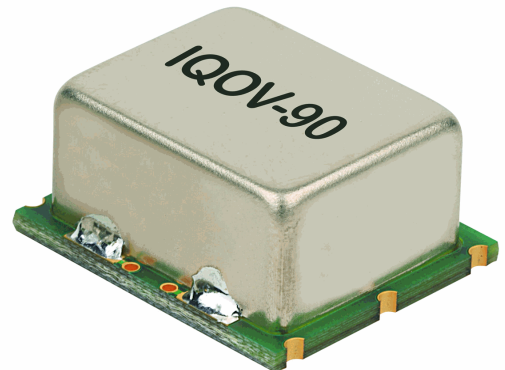


ISSUE 2; April 2016

Description

- Small SMD case style/low height with hermetically sealed oven controlled crystal oscillator (OCXO)
- Tight temperature stability
- Low phase noise and short term stability optimised design
- AT-Cut and SC-Cut crystal designs
- Optional reference voltage

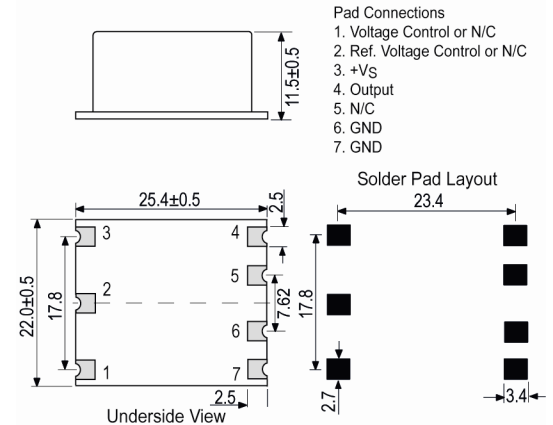
Please note: This document is intended to illustrate the general capability and versatility of IQD's design. For specific enquiries please contact one of IQD's sales offices where we can tailor a unique specification to meet your needs.



Frequency Parameters

- Frequency: 10.0MHz to 40.0MHz
- Frequency Stability: $\pm 3.00\text{ppb}$ to $\pm 5.00\text{ppb}$
- Developed Frequency: 10.0MHz, 13.0MHz, 16.3840MHz, 32.7680MHz, 38.40MHz
- Frequency Tolerance Example: $\pm 500\text{ppb}$
Measurement at 25°C reference to nominal frequency.
- Frequency Stability vs Temperature Range:
Tightest Stability: $\pm 3\text{ppb}$ 0 to 60°C
Widest Temperature Range: $\pm 5\text{ppb}$ -40 to 75°C
- For other frequency/specification combinations please contact our sales offices
- Ageing (after 30 days of continuous operation, referred @ 25°C):
Ageing per day: $\pm 0.5\text{ppb}$ max
After 1st year: $\pm 50\text{ppb}$ max
After 10 years: $\pm 300\text{ppb}$ max
- Supply Voltage Coefficient Example: $\pm 1\text{ppb}$ ref $V_s \pm 5\%$
- Load Coefficient Example: $\pm 1\text{ppb}$ ref $\pm 5\%$ load change

Outline (mm)



Electrical Parameters

- Supply Voltage: 3.3V
- Supply Voltage: Available in 12.0V, 5.0V and 3.3V
- Current Consumption:
12.0V @ 25°C steady state, 180mA max
12.0V Warm-up, 350mA max
5.0V @ 25°C steady state, 200mA max
5.0V Warm-up, 500mA max
3.3V @ 25°C steady state, 350mA max
3.3V Warm-up, 800mA max
- Reference Voltage Output: Customer specified value
(A very stable DC output voltage, made available to the designer for use with a voltage divider circuit on the Voltage Control Input)

Frequency Adjustment

- Frequency Adjustment Range: $\pm 1000\text{ppb}$ to $\pm 2000\text{ppb}$
- Control Voltage Example:
For 3.3V supply: 1.65V $\pm 1.65\text{V}$
For 5.0V supply: 2.5V $\pm 2.5\text{V}$
- Linearity Example: 10% max
- Input Impedance Example: 100kohms
- Slope (standard): Positive

Sales Office Contact Details:

UK: +44 (0)1460 270200
Germany: 0800 1808 443

France: 0800 901 383
USA: +1.760.318.2824

Email: info@iqdfrequencyproducts.com
Web: www.iqdfrequencyproducts.com

Operating Temperature Ranges

- 0 to 60°C
- -40 to 75°C

Output Details

- Output Compatibility HCMOS/Sinewave
- Available with either HCMOS or Sinewave output
- HCMOS Typical Parameters (15pF load):
Rise and fall time: 10ns max
Duty Cycle 45/55%
- Sinewave Typical Parameters (50ohm load):
Output Level: 6 to 10dBm
Harmonic Suppression: -30dBc max
Spurious Suppression: -60dBc max

Noise Parameters

- Phase Noise typical figures @ 10.0MHz (dBc/Hz):

Offset	Typ	Max
1Hz	-90	-80
10Hz	-120	-110
100Hz	-140	-130
1kHz	-145	-140
10kHz	-150	-145
100kHz	-150	-145
- Allan Variance Example: 5E-11 for 1s

Environmental Parameters

- Storage Temperature Range: -55 to 105°C
- Vibration: IEC 68-2-06 Test Fc, Test condition 0.75mm 10G acceleration 10Hz to 500Hz, one cycle per 30mins 2hrs test time
- Shock: IEC 68-2-27, 50G, 11ms, half sine, 3 times in 3 directions

Ordering Information

- Minimum data needed to open an enquiry:-
Frequency
Model
Supply Voltage
Output
Frequency Stability (over operating temperature range)
Operating Temperature Range
Frequency Adjustment
Reference Voltage Output

Compliance

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

Packaging Details

- Pack Style: Bulk Supplied tube or box packaging
Pack Size: 75
- Pack Style: Reel Tape & reel in accordance with EIA-481-D
Pack Size: 75

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Electrical Specification - example values 3.3V

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppb	mA	ns	%
10.0MHz	40.0MHz	0 to 60	±3.0	-	10	45/55
		-40 to 75	±5.0	-	10	45/55

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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