

Surface Mount Voltage Controlled Oscillator

ROS-1605PV+ ROS-1605PV

5V Tuning for PLL IC's 1500 to 1605 MHz

Features

- low phase noise, -98 dBc/Hz at 10 kHz offset, typ.
- linear tuning, 40-50 MHz/V typ.
- 3.3V power supply

Applications

- GPS
- PLL circuitry



CASE STYLE: CK605
PRICE: \$19.95 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.

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.	Voltage (V)	Current (mA) Max.
1500	1605	0	0.5	5.0	-74	-98	-118	-138	6.0	0.8	40-50	-17	-8	8.0	3.3	16

Pin Connections

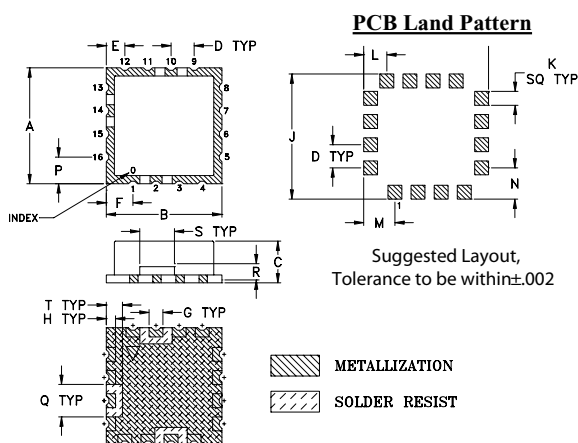
RF OUT	10
VCC	14
V-TUNE	2
GROUND	1,3,4,5,6,7,8,9,11,12,13,15,16

Maximum Ratings

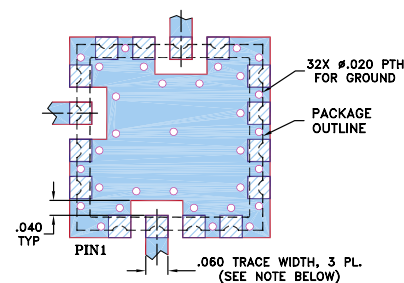
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+3.5V
Absolute Max. Tuning Voltage (Vtune)	+6V

all specifications: 50 ohm system

Outline Drawing



Demo Board MCL PIN: 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



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site



The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com

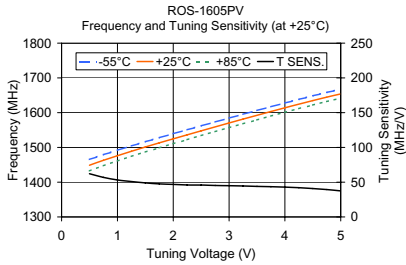
RF/IF MICROWAVE COMPONENTS



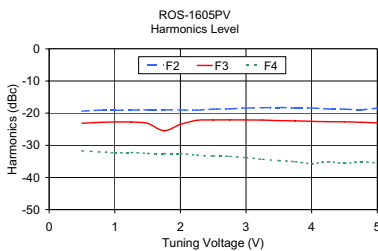
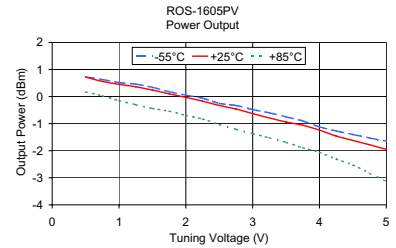
REV. C
M102713
ED-7820B/3
ROS-1605PV
MM/TD/CP/AM
070705
Page 1 of 2

Performance Data & Curves

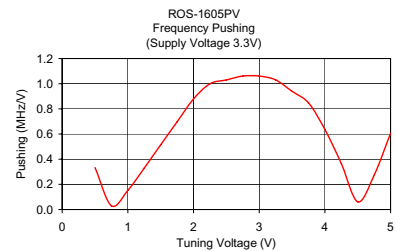
ROS-1605PV+ ROS-1605PV



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	62.17	1465.51	1448.68	1432.50	0.73	0.72	0.17
0.75	56.88	1479.22	1462.90	1447.33	0.63	0.56	0.03
1.00	53.24	1492.08	1476.21	1461.10	0.52	0.45	-0.15
1.25	50.93	1504.40	1488.94	1474.21	0.46	0.36	-0.30
1.50	48.95	1516.36	1501.18	1486.75	0.34	0.24	-0.44
1.75	47.58	1528.00	1513.07	1498.90	0.18	0.10	-0.54
2.00	46.86	1539.52	1524.79	1510.79	0.05	-0.03	-0.69
2.25	45.99	1550.86	1536.29	1522.46	-0.06	-0.17	-0.83
2.50	45.84	1562.16	1547.75	1534.06	-0.25	-0.33	-1.03
2.75	45.30	1573.32	1559.07	1545.52	-0.33	-0.46	-1.21
3.00	44.93	1584.42	1570.30	1556.92	-0.48	-0.63	-1.37
3.25	44.56	1595.42	1581.44	1568.18	-0.60	-0.79	-1.52
3.50	43.88	1606.31	1592.41	1579.31	-0.75	-0.94	-1.69
3.75	43.48	1617.11	1603.28	1590.26	-0.90	-1.06	-1.89
4.00	42.88	1627.80	1614.00	1601.07	-1.12	-1.24	-2.06
4.25	42.07	1638.29	1624.52	1611.70	-1.27	-1.46	-2.31
4.50	40.88	1648.50	1634.74	1622.03	-1.40	-1.62	-2.53
4.75	39.40	1658.30	1644.58	1632.00	-1.53	-1.78	-2.83
5.00	37.50	1667.57	1653.96	1641.53	-1.65	-1.95	-3.14



V TUNE	HARMONICS (dBc)			FREQ. PUSHING (MHz/V)
	F2	F3	F4	
0.50	-19.36	-23.15	-31.68	0.33
0.75	-19.10	-22.88	-32.02	0.03
1.00	-19.10	-22.73	-32.33	0.15
1.25	-19.05	-22.78	-32.24	0.33
1.50	-18.95	-23.18	-32.54	0.52
1.75	-18.94	-25.47	-32.58	0.70
2.00	-19.01	-23.51	-32.56	0.88
2.25	-19.05	-22.24	-33.05	1.00
2.50	-18.75	-22.11	-33.32	1.03
2.75	-18.64	-22.08	-33.44	1.06
3.00	-18.40	-22.11	-33.82	1.06
3.25	-18.30	-22.15	-34.34	1.03
3.50	-18.23	-22.31	-34.75	0.94
3.75	-18.40	-22.40	-35.07	0.85
4.00	-18.39	-22.54	-35.71	0.64
4.25	-18.67	-22.66	-35.12	0.36
4.50	-18.76	-22.70	-35.61	0.06
4.75	-18.95	-22.85	-35.16	0.27
5.00	-18.42	-23.00	-35.46	0.61



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