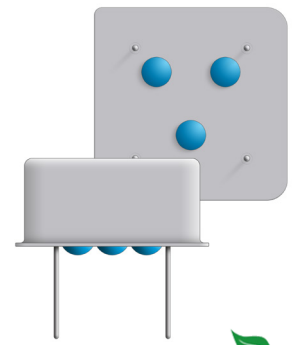


# QX8 Series

## 8 pin Dual-in-Line HCMOS Clock Oscillator



### Features

- Industry-standard 8 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	

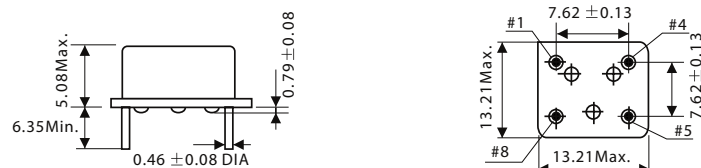
\* Frequency stability is inclusive of calibration tolerance at 25°C, frequency change due to shock & vibration, ±10% supply voltage variation and stability over temperature range.

### Electrical Specifications

Supply Voltage		3.3V <sub>dd</sub> ±10%	5.0V <sub>dd</sub> ±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 (V <sub>oh</sub> )	90% V <sub>dd</sub> min.	
	Logic Low (V <sub>ol</sub> )	10% V <sub>dd</sub> 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.		

Pin	Connection
1	NC or Tristate (Enable/Disable)
4	Ground
5	Output
8	+V <sub>dd</sub>

### Mechanical Dimensions



Pin Connection: #1 E/D, #4 GND, #5 Output, #8 VDC Enable/Disable Function: E/D (#1) Output (#5), High (Open) Operating, Low High Impedance

### Part Numbering Guide

Qantek Code	Package	Option	Supply Voltage	Frequency Stability	Frequency	Operating Temperature Range	Load Capacitance	Tight Symmetry Indicator	Packaging
Q = Qantek	X8 = DIP8	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: QX8T33B20.00000B15T



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# QX8 Series

## 8 pin Dual-in-Line HCMOS Clock Oscillator

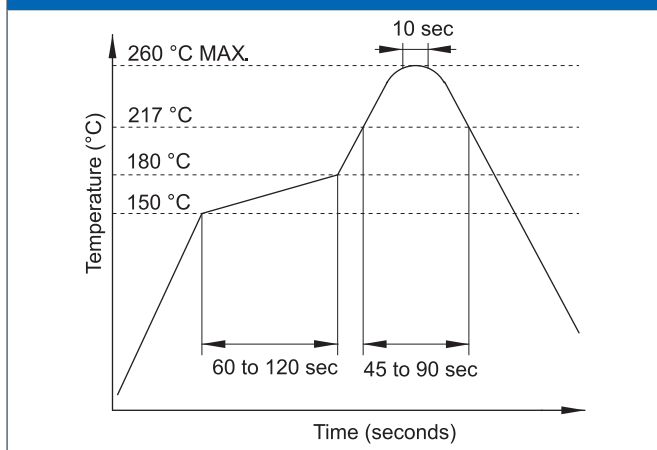
### Marking Code Guide

Contains frequency, Qantek manufacturing Code, production code (month and year), stability, temperature range and voltage indicator.

Month Codes				Year Codes						Stability		Temperature Range		Voltage	
January	A	July	G	2010	0	2011	1	2012	2	ppm	PN Code	°C	PN Code	Volt	PN Code
February	B	August	H	2013	3	2014	4	2015	5	25	A	-10 to +70°C	A	3.3	3
March	C	September	I							50	B	-40 to +85°C	B	5.0	5
April	D	October	J							100	C	custom	S	custom	S
May	E	November	K							custom	S				
June	F	December	L												

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.



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