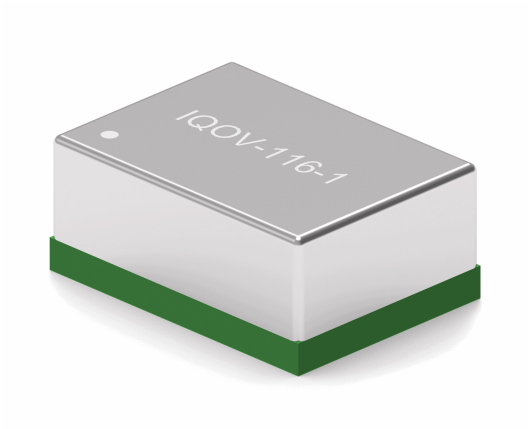
OCXO Specification

Part No.: ***LFOCXO094144***

Description

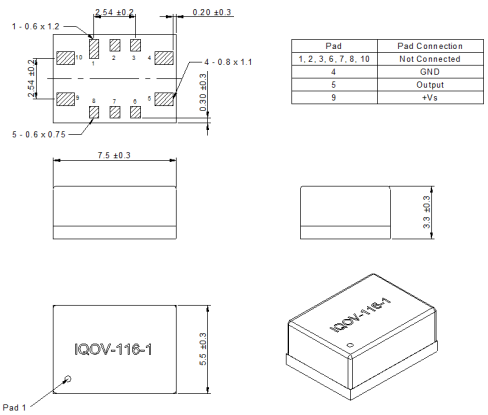
- Oven Controlled Crystal Oscillator (OCXO) in a miniature 7.5x5.5mm package.
- Model IQOV-116-1
- Model Issue number 1



Frequency Parameters

- Frequency 10.0MHz
- Frequency Tolerance ±1.50ppm
- Frequency Stability ±0.02ppm
- Operating Temperature Range -40.00 to 95.00°C
- Ageing ±5ppb max per day, ±0.5ppm max per year
- Develop frequencies: 10.0MHz, 19.2MHz, 20MHz
- Frequency Tolerance: measurement referenced to frequency observed with TA=25°C, Vs=3.3V within 30 days after ex-works.
- Frequency Stability: temperature varied across the operating temperature range, measurement referenced to the frequency observed with Fref=(Fmax+Fmin)/2, Vs=3.3V, load=15pF, temperature variable speed less than 2°C per minute.
- Supply Voltage Variation (measurement referenced to frequency observed with TA=25°C, Vs varied from 3.135V to 3.465V, load=15pF): ±5ppb max
- Load Variation (measurement referenced to frequency observed with TA=25°C, Vs=3.3V, load change=5%, load=15pF): ±5ppb max
- Ageing: Measurement referenced to frequency observed with TA=25°C, Vs=3.3V and after 30 days of operation.
- Short Term Stability (temperature stability, no EMI/EMC or other interference, test after powered for 1 hour ref to 25°C; 1s): 0.05ppb max
- g-sensitivity: 1ppb/g max

Outline (mm)

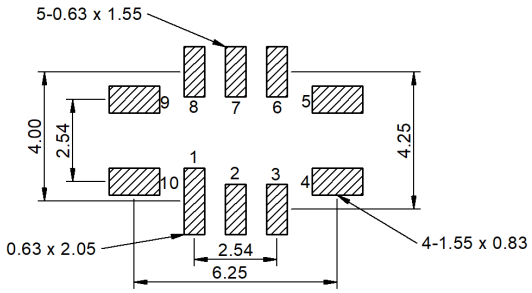


Pad	Pad Connection
1, 2, 3, 6, 7, 8, 10	Not Connected
4	GND
5	Output
9	+Vs

Electrical Parameters

- Supply Voltage 3.3V ±5%
- Current Consumption:
  Warm Up: 600mA max
  Steady State: 230mA max @ 25°C
- Warm Up Time (time until the output is within ±0.1ppm, with reference to the last frequency reading taken 1hr after start-up @ 25°C): 5min max

Recommended Solder Pad Layout



Output Details

- Output Compatibility HCMOS
- Drive Capability 15pF
- Rise and Fall Time 6.0ns max
- Duty Cycle 45/55
- Output Low VoL (@ Vs=3.3V, load=15pF): 0.4V max
  Output High VoH (@ Vs=3.3V, load=15pF): 2.4V min

Noise Parameters

- Phase Noise (max @ 25°C):
  -65dBc/Hz @ 1Hz
  -100dBc/Hz @ 10Hz
  -130dBc/Hz @ 100Hz
  -150dBc/Hz @ 1kHz
  -155dBc/Hz @ 10kHz
  -155dBc/Hz @ 100kHz
  -155dBc/Hz @ 1MHz

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Environmental Parameters

- Storage Temperature Range: -55 to 105°C
- ESD Levels:
  Human Body Model (HBM), ANSI/ESDA/JEDEC JS-001-2010: class 2: 2000V to 4000V
  Machine Model (MM), JEDEC JESD22-A115C: class B: 200V to 400V
- Shock (IEC 68-2-27, Test Ea, Severity 50A): 100g, 6ms, half sine wave, 3 times in each of the 3 mutually perpendicular planes.
- Vibration (IEC 68-2-06, Test Fc): 10Hz-2000Hz, 0.75mm displacement, 10g acceleration, 30mins per cycle, 3 times in each of the 3 mutually perpendicular planes, test 2hrs.

Manufacturing Details

- Please note that this part is NOT suitable for inverted reflow process.
- RoHS Terminations — Kovar 2~8µm
- RoHS Reflow Temp — 260°C max for 30s max

Compliance

- RoHS Status (2015/863/EU) — Compliant
- REACh Status — Compliant
- MSL Rating (JDEC-STD-033): — 3

Packaging Details

- Tape & reel in accordance with EIA-481
  Quantities below the standard reel size to be supplied on cut tape

Standard Pack Quantity: 1,000

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