

QP7 Series

5x7 SMD LVPECL Clock Oscillator



Features

- Miniature 5.0 x 7.0 x 1.8mm package
- Frequency Range 10.000 to 625.000MHz
- Supply voltage range: 2.5 or 3.3 Volts

Description

QP7 series oscillators provide a high quality differential PECL output at frequencies from 10.000MHz to 625.000MHz. Power supply voltages may be specified as +2.5 Volts or +3.3 Volts.

General Specifications

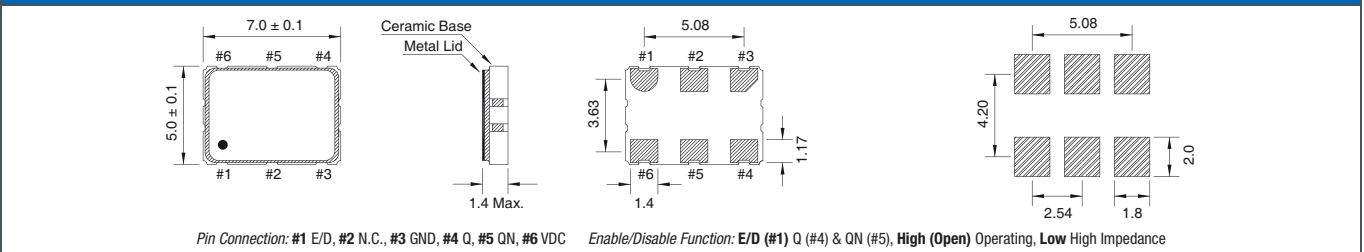
Frequency Range	10.000 to 625.000MHz	
Output Type	LVPECL - Complementary Output	
Temperature Stability*	±100ppm max.	
	±50ppm max.	
	±25ppm max.	
Aging per year	±3ppm max.	
Operating Temperature Range	Standard	-20 to +70°C
	Extended	-40 to +85°C
Storage Temperature Range	-55 to +125°C	

* 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	2.5 Vdd ±5%		3.3 Vdd ±5%	
Input Current	10.000 to 29.900MHz	60mA max.	60mA max.	
	30.000 to 59.900MHz	65mA max.	65mA max.	
	60.000 to 99.900MHz	65mA max.	65mA max.	
	100.000 to 159.000MHz	65mA max.	65mA max.	
	160.000 to 625.000MHz	100mA max.	110mA max.	
Output Voltage	Logic High (Voh)	1.475Vdd min.	2.275Vdd min.	
	Logic Low (Vol)	1.095Vdd max.	1.68Vdd max.	
Output Symmetry	45 to 55%			
Output Load	50Ω			
Rise and Fall Time	10.000 to 29.900MHz	2ns max.	2ns max.	
	30.000 to 59.900MHz	1.5ns max.	1.5ns max.	
	60.000 to 99.900MHz	1ns max.	1ns max.	
	100.000 to 159.000MHz	0.5ns max.	0.5ns max.	
	160.000 to 625.000MHz	1.5ns max.	1.5ns max.	
Enable-Disable Function	Tri-State			
	INH - Pin 1	Q Pin 4 - QN Pin 5		
	High - Pin 1	Operating		
	Low - Pin 1	High Impedance		
Enable High Input Voltage	1.75Vdd min.		2.31Vdd min.	
Output Enable Time	0.75Vdd max.		0.99Vdd max.	
Phase Jitter (12KHz to 20MHz)	10.000 to 159.900 MHz	1ps RMS		
	160.000 to 625.000 MHz	4ps RMS		

Mechanical Dimensions



Part Numbering Guide

Qantek Code	Package	Supply Voltage	Frequency Stability	Frequency	Operating Temperature Range	Packaging
Q = Qantek	P7 = 5x7	25 = 2.5V 33 = 3.3V	A = ±25ppm B = ±50ppm C = ±100ppm	in MHz, always 8 digits including the decimal point (f. ie. 156.25000)	A = -20 to +70°C B = -40 to +85°C	R = Tape&Reel M = Minireel (250 pscs Tape&Reel)

Example: QP733B156.25000BR

bold letters = recommended standard specification



QANTEK Technology Corporation

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

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

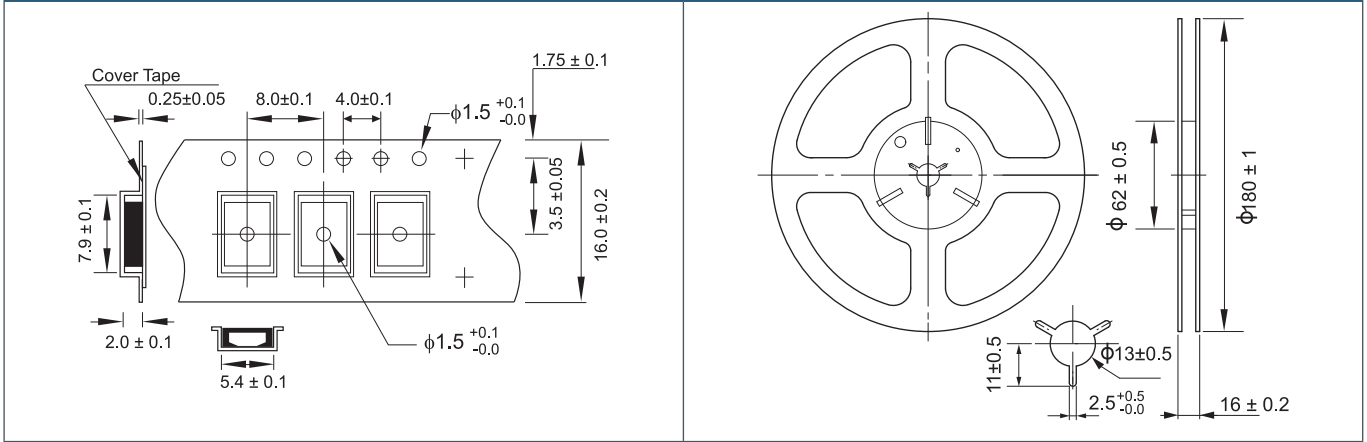
www.qantek.com

info@qantek.com

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Tape and Reel Dimensions



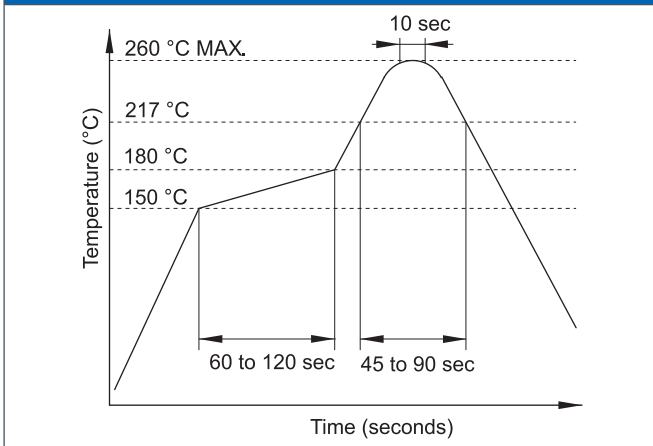
Marking Code Guide

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	-20 to +70°C	A	2.5	2
March	C	September	I							50	B	-40 to +85°C	B	3.3	3
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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