

Low Noise 2670 to 2700 MHz

Features

- linear tuning characteristics
- low phase noise
- low pulling
- low pushing
- aqueous washable

Applications

- wireless communications
- point-to-point



CASE STYLE: CK605
PRICE: \$ 25.95 ea. QTY (5-49)

+RoHS Compliant

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

Electrical Specifications

| MODEL NO. | FREQ. (MHz) | | POWER OUTPUT (dBm) | PHASE NOISE dBc/Hz SSB at offset frequencies, kHz | | | | TUNING | | | | | NON HARMONIC SPURIOUS (dBc) | HARMONICS (dBc) | | PULLING pk-pk @ 12 dBr (MHz) | PUSHING (MHz/V) | DC OPERATING POWER | |
|----------------|-------------|------|--------------------|---|------|------|------|--------|-------------------|----------------------|---------------|---------------------------------|-----------------------------|-----------------|------|------------------------------|-----------------|--------------------|------|
| | Min. | Max. | | Typ. | 1 | 10 | 100 | 1000 | VOLTAGE RANGE (V) | SENSI-TIVITY (MHz/V) | PORT CAP (pF) | 3 dB MODULATION BANDWIDTH (MHz) | | Typ. | Typ. | | | Typ. | Typ. |
| ROS-2710C-119+ | 2670 | 2700 | +3.5 | -83 | -110 | -131 | -150 | 0.5 | 5.5 | 16 | 18 | 100 | -90 | -14 | - | 0.3 | 0.4 | 5 | 35 |

Pin Connections

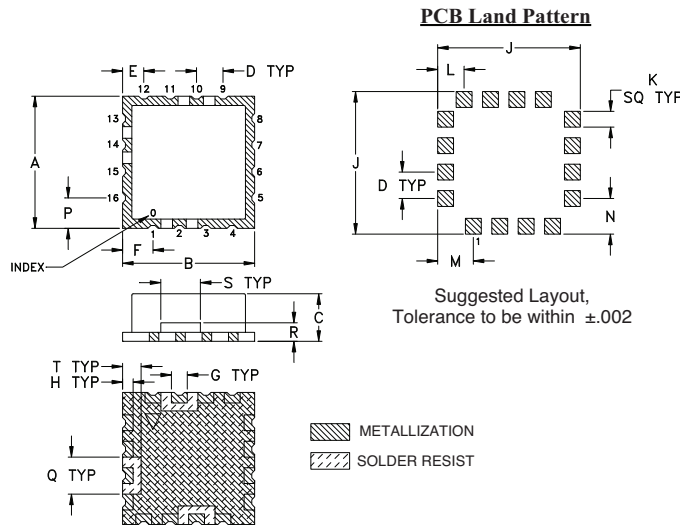
| | |
|--------|--------------------------------|
| RF OUT | 10 |
| VCC | 14 |
| V-TUNE | 2 |
| GROUND | 1,3,4,5,6,7,8,9,11,12,13,15,16 |

Maximum Ratings

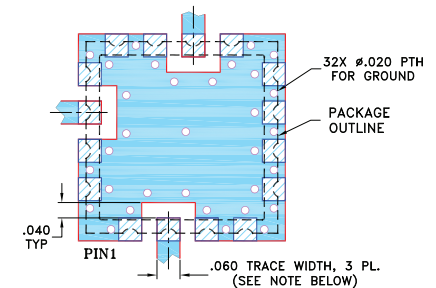
| | |
|--------------------------------------|----------------|
| Operating Temperature | -55°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| Absolute Max. Supply Voltage (Vcc) | 6V |
| Absolute Max. Tuning Voltage (Vtune) | 7V |
| All specifications | 50 ohm system |

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 BOTTOM 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)

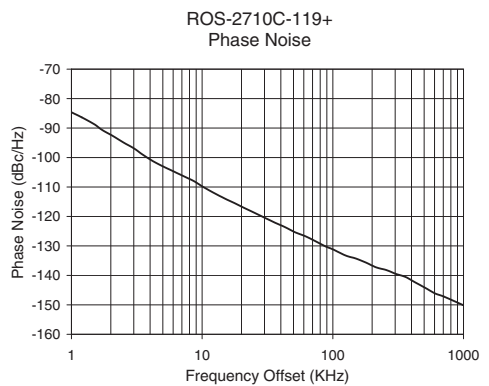
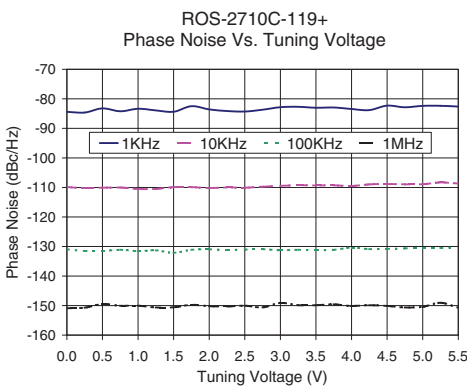
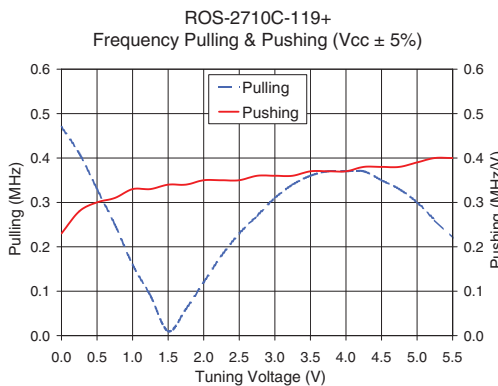
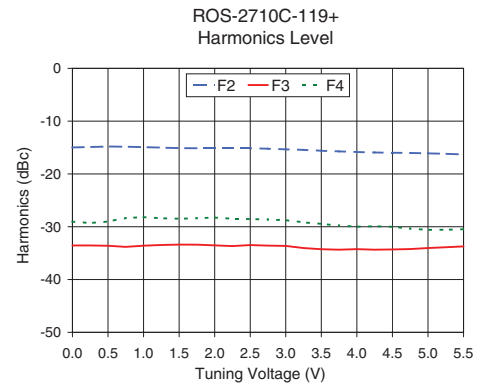
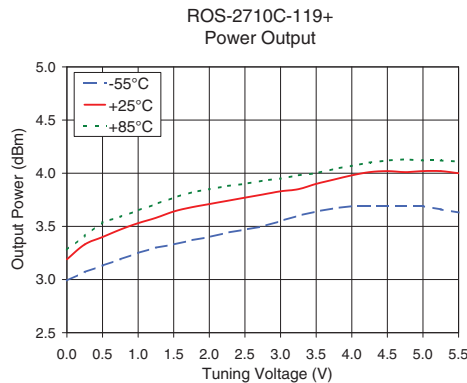
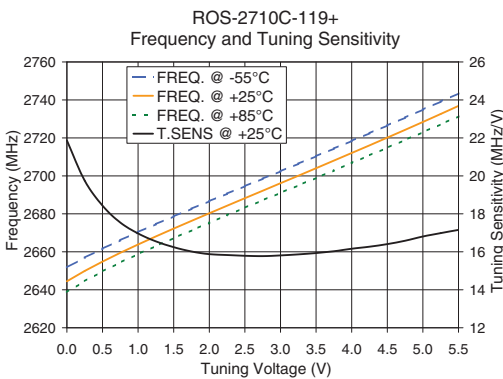
| | | | | | | | | | | | | | | | | | | |
|-------|-------|------|------|------|------|------|------|-------|------|------|------|------|------|------|------|------|------|-------|
| A | B | C | D | E | F | G | H | J | K | L | M | N | P | Q | R | S | T | wt. |
| .500 | .500 | .180 | .100 | .080 | .115 | .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-2710C-119+

| V TUNE | TUNE SENS (MHz/V) | FREQUENCY (MHz) | | | POWER OUTPUT (dBm) | | | Icc (mA) | HARMONICS (dBc) | | | FREQ. PUSH (MHz/V) | FREQ. PULL (MHz) | PHASE NOISE (dBc/Hz) at offsets | | | | FREQ OFFSET (KHz) | PHASE NOISE at 2685 MHz (dBc/Hz) |
|--------|-------------------|-----------------|--------|--------|--------------------|-------|-------|----------|-----------------|-------|-------|--------------------|------------------|---------------------------------|--------|--------|--------|-------------------|----------------------------------|
| | | -55°C | +25°C | +85°C | -55°C | +25°C | +85°C | | F2 | F3 | F4 | | | 1KHz | 10KHz | 100KHz | 1MHz | | |
| 0.00 | 21.87 | 2651.8 | 2644.5 | 2638.8 | 2.99 | 3.19 | 3.28 | 21.79 | -15.0 | -33.6 | -29.0 | 0.23 | 0.47 | -84.4 | -109.9 | -130.9 | -150.9 | 1.0 | -84.63 |
| 0.25 | 19.75 | 2656.9 | 2649.9 | 2644.6 | 3.07 | 3.33 | 3.41 | 21.84 | -14.9 | -33.5 | -29.3 | 0.28 | 0.41 | -84.6 | -110.2 | -131.5 | -150.7 | 2.1 | -92.82 |
| 0.50 | 18.43 | 2661.6 | 2654.9 | 2649.7 | 3.13 | 3.40 | 3.54 | 21.87 | -14.8 | -33.6 | -29.0 | 0.30 | 0.33 | -83.2 | -110.1 | -131.5 | -149.5 | 4.2 | -101.22 |
| 1.00 | 16.97 | 2670.4 | 2663.9 | 2658.8 | 3.25 | 3.53 | 3.65 | 21.93 | -14.9 | -33.6 | -28.2 | 0.33 | 0.16 | -83.4 | -110.5 | -131.6 | -150.0 | 6.1 | -104.77 |
| 1.25 | 16.55 | 2674.6 | 2668.1 | 2663.1 | 3.30 | 3.58 | 3.71 | 21.95 | -15.0 | -33.5 | -28.4 | 0.33 | 0.09 | -83.9 | -110.5 | -131.3 | -150.7 | 8.7 | -108.07 |
| 1.50 | 16.24 | 2678.6 | 2672.2 | 2667.2 | 3.33 | 3.64 | 3.77 | 21.97 | -15.1 | -33.4 | -28.5 | 0.34 | 0.01 | -84.4 | -109.9 | -132.1 | -150.6 | 10.0 | -109.77 |
| 1.75 | 16.02 | 2682.7 | 2676.3 | 2671.3 | 3.37 | 3.68 | 3.82 | 21.98 | -15.1 | -33.4 | -28.4 | 0.34 | 0.06 | -82.5 | -109.9 | -131.1 | -149.7 | 25.2 | -118.79 |
| 2.00 | 15.88 | 2686.7 | 2680.3 | 2675.3 | 3.40 | 3.71 | 3.85 | 21.99 | -15.1 | -33.5 | -28.3 | 0.35 | 0.12 | -83.6 | -110.2 | -130.9 | -150.2 | 43.1 | -123.64 |
| 2.25 | 15.83 | 2690.6 | 2684.3 | 2679.3 | 3.44 | 3.74 | 3.88 | 22.00 | -15.1 | -33.7 | -28.5 | 0.35 | 0.18 | -84.1 | -110.0 | -131.1 | -150.3 | 61.6 | -126.71 |
| 2.50 | 15.79 | 2694.6 | 2688.2 | 2683.2 | 3.47 | 3.77 | 3.90 | 22.00 | -15.1 | -33.5 | -28.6 | 0.35 | 0.23 | -84.3 | -110.1 | -131.0 | -150.0 | 88.0 | -130.18 |
| 2.75 | 15.77 | 2698.5 | 2692.2 | 2687.1 | 3.50 | 3.80 | 3.93 | 22.00 | -15.2 | -33.6 | -28.6 | 0.36 | 0.27 | -83.7 | -109.8 | -130.9 | -150.6 | 100.0 | -131.15 |
| 3.00 | 15.81 | 2702.4 | 2696.1 | 2691.0 | 3.55 | 3.83 | 3.95 | 22.00 | -15.3 | -33.6 | -28.8 | 0.36 | 0.31 | -82.8 | -109.5 | -131.3 | -149.1 | 150.3 | -134.28 |
| 3.25 | 15.87 | 2706.4 | 2700.1 | 2695.0 | 3.60 | 3.85 | 3.98 | 22.01 | -15.5 | -34.0 | -29.2 | 0.36 | 0.34 | -82.7 | -109.3 | -131.1 | -149.9 | 214.7 | -137.27 |
| 3.50 | 15.94 | 2710.4 | 2704.0 | 2698.9 | 3.64 | 3.90 | 4.00 | 22.00 | -15.6 | -34.3 | -29.5 | 0.37 | 0.36 | -83.0 | -109.3 | -131.3 | -149.9 | 306.7 | -139.56 |
| 3.75 | 16.03 | 2714.4 | 2708.0 | 2702.8 | 3.67 | 3.94 | 4.04 | 21.99 | -15.7 | -34.4 | -29.8 | 0.37 | 0.37 | -82.9 | -109.3 | -131.1 | -149.6 | 430.5 | -142.48 |
| 4.00 | 16.16 | 2718.4 | 2712.0 | 2706.8 | 3.69 | 3.98 | 4.07 | 21.99 | -15.8 | -34.3 | -30.0 | 0.37 | 0.37 | -83.4 | -109.5 | -130.4 | -150.1 | 505.5 | -144.15 |
| 4.25 | 16.27 | 2722.5 | 2716.1 | 2710.8 | 3.69 | 4.01 | 4.10 | 21.98 | -15.9 | -34.3 | -29.9 | 0.38 | 0.37 | -83.8 | -109.0 | -130.9 | -149.9 | 604.2 | -146.11 |
| 4.50 | 16.41 | 2726.6 | 2720.1 | 2714.8 | 3.69 | 4.02 | 4.12 | 21.96 | -16.0 | -34.3 | -30.0 | 0.38 | 0.35 | -82.3 | -108.8 | -130.8 | -150.1 | 709.5 | -147.23 |
| 5.00 | 16.81 | 2734.9 | 2728.4 | 2723.0 | 3.69 | 4.02 | 4.12 | 21.92 | -16.1 | -34.0 | -30.6 | 0.39 | 0.30 | -82.4 | -108.9 | -130.6 | -150.4 | 995.8 | -150.12 |
| 5.50 | 17.15 | 2743.4 | 2736.8 | 2731.3 | 3.63 | 4.00 | 4.11 | 21.88 | -16.3 | -33.7 | -30.5 | 0.40 | 0.22 | -82.6 | -108.7 | -130.3 | -150.8 | 1000.0 | -150.14 |

*at 25°C unless mentioned otherwise



For detailed performance specs & shopping online see web site

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