

# QC7CB Series

5x7 2-Pad SMD All Ceramic Crystal Unit

**End of Life**

**12/31/2016**

Replaced by QC7B Series



## Features

- All ceramic epoxy sealed SMD package
- Low in height, suitable for thin equipment
- Tight tolerance and stability available

## Applications

- High density applications
- Modem, communication and test equipment

## General Specifications

Frequency Range	6.000 to 30.000MHz (Fundamental)
Frequency Tolerance at 25°C	±20 to ±50ppm (±30ppm standard)
Frequency Stability over Temperature Range	See Stability vs. Temperature Table
Storage Temperature	-55 to +125°C
Aging per Year	±5ppm max.
Load Capacitance $C_L$	10 to 32pF and Series Resonance
Shunt Capacitance $C_0$	7.0pF max.
Equivalent Series Resistance (ESR)	See ESR Table
Drive Level	100µW typ. (500µW max)
Insulation Resistance (MΩ)	500 at 100Vdc ±15Vdc

## Equivalent Series Resistance (ESR)

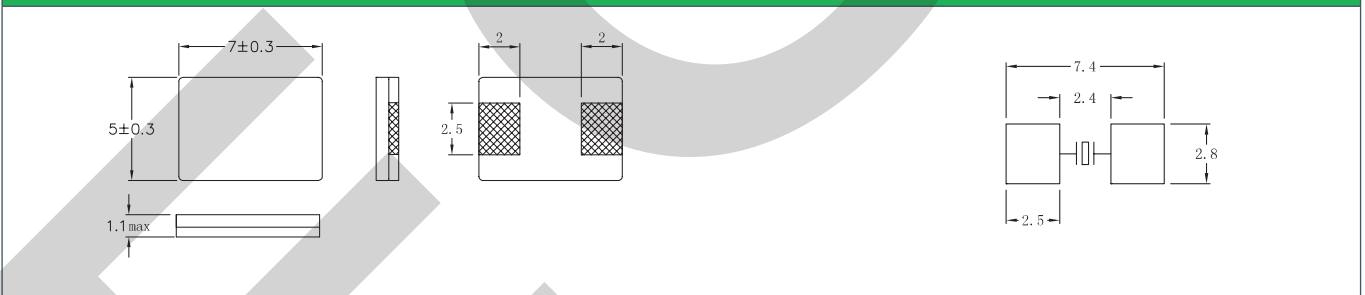
Frequency Range - MHz	Ω max.	Mode of Operation
6.000 to 8.000	80	Fundamental
8.000 to 30.000	60	Fundamental

## Frequency Stability vs. Temperature

Operating Temperature	±20ppm	±30ppm	±50ppm
-20 to +70°C	○	○	○
-40 to +85°C	○	●	○

● standard    ○ available

## Mechanical Dimensions



## Part Numbering Guide

Qantek Code	Package	Nominal Frequency (in MHz)	Vibration Mode	Load Capacitance	Operating Temperature Range	Frequency Tolerance	Frequency Stability	Packaging
Q = Qantek	C7CB = 5x7 2-Pad SMD	7 digits including the decimal point (f.i.e. 12.0000)	F = AT-Fund	S = Series 12 = 12pF 18 = 18pF 20 = 20pF etc.	A = -20 to +70°C B = -40 to +85°C	2 = ±20ppm 3 = ±30ppm 5 = ±50ppm	2 = ±20ppm 3 = ±30ppm 5 = ±50ppm	M = 250pcs Tape&Reel R = 1000pcs Tape&Reel

Example: QC7CB12.0000F12B33R

bold letters = recommended standard specification



**QANTEK Technology Corporation**

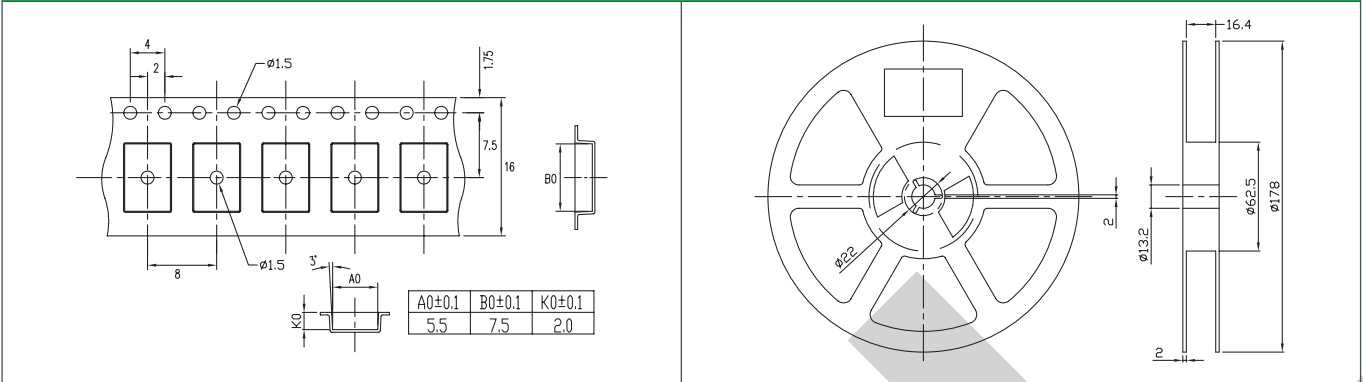
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**Tape and Reel Dimensions**



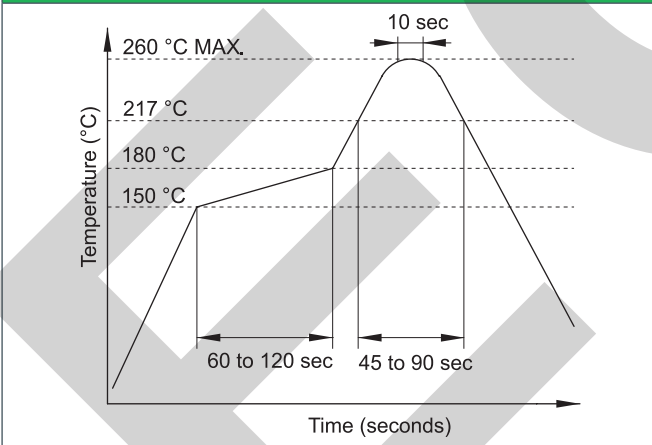
**Marking Code Guide**

Contains frequency, Qantek manufacturing code, production code (month and year) and load capacitance.

Month Codes				Year Codes						Load Capacitance Code in pF			
January	A	July	G	2010	0	2011	1	2012	2	pF	PN Code	pF	PN Code
February	B	August	H	2013	3	2014	4	2015	5	12	A	20	F
March	C	September	I							18	B	22	G
April	D	October	J							8	C	30	H
May	E	November	K							10	D	32	I
June	F	December	L							16	E	S	S

*Example: First Line: 12.000 (Frequency) Second Line: QA1A (Qantek - January - 2011 - 12 pF)*

**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.