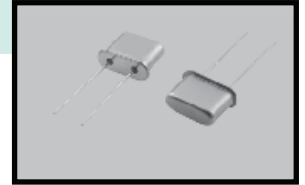


# Quartz Crystal Resonator (MHz)

## UM5, UM5SMD



### General Description

The UM1 are historical metal package for AT Cut crystals, widely used in all application, can guarantee good reliability because of resistance welding enclosure

### Features

A great number of standard frequencies.  
Higher frequency pullability and lower equivalent series resistance.  
Lower cost and highly mass production capability. 100% Pb-free, RoHS-compliant

### Main Applications

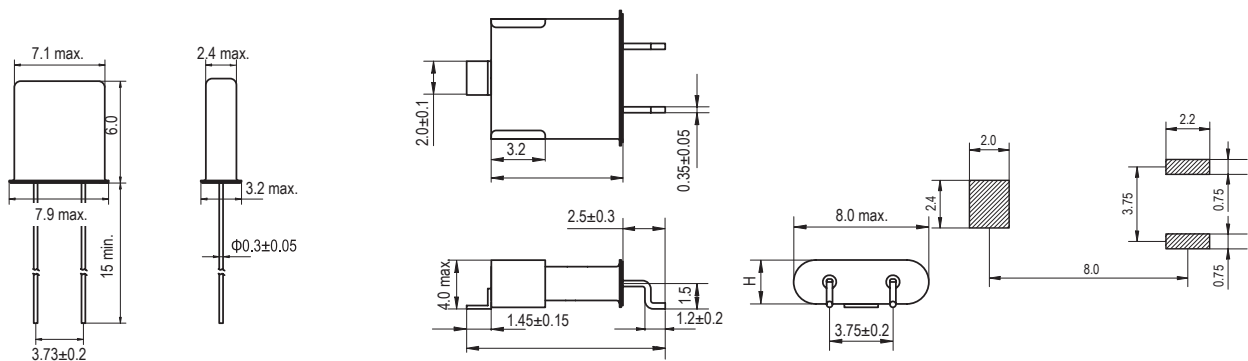
Wireless modules

### Electrical characteristics

Item	Symbol	Values			
Part number		UM5 , UM5SMD			
Mode of vibration		Fund.	3rd Ov	5th Ov	7th Ov
Frequency range	F	6-45M	30-100M	80-125M	120-200M
Frequency tolerance (@ +25°C)	$\Delta f/F$	5 - <b>30</b> ppm			
Frequency stability	$\Delta f/F$	see table 1			
Operating temp. range	To	see table 1			
Storage temp. range	Ts	-55°C / +135°C			
Load capacitance	Cl	6-50pF or Serie			
Resonance Resistance	R1	60 max	80 max	80 max	120 max
Shunt capacitance	CO	< 7pF			
Insulation resistance		>500 M $\Omega$ / DC100V			
Drive level	P	0.01-0.5mW			
Aging	$\Delta f/F$	$\pm 3$ ppm max @ +25°C			

Table 1	3ppm	5ppm	10ppm	15ppm	20ppm	30ppm	50ppm	100ppm
0°C / +50°C	•	•	•	•	•	•	•	•
-10°C / +60°C	•	•	•	•	•	•	•	•
-20°C / +70°C		•	•	•	•	•	•	•
-40°C / +85°C			•	•	•	•	•	•
-40°C / +105°C				•	•	•	•	•
-55°C / +125°C						•	•	•

### Dimensions



Remark : specifications subject to change without prior notice. Please confirm with our sales

# UM5, UM5SMD

## Part Number Generator

**UM5 SMD 10.000000 F AT P120 E F H TR xxx**  
 0 1 2 3 4 5 6 7 8 9

**0 : Holder**  
 UM1  
 UM1 SMD

**1 : Frequency (MHz)**  
 □□□.□□□□□□□□  
 max 10 digits including comma

**2 : Vibration mode**  
 F = Fund.  
 X = 30v  
 Y = 50v  
 W = 70v

**3 : Cut**  
 AT

**4 : Load capacitance**  
 S=Serie  
 P20=20pF  
 P30=30pF  
 etc

**5 : Tolerance**  
 A=  $\leq \pm 30$ ppm  
 B=  $\leq \pm 25$ ppm  
 C=  $\leq \pm 20$ ppm  
 D=  $\leq \pm 15$ ppm  
 E=  $\leq \pm 10$ ppm  
 F=  $\leq \pm 7.5$ ppm  
 G=  $\leq \pm 5.0$ ppm

**6 : Op. temp. range**  
 A= 0/+50  
 D=-10/+60  
 F=-20/+70  
 N=-40/+85  
 P=-40/+105  
 R=-55/+125

**7 : Stability**  
 F = Fund.  
 A1 <  $\pm 100$ ppm  
 A <  $\pm 50$ ppm  
 D <  $\pm 30$ ppm  
 F <  $\pm 20$ ppm  
 G <  $\pm 15$ ppm  
 H <  $\pm 10$ ppm  
 M <  $\pm 5.0$ ppm  
 N <  $\pm 3.0$ ppm

**8 : Packing**  
 RR = Bulk  
 TR = Tape & Reel

**9 : Customized code**  
 Note : factory use

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