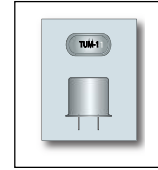


# TUM-5 Crystal Resonator



**FEATURES:**

**Higher Frequencies**  
**Small Metal Can**

**Low Cost**  
**6.0 x 8.0 x 3.8 mm**

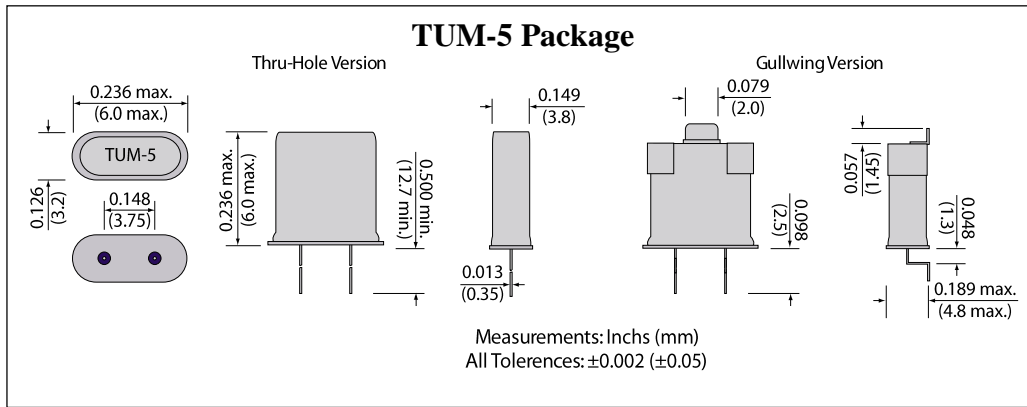
Parameter	Unit	Min.	Typ.	Max.
Frequency Range (FR)	MHz	5.000	-	200.000
Operating Temperature Range	°C	See Table		
Frequency Tolerance at 25°C	ppm	±5	-	±50
Frequency Stability	ppm	See Table		
Load Capacitance (C <sub>L</sub> )	pF	6	-	Series
Shunt Capacitance (C <sub>0</sub> )	pF	-	-	7
Equivalent Series Resistance (R)	Ohms	See Table		
Drive Level	µW		100	1000
Aging per year	ppm	-	±3.0	±5.0
Storage Temperature Range	°C	-40	-	+85

Frequency (MHz)	ESR (Ohms) max.
Fundamental Mode	
5.000 to 50.000	30
3 <sup>rd</sup> Overtone	
>24.000 to 100.000	60
5 <sup>th</sup> Overtone	
>70.000 to 160.000	90
7 <sup>th</sup> Overtone	
>160.000 to 200.000	140

Temperature	Stability (ppm)
-10 to +60°C	±5, ±10, ±15, ±20, ±25, ±30, ±50
-20 to +70°C	±5, ±10, ±15, ±20, ±25, ±30, ±50
-40 to +85°C	±5, ±10, ±15, ±20, ±25, ±30, ±50

**Environmental**

Terminal Material	KOVAR
Terminal Plating	Sn-Ag-Cu
REACH Compliant	Yes
RoHS Compliant	Yes
RoHS Exemptions	No
Re-flow Temp. Max.	260°C
MSL	1



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Example Part Number: TUM-5-D-E-16-18-25M576

TUM-5	1	2	3	4	5
	<b>Tolerance</b>	<b>Stability</b>	<b>Temp. Range</b>	<b>Load Cap.</b>	<b>Frequency</b>
	A = ±50	A = ±50	16 = -10 to +60°C	AA = Series	Frequency in MHz
	B = ±30	B = ±30	27 = -20 to +70°C	xx = Load	i.e. 25M456
	C = ±25	C = ±25	48 = -40 to +85°C	i.e. 16, 24, 32	use M for decimal point
	D = ±20	D = ±20			
	E = ±15	E = ±15			
	F = ±10	F = ±10			
	G = ±5	G = ±5			