Surface Mount

Voltage Controlled Oscillator

ROS-535

Linear Tuning 300 to 525 MHz

CASE STYLE: CK605
PRICE: Contact Sales Dept.

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

Features

- wide band tuning
- low phase noise, -138 dBc/Hz at 1 MHz offset, typ.
- linear tuning
- excellent harmonic suppression, -20 dBc typ.
- aqueous washable

Applications

- test instruments-signal generators
- UHF

Electrical Specifications

FREQUENCY (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.
300	525	+6.0	1	17	-75	-98	-118	-138	0.5	0.4	9-27	-20	-15	0.1	12	20

Pin Connections

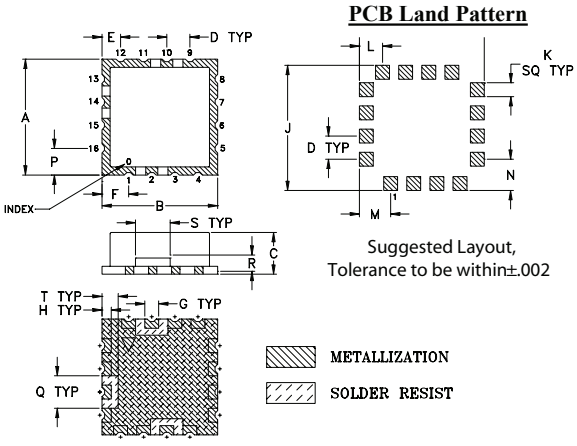
RF OUT	10
VCC	14
V-TUNE	2
GROUND	1,3,4,5,6,7,8,9,11,12,13,15,16

Maximum Ratings

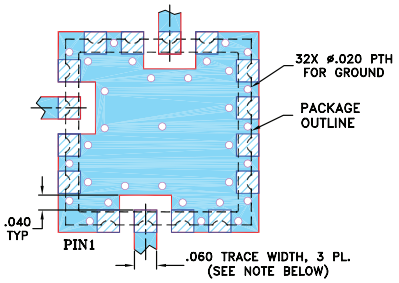
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+13V
Absolute Max. Tuning Voltage (Vtune)	+18V

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

Outline Drawing



Demo Board MCL P/N: TB-10
Suggested PCB Layout (PL-012)



NOTES: 1. TRACE WIDTH IS SHOWN FOR FR4 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 PCB IS CONTINUOUS GROUND PLANE.

DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

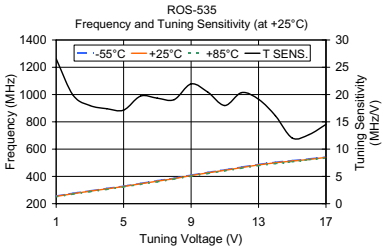
Outline Dimensions (inch / mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	wt.
.500	.500	.180	.100	.080	.115	.060	.040	.540	.060	.100	.135	.135	.115	.140	.070	.150	.070	grams
12.70	12.70	4.57	2.54	2.03	2.92	1.52	1.02	13.72	1.52	2.54	3.43	3.43	2.92	3.56	1.78	3.81	1.78	1.0

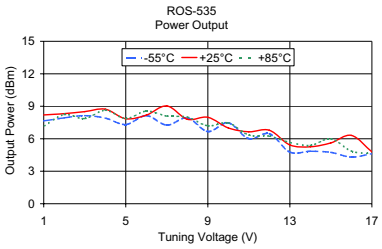
REV. D
M102713
ED-4405
ROS-535
MM/TD/CP/AM
120627

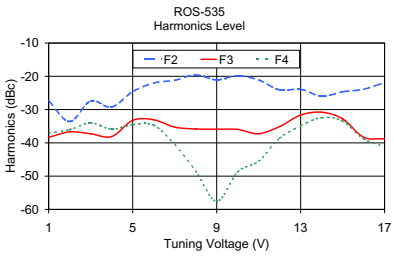
Performance Data & Curves

ROS-535



V TUNE	TUNING SENS. (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)		
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C
1.00	26.56	256.90	253.31	250.30	7.65	8.20	7.17
2.00	19.90	276.80	273.22	269.89	7.93	8.32	8.23
3.00	17.98	294.53	291.20	288.06	8.14	8.51	7.87
4.00	17.41	312.58	308.61	304.45	7.91	8.73	8.63
5.00	17.15	328.96	325.76	322.94	7.32	7.85	7.87
6.00	19.71	349.18	345.47	341.76	8.14	8.18	8.56
7.00	19.33	369.22	364.80	360.00	7.26	9.03	8.10
8.00	19.07	387.26	383.87	380.54	7.93	7.80	8.00
9.00	21.95	409.98	405.82	402.11	6.67	7.98	7.20
10.00	20.42	430.21	426.24	421.25	7.47	7.00	7.47
11.00	17.98	448.26	444.22	440.51	6.02	6.64	6.34
12.00	20.35	469.06	464.58	460.48	6.47	6.79	6.24
13.00	19.14	488.26	483.71	478.85	4.77	5.43	5.67
14.00	16.13	504.38	499.84	494.46	4.85	5.26	5.39
15.00	12.03	516.48	511.87	506.82	4.75	5.62	6.00
16.00	12.67	528.77	524.54	522.24	4.31	6.31	4.86
17.00	14.53	542.85	539.07	534.85	4.62	4.79	4.62





V TUNE	HARMONICS (dBc)			FREQ. PUSHING (MHz/V)
	F2	F3	F4	
1.00	-27.38	-38.33	-37.02	0.26
2.00	-33.58	-36.70	-36.04	-0.06
3.00	-27.41	-37.27	-33.99	0.19
4.00	-29.24	-38.10	-35.89	-0.19
5.00	-24.60	-33.24	-34.54	0.32
6.00	-22.01	-33.06	-34.68	-0.06
7.00	-21.20	-35.28	-40.46	-0.32
8.00	-19.59	-35.82	-48.52	0.19
9.00	-21.06	-35.91	-57.57	0.00
10.00	-19.80	-35.96	-48.72	-0.26
11.00	-21.11	-37.25	-45.48	0.32
12.00	-24.06	-35.08	-38.59	0.19
13.00	-23.89	-31.64	-34.89	-0.06
14.00	-25.99	-30.78	-32.40	-0.13
15.00	-24.64	-32.79	-33.44	-0.58
16.00	-23.87	-38.34	-38.77	0.64
17.00	-21.87	-38.79	-41.19	0.45