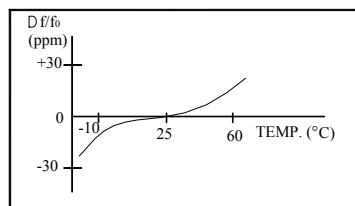


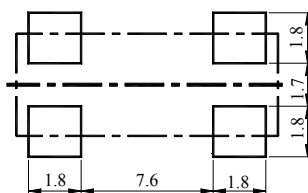
STANDARD SPECIFICATIONS	
Frequency Range	3.500MHz ~ 70.000MHz
Frequency Tolerance (25 °C)	± 50 ppm Standard (see Crystal Part Number Guide for more details)
Load Capacity (CL)	18pF Standard (see Crystal Part Number Guide for more details)
Shunt Capacity (C ₀)	7.0 pF max
Equivalent Series Resistance (E.S.R.)	See Table
Insulation Resistance	500 MΩ min
Aging (First Year)	± 5ppm max
Sealing	1×10 ⁻⁷ mbar/sec. max
Drive Level	200μW(3.5MHz~4MHz), 50μW(4MHz~10MHz), 500μW(>10MHz)
Operating Temperature Range	0°C ~ +70°C Standard (see Crystal Part Number Guide for more details)
Storage Temperature Range	-40°C ~+85°C Standard
Holder	QPM2

EQUIVALENT SERIES RESISTANCE (E.S.R.)	
Frequency (MHz)	Max ESR (Ω)
3.5~4.0	200
4.0~6.0	150
6.0~10.0	100
>10.0 (Fund.)	50

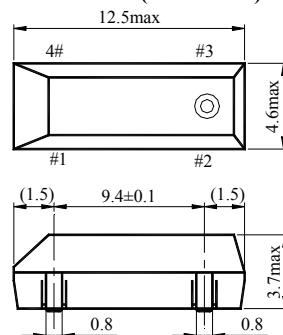
FREQUENCY vs TEMPERATURE CURVE



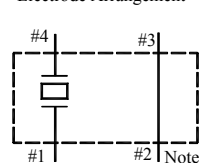
RECOMMENDED PAD LAYOUT



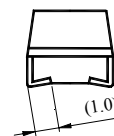
DIMENSIONS (UNIT=mm)



Electrode Arrangement



Note: #2 and/or #3 are not connected to other places



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

Ordering Instructions (see Crystal Part Number Guide for more details)

Example: QVS Part # = QPM2-21AF18-20.000

QPM2-	±50ppm(@ 25°)	±100ppm(Over Temp)	0°C~+70°C	Fundamental	Load Cap.	Freq.
	2	1	A	F	18 pF	-20.000MHz

QVS TECH INC

6965 El Camino Real, Ste 105 Carlsbad, CA 92009 Phone: 760-929-8677 Fax: 760-929-8077
email: sales@qvstech.com

Specifications subject to change without notice (Rev A)