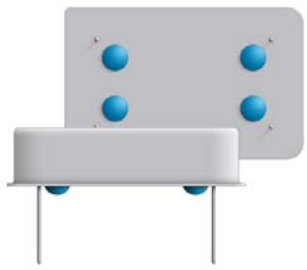
QX14 Series

14 pin Dual-in-Line HCMOS Clock Oscillator



RoHS Compliant

Pb lead-free

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.

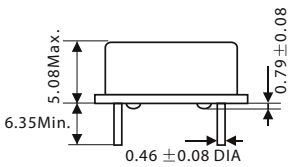
Pin Connection

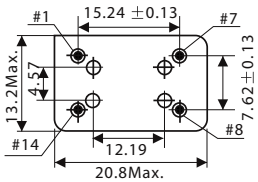
Pin	Connection
1	NC or Tristate (Enable/Disable)
7	Ground
8	Output
14	+Vdd

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 Eable/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.ie. 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

QANTEK Technology Corporation

QANTEK Technology Corporation

Phone: +1 877-227-0440 (tollfree)

Fax: +1 877-227-0440 (tollfree)

www.qantek.com

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

January	A	July	G
February	B	August	H
March	C	September	I
April	D	October	J
May	E	November	K
June	F	December	L

Year Codes

2010	0	2011	1	2012	2
2013	3	2014	4	2015	5

Stability

ppm	PN Code
25	A
50	B
100	C
custom	S

Temperature Range

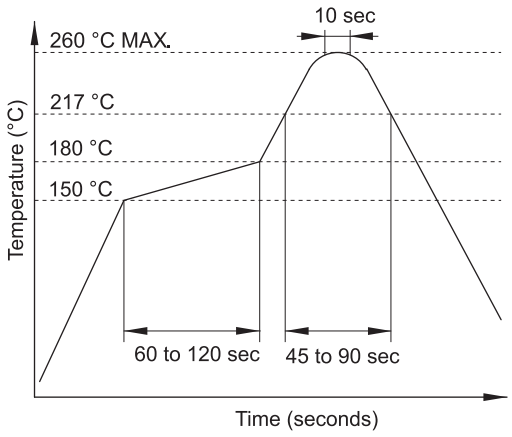
°C	PN Code
-10 to +70°C	A
-40 to +85°C	B
custom	S

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*)*

Solder Reflow Profile



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.

QANTEK Technology Corporation

QANTEK Technology Corporation
Phone: +1 877-227-0440 (tollfree)
Fax: +1 877-227-0440 (tollfree)
www.qantek.com
info@qantek.com