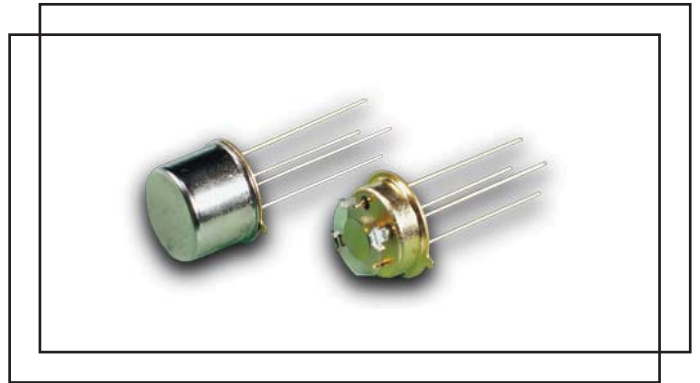


## HC-35/U precision crystal cold weld enclosure (5.0 ~ 200)MHz

- # very high shock and vibration
- # precision AT cut
- # low ageing rate



### Electrical specification

**Case style**
**Frequency range**
**Adjustment tolerance**
**Temperature tolerance**
**Operating temperature**
**Storage temperature**
**Load**
**Shunt capacitance  $C_0$** 
**Drive level**
**Q factor**
**Ageing**
**Insulation resistance**

HC-35/U cold weld  
 (5.0 ~ 200)MHz, fundamental to 9th overtone  
 from  $\pm 5$ ppm at  $+25^\circ\text{C}$ , frequency dependent  
 from  $\pm 3$ ppm, frequency and temperature range dependent  
 $(-10 +60)^\circ\text{C} \sim (-55 +105)^\circ\text{C}$   
 $(-55+125)^\circ\text{C}$   
 customer specified  
 5.0pF max.  
 0.5 milli.W typical  
 100,000 typical  
 $\pm 1$ ppm first year max.  
 500Meg. ohm min. at 100Vd.c.

### Ordering information

The HC-35/U glass crystal may be specified within its available frequency range together with load capacitance, adjustment tolerance, temperature tolerance and temperature range with each parameter coded as follows ....

**Example .... HC-35/U crystal, 100.00MHz, load series,  $\pm 10$ ppm at  $+25^\circ\text{C}$ ,  $\pm 5$ ppm  $(-10 +60)^\circ\text{C}$**

**TFC PART NUMBER .... X35U 100.00M S B A I**

'X35U' .... crystal holder: X35U = HC-35/U

'100.00M' .... frequency: 100.00M = 100.00MHz, frequency range from (3.0 ~ 200)MHz

'S' .... load capacitance: S = series

'B' .... adjustment tolerance at  $+25^\circ\text{C}$ : B =  $\pm 10$ ppm

'A' .... temperature tolerance: A =  $\pm 5$ ppm

'I' .... temperature range: I =  $(-10 +60)^\circ\text{C}$

**Load capacitance .... C: 10pF, D: 12pF, E: 15pF, G: 18pF, H: 20pF, I: 30pF, J: 32pF, S: series**

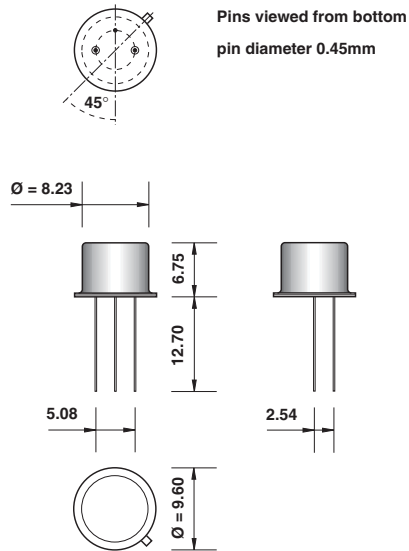
**Adjustment tolerance .... A:  $\pm 5$ ppm, B:  $\pm 10$ ppm, C:  $\pm 20$ ppm, E:  $\pm 30$ ppm, G:  $\pm 50$ ppm, H:  $\pm 100$ ppm, P:  $\pm 15$ ppm**

**Temperature tolerance .... A:  $\pm 5$ ppm, B:  $\pm 10$ ppm, C:  $\pm 20$ ppm, E:  $\pm 30$ ppm, G:  $\pm 50$ ppm, H:  $\pm 100$ ppm, P:  $\pm 15$ ppm**

**Temperature range .... B:  $(0 +55)^\circ\text{C}$ , I:  $(-10 +60)^\circ\text{C}$ , C:  $(-20 +70)^\circ\text{C}$ , L:  $(-40 +85)^\circ\text{C}$**

## HC-35/U precision crystal

### HC-35/U dimensions(mm)



### ESR - equivalent series resistance

frequency range(MHz)	cut/mode	esr( $\Omega$ )
(5.0 ~ 6.0)	AT1	<100
(6.0 ~ 7.0)	AT1	<120
(7.0 ~ 11.50)	AT1	<45
(11.50 ~ 13.0)	AT1	<45
(13.0 ~ 50.0)	AT1	<45
(25.0 ~ 48.0)	AT3	<50
(48.0 ~ 100)	AT3	<40
(75.0 ~ 125)	AT5	<100
(125 ~ 200)	AT7	<120

### Environmental test conditions (on request)

<b>Thermal shock</b>	MIL STD 202F method 107, Test condition A
<b>Seal</b>	MIL STD 202F method 112, Test condition C
<b>Vibration</b>	MIL STD 202F method 201, Test condition C
<b>Solderability</b>	MIL STD 202F method 208, Procedure 4.0
<b>Acceleration</b>	MIL STD 202F method 107, Test condition B