

HC35 (TO5) CRYSTALS

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Outline (mm)

Holder Style

- Resistance welded, hermetically sealed in an inert atmosphere with glass to metal seals securing the lead wires

General Specifications

- Load Capacitance (CL): 10pF to 75pF or Series
- Drive Level: 1.0mW max
- Static Capacitance (C0): 7pF max
- Ageing: ± 3 ppm typical per year

Packaging

- Loose in bulk pack

Standard Frequency Tolerances and Stabilities

- ± 5 ppm, ± 10 ppm, ± 15 ppm, ± 20 ppm, ± 30 ppm, ± 50 ppm, ± 100 ppm

Operating Temperature Ranges

- 0 to 50°C
- -10 to 60°C
- -20 to 70°C
- -30 to 80°C
- -40 to 85°C
- -55 to 105°C
- -55 to 125°C

Storage Temperature Range

- -55 to 125°C

Environmental Specification

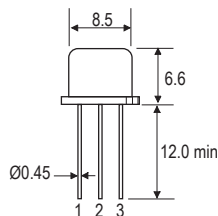
- Shock: 981m/s^2 for 6ms, three shocks in each direction along three mutually perpendicular planes
- Vibration: 10 to 60Hz 0.75mm displacement, 60 to 2000Hz 98.1m/s^2 acceleration, 30 minutes in each of three mutually perpendicular planes

Marking Includes

- Frequency

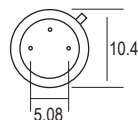
Minimum Order Information Required

- Frequency + Holder + Frequency Tolerance @ 25°C + Frequency Stability + Operating Temperature Range + Circuit Condition + Overtone Order

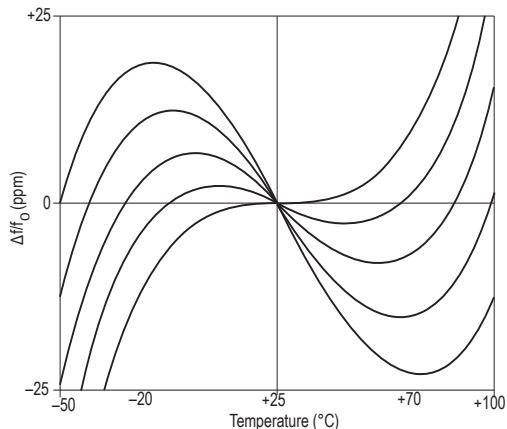


Pin connections

1. Crystal
2. Case & GND
3. Crystal



Typical Frequency vs Temperature Curves for various angles of AT-cut crystals



Electrical Specifications - maximum limiting values

Frequency Range	Frequency Tolerance @25°C ±2°C	Operating Temperature Range	Frequency Stability Available Over Operating Temperature Range		ESR Max	Vibration Mode
			Minimum	Maximum		
6.0 to < 8.0MHz	±5ppm to ±100ppm	0 to 50°C	±10ppm	±100ppm	60Ω	Fundamental AT cut
		-10 to 60°C	±15ppm			
		-20 to 70°C	±15ppm			
		-30 to 80°C	±20ppm			
		-40 to 85°C	±25ppm			
		-55 to 105°C	±50ppm			
		-55 to 125°C	±50ppm			
8.0 to < 15.0MHz	±5ppm to ±100ppm	0 to 50°C	±10ppm	±100ppm	30Ω	Fundamental AT cut
		-10 to 60°C	±15ppm			
		-20 to 70°C	±15ppm			
		-30 to 80°C	±20ppm			
		-40 to 85°C	±25ppm			
		-55 to 105°C	±50ppm			
		-55 to 125°C	±50ppm			
15.0 to < 30.0MHz	±5ppm to ±100ppm	0 to 50°C	±10ppm	±100ppm	20Ω	Fundamental AT cut
		-10 to 60°C	±15ppm			
		-20 to 70°C	±15ppm			
		-30 to 80°C	±20ppm			
		-40 to 85°C	±25ppm			
		-55 to 105°C	±50ppm			
		-55 to 125°C	±50ppm			
25.0 to 90.0MHz	±5ppm to ±100ppm	0 to 50°C	±10ppm	±100ppm	40Ω	3rd Overtone AT cut
		-10 to 60°C	±15ppm			
		-20 to 70°C	±15ppm			
		-30 to 80°C	±20ppm			
		-40 to 85°C	±25ppm			
		-55 to 105°C	±50ppm			
		-55 to 125°C	±50ppm			
60.0 to 150.0MHz	±5ppm to ±100ppm	0 to 50°C	±10ppm	±100ppm	60Ω	5th Overtone AT cut
		-10 to 60°C	±15ppm			
		-20 to 70°C	±15ppm			
		-30 to 80°C	±20ppm			
		-40 to 85°C	±25ppm			
		-55 to 105°C	±50ppm			
		-55 to 125°C	±50ppm			
125.0 to 175.0MHz	±5ppm to ±100ppm	0 to 50°C	±10ppm	±100ppm	100Ω	7th Overtone AT cut
		-10 to 60°C	±15ppm			
		-20 to 70°C	±15ppm			
		-30 to 80°C	±20ppm			
		-40 to 85°C	±25ppm			
		-55 to 105°C	±50ppm			
		-55 to 125°C	±50ppm			
170.0 to 210.0MHz	±5ppm to ±100ppm	0 to 50°C	±10ppm	±100ppm	200Ω	9th Overtone AT cut
		-10 to 60°C	±15ppm			
		-20 to 70°C	±15ppm			
		-30 to 80°C	±20ppm			
		-40 to 85°C	±25ppm			
		-55 to 105°C	±50ppm			
		-55 to 125°C	±50ppm			

Note: For other frequency/specification combinations, please contact our sales office