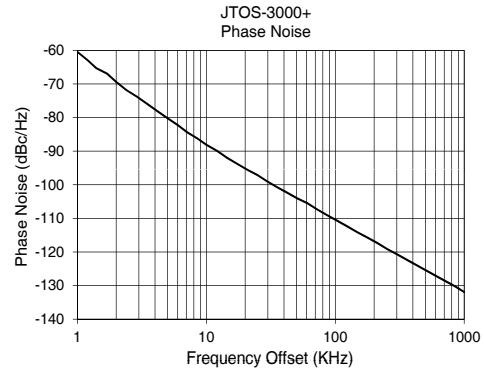
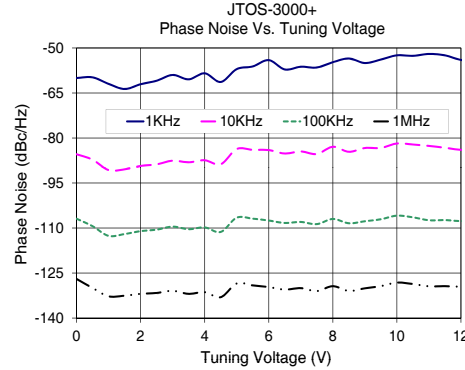
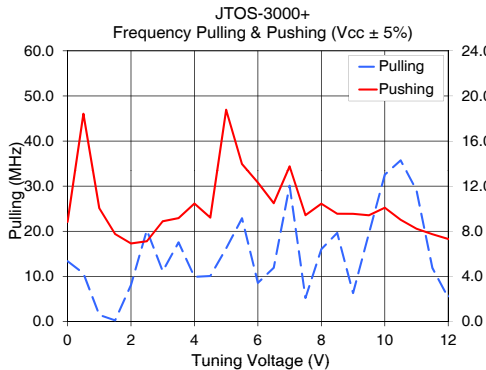
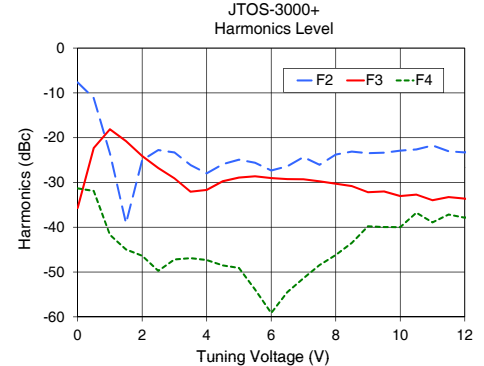
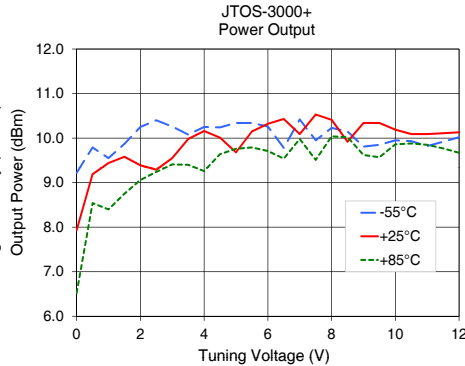
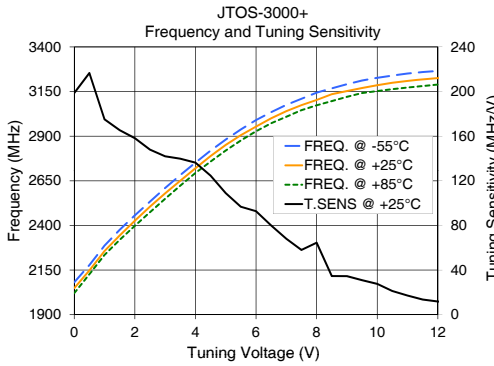


Performance Data & Curves*

JTOS-3000+

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 2650 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	200.29	2026.5	1995.5	1958.8	8.34	7.97	6.78	19.79	-8.5	-31.1	-33.3	11.55	8.15	-61.39	-87.5	-108.3	-128.2	1.0	-60.41
0.50	233.81	2116.2	2095.6	2074.8	9.14	8.86	7.96	21.55	-14.2	-18.8	-35.7	18.83	19.25	-62.65	-87.7	-110.2	-130.5	2.0	-70.08
1.00	178.16	2237.7	2212.5	2184.4	9.38	8.97	8.20	23.79	-29.2	-17.6	-51.5	18.12	11.85	-62.70	-88.0	-110.7	-131.0	3.5	-76.41
1.50	163.03	2326.3	2301.6	2274.1	9.70	9.29	8.47	23.79	-25.3	-20.4	-41.8	13.80	9.78	-63.58	-89.2	-111.4	-131.5	6.0	-82.02
2.00	154.63	2407.2	2383.1	2356.3	9.88	9.54	8.66	23.46	-25.6	-21.8	-41.8	13.34	15.32	-61.99	-89.4	-110.5	-130.8	10.0	-86.74
2.50	147.45	2484.4	2460.4	2435.3	10.06	9.75	8.77	23.28	-27.4	-23.0	-47.5	14.31	11.19	-60.88	-87.5	-109.8	-130.1	12.2	-88.34
3.00	142.76	2557.0	2534.1	2509.8	10.24	9.97	8.93	23.10	-27.7	-25.8	-46.3	11.88	11.76	-63.17	-88.5	-111.1	-131.7	20.8	-93.99
3.50	128.84	2624.1	2605.5	2579.8	10.55	9.98	9.18	22.89	-27.7	-29.8	-46.7	15.96	18.02	-58.79	-86.4	-108.5	-129.2	35.5	-99.41
4.00	118.85	2691.3	2669.9	2645.6	10.51	10.23	9.43	22.60	-31.5	-29.9	-46.7	16.71	17.32	-60.94	-87.0	-109.1	-129.9	60.7	-104.29
4.50	111.73	2750.7	2729.4	2708.1	10.75	10.50	9.56	22.47	-26.1	-30.1	-46.8	21.63	14.04	-58.25	-84.3	-107.0	-128.0	100.0	-108.34
5.00	101.12	2805.3	2785.2	2763.8	11.01	10.59	9.63	22.29	-26.0	-32.7	-48.0	18.50	5.28	-59.31	-85.4	-108.2	-129.3	123.9	-110.65
5.50	89.86	2858.1	2835.8	2813.2	10.86	10.70	9.85	22.07	-25.3	-31.2	-51.9	19.96	14.07	-57.06	-85.4	-107.5	-128.8	148.1	-112.26
6.00	77.87	2903.8	2880.7	2859.2	10.98	10.73	9.76	21.90	-23.6	-29.9	-47.6	16.86	16.86	-57.68	-85.3	-108.6	-129.8	177.0	-113.56
6.50	70.46	2943.6	2919.7	2898.4	10.94	10.80	9.84	21.75	-23.7	-29.3	-46.9	15.61	16.06	-59.44	-86.0	-108.4	-130.0	211.6	-115.45
7.00	56.44	2977.7	2954.9	2931.1	10.95	10.63	9.87	21.60	-25.0	-29.7	-46.0	16.55	20.99	-55.86	-84.0	-106.8	-128.8	302.4	-118.43
8.00	42.81	3032.1	3007.0	2984.7	10.78	10.71	9.87	21.43	-25.9	-28.8	-48.6	12.27	12.03	-58.57	-85.0	-108.1	-130.0	361.5	-119.95
9.00	25.61	3068.4	3045.2	3020.3	10.71	10.55	9.81	21.32	-24.7	-29.5	-51.4	9.01	24.61	-57.32	-85.7	-108.8	-130.9	507.5	-122.89
10.00	18.51	3093.3	3068.7	3045.2	10.60	10.52	9.74	21.22	-25.8	-29.9	-46.5	7.42	16.60	-56.34	-85.5	-108.4	-130.5	606.7	-124.48
11.00	13.00	3112.2	3085.4	3060.8	10.50	10.48	9.74	21.14	-25.0	-30.8	-48.1	5.59	22.12	-56.00	-86.1	-109.0	-131.0	851.6	-127.51
12.00	11.07	3123.2	3097.6	3072.3	10.49	10.39	9.74	21.07	-24.3	-31.8	-47.9	5.71	29.40	-55.80	-83.9	-108.3	-130.3	1000.0	-129.20

*at 25°C unless mentioned otherwise



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