

Datasheet

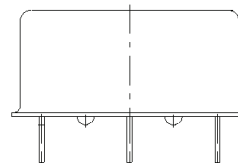
AXIOM35

HIGH STABILITY MINIATURE OCXO, SINE WAVE OUTPUT

FEATURES

- High stability till +/-5 ppb over temperature range
- Thru hole package size 20.5 x 20.5 x 12 mm.
- Sine wave output signal
- Standard frequencies: 10.0 / 20.0 / 100.0 MHz

20.5 x 20.5 x 12 mm. max.



| Parameter | min. | typ. | max. | Unit | Condition |
|---|---------------------------|----------|-------|------|--|
| Frequency range | 10 | | 125 | MHz | |
| Standard frequencies | 10.000 / 20.000 / 100.000 | | | MHz | |
| Frequency stability | | | | ppm | |
| Initial tolerance @+25°C | | | ± 500 | ppb | V _C @ centre value |
| vs. operating temperature range (steady state) | | | ± 200 | ppb | Option II = "200" |
| | | | ± 100 | ppb | Option II = "100" |
| | | | ± 50 | ppb | Option II = "50" |
| | | | ± 25 | ppb | Option II = "25" |
| | | | ± 10 | ppb | Option II = "10" |
| operating temperature range | -10 | | ± 5 | ppb | Option II = "05" |
| | | | 60 | °C | Note 2 |
| vs. supply voltage variation | | | ± 10 | ppb | |
| vs. load change | | | ± 10 | ppb | |
| Long term (aging) per day, after 30 days operation | | | ± 10 | ppb | Option II = "200", "100", "50" |
| | | | | | |
| long term (aging) 1 st year, after 30 days operation | | | ± 2 | ppb | |
| | | | ± 200 | ppb | Option II = "200", "100", "50" |
| | | | ± 100 | ppb | All other Options II |
| Frequency adjustment range | | | | | |
| Electronic Frequency Control (EFC) | ± 0.8 | ± 1 | | ppm | |
| EFC voltage V _C | 0.15 | 1.65 | 3.15 | V | Option I = "33" |
| | 0.25 | 2.5 | 4.75 | V | Option I = "50" |
| EFC slope (Df / DV _C) | | positive | | | |
| EFC input impedance | 100 | | | kΩ | |
| RF output | | | | | |
| Signal waveform | Sine wave | | | | |
| Load | | 50 | | Ω | ± 10 % |
| Output level | +3 | | | dBm | Note 4 |
| Harmonics attenuation | -20 | | | dBc | |
| Warm-up time | | | 5 | min | Df _{final} /f ₀ < ±0.1 ppm |
| Reference voltage VREF output | | 3.0 | | V | Option I = "50" |
| Note 3 | | 5.0 | | V | Option I = "12" |
| | | | | | |
| Supply voltage V _S | 4.75 | 5.0 | 5.25 | V | Option I = "50" |
| | 11.4 | 12 | 12.6 | V | Option I = "12" |
| Current consumption (steady state) @ +25°C | | | 200 | mA | Option I = "50" |
| | | | 100 | mA | Option I = "12" |
| Current consumption (warm-up) | | | 500 | mA | Option I = "50" |
| | | | 250 | mA | Option I = "12" |
| Operable temperature range | -20 | | +70 | °C | |
| Storage temperature range | -40 | | +85 | °C | |
| Enclosure (see drawing) L x W x H | 20.5x20.5x12 max. | | | mm | IEC 60679-3 CO 15 |
| Weight | | | 10 | gram | |

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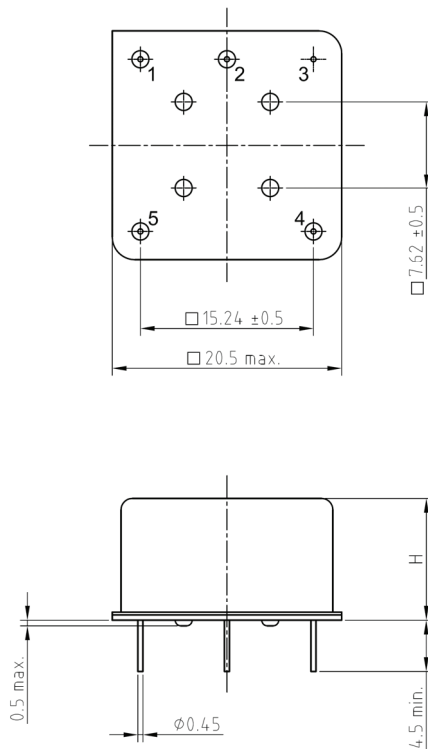
Notes:

1. Terminology and test conditions are according to IEC standard IEC60679-1, unless otherwise stated
2. Other operating temperature range on request
3. Other reference voltages on request
4. Higher output level on request

Ordering Code:

| Model (Specification) | Option I | Option II | Frequency [MHz] |
|-----------------------|----------|-----------|-----------------|
| AXIOM35 | 12 | 100 | 10.000 |

Enclosure drawing



Pin connections

| Pin # | Symbol | Function |
|-------|----------------|-----------------------|
| 1 | V _S | Supply Voltage |
| 2 | RF OUT | RF Output |
| 3 | GND | Ground |
| 4 | V _C | Control Voltage (EFC) |
| 5 | VREF | Reference voltage |

Environmental conditions

| Test | IEC 60068 Part ... | IEC 60679-1 clause ... | Test conditions |
|-------------------------------|--------------------|------------------------|--|
| Sealing tests (if applicable) | 2-17 | 4.6.2 | Gross leak: Test Qc, Fine leak: Test Qk |
| Solderability | 2-20 | 4.6.3 | Test Ta (235 ± 5)°C Method 1 |
| Resistance to soldering heat | 2-58 | | Test Tb Method 1A, 5s |
| Shock* | 2-27 | 4.6.8 | Test Ea, 3 x per axes 100g, 6 ms half-sine pulse |
| Vibration, sinusoidal* | 2-6 | 4.6.7 | Test Fc, 30 min per axes, 10 Hz - 55 Hz 0,75mm; 55 Hz - 2 kHz, 10g |
| Endurance tests | | | |
| - ageing | | 4.7.1 | 30 days @ 85°C, OCXO @25°C |
| - extended aging | | 4.7.2 | 1000h, 2000h, 8000h @85°C |

Other environmental conditions on request

Rev. 7.1 date 01-10-2012