# **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)

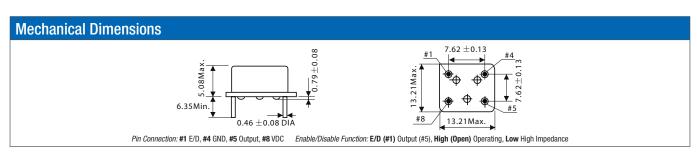


General Specifications			
Frequency Range		0.252 to 150.000MHz	
Output Logic		HCMOS	
Temperature Stability*		±100ppm	
		±50ppm	
		±25ppm	
Aging per year		±5ppm	
Operating Temperature Standard Range Industrial		-10 to +70°C	
		-40 to +85°C	
Storage Temperature Range		-55 to +125°C	
* Frequency stability is inclusive of calibration tolerance at 25°C frequency			

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

Pin	Connection
1	NC or Tristate (Enable/Disable)
4	Ground
5	Output
8	+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% Vo	dd min.	
	Logic Low (Vol)	10% Vo	ld max.	
Output	Standard	40 to	60%	
Symmetry	Tight 45 to 55%		55%	
Output Load Standar		15pF max.		
Medium		30pF	max.	
	Heavy 50pF max.		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.	



Part Nur	mbering Gu	ide							
Qantek Code	Package	Option	Supply Voltage	Frequency Stability	Frequency	Operating Tempera- ture Range	Load Capacitance	Tight Symmetry Indicator	Packaging
Q = Qantek	X8 = DIP8	N = not connected T = Tristate (Enable/Disable)	33 = 3.3V 50 = 5.0V	$A = \pm 25ppm$ $B = \pm 50ppm$ $C = \pm 100ppm$	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



#### **QANTEK Technology Corporation**

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### **Marking Code Guide**

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

Month Codes			
January	Α	July	G
February	В	August	Н
March	С	September	1
April	D	October	J
May	Ε	November	K
June	F	December	L

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

Stability		
ppm	PN Code	ı
25	Α	ı
50	В	ı
100	С	ı
custom	S	ı

Temperature Range		
PN Code		
Α		
В		
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 –  $\pm$ 50ppm – -40 to +85°C – 3.3V)

Solder F	Reflow Profile
Temperature (°C)	260 °C MAX.  217 °C  180 °C  150 °C
	60 to 120 sec 45 to 90 sec
	Time (seconds)

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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