QC3CA Series

2.5x3.2 4-Pad SMD All Ceramic Crystal Unit

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



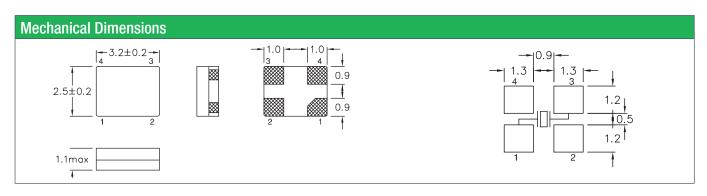




General Specifications	
Frequency Range	12.000 to 48.000MHz (Fundamental)
Frenquency Tolerance at 25°C	±20 to ±50ppm (±30ppm standard)
Frequency Stability over Temperature Range	See Stability vs. Temperature Table
Storage Temperature	-55 to +125°C
Aging per Year	±5ppm max.
Load Capacitance C _L	10 to 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 (MO)	500 at 100Vdc +15Vdc

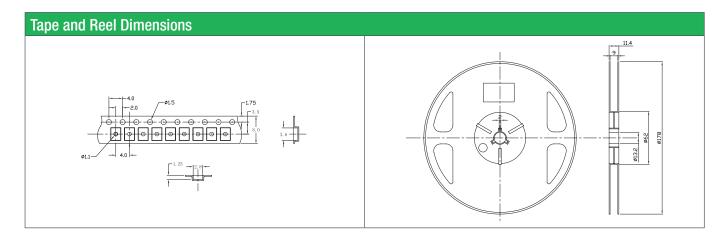
Equivalent Series Resistance (ESR)			
Frequency Range - MHz	Ω max.	Mode of Operation	
12.000 to 16.000	120	Fundamental	
16.000 to 25.000	60	Fundamental	
25.000 to 30.000	50	Fundamental	
30.000 to 48.000	35	Fundamental	

Frequency Stability vs. Temperature					
Operating Temperature	±20ppm	±30ppm	±50ppm		
-20 to +70°C	0	0	0		
-40 to +85°C	0	•	0		
			● standard ○ available		



Part No	Part Numbering Guide							
Qantek Code	Package	Nominal Frequency (in MHz)	Vibration Mode	Load Capacitance	Operating Temperature Range	Frequency Tolerance	Frequency Stability	Packaging
Q = Qantek	C3CA = 2.5x3.2 4-Pad SMD	7 digits including the decimal point (f.ie. 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 R3 = 3000pcs Tape&Reel
Example: QC3CA12.0000F12B33R bold letters = recommended standard specification			ded standard specification					





Marking Code Guide

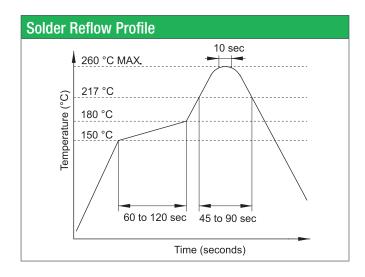
Contains frequency, Qantek manufacturing code, production code (month and year) and load capacitance.

Month Codes				
January	Α	July	G	
February	В	August	Н	
March	С	September	1	
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

Load Capacitance Code in pF					
pF	PN Code	pF	PN Code		
12	Α	20	F		
18	В	22	G		
8	С	30	Н		
10	D	32	I		
16	Е	S	S		

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



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	

 $\ensuremath{\mathsf{All}}$ specifications are subject to change without notice.

