

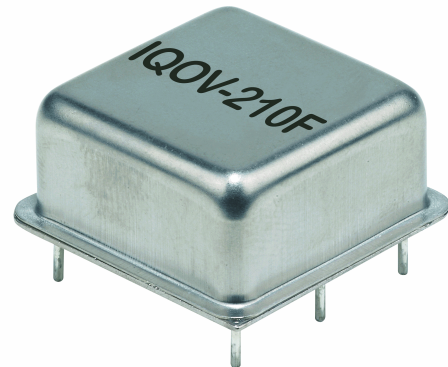
ISSUE 1; April 2016

Description

- A hermetically sealed Oven Controlled Crystal Oscillator (OCXO) in an industry standard metal package.
 - Ultra low phase noise
 - Tight temperature stability
 - Voltage controlled frequency adjustment optional

Please Note: This document is intended to illustrate the general capability and versatility of IQD's design. For specific enquiries please contact one of IQD's sales offices where we can tailor a unique specification to meet your needs.

- All parameters, unless specified, are at nominal conditions (i.e. TA=25°C, VC=Centre Voltage & load=50Ω).



Frequency Parameters

- Frequency: 100.0MHz
- Frequency Tolerance: ±100.00ppb
- Tolerance Condition: @ 25°C & VC=Centre Voltage
- Frequency Stability: ±10.00ppb to ±50.00ppb
- Ageing (typ): ±1ppb per day, ±100ppb in 1st year
- Ageing: After 30 days of operation.
- Short Term Stability (tau=1s): 0.01ppb max
- Supply Voltage Variation (±5% change): ±5ppb max
- Load Variation (±5% change): ±5ppb max

Electrical Parameters

- Supply Voltage Options:
 - 12.0V ±5% (standard)
 - 5.0V ±5% (standard)
 - 3.3V ±5% (limited availability)
- Power Consumption:
 - Warm Up: 4.5W max
 - Steady State (@ 25°C): 2.0W max
- Warm Up Time (within ±1x10⁻⁷ppm of final frequency with reference after 1hr on): 5mins max

Frequency Adjustment

- Pulling: ±0.5ppm min
- Control Voltages:
 - 2.5V ±2.5V (Vs=12V or 5V)
 - 1.65V ±1.65V (Vs=3.3V)
- Linearity: 10% max

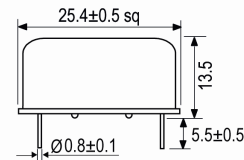
Operating Temperature Ranges

- -40 to 75°C
- -40 to 85°C

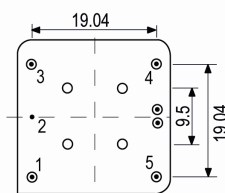
Output Details

- Output Compatibility: Sinewave
- Drive Capability: 50Ω
- Output Level (into 50Ω): 8dBm min, 13dBm typ

Outline (mm)

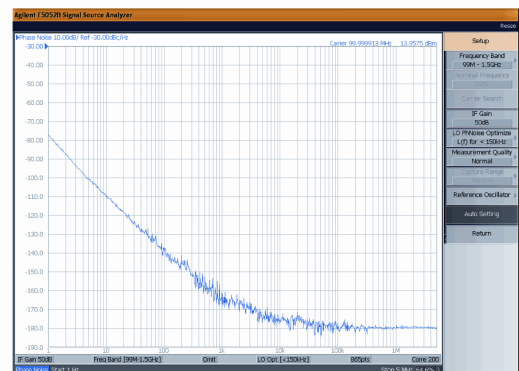


- Pin Connection
1. Output
 2. GND
 3. Voltage Control or N/C
 4. N/C
 5. +Vs



Underside View

Phase Noise



Sales Office Contact Details:

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Noise Parameters

- Phase Noise @ 25°C (dBc/Hz):
 - Option A

Offset (Hz)	Typical	Max
10	-110	-105
100	-140	-135
1k	-165	-160
10k	-176	-172
100k	-180	-178
 - Option B

Offset (Hz)	Typical	Max
10	-100	-95
100	-135	-130
1k	-162	-158
10k	-176	-172
100k	-180	-178
 - Option C

Offset (Hz)	Typical	Max
10	-90	-85
100	-130	-125
1k	-160	-155
10k	-175	-170
100k	-178	-175
- Harmonic Suppression: -50dBc max
- Spurious Suppression: -80dBc max

Environmental Parameters

- Storage Temperature Range: -55 to 105°C
- ESD Levels: ANSI/ESDA/JEDEC JS-001-2010:
 - Human Body Model, Class 2: 2000V to 4000V
 - Machine Model, Class B: 200V to 400V
- Mechanical Shock: MIL-STD-202: 30G, 11ms.
- Vibration: MIL-STD-202: 5G to 2000Hz.
- Thermal Shock: MIL-STD-883, Method 1011, Condition A.

Ordering Information

- Frequency
- Model*
- Output
- Frequency Stability (over operating temperature range)*
- Operating Temperature Range*
- Supply Voltage*
- Phase Noise Option*
- (*minimum required)

Compliance

- RoHS Status (2011/65/EU) Compliant
- REACh Status Compliant
- MSL Rating (JEDEC-STD-033): Not Applicable

Packaging Details

- Pack Style: Bulk Loose in bulk pack
- Pack Size: 1

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Electrical Specification - maximum limiting values

Frequency	Temperature Range	Stability Min	Current Draw	Rise and Fall Time	Duty Cycle
	°C	ppb	mA	ns	%
100.0MHz	-40 to 85 -40 to 75	±10.00 ±10.00	- -	- -	- -

This document was correct at the time of printing; please contact your local sales office for the latest version.

[Click to view latest version on our website.](#)

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