

<b>Specification</b>	<b>AXX35</b>	Issue: 01	Date: 2003-11-08
<b>Oscillator type : Quartz Crystal Unit in HC-35/U package</b>			

Parameter	min.	typ.	max.	Unit	Condition
Frequency range	5		200	MHz	
Actual frequency $f_0$				MHz	
Crystal cut	AT				
Mode	1	5 ~ 30		MHz	
	3	25 ~ 90		MHz	
	5	60 ~ 150		MHz	
	7	110 ~ 200		MHz	
	9	150 ~ 200		MHz	
Load capacitance $C_L$	10 ~ 50 pF or Series				
Adjustment tolerance	-10		+10	ppm	@ 25°C ±3°C
Frequency stability				ppm	Overall (Note 1)
Frequency stability over temperature range	± 5 ~ ± 50			ppm	Available combinations on request
operating temperature range (steady state)	-55		+105	°C	
long term (aging)			±2	ppm	
g-sensitivity				ppb/g	
Resonance resistance $R_r$				Ω	See table 1
Motional capacitance $C_1$				fF	
Static capacitance $C_0$			7	pF	
Drive level		100		μW	
Insulation resistance	500			MΩ	100 V DC
Storage temperature range	-55		+105	°C	
Enclosure (see drawing)	HC-35/U				IEC 60122-3 Type CK
Can height H	6.5			mm	
marking	Frequency (MHz) AXX35 wwAXyy				
Packing	bulk				IEC 60286-3

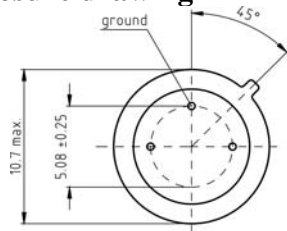
**Notes:**

- Overall frequency stability = initial tolerance + temp. stability + aging (1<sup>st</sup> year)
- Terminology and test conditions are according to IEC standard IEC60122-1, unless otherwise stated
- Measurement technique according to IEC 60444-5 or equivalent

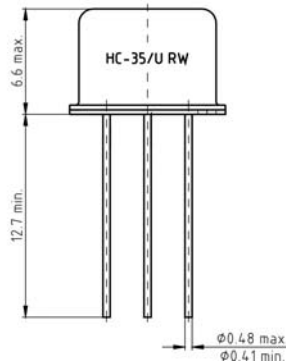
**Table 1: Resistance  $R_1$** 

Frequency [MHz]	Overtone	$R_{1max}$ [Ω]
5 ~ 9.999	1	80
10 ~ 14.999	1	50
15 ~ 19.999	1	40
20 ~ 35	1	30
25 ~ 49.999	3 <sup>rd</sup>	100
50 ~ 100	3 <sup>rd</sup>	90
60 ~ 79.999	5 <sup>th</sup>	150
80 ~ 160	5 <sup>th</sup>	100
110 ~ 200	7 <sup>th</sup>	150
150 ~ 200	9 <sup>th</sup>	200

## Enclosure drawing



**Note:**  
**Tag position optional**



## Environmental conditions

Test	IEC 60068 Part ...	IEC 61178-1 clause ...	Test conditions
Visual inspection, dimensions		4.5 4.6	Enclosure styles as in IEC 60122-3, if applicable
Sealing tests	2-17	4.8.2	Gross leak: Test Qc, Fine leak: Test Qk
Solderability Resistance to soldering heat	2-20	4.8.3	Test Ta (235 ± 5)°C Method 1 Test Tb Method 1A, 5s
Shock	2-27	4.8.8	Test Ea, 3 x per axes 100g, 6 ms half-sine pulse
Bump	2-29	4.8.6	Test Eb, 4000 bumps per Axes, 40g, 6 ms
Free fall	2-32	4.8.9	Test Ed procedure 1, 2 drops from 1m height
Vibration, sinusoidal	2-6	4.8.7	Test Fc, 30 min per axes, 10 Hz - 55 Hz 0,75mm; 55 Hz - 1 kHz, 10g
Rapid change of temperature	2-14	4.8.5	Test Na, 10 cycles at extremes of operating temperature range
Dry heat	2-2	4.8.11	Test Ba, 16 h at upper temperature indicated by climatic category
Damp heat, cyclic	2-30	4.8.12	Test Db variant 1 severity b), 55°C/95% r.H., 6 cycles
Cold	2-1	4.8.13	Test Aa, 2 h at lower temperature indicated by climatic category
Climatic sequence	1-7	4.8.14	Sequence of 4.8.11, 4.8.12 (1 <sup>st</sup> cycle), 4.8.13, 4.8.12 (5 cycles)
Damp heat, steady state	2-3	4.8.15	Test Ca, 56 days
Endurance tests - ageing - extended aging		4.9.1 4.9.2	30 days @ 85°C 1000h, 2000h, 8000h @ 85°C