

NON-CATALOG

Surface Mount

Voltage Controlled Oscillator

JTOS-2700V+

Linear Tuning 2050 to 2700 MHz



CASE STYLE: BK377

Features

- wide bandwidth, 2050 to 2700 MHz
- low phase noise, -134 dBc/Hz at 1 MHz offset
- flat tuning sensitivity, 46-56 MHz/V typ.
- aqueous washable
- protected by US patent 6,549,084

Applications

- satellite systems
- instrumentation
- ISM

+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 (MHz)	PUSHING (MHz/V)	TUNING SENSITIVITY (MHz/V)	HARMONICS (dBc)		3 dB MODULATION BANDWIDTH (MHz)	DC OPERATING POWER	
Min.	Max.	Typ.	Min.	Max.	1 kHz	10 kHz	100 kHz	1 MHz	Typ.	Typ.	Typ.	Typ.	Max.	Typ.	Vcc (volts)	Current (mA) Max.
2050	2700	+8.0	0.5	18	-63	-91	-113	-134	5.0	2.0	46 - 62	-17	—	190	5	23

Pin Connections

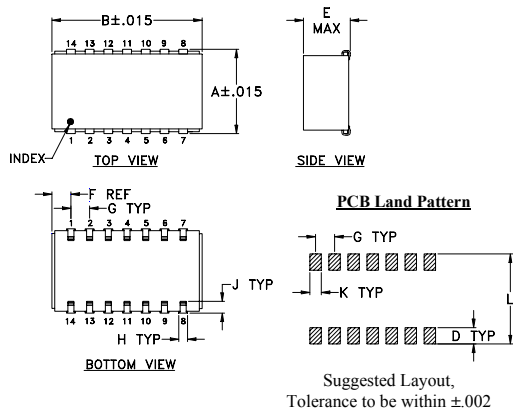
RF OUT	13
VCC	2
V-TUNE	5
GROUND	1,3,4,6,7,8,9,10,11,12,14

Maximum Ratings

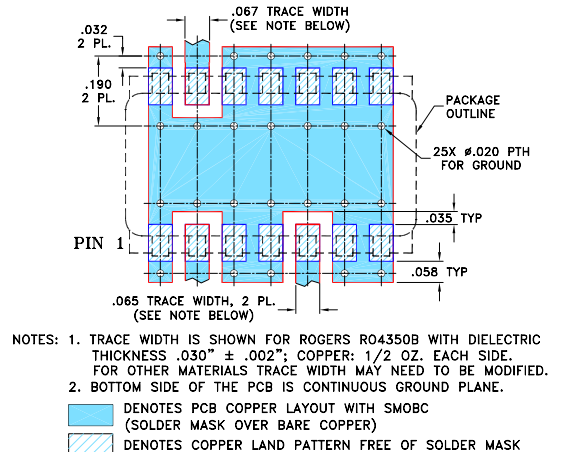
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+7V
Absolute Max. Tuning Voltage (Vtune)	+20V

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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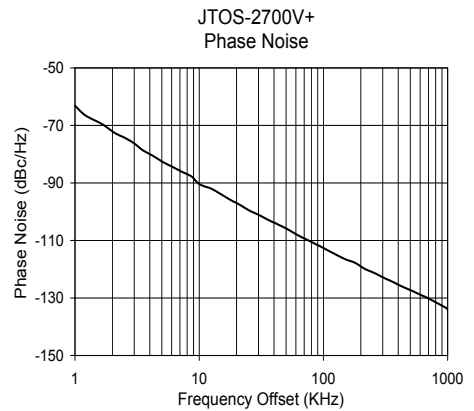
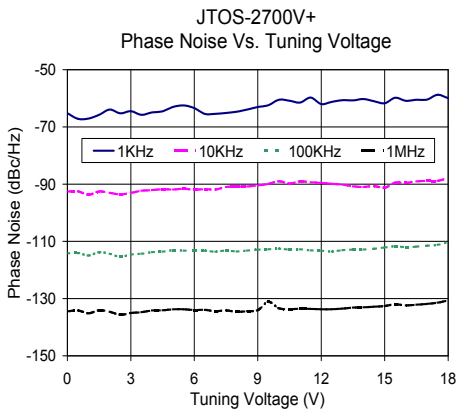
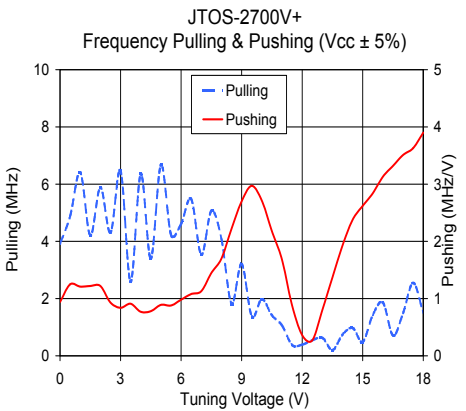
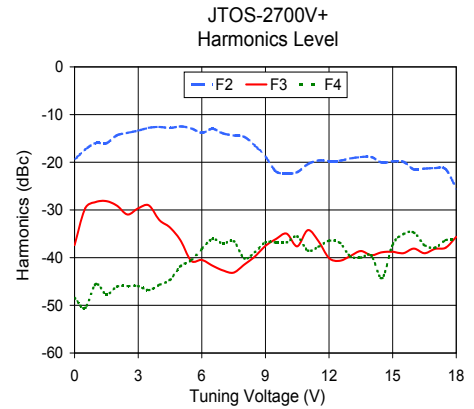
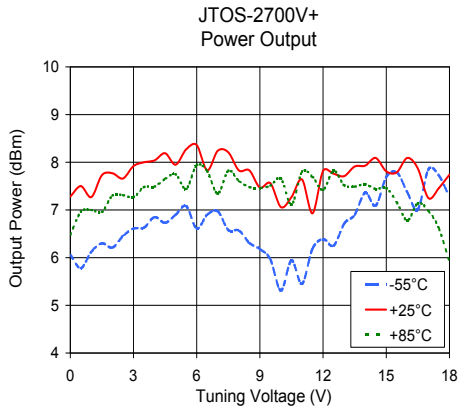
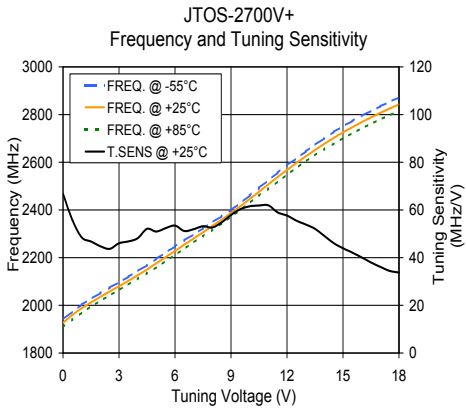


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Performance Data & Curves

JTOS-2700V+

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 2375 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.0	66.80	1940.7	1926.8	1907.8	6.06	7.28	6.48	15.18	-19.5	-37.4	-48.5	0.94	3.9	-65.2	-92.6	-114.2	-134.5	1.0	-63.11
0.5	55.80	1974.6	1960.2	1941.4	5.78	7.50	6.96	15.23	-17.3	-29.7	-50.5	1.25	4.9	-67.2	-92.5	-114.0	-134.1	2.1	-72.65
1.0	48.47	2003.0	1988.1	1969.9	6.12	7.27	7.00	15.30	-16.0	-28.3	-45.5	1.21	6.4	-67.1	-93.7	-115.0	-135.1	3.5	-78.58
2.0	44.79	2051.4	2035.7	2018.7	6.21	7.77	7.30	15.42	-14.4	-29.1	-46.1	1.22	5.9	-63.9	-93.0	-114.3	-134.6	6.1	-84.43
2.5	43.68	2074.2	2058.1	2041.6	6.45	7.66	7.31	15.49	-13.8	-31.0	-46.0	0.93	4.3	-65.2	-93.6	-115.4	-135.7	8.7	-87.79
4.0	48.17	2143.6	2126.3	2111.1	6.85	8.04	7.49	15.64	-12.6	-32.1	-45.7	0.77	6.4	-64.9	-92.1	-113.8	-134.2	10.0	-90.39
5.0	50.95	2195.0	2176.5	2159.8	6.90	7.95	7.75	15.57	-12.5	-36.4	-41.8	0.89	6.7	-63.0	-91.9	-113.1	-133.8	21.1	-97.53
6.0	53.45	2247.1	2228.1	2211.1	6.61	8.36	7.94	15.43	-13.8	-40.5	-38.2	0.98	4.6	-63.4	-91.9	-113.3	-134.0	36.1	-102.90
7.0	51.94	2297.8	2280.5	2264.1	6.97	8.24	7.34	15.31	-13.9	-42.7	-37.1	1.13	3.5	-65.4	-91.9	-113.6	-134.4	61.6	-108.08
8.5	54.83	2374.1	2359.3	2343.9	6.31	7.83	7.48	15.23	-16.5	-39.8	-38.9	2.22	1.8	-63.9	-90.8	-113.2	-134.4	88.0	-111.42
9.0	57.87	2399.7	2386.7	2371.8	6.18	7.47	7.46	15.23	-18.8	-37.5	-36.8	2.70	3.2	-63.1	-90.4	-112.9	-134.1	100.0	-112.61
10.0	61.55	2461.0	2445.8	2429.8	5.31	7.06	7.66	15.26	-22.4	-35.0	-36.8	2.71	2.0	-60.5	-89.0	-112.6	-133.4	150.3	-116.53
11.0	61.94	2524.8	2507.6	2489.4	5.45	7.64	7.80	15.30	-20.4	-34.2	-38.5	1.68	1.1	-61.5	-89.0	-112.8	-133.5	179.6	-117.76
12.0	57.66	2587.4	2568.0	2548.3	6.39	7.82	7.42	15.36	-19.7	-40.1	-36.5	0.36	0.4	-62.0	-89.6	-113.3	-133.7	214.7	-119.88
13.0	53.91	2645.3	2624.6	2603.3	6.71	7.71	7.52	15.42	-19.2	-39.7	-39.7	0.80	0.6	-60.7	-90.2	-113.1	-133.5	306.7	-122.99
14.0	49.12	2701.0	2677.6	2654.7	7.36	7.93	7.54	15.53	-18.9	-39.5	-39.6	1.93	0.7	-60.3	-91.0	-112.9	-133.1	360.2	-124.36
14.5	46.12	2726.9	2702.2	2678.5	7.09	8.09	7.44	15.60	-20.1	-38.9	-44.3	2.38	1.0	-61.0	-90.7	-112.6	-132.8	505.5	-127.34
16.0	40.09	2794.7	2768.2	2742.4	7.37	8.09	6.78	15.79	-21.5	-38.1	-34.7	3.13	1.9	-60.9	-89.6	-112.0	-132.4	604.2	-128.89
17.0	36.16	2834.8	2807.3	2779.7	7.85	7.25	6.98	15.95	-21.2	-38.2	-37.9	3.51	1.5	-60.4	-88.9	-111.5	-131.9	995.8	-133.74
18.0	33.76	2872.0	2842.6	2813.5	7.27	7.74	5.90	16.05	-25.5	-35.6	-36.1	3.90	1.5	-60.0	-87.9	-110.2	-130.7	1000.0	-134.40



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