

LOW PROFILE CRYSTAL UNITS

for microprocessor use

Specifications

TOYOCOM's Part No.	as mentioned in the table	
Holder	HC-49/U-70	
Frequency range	3.5+ to 36 MHz	36+ to 60 MHz
Mode of vibration	Fundamental	3rd overtone
Frequency tolerance	±50ppm (at 25±3°C)	
Load capacitance (C _L)	as mentioned in the table	
Resonance resistance (R _r)	as mentioned in the table	
Frequency stability	±100 ppm (0 to +70°C, inclusive of frequency tolerance at 25°C)	
Operating temperature range	0 to +70°C	
Shunt capacitance (C ₀)	5pF max.	
Drive level	0.5±0.1mW	
Insulation resistance	500MΩ min./DC 100V	
Shock	dF/F = ±10 ppm max., Withstand half sine wave in each 3 directions under 1,000G, 0.35 msec	
Vibration	dF/F = ±10 ppm max., Withstand each 1 hour in 3 directions under 1 to 2 min. of 10 to 55 Hz, amplitude 0.7 to 0.9 mm (Peak to peak in vibration)	
Leak	2×10 ⁻⁸ atm·cc/sec max.	

The Table of MPU crystal units

Part No.	Frequency (MHz)	R _r (Ω) max.	C _L (pF)
TQC-203C-6R	3.579545	180	16±0.2
TQC-246C-6R	3.6864	180	16±0.2
TQC-233C-6R	3.93216	150	16±0.2
TQC-204C-6R	4.0000	150	16±0.2
TQC-224C-6R	4.194304	130	16±0.2
TQC-234C-6R	4.433619	120	16±0.2
TQC-231C-6R	4.5000	120	16±0.2
TQC-235C-6R	4.9152	120	16±0.2
TQC-205C-6R	5.0000	120	16±0.2
TQC-208C-6R	6.0000	80	16±0.2
TQC-248C-6R	7.3728	75	16±0.2
TQC-210C-6R	8.0000	70	16±0.2
TQC-211C-6R	10.0000	50	16±0.2
TQC-240C-6R	10.2400	50	16±0.2
TQC-252C-6R	11.0592	50	16±0.2

Part No.	Frequency (MHz)	R _r (Ω) max.	C _L (pF)
TQC-226C-6R	12.0000	50	16±0.2
TQC-244C-6R	12.2880	50	16±0.2
TQC-227C-6R	14.0000	50	16±0.2
TQC-241C-6R	14.31818	50	16±0.2
TQC-249C-6R	14.7456	50	16±0.2
TQC-212C-6R	15.0000	50	16±0.2
TQC-228C-6R	16.0000	50	16±0.2
TQC-242C-6R	17.734475	50	16±0.2
TQC-213C-6R	18.0000	50	16±0.2
TQC-214C-6R	18.4320	50	16±0.2
TQC-215C-6R	19.6608	50	16±0.2
TQC-216C-6R	20.0000	50	16±0.2
TQC-243C-6R	24.0000	50	16±0.2
TQC-254A-6R	32.000	50	10±0.2
TQC-219C-6R	48.000	100	16±0.2

*Note: The other frequencies and specifications of our MPU crystals ranging from 3.5 to 60 MHz are available upon your request.

TQC-317C-6R	C _L = 16 pF
TQC-317D-6R	C _L = 32 pF
TQC-317S-6R	C _L = (s): Series resonance