

ISSUE 1; April 2016

### Description

- Simple package crystal oscillator in a hermetically sealed 14-pin DIL package

### 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

- Start Up Time: 10ms max

### Output Levels

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

### 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

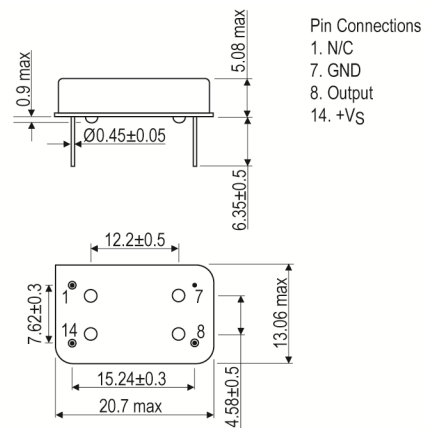
- Frequency\*  
Model\*  
Frequency Stability (over operating temperature range)\*  
Operating Temperature Range\*  
Supply Voltage  
(\*minimum required)
- Example  
20.0MHz IQXO-822  
HCMOS  $\pm 50\text{ppm}$  -40 to 85C 3.3V

### 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: 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         | $\pm$ 25.0      | 10           | 6                  | 45/55%     |
|               |               | -40 to 85         | $\pm$ 25.0      | 10           | 6                  | 45/55%     |
| 20.0MHz       | 49.999999MHz  | -10 to 70         | $\pm$ 25.0      | 30           | 6                  | 45/55%     |
|               |               | -40 to 85         | $\pm$ 25.0      | 30           | 6                  | 45/55%     |
| 50.0MHz       | 79.999999MHz  | -10 to 70         | $\pm$ 25.0      | 40           | 5                  | 45/55%     |
|               |               | -40 to 85         | $\pm$ 25.0      | 40           | 5                  | 45/55%     |
| 80.0MHz       | 124.999999MHz | -10 to 70         | $\pm$ 25.0      | 50           | 4                  | 45/55%     |
|               |               | -40 to 85         | $\pm$ 25.0      | 50           | 4                  | 45/55%     |
| 125.0MHz      | 166.0MHz      | -10 to 70         | $\pm$ 25.0      | 60           | 3                  | 45/55%     |
|               |               | -40 to 85         | $\pm$ 25.0      | 60           | 3                  | 45/55%     |

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