Surface Mount

Voltage Controlled Oscillator

ROS-1435PV+

5V Tuning for PLL IC's 1375 to 1435 MHz

CASE STYLE: CK605

+RoHS Compliant

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

Features

- linear tuning, 20-30 MHz/V typ.
- low phase noise, -121 dBc/Hz at 100 kHz offset typ.
- 5V power supply
- excellent harmonic suppression, -26 dBc typ.
- aqueous washable
- protected by US patent 6,424,241

Applications

- satellite receiver
- PLL circuitry

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	
					1	10	100	1							Voltage	Current (mA)
Min.	Max.	Typ.	Min.	Max.	kHz	kHz	kHz	MHz	Typ.	Typ.	Typ.	Typ.	Max.	Typ.	(V)	Max.
1375	1435	3	0.5	5.0	-75	-101	-121	-141	4.0	1.7	20-30	-26	-18	5.0	5	20

Pin Connections

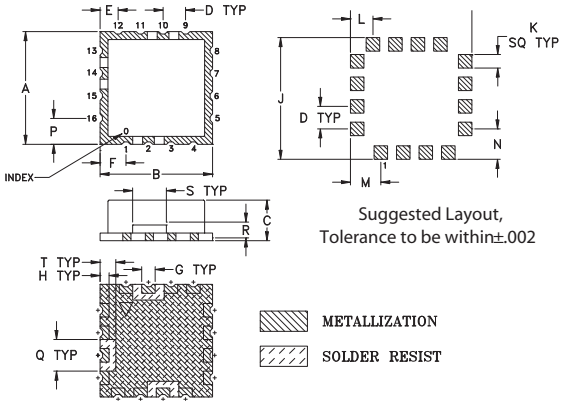
RF OUT	10
VCC	14
V-TUNE	2
GROUND	1,3,4,5,6,7,8,9,11,12,13,15,16

Maximum Ratings

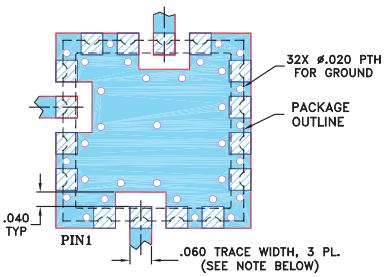
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+6V
Absolute Max. Tuning Voltage (Vtune)	+6V

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)

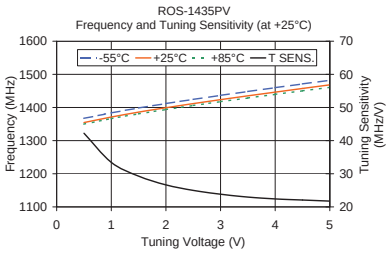
DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Outline Dimensions (inch / mm)

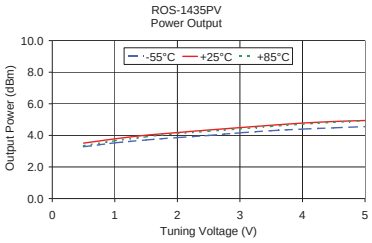
A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	wt.
.500	.500	.180	.100	.080	.115	.060	.040	.540	.060	.100	.135	.135	.115	.140	.070	.150	.070	grams
12.70	12.70	4.57	2.54	2.03	2.92	1.52	1.02	13.72	1.52	2.54	3.43	3.43	2.92	3.56	1.78	3.81	1.78	1.0

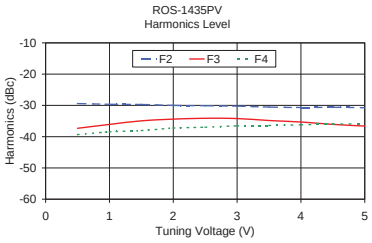
Performance Data & Curves

ROS-1435PV+

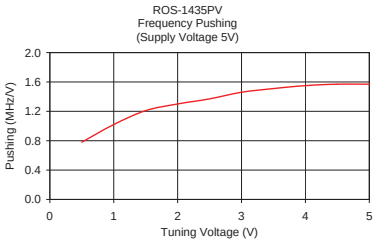


V TUNE	TUNING SENS. (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)		
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C
0.50	42.22	1367.29	1354.58	1349.90	3.28	3.51	3.35
1.00	33.44	1383.81	1371.29	1366.43	3.53	3.78	3.66
1.50	29.28	1398.46	1385.93	1380.79	3.71	4.01	3.91
2.00	26.65	1411.91	1399.26	1393.87	3.86	4.18	4.11
2.50	24.97	1424.55	1411.74	1406.08	4.00	4.34	4.26
3.00	23.83	1436.65	1423.66	1417.71	4.16	4.49	4.41
3.50	22.97	1448.37	1435.14	1428.89	4.30	4.64	4.57
4.00	22.40	1459.82	1446.34	1439.78	4.40	4.78	4.71
4.50	22.07	1471.14	1457.38	1450.46	4.48	4.88	4.83
5.00	21.75	1482.33	1468.25	1460.97	4.56	4.94	4.93





V TUNE	HARMONICS (dBc)			FREQ. PUSHING (MHz/V)
	F2	F3	F4	
0.50	-29.40	-37.32	-39.33	0.78
1.00	-29.64	-36.08	-38.44	1.02
1.50	-29.69	-34.94	-38.04	1.21
2.00	-30.00	-34.40	-37.25	1.30
2.50	-30.09	-34.13	-36.96	1.37
3.00	-30.23	-34.20	-36.53	1.46
3.50	-30.52	-34.84	-36.42	1.51
4.00	-30.67	-35.32	-36.19	1.55
4.50	-30.60	-36.06	-36.00	1.57
5.00	-30.73	-36.62	-35.82	1.57



Notes

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