

ISSUE 1; March 2016

Description

- Simple package crystal oscillator in a hermetically sealed 14-pin DIL package with tri-state function

Frequency Parameters

- Frequency: 1.0MHz to 166.0MHz
- Frequency Stability: $\pm 25.00\text{ppm}$ to $\pm 100.00\text{ppm}$
- Ageing: $\pm 5\text{ppm}$ max in 1st yr @ 25°C

Electrical Parameters

- Supply Voltage: 3.3V $\pm 10\%$

Operating Temperature Ranges

- 10 to 70°C
- 40 to 85°C

Output Details

- Output Compatibility: HCMOS

Drive Capability	
1.0MHz to 40.0MHz	50pF
40.0MHz to 80.0MHz	30pF
80.0MHz to 166.0MHz	15pF

Output Control

- Tri-state Operation:
 - Logic '1' to pin 1 enables oscillator output
 - Logic '0' to pin 1 disables oscillator output, the oscillator output goes to a high impedance state
 - No connection to pin 1 enables oscillator output
- 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

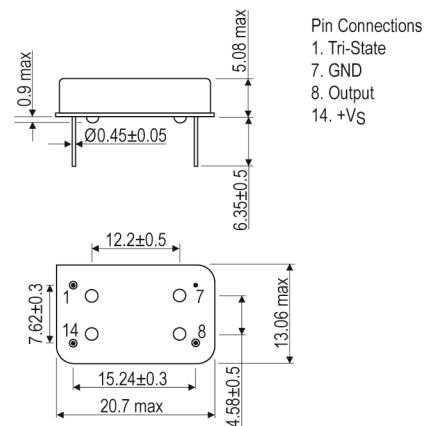
- Shock: 1500G, 0.5ms, 5 times in each of 6 directions, along 3 mutually perpendicular planes
- Vibration: 20G (20Hz-2000Hz), 1.5mm amplitude, cross-over frequency 80Hz, in 3 mutually perpendicular planes
- Storage Temperature Range: -55 to 125°C

Ordering Information

- Frequency*
Model*
Frequency Stability (over operating temperature range)*
Operating Temperature Range*
Supply Voltage
(*minimum required)
- Example
20.0MHz IQXO-823
HCMOS $\pm 50\text{ppm}$ -40 to 85C 3.3V



Outline (mm)



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

Compliance

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

Packaging Details

- Pack Style: Bulk Loose in Bulk Pack
Pack Size: 25

Electrical Specification - maximum limiting values 3.3V $\pm 10\%$

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	10	6	45/55%
		-40 to 85	± 25.0	10	6	45/55%
20.0MHz	49.999999MHz	-10 to 70	± 25.0	30	6	45/55%
		-40 to 85	± 25.0	30	6	45/55%
50.0MHz	79.999999MHz	-10 to 70	± 25.0	40	5	45/55%
		-40 to 85	± 25.0	40	5	45/55%
80.0MHz	124.999999MHz	-10 to 70	± 25.0	50	4	45/55%
		-40 to 85	± 25.0	50	4	45/55%
125.0MHz	166.0MHz	-10 to 70	± 25.0	60	3	45/55%
		-40 to 85	± 25.0	60	3	45/55%

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