



TU2M

*RoHS Complaint Standard*  
**Features:**

- ❖ Compatible LCC clock oscillator footprint
- ❖ Ultra-miniature
- ❖ High reliability, seam welded
- ❖ Tighter Tolerance
- ❖ VP/ IR solder re-flow compatible
- ❖ Tape and Reel Available
- ❖ GSM, GPS, PCMCIA, Bluetooth, Wireless
- ❖ Shielded

# CRYSTAL UNITS

## TU2M Series Crystal

### Ultra-Low Profile, LCC/SMD

#### Model: TU2M Series Specifications

Frequency Range	8.00 to 120.00 MHz	Frequency (MHz)	Mode	ESR max. (Ω)
Frequency Tolerance	±5, ±10, ±15, ±20, ±25, ±30	8.00 to 9.99	AT1	100
Frequency Stability	See Table	10.00 to 12.99	AT1	80
Operating Temperature Range	See Table	13.00 to 13.99	AT1	50
Load Capacitance	Series, 10 to 32 pF	14.00 to 19.99	AT1	40
Shunt Capacitance	7pF max.	20.00 to 47.99	ATI	30
Mode of Vibration	See Table	48.00 to 120.0	AT3/5	120
Equivalent Series Resistance	See Table	AT1	AT cut Fundamental	
Drive Level	50 μW to 1mW	AT3	AT cut 3rd Overtone	
Aging	±5 ppm/Year Max.	AT5	AT cut 5th Overtone	
		Temperature	Stability (ppm)	
		-10 to 60°C	±10, ±15, ±20, ±25, ±30	
		-20 to 70°C	±10, ±15, ±20, ±25, ±30	
		-40 to 85°C	±20, ±25, ±30	

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