QCP9 Series

4.6x12.5 4-Pad Plastic SMD Crystal Unit

RoHS Compliant

Pb lead-free

Features

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

Applications

- Commercial and Industrial applications

General Specifications

Frequency Range	3.579545 to 27.000MHz (Fundamental)
Frenquency Tolerance at 25°C	±30 to ±50ppm (±50ppm 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
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)

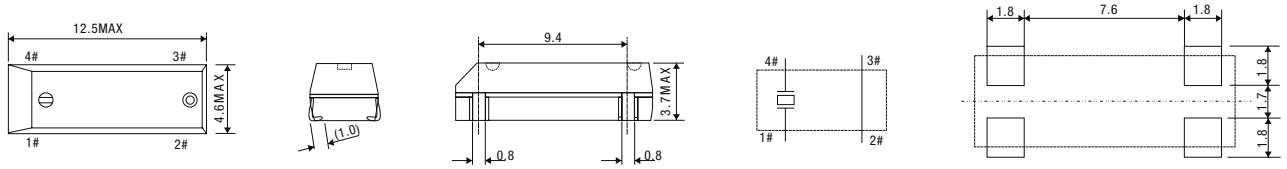
Frequency Range - MHz	Ω max.	Mode of Operation
3.500 to 3.999	200	Fundamental
4.000 to 6.999	150	
7.000 to 8.999	120	
9.000 to 11.999	100	
12.000 to 13.999	80	
14.000 to 19.999	70	
20.000 to 27.000	60	

Frequency Stability vs. Temperature

Operating Temperature	±30ppm	±50ppm	±100ppm
-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	CP9 = 4.6x12.5 4-Pad SMD	7 digits including the decimal point (f.ie. 12.0000)	F = AT-Fund	12 = 12pF 16 = 16pF **18 = 18pF** 20 = 20pF 30 = 30pF etc.	A = -20 to +70°C **B = -40 to +85°C**	3 = ±30ppm **5 = ±50ppm** 0 = ±100ppm	3 = ±30ppm **5 = ±50ppm** 0 = ±100ppm	R = 1000pcs Tape&Reel R3 = 3000pcs Tape&Reel

Example: QCP912.0000F12B55R

bold letters = recommended standard specification

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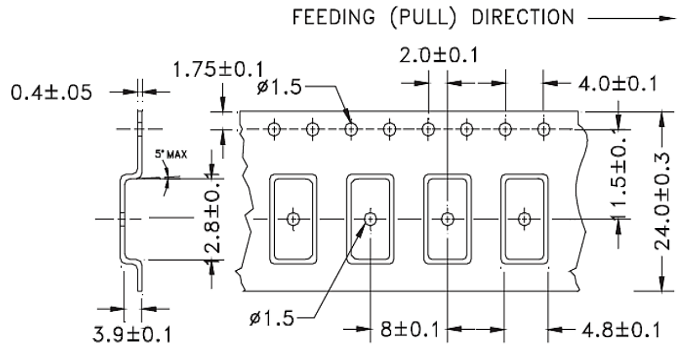
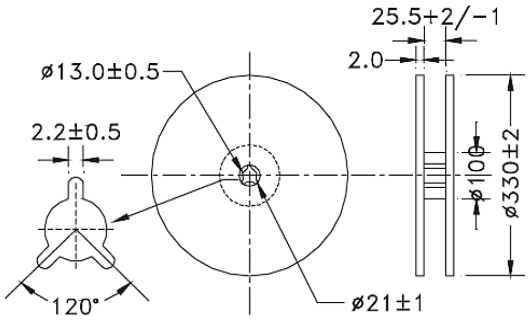
Tape and Reel Dimensions

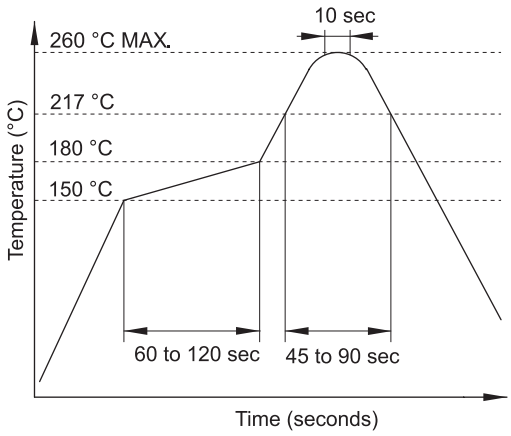




Marking Code Guide

Contains frequency

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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