

# Voltage Controlled Oscillator

JTOS-ED8878C/1

## Typical Performance Data

| V<br>TUNE | TUNE<br>SENS<br>(MHz/V) | FREQUENCY<br>(MHz) |        |        | POWER OUTPUT<br>(dBm) |       |       | HARMONICS (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    |                          |                         |                            |
| 0.4       | 219.28                  | 2114.5             | 2079.0 | 1968.2 | 12.83                 | 12.80 | 14.09 | -15.8           | -25.6 | -36.3 | 16.32                    | 1                       | -63                        |
| 0.8       | 185.34                  | 2185.2             | 2149.4 | 2053.5 | 13.62                 | 13.72 | 14.98 | -15.2           | -29.5 | -34.6 | 14.72                    | 10                      | -90                        |
| 1.1       | 178.58                  | 2252.9             | 2217.2 | 2141.9 | 14.13                 | 14.24 | 14.60 | -16.0           | -31.7 | -38.2 | 18.30                    | 100                     | -110                       |
| 1.5       | 169.71                  | 2318.9             | 2281.7 | 2219.9 | 14.02                 | 14.44 | 14.00 | -18.1           | -34.4 | -35.1 | 16.16                    | 1000                    | -130                       |
| 1.9       | 162.45                  | 2377.8             | 2343.5 | 2288.7 | 13.76                 | 14.25 | 13.64 | -22.0           | -41.0 | -35.5 | 10.54                    |                         |                            |
| 2.3       | 161.29                  | 2435.9             | 2404.8 | 2358.5 | 13.79                 | 14.29 | 12.79 | -25.8           | -33.1 | -38.1 | 6.56                     |                         |                            |
| 2.7       | 164.87                  | 2498.9             | 2467.4 | 2429.0 | 13.80                 | 14.29 | 11.55 | -28.1           | -29.0 | -41.3 | 4.74                     |                         |                            |
| 3.0       | 162.00                  | 2558.9             | 2529.0 | 2494.4 | 13.80                 | 14.08 | 10.89 | -25.2           | -30.1 | -44.2 | 5.06                     |                         |                            |
| 3.4       | 150.03                  | 2616.9             | 2586.0 | 2558.5 | 13.44                 | 13.94 | 10.61 | -23.8           | -34.2 | -43.5 | 6.54                     |                         |                            |
| 3.8       | 146.84                  | 2671.8             | 2641.8 | 2620.6 | 13.40                 | 13.86 | 10.12 | -23.2           | -35.2 | -43.5 | 8.06                     |                         |                            |
| 4.2       | 141.92                  | 2726.1             | 2695.7 | 2678.4 | 13.37                 | 13.58 | 10.23 | -23.1           | -33.9 | -44.1 | 10.06                    |                         |                            |
| 4.6       | 136.21                  | 2777.4             | 2747.5 | 2733.4 | 13.12                 | 13.58 | 10.52 | -22.6           | -35.6 | -45.7 | 10.46                    |                         |                            |
| 4.9       | 130.45                  | 2827.2             | 2797.0 | 2783.3 | 12.94                 | 13.41 | 10.81 | -22.3           | -33.0 | -43.4 | 11.20                    |                         |                            |
| 5.3       | 121.00                  | 2872.6             | 2843.0 | 2830.0 | 12.67                 | 13.05 | 11.03 | -22.2           | -34.0 | -43.0 | 10.46                    |                         |                            |
| 5.7       | 113.47                  | 2915.3             | 2886.1 | 2871.2 | 12.60                 | 13.00 | 11.18 | -22.4           | -35.5 | -44.0 | 9.98                     |                         |                            |
| 6.1       | 103.13                  | 2955.2             | 2925.3 | 2909.0 | 12.21                 | 12.87 | 11.68 | -22.2           | -35.6 | -45.0 | 8.72                     |                         |                            |
| 6.5       | 96.18                   | 2989.4             | 2961.9 | 2942.8 | 12.16                 | 12.72 | 11.79 | -21.8           | -43.4 | -46.5 | 7.70                     |                         |                            |
| 6.8       | 82.95                   | 3021.0             | 2993.4 | 2974.5 | 11.65                 | 12.49 | 12.01 | -21.9           | -37.7 | -49.5 | 7.02                     |                         |                            |
| 7.2       | 76.21                   | 3051.8             | 3022.4 | 3001.3 | 11.71                 | 12.12 | 12.11 | -22.0           | -38.9 | -49.8 | 6.28                     |                         |                            |
| 7.6       | 73.13                   | 3077.1             | 3050.1 | 3025.9 | 11.60                 | 12.18 | 12.15 | -21.7           | -36.8 | -50.7 | 5.62                     |                         |                            |
| 8.0       | 58.90                   | 3099.9             | 3072.5 | 3049.4 | 11.26                 | 12.18 | 12.33 | -21.8           | -38.0 | -50.9 | 5.06                     |                         |                            |
| 8.4       | 53.26                   | 3121.9             | 3092.8 | 3068.7 | 10.95                 | 11.97 | 12.63 | -21.8           | -37.5 | -49.9 | 4.60                     |                         |                            |
| 8.7       | 46.53                   | 3141.2             | 3110.4 | 3085.1 | 11.04                 | 11.81 | 12.73 | -21.9           | -37.9 | -50.2 | 3.86                     |                         |                            |
| 9.1       | 45.89                   | 3156.0             | 3127.9 | 3099.7 | 10.91                 | 11.59 | 12.71 | -22.2           | -38.2 | -50.4 | 3.52                     |                         |                            |
| 9.5       | 37.37                   | 3168.8             | 3142.1 | 3112.6 | 10.78                 | 11.58 | 12.71 | -22.0           | -38.2 | -49.7 | 2.32                     |                         |                            |
| 9.9       | 29.58                   | 3180.4             | 3153.3 | 3123.9 | 10.63                 | 11.48 | 12.63 | -21.9           | -38.4 | -50.0 | 1.52                     |                         |                            |
| 10.3      | 25.16                   | 3189.6             | 3162.9 | 3135.2 | 10.58                 | 11.44 | 12.58 | -21.8           | -37.2 | -49.3 | 0.80                     |                         |                            |
| 10.6      | 21.58                   | 3197.2             | 3171.1 | 3144.8 | 10.50                 | 11.38 | 12.68 | -22.1           | -37.3 | -49.0 | 0.16                     |                         |                            |
| 11.0      | 18.74                   | 3203.9             | 3178.2 | 3152.0 | 10.33                 | 11.30 | 12.75 | -22.0           | -37.7 | -49.9 | 0.56                     |                         |                            |
| 11.4      | 16.63                   | 3211.0             | 3184.5 | 3158.1 | 10.20                 | 11.22 | 12.71 | -21.9           | -37.1 | -50.4 | 1.04                     |                         |                            |
| 11.8      | 14.42                   | 3218.1             | 3190.0 | 3163.5 | 10.25                 | 11.16 | 12.72 | -21.8           | -37.4 | -49.8 | 1.44                     |                         |                            |
| 12.2      | 12.21                   | 3223.5             | 3194.6 | 3168.2 | 10.32                 | 11.12 | 12.75 | -21.9           | -37.2 | -49.0 | 1.60                     |                         |                            |
| 12.5      | 10.63                   | 3227.9             | 3198.7 | 3172.2 | 10.35                 | 11.08 | 12.75 | -22.0           | -37.7 | -50.0 | 1.84                     |                         |                            |
| 12.9      | 9.89                    | 3231.8             | 3202.4 | 3175.9 | 10.35                 | 11.04 | 12.74 | -22.1           | -37.4 | -48.8 | 2.08                     |                         |                            |
| 13.3      | 9.37                    | 3235.2             | 3206.0 | 3179.2 | 10.36                 | 10.98 | 12.74 | -22.4           | -37.0 | -48.6 | 2.32                     |                         |                            |
| 13.7      | 9.26                    | 3238.4             | 3209.5 | 3182.1 | 10.38                 | 10.93 | 12.74 | -22.5           | -38.5 | -49.5 | 2.72                     |                         |                            |
| 14.1      | 9.47                    | 3241.3             | 3213.1 | 3184.8 | 10.36                 | 10.89 | 12.73 | -22.5           | -37.2 | -48.4 | 3.04                     |                         |                            |
| 14.4      | 9.16                    | 3244.0             | 3216.6 | 3187.4 | 10.36                 | 10.89 | 12.72 | -22.4           | -38.3 | -49.0 | 3.20                     |                         |                            |
| 14.8      | 8.32                    | 3246.5             | 3219.8 | 3189.9 | 10.34                 | 10.90 | 12.70 | -22.4           | -37.9 | -48.9 | 3.04                     |                         |                            |