Surface Mount

Voltage Controlled Oscillator

JTOS-25+
JTOS-25

Linear Tuning 12.5 to 25 MHz

CASE STYLE: BK377
PRICE: $18.95 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.

Features

- 3 dB modulation bandwidth 130 kHz typ.
- octave linear tuning
- excellent harmonic suppression, -26dBc typ.
- low power consumption, 190 mW typ.
- aqueous washable

Applications

- test instruments-signal generators
- wideband frequency synthesizers

Electrical Specifications

MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	TUNING VOLTAGE (V)		PHASE NOISE dBc/Hz SSB at offset frequencies: Typ.				PULLING pk-pk @ 12 dBr (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.
JTOS-25	12.5	25	+8.0	1	11	-95	-115	-135	-155	0.03	0.02	1.0-4.0	-26	-13	0.13	12	20

Pin Connections

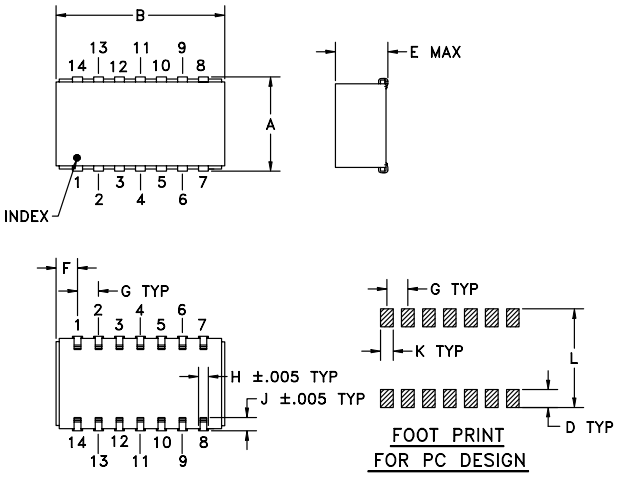
RF OUT	13
VCC	2
V-TUNE	5
GROUND	1,3,4,6,7,8,9,10,11,12,14

Maximum Ratings

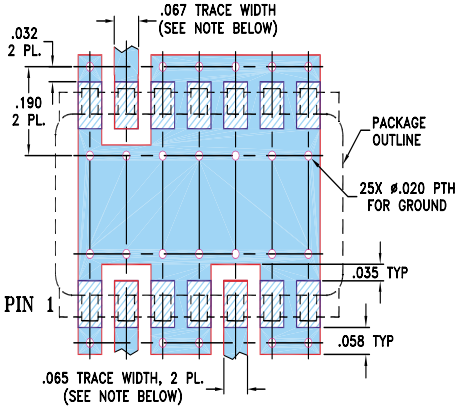
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+15V
Absolute Max. Tuning Voltage (Vtune)	+12V

all specifications: 50 ohm system

Outline Drawing



Demo Board MCL P/N: TB-04
Suggested PCB Layout (PL-005)



NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B 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 BOTTOM IS CONTINUOUS GROUND PLANE.

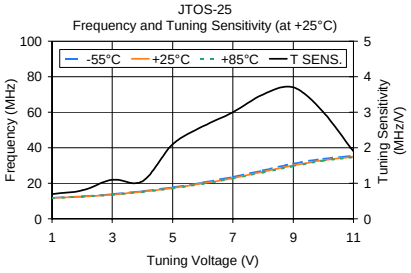
DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

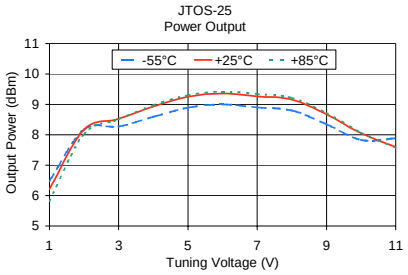
Outline Dimensions (inch / mm)

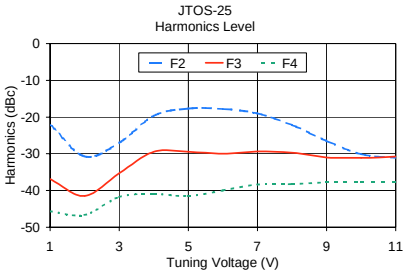
A	B	C	D	E	F	G	H	J	K	L	wt
.505	.800	--	.100	.250	.100	.100	.047	.065	.065	.525	grams
12.83	20.32	--	2.54	6.35	2.54	2.54	1.19	1.65	1.65	13.34	3.0

Performance Curves



V TUNE	TUNING SENS. (MHz/V)	FREQUENCY (MHz) -55°C	+25°C	+85°C	POWER OUTPUT (dBm) -55°C	+25°C	+85°C
1.0	0.70	11.84	11.72	11.66	6.48	6.21	5.82
2.0	0.80	12.68	12.53	12.45	8.17	8.17	8.02
3.0	1.10	13.88	13.67	13.56	8.27	8.52	8.50
4.0	1.06	15.55	15.26	15.12	8.59	8.93	8.97
5.0	2.10	17.72	17.34	17.15	8.89	9.25	9.30
6.0	2.60	20.39	19.93	19.69	9.00	9.36	9.42
7.0	3.00	23.60	22.96	22.69	8.90	9.26	9.34
8.0	3.50	27.31	26.43	26.09	8.80	9.16	9.22
9.0	3.70	31.02	30.07	29.67	8.35	8.67	8.72
10.0	3.00	33.77	33.07	32.70	7.83	8.05	8.07
11.0	1.90	35.46	34.96	34.64	7.88	7.60	7.56





V TUNE	HARMONICS (dBc) F2	F3	F4	FREQ. PUSHING (MHz/V)
1.0	-22.00	-36.90	-45.70	0.00
2.0	-30.70	-41.50	-46.70	0.02
3.0	-27.00	-35.30	-41.80	0.02
4.0	-19.70	-29.50	-41.00	0.01
5.0	-17.70	-29.50	-41.50	0.01
6.0	-17.80	-30.00	-40.00	0.01
7.0	-19.00	-29.40	-38.40	0.03
8.0	-22.20	-29.70	-38.30	0.11
9.0	-26.50	-31.00	-37.80	0.18
10.0	-30.10	-31.10	-37.70	0.12
11.0	-31.10	-30.80	-37.60	0.03