QEUM1 / QEUM1-GW

UM1, Through Hole & Gull Wing SMD packaged

Frequency and Electrical Characteristics

Parameter	Min.	Typ.	Max.	Unit	Test condition / Description
Nominal frequency (Fn)	10		200	MHz	
Calibration tolerance	±10	±30	±50	ppm	Frequency at 25°C ± 2°C and specified load capacitance
Operating temperature range		-20 to +70	-40 to +85	°C	Refer to ordering information
Storage temperature range	-40		+85	°C	
Frequency stability over temperature	±10	±30	±50	ppm	Referenced to frequency reading at 25°C and the specified load capacitance
Long-term stability (Ageing)			±3	ppm	Frequency drift over 1 year at 25°C
Shunt capacitance (C_O)			7.0	pF	
Load capacitance (C_L)	10		32 or series	pF	Refer to ordering information
Drive level		100	500	µW	
Equivalent series resistance (ESR)					Mode of vibration:
10.000 to 14.999Mhz			40	Ω	Fundamental (AT-cut)
15.000 to 40.000Mhz			30	Ω	Fundamental (AT-cut)
24.000 to 49.999Mhz			80	Ω	3rd Overtone (AT-cut)
50.000 to 105.000Mhz			60	Ω	3rd Overtone (AT-cut)
50.000 to 175.000Mhz			150	Ω	5th Overtone (AT-cut)
70.000 to 200.000Mhz			100	Ω	7th Overtone (AT-cut)
Insulation resistance (IR)	500			MΩ	100 V ±15 V at 25°C

Environmental Specifications

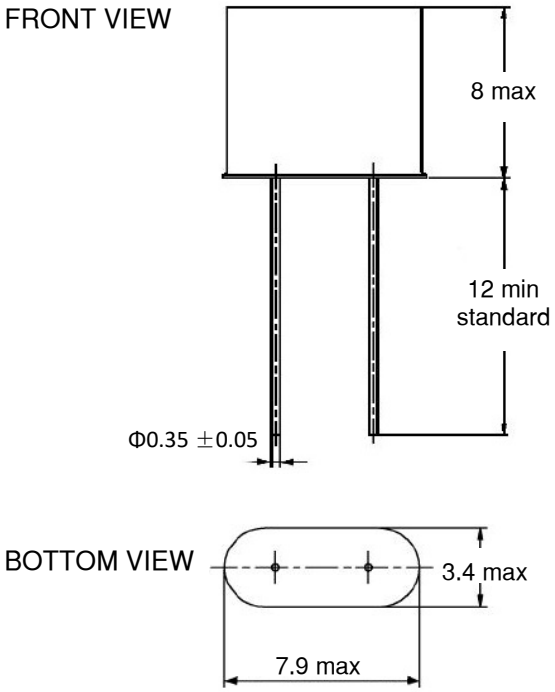
Parameter	Test condition / Description
Mechanical vibration	10*g*, Frequency: 10 Hz ~ 2 kHz according to standard CEI 68-2-63
Shock	100*g*, 6ms according to standard CEI 68-2-27

Order Part Example – QEUM1.1.30.HQ.50.20 / 25.000MHZ

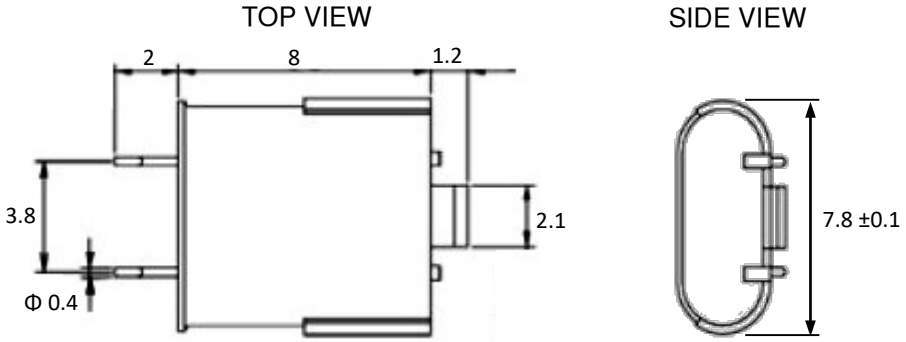
Parameter	Package type	Vibration mode	Frenquency tolerance	Operating temperature range	Frenquency stability	Load capacitance	Nominal Frenquency (MHz)
Code	QEUM1	1	30	HQ	50	20	25.000MHZ
Decode	**QEUM1 :** UM1 Through Hole packaged **QEUM1-GW** : UM1 Gull Wing SMD packaged	1 = Fundamental 3 = 3rd overtone 5 = 5th overtone 7 = 7th overtone	10 = ±10ppm 30 = ±30ppm 50 = ±50ppm	D = -40°C F = -30°C H = -20°C J = -10°C L = 0°C M = +50°C N = +55°C O = +60°C Q = +70°C T = +85°C	10 = ±10ppm 30 = ±20ppm 50 = ±30ppm	20 = ±20pF	Please enter the nominal frequency

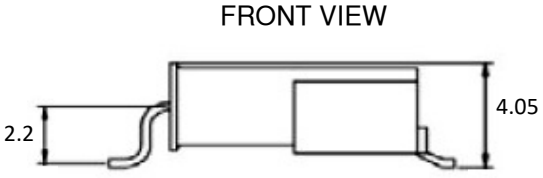
Model Outline, Recommended Pad Layout and Marking

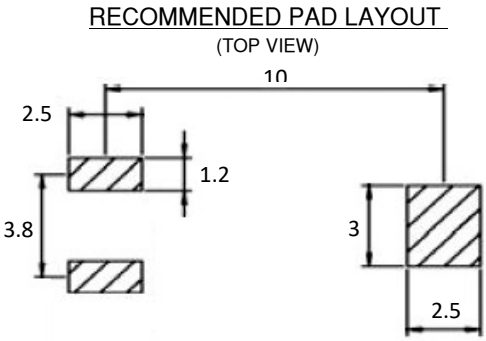
QEUM1



QEUM1-GW





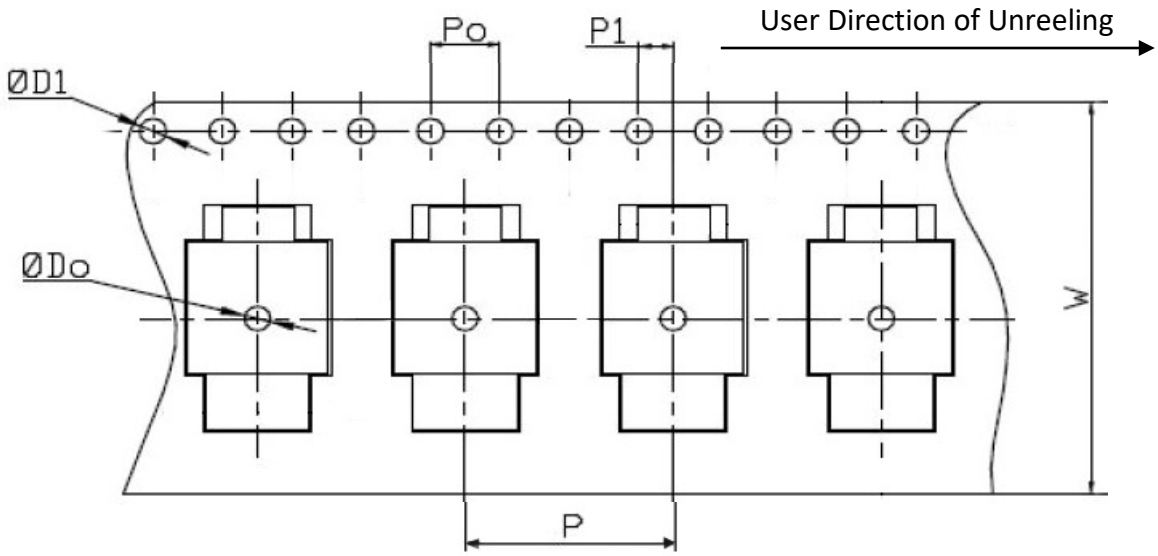


	Marking	Note
Line 1	Product code	QEUM1: VRDxxx QEUM1-GW: VRSxxx
Line 2	Frequency code	Frequency in MHz
Line 3	Date code	YYWW

UNIT: mm

Packaging

TAPE DETAILS – QEUM1-GW:



Parameter	Code	Dimension	Tolerance
Pitch of components	P	12	± 0.1
Pitch of sprocket hole	P_0	4	± 0.1
Length from hole center to component center	P_1	2	± 0.1
Width of carrier tape	W	24	± 0.3
Diameter of feed hole	D_1	Φ 1.5	
Diameter of sprocket hole	D_0	Φ 1.5 min	

NOTE:

- Standard Packing Quantity (SPQ): 1000 pcs/reel
- Metal clips are oriented in the direction of the sprocket holes
- Unit: mm