

## Crystal Resonator (晶体谐振器) – Leded Type (引线型)

### UM Series



#### Applications 用途:

Microcomputer, pager, wireless communication, GPS, Satellite receiver, Communication equipment, Air craft, etc.

微电脑, 传呼机, 无线通讯, 卫星定位导航, 卫星接收器, 通讯设备, 航空器, 等等。

#### Features 特征:

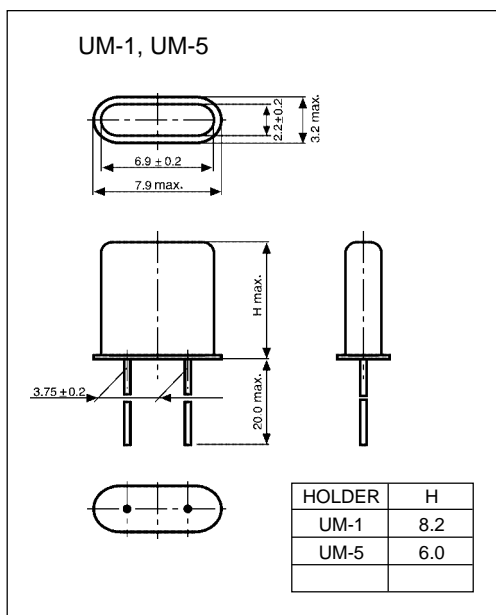
- Small metal welded package. 小型金属封装。
- High stability temperature range. 高稳定性温度范围。

#### Typical specifications 规格参数

Type	型号	UM-1,UM-5		
Frequency range	频率范围	3.5~50.0MHz(UM-1) 9.6~50.0MHz(UM-5)	30.0~100.0MHz	75.0~160.0MHz
Cut / Vibration mode	切型 / 振荡	(AT) Fundamental(基频)	(AT) 3rd overtone (三次泛音)	(AT) 5th overtone (五次泛音)
Frequency tolerance(at +25℃)	调整频差	$\pm 10, \pm 15, \pm 20, \pm 30, \pm 50 \times 10^{-6}$		
Frequency stability	温度频差	$\pm 30, \pm 50 \times 10^{-6}$ Typical, See Table1 (见表 1)		
Operating temperature range	工作温度	-10~+60℃ (-40~+85℃), See Table1 (见表 1)		
Equivalent series resistance	等效电阻	See Table2 (见表 2)		
Load capacitance	负载电容	Series, 10pF, 12pF, 16pF, etc.		
Shunt capacitance	静电容	5pF max.		
Level of drive	激励功率	10μW(100μW max.)		
Aging	老化率	$\pm 3, \pm 5$ ppm/year		
Storage temperature range	储存温度	-55~+125℃		

• Please consult for other specifications. (若有其它规格需求请告知)

#### Outline Dimensions [Unit: mm] 外形尺寸



#### Table1: Frequency stability (ref. to 25℃) 频率稳定性

O.P Temp.	± 2.5ppm	± 5ppm	± 10ppm	± 20ppm	± 30ppm
0~+50℃	●	●	●	●	●
-10~+60℃	●	●	●	●	●
-20~+70℃		●	●	●	●
-40~+85℃			●	●	●

#### Table2: Equivalent series resistance (ESR) 等效电阻

AT Fundamental	ESR(Ω)			AT 3rd Overtone	ESR(Ω)		
	UM-1	UM-5			UM-1	UM-5	
3.5~3.99 MHz	200			30.0~49.99 MHz	45	50	
4.0~4.99 MHz	150			50.0~100.0 MHz	60	60	
5.0~9.99 MHz	60			AT 5th Overtone	ESR(Ω)		
10.0~14.99 MHz	40	60			UM-1	UM-5	
15.0~50.00 MHz	30	35			80	90	