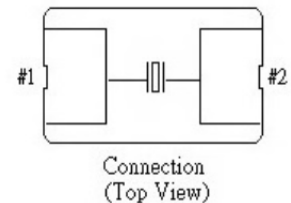
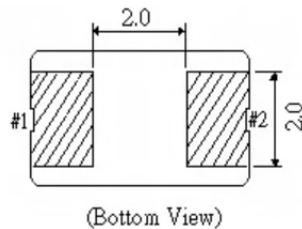
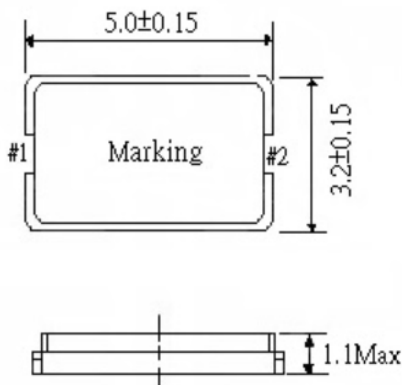


### STANDARD SPECIFICATIONS

Frequency Range	7.6 MHz to 54.0 MHz (Fundamental) 40.0 MHz to 156.25 MHz (3 <sup>rd</sup> Overtone)		
Vibration Mode	AT Cut Fundamental, 3rd		
Frequency Tolerance (25°C)	± 10 ppm (see Crystal Part Number Guide for more details)		
Load Capacitance (CL)	16pF, 18pF (see Crystal Part Number Guide for more details)		
Equivalent Series Resistance (E.S.R.)	<b>Frequency (MHz)</b>	<b>Mode</b>	<b>ESR</b>
	7.6 ~ 11.9	Fundamental	100 Ohms Max.
	12.0 ~ 13.9	Fundamental	60 Ohms Max.
	14.0 ~ 19.9	Fundamental	50 Ohms Max.
	20.0 ~ 54.0	Fundamental	40 Ohms Max.
	40.0 ~ 59.0	3 <sup>rd</sup>	70 Ohms Max.
60.0 ~ 156.25	3 <sup>rd</sup>	60 Ohms Max.	
Aging (First Year @ 25°C)	±2 ppm/year max, ±5 ppm/year max		
Frequency Stability over Operating Temperature	± 50 ppm Standard (see Crystal Part Number Guide for more details)		
Drive Level	300µW Max.		
Operating Temperature Range	-40°C ~+125°C (see Crystal Part Number Guide for more details)		
Storage Temperature Range	-50 °C ~+150 °C		
<b>Ordering Instructions (see Crystal Part Number Guide for more details)</b>			
<b>Example: QVS Part # = QCA215-21KF18-20.000</b>			
QCA215 -	±50ppm(@ 25°) 2	±50ppm(Over Temp) 1	-40°C~+125°C K
			Fundamental F
			Load Cap. 18pF
			Freq. -20.000MHz

See Engineering-Technical Info for Solder Re-flow and Tape and Reel Specs

### Dimensions (Unit:mm)



### QVS TECH INC

6965 El Camino Real, Ste 105 Carlsbad, CA 92009 Phone: 760-929-8677 Fax: 760-929-8077

email: [sales@qvstech.com](mailto:sales@qvstech.com)

Specifications subject to change without notice (Rev IR)