Crystal Clock Oscillator Specification

IQXO-825

ISSUE 1; March 2016

Description

- Simple package crystal oscillator in a hermetically sealed 8-pin DIL package

Frequency Parameters

- Frequency 1.0MHz to 100.0MHz
- Frequency Stability ±25.00ppm to ±100.00ppm
- Ageing ±5ppm max in 1st yr @ 25°C

Electrical Parameters

- Supply Voltage 5.0V ±10%

Operating Temperature Ranges

- -10 to 70°C
- -40 to 85°C

Output Details

- Output Compatability HCMOS

Drive Capability	
1.0MHz to 40.0MHz	50pF
40.0MHz to 80.0MHz	30pF
80.0MHz to 100.0MHz	15pF

Output Control

- Start Up Time: 10ms max

Output Levels

- VoL: 10% Vs max
- VoH: 90% Vs min

Noise Parameters

- Phase Jitter (12kHz-20MHz): 1ps rms max

Environmental Parameters

- Shock: 1500G, 0.5ms, 5 times in each of 6 directions, along 3 mutually perpendicular planes
- Vibration: 20G (20Hz-2000Hz), 1.5mm amplitude, cross-over frequency 80Hz, in 3 mutually perpendicular planes
- Storage Temperature Range: -55 to 125°C

Ordering Information

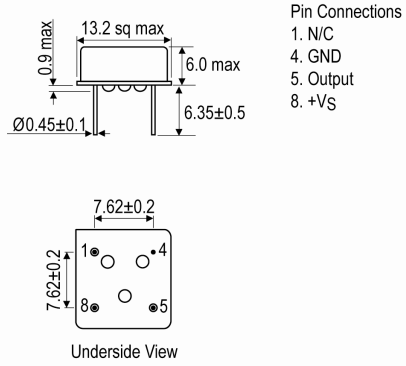
- Frequency*
  Model*
  Frequency Stability (over operating temperature range)*
  Operating Temperature Range*
  Supply Voltage
  (*minimum required)
- Example
  20.0MHz IQXO-825
  HCMOS ±50ppm -40 to 85C 5V

Compliance

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



Outline (mm)



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Packaging Details

- Pack Style: Bulk Loose in Bulk Pack
  Pack Size: 40

Electrical Specification - maximum limiting values 5.0V ±10%

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
1.0MHz	19.999999MHz	-10 to 70	±25.0	20	6	45/55%
		-40 to 85	±25.0	20	6	45/55%
20.0MHz	49.999999MHz	-10 to 70	±25.0	40	5	45/55%
		-40 to 85	±25.0	40	5	45/55%
50.0MHz	79.999999MHz	-10 to 70	±25.0	50	4	45/55%
		-40 to 85	±25.0	50	4	45/55%
80.0MHz	100.0MHz	-10 to 70	±25.0	70	4	45/55%
		-40 to 85	±25.0	70	4	45/55%

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