



ISSUE 14; February 2012 - RoHS 2011/65/EU

Description

- Industry standard TO5 package
Resistance welded, hermetically sealed in an inert atmosphere, glass to metal seals on leads
Variant - 2L = two-legged device with no ground leg

Frequency Range

- Frequency 6.0 to 210.0Mhz
- Frequency Tolerance ±5ppm to ±100ppm

General Specification

- Load Capacitance (CL) 10.0pF to 75.0pF or Series
- Drive Level 1.0mW max
- Ageing ±3ppm typical per year
- Shunt Capacitance (C0) 7pF max

Operating Temperature Ranges

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

Environmental Parameters

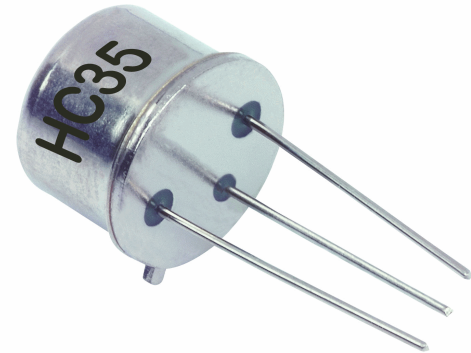
- Vibration: 10Hz-60Hz, 0.75mm amplitude, 60Hz-2000Hz, 98.1m/s², 30mins in 3 mutually perpendicular planes.
- Shock: 981m/s², 6ms, 3 times in each of 3 mutually perpendicular planes.
- Storage Temperature Range: -55 to 125°C

Ordering Information

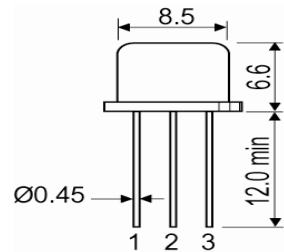
- Frequency*
- Model*
- Frequency Tolerance (@25°C)*
- Frequency Stability (over operating temperature range)*
- Operating Temperature Range*
- Load Capacitance*
- Overtone*
- Example
10.0MHz HC35
50/50/-40 to 85C/10 FUND

Packing Details

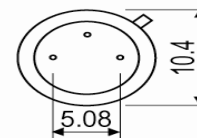
- Pack Style: **Bulk** Loose in bulk pack
- Pack Size 100
- Alternative packing options available



Outline (mm)



Pin Connections
 1. Crystal
 2. Case & GND
 3. Crystal



Sales Office Contact Details:

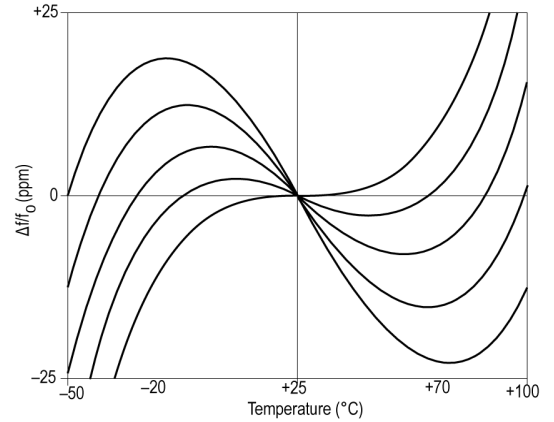
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Typical Frequency vs Temperature Curves for various angles of AT-cut crystals



Electrical Specification - maximum limiting values

Frequency Range	Frequency Tolerance	Stability		Temperature Range	ESR Max	Vibration Mode
		Min	Max			
6.0 to <8.0MHz	±5 to ±100ppm	±10ppm ±15ppm ±15ppm ±20ppm ±25ppm ±50ppm ±50ppm	±100ppm	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	60Ω	Fundamental
8.0 to <15.0MHz	±5 to ±100ppm	±10ppm ±15ppm ±15ppm ±20ppm ±25ppm ±50ppm ±50ppm	±100ppm	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	30Ω	Fundamental
15.0 to <30.0MHz	±5 to ±100ppm	±10ppm ±15ppm ±15ppm ±20ppm ±25ppm ±50ppm ±50ppm	±100ppm	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	20Ω	Fundamental
25.0 to <90.0MHz	±5 to ±100ppm	±10ppm ±15ppm ±15ppm ±20ppm ±25ppm ±50ppm ±50ppm	±100ppm	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	40Ω	3RD Overtone
60.0 to <150.0MHz	±5 to ±100ppm	±10ppm ±15ppm ±15ppm ±20ppm	±100ppm	0 to 50°C -10 to 60°C -20 to 70°C -30 to 80°C	60Ω	5TH Overtone

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		±25ppm ±50ppm ±50ppm		-40 to 85°C -55 to 105°C -55 to 125°C		
125.0 to <175.0MHz	±5 to ±100ppm	±10ppm ±15ppm ±15ppm ±20ppm ±25ppm ±50ppm ±50ppm	±100ppm	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	100Ω	7TH Overtone
170.0 to <210.0MHz	±5 to ±100ppm	±10ppm ±15ppm ±15ppm ±20ppm ±25ppm ±50ppm ±50ppm	±100ppm	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	200Ω	9TH Overtone

This document was correct at the time of printing; please contact your local sales office for the latest version

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