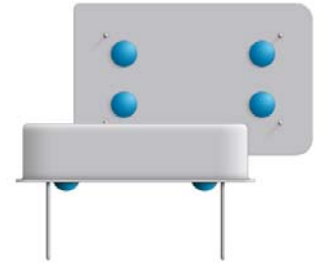


QX14 Series

14 pin Dual-in-Line HCMOS Clock Oscillator

Features

- Industry-standard 14 pin DIL package for compatibility
- Frequency range from 0.252kHz to 150MHz
- Choice of supply voltage 3.3 or 5.0 Volts DC
- Hermetically sealed package for reliability and low aging
- Optional Tristate function (Enable/Disable)

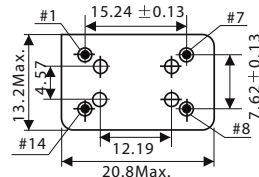
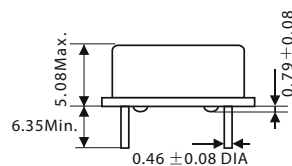


| General Specifications | | |
|---|------------|---------------------|
| Frequency Range | | 0.252 to 150.000MHz |
| Output Logic | | HCMOS |
| Temperature Stability* | | ±100ppm |
| | | ±50ppm |
| | | ±25ppm |
| Aging per year | | ±5ppm |
| Operating Temperature Range | Standard | -10 to +70°C |
| | Industrial | -40 to +85°C |
| Storage Temperature Range | | -55 to +125°C |
| * Frequency stability is inclusive of calibration tolerance at 25°C, frequency change due to shock & vibration, ±10% supply voltage variation and stability over temperature range. | | |

| Pin | Connection |
|-----|---------------------------------|
| 1 | NC or Tristate (Enable/Disable) |
| 7 | Ground |
| 8 | Output |
| 14 | +Vdd |

| Electrical Specifications | | | |
|----------------------------|----------------------|---------------------|-------------|
| Supply Voltage | | 3.3Vdd ±10% | 5.0Vdd ±10% |
| Input Current | 0.252 to 24.000MHz | 5mA | 10mA |
| | 24.100 to 50.000MHz | 10mA | 15mA |
| | 50.100 to 70.000MHz | 25mA | 50mA |
| | 70.100 to 80.000MHz | 25mA | 50mA |
| | 80.100 to 150.000MHz | 60mA | 60mA |
| Output Voltage | Logic High (Voh) | 90% Vdd min. | |
| | Logic Low (Vol) | 10% Vdd max. | |
| Output Symmetry | Standard | 40 to 60% | |
| | Tight | 45 to 55% | |
| Output Load | Standard | 15pF max. | |
| | Medium | 30pF max. | |
| | Heavy | 50pF max. | |
| Rise and Fall Time | 0.252 to 24.000MHz | 10ns max. | 10ns max. |
| | 24.100 to 50.000MHz | 6ns max. | 6ns max. |
| | 50.100 to 70.000MHz | 6ns max. | 6ns max. |
| | 70.100 to 80.000MHz | 4ns max. | 4ns max. |
| | 80.100 to 150.000MHz | 4ns max. | 4ns max. |
| Standby Function | | Tristate (optional) | |
| Output Enable/Disable Time | | 100ns max. | |
| Standby Current | | 10µA max. | |
| Start Up Time | | 10ms max. | |

Mechanical Dimensions



Part Numbering Guide

| Qantek Code | Package | Option | Supply Voltage | Frequency Stability | Frequency | Operating Temperature Range | Load Capacitance | Tight Symmetry Indicator | Packaging |
|-------------|-------------|--|------------------------|---|---|--------------------------------------|-------------------------------------|--------------------------|-----------|
| Q = Qantek | X14 = DIP14 | N = not connected T = Tristate (Enable/Disable) | 33 = 3.3V 50 = 5.0V | A = ±25ppm B = ±50ppm C = ±100ppm | in MHz, always 8 digits including the decimal point (f.i.e. 20.00000) | A = -10 to +70°C B = -40 to +85°C | 15 = 15pF 30 = 30pF 50 = 50pF | T = 45/55 | T = Tube |

Example: QX14T33B20.00000B15T



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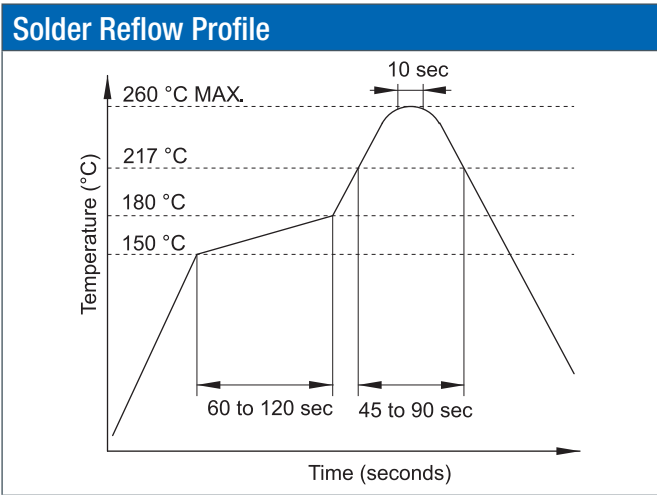
info@qantek.com

QX14 Series

14 pin Dual-in-Line HCMOS Clock Oscillator

| Marking Code Guide | | | | | | | | | |
|--|---|-----------|---|------------|---|------|---|-------------------|---------|
| Contains frequency, Qantek manufacturing Code, production code (month and year), stability, temperature range and voltage indicator. | | | | | | | | | |
| Month Codes | | | | Year Codes | | | | Stability | |
| January | A | July | G | 2010 | 0 | 2011 | 1 | ppm | PN Code |
| February | B | August | H | 2013 | 3 | 2014 | 4 | 25 | A |
| March | C | September | I | | | | | 50 | B |
| April | D | October | J | | | | | 100 | C |
| May | E | November | K | | | | | custom | S |
| June | F | December | L | | | | | | |
| | | | | | | | | Temperature Range | |
| | | | | | | | | °C | PN Code |
| | | | | | | | | -10 to +70°C | A |
| | | | | | | | | -40 to +85°C | B |
| | | | | | | | | custom | S |
| | | | | | | | | Voltage | |
| | | | | | | | | Volt | PN Code |
| | | | | | | | | 3.3 | 3 |
| | | | | | | | | 5.0 | 5 |
| | | | | | | | | custom | S |

Example: First Line: 20.000 (Frequency) Second Line: QA1BB3 (Qantek – January – 2011 – ±50ppm – -40 to +85°C – 3.3V)



| Environmental Specifications | |
|------------------------------|-------------------------------|
| Mechanical Shock | MIL-STD-202, Method 213, C |
| Vibration | MIL-STD-202, Method 201 & 204 |
| Thermal Cycle | MIL-STD, Method 1010, B |
| Gross Leak | MIL-STD-202, Method 112 |
| Fine Leak | MIL-STD-202, Method 112 |

All specifications are subject to change without notice.