

Specification

| Parameter | Sym. | Conditions | Value | | | Unit | Note |
|----------------------------------------------|---------------------------------------------------------|---------------------------------------------------------------|-----------|-----------|-----------|------------|-----------------------------------------------|
| | | | Min. | Typ. | Max. | | |
| Frequency range | f_0 | | 8 | | 100 | MHz | |
| RF output | | | | | | | |
| HCMOS (TTL) option | Load | | 10 | | 15 | kOhm pF | |
| | H-level voltage | V_H | 3.6 | | | V | |
| | L-level voltage | V_L | | | 0.4 | V | |
| | Duty cycle | | 45 | | 55 | % | |
| | Rise/Fall time | | | | 10 | ns | for 10 MHz operational frequency |
| Sine- wave option | Level | L | +6 | +8 | +10 | dBm | |
| | Load | R_L | | 50 | | Ohm | |
| | Harmonics level | | | | -25 | dBc | |
| Sub-harmonics level | | Operational frequency 14 MHz Operational frequency >14 MHz | | none | -40 | dBc | Frequency multiplier used |
| Power supply | | | | | | | |
| Voltage | V_{cc} | | 4.75 | 5.0 | 5.25 | V | 12V optional |
| Power consumption | | Warm-up state Steady state, +25°C | | 1.25 | 4 1.5 | W W | |
| Warm-up time | t_{up} | to $\Delta f/f=1e-8$, at +25°C | | | 5 | min | ref. to frequency after 30 min. |
| Frequency control* | | | | | | | |
| Control voltage range | V_c | | 0 | | 4.3 | V | Tuning slope - positive |
| Tuning range | | | ± 0.5 | ± 1.0 | | ppm | |
| Reference voltage | V_{ref} | | 4.09 | 4.2 | 4.31 | V | |
| Frequency stability | | | | | | | |
| vs. temperature | | 0°C to +50°C, ref 25°C | | | ± 0.2 | ppb | See chart below |
| vs. supply voltage | | ref Vcc typ. | | | ± 0.2 | ppb | |
| SSB Phase noise | | 1 Hz | | -95 | | dBc/Hz | tor 10MHz operational frequency |
| | | 10 Hz | | -125 | | | |
| | | 100 Hz | | -145 | | | |
| | | 1 kHz | | -155 | | | |
| | | 10 kHz | | -163 | | | |
| Allan variance | | 1 s | | 10 | | e-12 | |
| Aging | per day | after 30 days of operation | | | ± 0.2 | ppb | Standard option S (see chart below) |
| | first year | | | | ± 30 | ppb | |
| Environmental, mechanical conditions. | | | | | | | |
| Operating temperature range | 0°C to +50°C Standard. Other options - see chart below. | | | | | | |
| Storage temperature range | -60°C to +90°C | | | | | | |
| Humidity | Hermetically sealed | | | | | | |
| Mechanical shock | Per MIL-STD-202, 30G half sine pulse, 11ms | | | | | | |
| Vibration | Per MIL-STD-202, 10G swept sine 10 to 1000 Hz | | | | | | |
| Soldering conditions | 260°C 10s | | | | | | |

* No frequency control option – on customer requirement

Ordering code

MXODR - B 50 S 5 T - 10 MHz
 1 2 3 4 5

| 1 Temperature range | |
|---------------------|---------------|
| Code | Specification |
| A | 0°C..50°C |
| B | -10°C..60°C |
| C | 0°C..70°C |
| D | -20°C..70°C |
| E | -30°C..70°C |
| F | -40°C..80°C |

| 2 Stability over temperature | | |
|------------------------------|----------------|----------------------------------|
| Code | Specification | Temperature range code available |
| XZ | $\pm X e - Y$ | |
| 10 | $\pm 1 e - 10$ | A...E |
| 20 | $\pm 2 e - 10$ | A...E |
| 50 | $\pm 5 e - 10$ | A...F |
| 19 | $\pm 1 e - 9$ | A...F |
| 29 | $\pm 2 e - 9$ | A...F |

| 3 Aging | | | |
|---------|---------------|----------|-------------|
| Code | Specification | Per day* | First year* |
| L | Relaxed | 0.5 ppb | 50 ppb |
| S | Standard | 0.2 ppb | 30 ppb |

* for 10 MHz operational freq.

| 4 Supply voltage | |
|------------------|---------------|
| Code | Specification |
| 5 | 5V \pm 5% |
| 2 | 12V \pm 10% |

| 5 Output | |
|----------|---------------|
| Code | Specification |
| T | HSMOS/TTL |
| S | Sinewave |

Deviations of the parameters are possible on Customer's requirements.