Surface Mount

Voltage Controlled Oscillator

ROS-1600PV+

5V Tuning for PLL IC's 1520 to 1600 MHz



CASE STYLE: CK605

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

Features
- supply voltage, 5V
- tuning voltage, 5V
- linear tuning, 25-38 MHz/V typ.
- low phase noise, -100 dBc/Hz at 10 kHz offset, typ.
- aqueous washable

Applications
- PCS
- CDMA
- 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	
Min.	Max.	Typ.	Min.	Max.	1 kHz	10 kHz	100 kHz	1 MHz	Typ.	Typ.	Typ.	Typ.	Max.	Typ.	Voltage (V)	Current (mA) Max.
1520	1600	7	0.5	5.0	-75	-100	-120	-140	10	3.0	25-38	-26	-16	1.0	5	25

Pin Connections

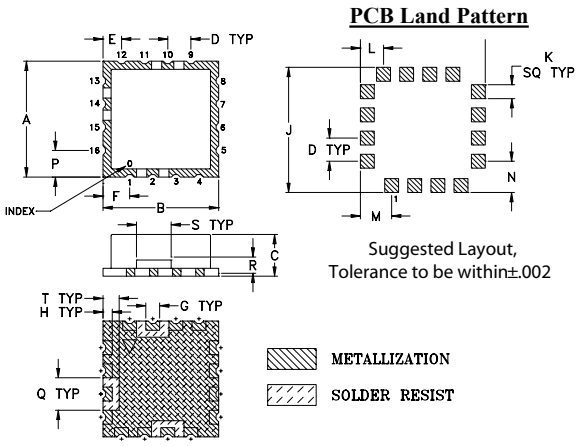
RF OUT	10
VCC	14
V-TUNE	2
GROUND	1,3,4,5,6,7,8,9,11,12,13,15,16

Maximum Ratings

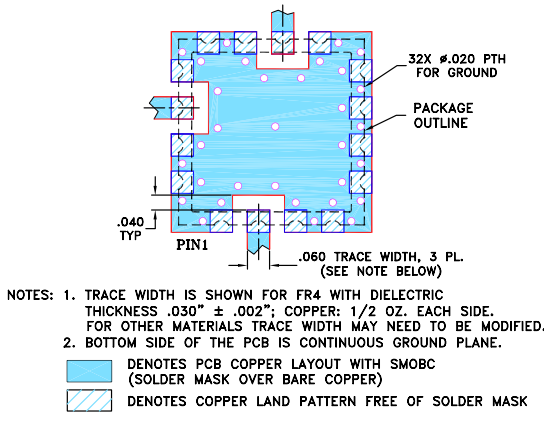
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+6V
Absolute Max. Tuning Voltage (Vtune)	+6V

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)



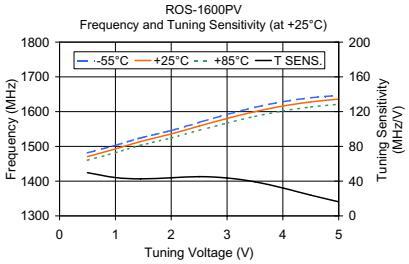
Outline Dimensions (inch / mm)

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

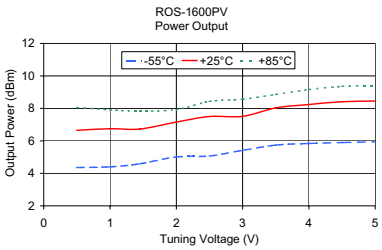
Notes
A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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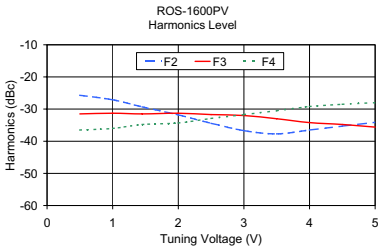
Performance Data & Curves

ROS-1600PV+

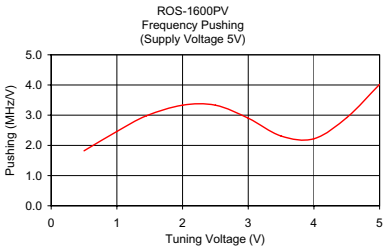


V TUNE	TUNING SENS. (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)		
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C
0.50	49.70	1481.38	1470.62	1460.02	4.36	6.65	8.06
1.00	44.10	1503.13	1492.65	1481.95	4.40	6.75	7.91
1.45	42.60	1524.32	1513.92	1503.01	4.59	6.73	7.83
2.00	43.90	1545.66	1535.90	1524.43	5.01	7.16	7.93
2.50	45.20	1569.15	1558.52	1546.12	5.07	7.50	8.43
3.00	43.60	1592.01	1580.33	1567.14	5.42	7.51	8.57
3.50	39.30	1612.34	1600.00	1586.13	5.74	8.03	8.86
4.00	32.10	1628.52	1616.05	1601.77	5.84	8.24	9.16
4.50	23.90	1639.88	1627.97	1613.35	5.90	8.41	9.36
5.00	16.20	1646.98	1636.06	1621.15	5.94	8.45	9.40





V TUNE	HARMONICS (dBc)			FREQ. PUSHING (MHz/V)
	F2	F3	F4	
0.50	-25.70	-31.50	-36.50	1.82
1.00	-27.10	-31.30	-36.00	2.46
1.45	-29.30	-31.50	-34.80	2.98
2.00	-31.80	-31.30	-34.30	3.33
2.50	-34.40	-31.70	-32.90	3.33
3.00	-36.70	-32.00	-31.70	2.90
3.50	-37.70	-33.00	-30.50	2.31
4.00	-36.50	-34.20	-29.20	2.22
4.50	-35.30	-34.80	-28.50	2.92
5.00	-34.10	-35.60	-28.00	4.02



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