## **QCP9 Series**

4.6x12.5 4-Pad Plastic SMD Crystal Unit

## **Features**

- Excellent environmental and heat resistance plastic package with reflow capability
- Extended temperature -40 to +85°C for industrial applications

Equivalent Series Resistance (ESR)

Insulation Resistance (M $\Omega$ )

Drive Level

## **Applications**

• Commercial and Industrial applications



General Specifications				
Frequency Range		3.500 to 70.000MHz (Fundamental)		
Mode of Oscillation Fundamental		3.500 to 36.000MHz		
	Third Overtone	30.000 to 70.000MHz		
Frequency Tolerance at 25°C		±30 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 <sub>L</sub>		10 to 32pF		
Shunt Capacitance C <sub>0</sub>		5.0pF max.		

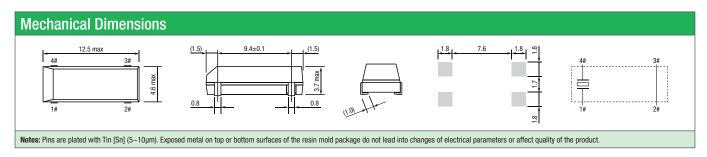
See ESR Table

500 at 100Vdc ±15Vdc

100μW typ.

Equivalent Series Resistance (ESR)				
Frequency Range - MHz	$\Omega$ max.	Mode of Operation		
3.500 to 3.999	150	Fundamental		
4.000 to 4.999	120			
5.000 to 5.999	100			
6.000 to 9.999	80			
10.000 to 15.999	50			
16.000 to 19.999	40			
20.000 to 36.000	30			
30.000 to 35.999	100	Third Overtone		
36.000 to 70.000	80			

Frequency Stability vs. Temperature				
Operating Temperature	±30ppm (>=6.000MHz)	±50ppm		
-20 to +70°C	0	0		
-40 to +85°C	0	•		
		● standard ○ available		

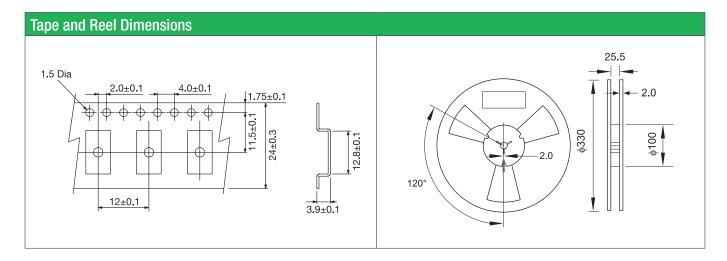


Part Numbering Guide								
Qantek Code	Package	Nominal Frequency (in MHz)	Vibration Mode	Load Capacitance	Operating Temperature Range	Frequency Tolerance	Frequency Stability	Packaging
Q = Qantek	CP9 = 4.6x12.5 4-Pad SMD	7 digits including the decimal point (f.ie. 12.0000)	F = AT-Fund	12 = 12pF 16 = 16pF <b>18 = 18pF</b> 20 = 20pF 30 = 30pF etc.	A = -20 to +70°C B = -40 to +85°C	3 = ±30ppm <b>5 = ±50ppm</b>	3 = ±30ppm <b>5 = ±50ppm</b>	R = 1000pcs Tape&Reel
Example: QCP912.0000F12B55R bold letters = recommended standard specification								



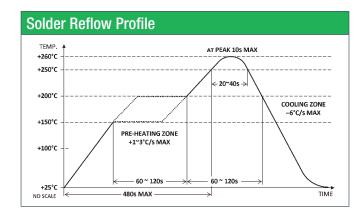
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## **Marking Code Guide**

Contains frequency



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.

