## **Features**

- Low in height, suitable for thin equipment
- Ceramic package and metal lid assures high reliability
- Tight tolerance and stability available

## **Applications**

- · High density applications
- · Modem, communication and test equipment
- PMCIA, wireless applications
- · Automotive applications

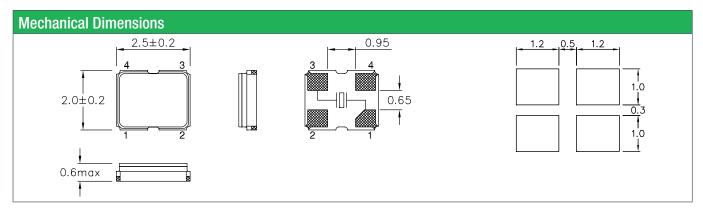




General Specifications	
Frequency Range	16.000 to 50.000MHz (Fundamental)
Frenquency Tolerance at 25°C	±10 to ±30ppm (±30ppm standard)
Frequency Stability over Temperature Range	See Stability vs. Temperature Table
Storage Temperature	-55 to +125°C
Aging per Year	±3ppm max.
Load Capacitance C <sub>L</sub>	7 to 32pF and Series Resonance
Shunt Capacitance C <sub>0</sub>	5.0pF max.
Equivalent Series Resistance (ESR)	See ESR Table
Drive Level	100μW typ.
Insulation Resistance (M $\Omega$ )	500 at 100Vdc ±15Vdc

Equivalent Series Resistance (ESR)				
Frequency Range - MHz	Mode of Operation			
16.000 to 29.999	150	Fundamental		
30.000 to 50.000 100				

Frequency Stability vs. Temperature					
Operating Temperature	±10ppm	±20ppm	±30ppm	±50ppm	±100ppm
-20 to +70°C	0	0	0	0	0
-40 to +85°C	0*	0	•	0	0
-40 to +105°C	-	-	-	0	0
-40 to +125°C	-	-	-	-	0
*Operating Temperature -30 to +80°C		*Operating Temperature -30 to +80°C • standard • availab			

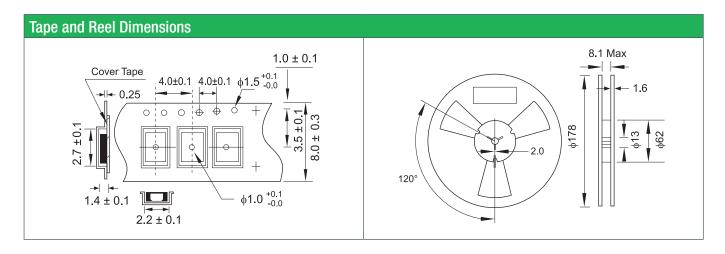


Part Numbering Guide									
Qantek Code	Package	Nominal Frequency (in MHz)	Vibration Mode	Load Capacitance	Operating Tem- perature Range	Frequency Tolerance	Frequency Stability	Automotive Indicator	Packaging
Q = Qantek	C25 = 2.0x2.5 4-Pad SMD	7 digits including the decimal point (f.ie. 12.0000)	F = AT-Fund	S = Series 08 = 8pF 12 = 12pF 18 = 18pF 20 = 20pF etc.	A = -20 to +70°C B = -40 to +85°C C = -40 to +105°C D = -40 to +125°C	1 = ±10ppm 2 = ±20ppm 3 = ±30ppm 5 = ±50ppm 0 = ±100ppm	1 = ±10ppm 2 = ±20ppm 3 = ±30ppm 5 = ±50ppm 0 = ±100ppm	A = AEC-Q200	M = 250pcs Tape&Reel R = 1000pcs Tape&Reel R3 = 3000pcs Tape&Reel
Example: QC2516.0000F12B33R bold letters = recommended standard specificar				led standard specification					









## **Marking Code Guide**

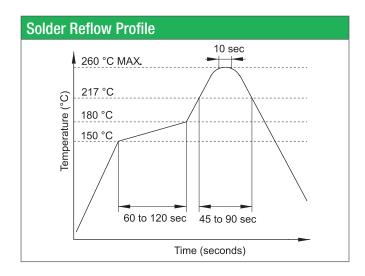
Contains frequency, Qantek manufacturing code, production code (month and year) and load capacitance.

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

Year Codes					
2013	3	2014	4	2015	5
2016	6	2017	7	2018	8
	2013	2013 3	2013 3 2014	2013 3 2014 4	2013 3 2014 4 2015

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

Example:	First Line: 12.000 (Frequency)	Second Line: QA5A (Qantek - January - 2015 - 12 pF)
_manipioi	Thot Emor Teloco (Troquonoj)	cocona zmor anor (aamen canaar) zoro rz pr)



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.





