

# Voltage Controlled Oscillator

ROS-EDR9618

## Typical Performance Data

| V<br>TUNE | TUNE<br>SENS<br>(MHz/V) | FREQUENCY<br>(MHz) |         |         | POWER OUTPUT<br>(dBm) |       |       | HARMONICS<br>(dBc) |        |        | FREQ.<br>PUSH<br>(MHz/V) | FREQ<br>OFFSET<br>(KHz) | PHASE<br>NOISE<br>(dBc/Hz) |
|-----------|-------------------------|--------------------|---------|---------|-----------------------|-------|-------|--------------------|--------|--------|--------------------------|-------------------------|----------------------------|
|           |                         | -55°C              | +25°C   | +85°C   | -55°C                 | +25°C | +85°C | F2                 | F3     | F4     |                          |                         |                            |
| 0.0       | 98.41                   | 2362.45            | 2338.79 | 2329.58 | 6.19                  | 5.20  | 4.57  | -8.01              | -23.48 | -29.01 | 4.87                     | 1                       | -56                        |
| 0.3       | 91.28                   | 2385.67            | 2363.39 | 2354.90 | 6.18                  | 5.18  | 4.57  | -8.06              | -23.23 | -28.07 | 4.84                     | 10                      | -82                        |
| 1.0       | 83.69                   | 2449.05            | 2430.07 | 2423.22 | 6.16                  | 5.16  | 4.61  | -7.99              | -23.26 | -26.05 | 4.43                     | 100                     | -106                       |
| 1.5       | 84.09                   | 2489.69            | 2471.91 | 2464.83 | 6.24                  | 5.23  | 4.68  | -8.64              | -22.93 | -26.59 | 4.32                     | 1000                    | -128                       |
| 2.0       | 90.39                   | 2530.68            | 2513.96 | 2507.52 | 6.37                  | 5.28  | 4.76  | -9.26              | -23.21 | -25.72 | 3.75                     |                         |                            |
| 2.5       | 101.80                  | 2577.29            | 2559.15 | 2552.01 | 6.51                  | 5.41  | 4.91  | -9.82              | -22.99 | -26.01 | 3.91                     |                         |                            |
| 3.0       | 115.56                  | 2627.96            | 2610.05 | 2603.05 | 6.74                  | 5.57  | 5.07  | -10.33             | -24.08 | -27.23 | 3.35                     |                         |                            |
| 3.5       | 127.42                  | 2686.23            | 2667.83 | 2660.18 | 7.04                  | 5.81  | 5.33  | -10.89             | -23.80 | -30.13 | 2.88                     |                         |                            |
| 4.0       | 133.90                  | 2750.47            | 2731.54 | 2723.36 | 7.45                  | 6.26  | 5.78  | -11.35             | -20.52 | -34.36 | 2.04                     |                         |                            |
| 4.5       | 125.94                  | 2818.57            | 2798.49 | 2789.39 | 7.99                  | 6.76  | 6.26  | -11.57             | -19.22 | -41.44 | 1.15                     |                         |                            |
| 5.0       | 123.34                  | 2885.75            | 2861.46 | 2851.30 | 8.58                  | 7.36  | 6.86  | -11.83             | -19.67 | -48.77 | 0.37                     |                         |                            |
| 5.5       | 256.74                  | 2955.43            | 2923.12 | 2914.66 | 8.63                  | 7.58  | 7.04  | -13.32             | -22.64 | -55.59 | 0.53                     |                         |                            |
| 6.0       | 226.96                  | 3072.82            | 3051.50 | 3043.92 | 7.70                  | 6.11  | 5.44  | -23.95             | -29.53 | -57.58 | 1.72                     |                         |                            |
| 6.5       | 204.49                  | 3184.22            | 3164.98 | 3156.02 | 7.32                  | 5.79  | 5.15  | -32.49             | -28.12 | -43.34 | 1.58                     |                         |                            |
| 7.0       | 194.11                  | 3286.58            | 3267.22 | 3260.59 | 7.32                  | 5.94  | 5.16  | -25.05             | -29.35 | -40.06 | 1.98                     |                         |                            |
| 7.5       | 187.14                  | 3383.44            | 3364.28 | 3358.89 | 7.42                  | 6.15  | 5.20  | -21.65             | -30.07 | -46.31 | 2.08                     |                         |                            |
| 8.0       | 180.66                  | 3478.23            | 3457.85 | 3452.84 | 7.37                  | 6.29  | 5.28  | -19.89             | -29.61 | -46.30 | 2.23                     |                         |                            |
| 8.5       | 175.70                  | 3571.29            | 3548.18 | 3543.42 | 7.23                  | 6.29  | 5.23  | -18.05             | -31.38 | -40.92 | 1.96                     |                         |                            |
| 9.0       | 166.92                  | 3660.15            | 3636.03 | 3630.67 | 7.10                  | 6.21  | 5.08  | -18.29             | -35.31 | -38.76 | 1.65                     |                         |                            |
| 9.5       | 157.38                  | 3744.72            | 3719.49 | 3713.10 | 6.93                  | 6.08  | 5.00  | -18.01             | -41.33 | -36.54 | 1.48                     |                         |                            |
| 10.0      | 146.72                  | 3824.93            | 3798.18 | 3790.72 | 6.68                  | 5.98  | 4.87  | -18.13             | -47.72 | -37.96 | 1.22                     |                         |                            |
| 10.5      | 142.47                  | 3899.23            | 3871.54 | 3863.89 | 6.53                  | 5.89  | 4.71  | -19.94             | -56.67 | -51.22 | 0.90                     |                         |                            |
| 11.0      | 130.64                  | 3967.89            | 3942.78 | 3935.50 | 6.48                  | 5.74  | 4.40  | -21.42             | -59.95 | -40.39 | 0.61                     |                         |                            |
| 11.5      | 118.52                  | 4034.92            | 4008.10 | 4000.04 | 6.23                  | 5.68  | 4.43  | -21.10             | -54.76 | -40.18 | 0.34                     |                         |                            |
| 12.0      | 117.54                  | 4094.83            | 4067.36 | 4059.94 | 6.21                  | 5.71  | 4.37  | -19.96             | -53.41 | -46.55 | 0.02                     |                         |                            |
| 12.5      | 104.41                  | 4153.67            | 4126.13 | 4118.94 | 6.02                  | 5.58  | 4.29  | -18.63             | -46.09 | -46.33 | 0.34                     |                         |                            |
| 13.0      | 106.02                  | 4207.55            | 4178.34 | 4170.88 | 5.86                  | 5.54  | 4.23  | -18.78             | -41.15 | -44.78 | 0.70                     |                         |                            |
| 13.5      | 91.69                   | 4258.95            | 4231.35 | 4223.63 | 5.70                  | 5.35  | 4.10  | -18.33             | -36.87 | -48.49 | 1.15                     |                         |                            |
| 14.0      | 89.05                   | 4305.83            | 4277.19 | 4268.88 | 5.54                  | 5.30  | 4.09  | -18.86             | -34.81 | -56.10 | 1.54                     |                         |                            |
| 15.0      | 67.20                   | 4389.08            | 4363.02 | 4353.02 | 5.31                  | 5.11  | 4.04  | -19.95             | -33.51 | -49.80 | 1.98                     |                         |                            |
| 15.5      | 74.63                   | 4429.52            | 4396.62 | 4387.63 | 5.06                  | 5.18  | 4.13  | -20.33             | -35.07 | -50.99 | 2.61                     |                         |                            |
| 16.5      | 51.81                   | 4491.00            | 4463.71 | 4453.01 | 5.09                  | 5.06  | 4.12  | -19.25             | -37.68 | -50.76 | 2.86                     |                         |                            |
| 17.0      | 50.35                   | 4520.07            | 4489.61 | 4479.83 | 5.00                  | 5.17  | 4.23  | -18.98             | -39.52 | -50.86 | 2.95                     |                         |                            |
| 18.0      | 40.66                   | 4569.72            | 4541.91 | 4527.84 | 4.88                  | 5.03  | 4.25  | -17.70             | -40.63 | -52.81 | 4.35                     |                         |                            |
| 18.5      | 33.36                   | 4588.78            | 4562.24 | 4550.97 | 5.00                  | 5.08  | 4.30  | -17.12             | -42.16 | -54.66 | 3.22                     |                         |                            |
| 19.5      | 33.34                   | 4630.16            | 4595.02 | 4583.22 | 5.01                  | 5.29  | 4.56  | -17.82             | -43.23 | -59.90 | 3.85                     |                         |                            |
| 20.0      | 33.34                   | 4646.73            | 4611.69 | 4598.41 | 5.00                  | 5.34  | 4.64  | -17.64             | -41.72 | -61.43 | 4.82                     |                         |                            |

### 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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