

NON-CATALOG

Surface Mount

Voltage Controlled Oscillator

ROS-1121V

Linear Tuning 1060 to 1121 MHz

Features

- linear tuning characteristics
- linear sensitivity, 8-13 MHz/V typ.
- low phase noise, -111 dBc/Hz at 10 KHz
- 5V power supply
- aqueous washable

Applications

- radio



CASE STYLE: CK605
PRICE: Contact Sales Dept.

+RoHS Compliant

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. | Vcc (volts) | Current (mA) Max. |
| 1060 | 1121 | 2.5 | 1 | 11 | -88 | -111 | -131 | -149 | 0.7 | 0.7 | 8-13 | -11 | — | 10.0 | 5 | 30 |

Pin Connections

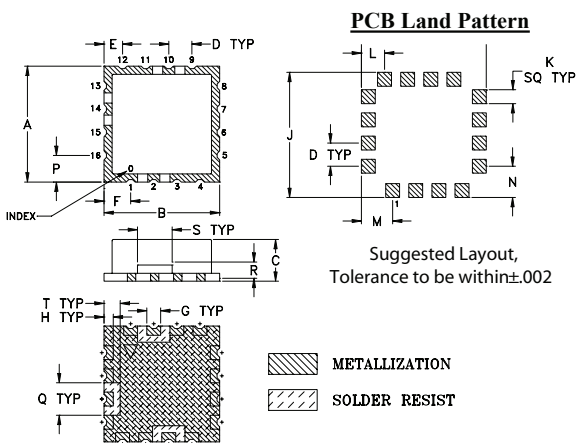
| | |
|--------|--------------------------------|
| RF OUT | 10 |
| VCC | 14 |
| V-TUNE | 2 |
| GROUND | 1,3,4,5,6,7,8,9,11,12,13,15,16 |

Maximum Ratings

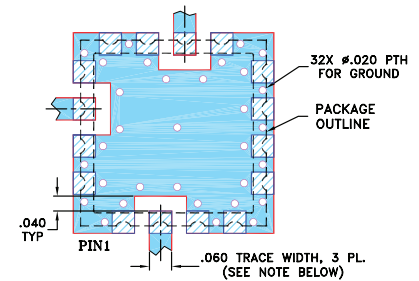
| | |
|--------------------------------------|----------------|
| Operating Temperature | -55°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| Absolute Max. Supply Voltage (Vcc) | +6V |
| Absolute Max. Tuning Voltage (Vtune) | +12V |

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

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 |



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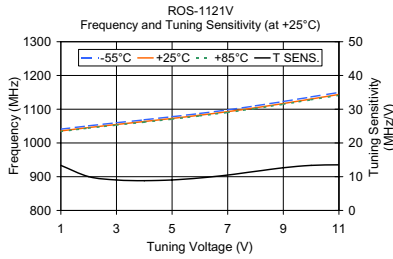
For detailed performance specs & shipping online see web site

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ROS-1121V
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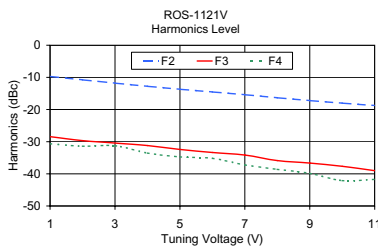
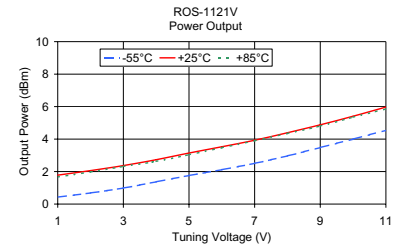
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Performance Data & Curves

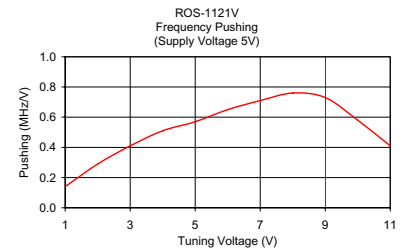
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| V TUNE | TUNING SENS. (MHz/V) | FREQUENCY (MHz) | | | POWER OUTPUT (dBm) | | |
|--------|----------------------|-----------------|---------|---------|--------------------|-------|-------|
| | | -55°C | +25°C | +85°C | -55°C | +25°C | +85°C |
| 1.00 | 13.36 | 1040.92 | 1035.70 | 1033.92 | 0.43 | 1.78 | 1.67 |
| 2.00 | 10.02 | 1050.77 | 1045.71 | 1043.96 | 0.69 | 2.06 | 1.98 |
| 3.00 | 9.03 | 1059.79 | 1054.75 | 1052.96 | 0.99 | 2.37 | 2.32 |
| 4.00 | 8.83 | 1068.66 | 1063.58 | 1061.72 | 1.37 | 2.73 | 2.63 |
| 5.00 | 9.03 | 1077.78 | 1072.61 | 1070.68 | 1.76 | 3.14 | 3.04 |
| 6.00 | 9.63 | 1087.55 | 1082.23 | 1080.20 | 2.12 | 3.53 | 3.47 |
| 7.00 | 10.50 | 1098.23 | 1092.74 | 1090.60 | 2.51 | 3.93 | 3.90 |
| 8.00 | 11.59 | 1110.01 | 1104.32 | 1102.06 | 2.97 | 4.39 | 4.35 |
| 9.00 | 12.65 | 1122.85 | 1116.97 | 1114.59 | 3.48 | 4.88 | 4.81 |
| 10.00 | 13.36 | 1136.40 | 1130.34 | 1127.89 | 4.00 | 5.41 | 5.35 |
| 11.00 | 13.51 | 1150.07 | 1143.85 | 1141.35 | 4.54 | 5.97 | 5.86 |



| V TUNE | HARMONICS (dBc) | | | FREQ. PUSHING (MHz/V) |
|--------|-----------------|--------|--------|-----------------------|
| | F2 | F3 | F4 | |
| 1.00 | -9.69 | -28.43 | -30.63 | 0.14 |
| 2.00 | -10.76 | -29.67 | -31.40 | 0.29 |
| 3.00 | -11.77 | -30.42 | -31.26 | 0.41 |
| 4.00 | -12.77 | -31.20 | -33.52 | 0.51 |
| 5.00 | -13.69 | -32.42 | -34.73 | 0.57 |
| 6.00 | -14.53 | -33.37 | -35.16 | 0.65 |
| 7.00 | -15.38 | -34.16 | -37.21 | 0.71 |
| 8.00 | -16.33 | -35.88 | -38.59 | 0.76 |
| 9.00 | -17.21 | -36.65 | -39.86 | 0.73 |
| 10.00 | -18.00 | -37.65 | -42.11 | 0.58 |
| 11.00 | -18.73 | -39.01 | -41.72 | 0.41 |



For detailed performance specs & shopping online see web site

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IF/RF MICROWAVE COMPONENTS

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