

## ACT HC49/US ( Custom Packages )

The ACT HC49/US is a family of robust, through hole crystals featuring high reliability, tight stability and standard temperature range with extended temperature ranges also available.

Applications include Computers, Modems, Networking, Telecomms, Industrial, Consumer Electronics, Instrumentation and many more.



### Specification

Parameter	Symbol	Specification	Condition
Frequency Range	fo	3.00 ~ 100.00MHz	Please specify.
		Fundamental & 3rd Overtone	Please refer to Note 1
Frequency Tol. @25°C	$\Delta f/fo$	$\pm 5 \sim \pm 100\text{ppm}$	Please specify
Stability over Temp Range	Tc	$\pm 5 \sim \pm 100\text{ppm}$	Dependant on temperature
Temp Operating Range	Topr	-10 to +60°C	Others available Please specify
Temp Storage Range	Tstg	-40 ~ +85°C	
Equivalent Series Resistance	ESR	See table below	
Shunt Capacitance	C0	7pFmax	
Load Capacitance	CL	8 ~ 55pF or SR	Please specify
Drive Level	DL	50 $\mu$ W Typ	Others available Please specify
Insulation Resistance	IR	500M $\Omega$ min	@100Vdc
Aging	Fa	$\pm 5\text{ppm}$ per year max @25°C	Others available Please specify

Frequency (MHz)	ESR ( $\Omega$ ) max	Mode	Frequency (MHz)	ESR ( $\Omega$ ) max	Mode
3.000 ~ 4.199	180	AT Fund	12.000 ~ 13.999	60	AT Fund
4.200 ~ 4.499	130	AT Fund	14.000 ~ 16.999	50	AT Fund
4.500 ~ 5.999	100	AT Fund	17.000 ~ 37.50	35	AT Fund
6.000 ~ 7.999	90	AT Fund	20.000 ~ 100.00	40	BT Fund
8.000 ~ 9.999	70	AT Fund	24.000 ~ 85.00	100	3rd OT
10.00 ~ 11.999	60	AT Fund			

Standard Frequencies (MHz)					
3.579545	7.3728	11.2896	22.1184	33.868	
3.686400	7.680	12.000	24.000	35.2512	
4.000	8.000	12.288	24.576	36.000	
4.032	8.192	12.800	25.000	40.000	
4.096	8.604	14.31818	26.800	40.320	
4.194304	8.6436	14.7456	27.000	40.960	
4.433619	9.600	15.000	28.000	42.000	
4.9152	9.8304	16.000	28.63636	42.500	
5.000	10.000	16.000312	29.000	45.000	
5.0688	10.240	16.384	29.4912	46.000	
6.000	10.244	16.660	30.000	50.000	
6.144	10.245	18.000	32.256	52.416	
6.176	10.592	18.432	32.768	56.448	
6.5539	10.752	19.6608	33.000	60.000	
6.750	11.000	20.0000	33.333	66.666667	
7.15909	11.0592	20.00014	33.868		

Note 1 Some frequencies below 8.00MHz and above 30MHz (fundamental) and 3rd O/T may not be available please enquire.

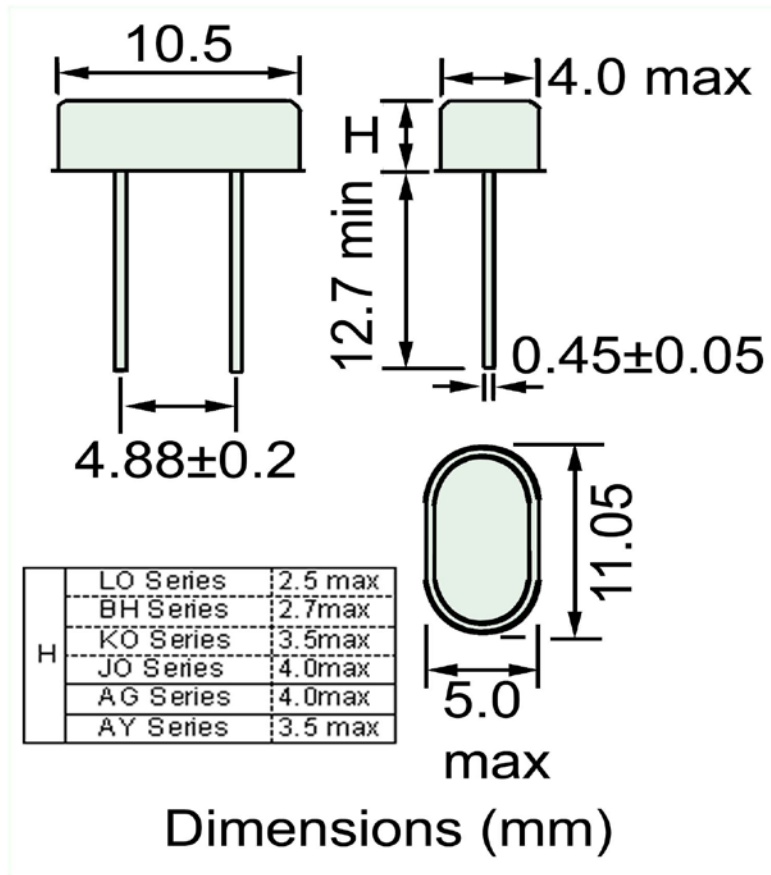
Please note that all parameters can not necessarily be specified in the same device

Customer to specify : Frequency, Frequency Tolerance, Temperature Stability, Operating Temperature Range, Load Capacitance  
 In line with our ongoing policy of product evolution and improvement, the above specification may be subject to change without notice

ISO9001:2000 Registered

For quotations or further information please contact us at:  
 3 The Business Centre, Molly Millars Lane, Wokingham, Berkshire, RG41 2EY, UK  
<http://www.actcrystals.com>

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**PACKAGE OPTIONS AVAILABLE**

- With insulating washer.
- Cropped leads.
- With centre ground lead.
- Ammo Pack\*
- Tape and Reel (Production facility code H3 only)\*
- \* Not recommended for new builds.

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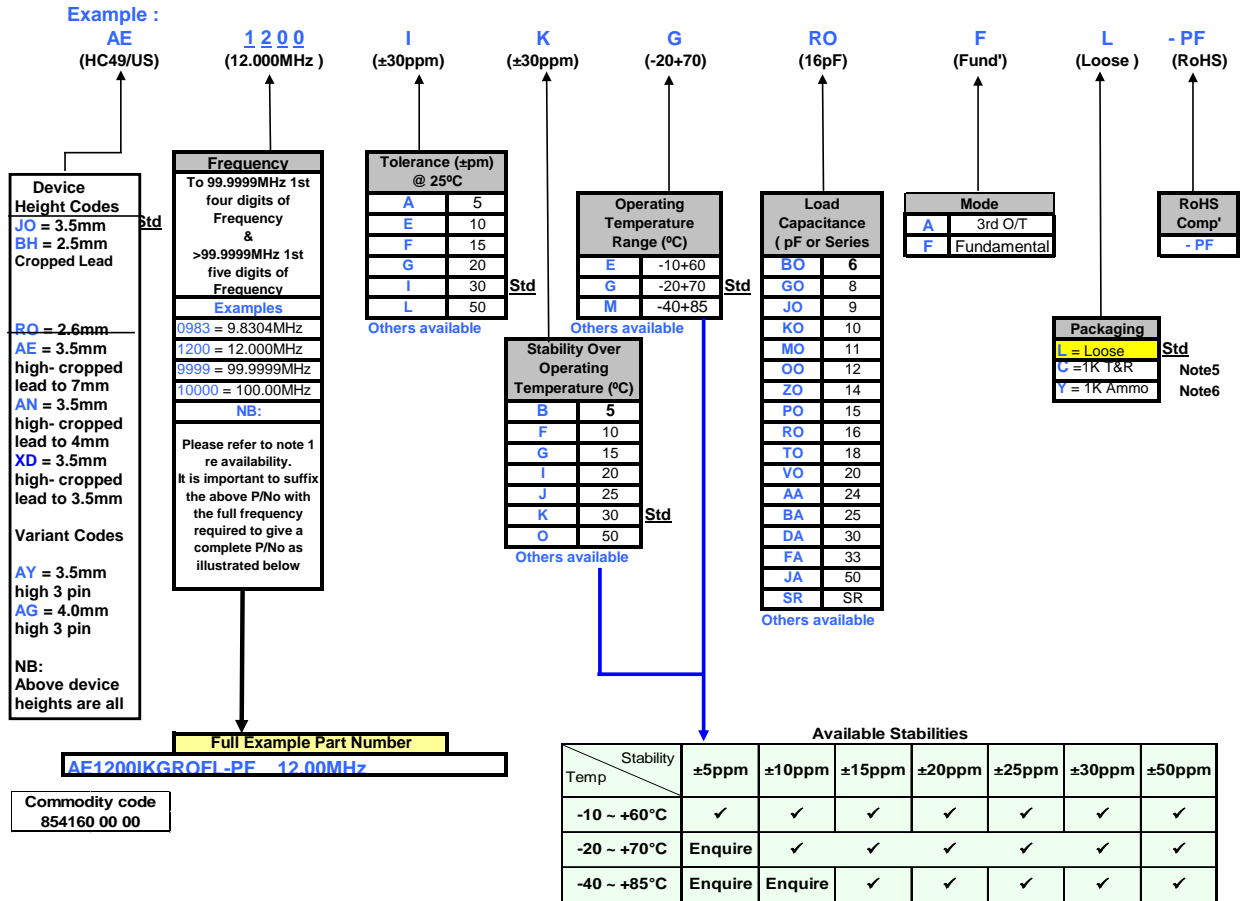
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**SERIES : ACTHC49/US ( Custom ) Device series codes JO /BH /RO /AY /AE / AN**



**NOTES :**

- 1) Tighter Tolerances and Stabilities, other Operating Temperature Ranges and CL's may be available on custom devices. Some frequencies below 8.00MHz and above 30MHz (fundamental) and 3rd O/T may not be available as specification parameters impact on each other, it is not always possible to combine all options in one device. Therefore, if a specification not catered for or has a frequency within the bands noted above please enquire regarding availability.
- 2) ACT are always happy to consider truly custom specification parts which may require non-standard specification parameters, specific testing, customer requested AQL requirements, non standard packaging or taping and reeling and custom marking. Such devices would normally be allocated a custom specification part number which is wholly customer specific. ( MOQ Dependent ) ( EG : A 12.00MHz custom ACTHC49/US with a cropped lead device requested may have a part number such as AE1200C- C1246-PF)
- 3) Frequencies below 10.000MHz are prefixed with a "0" (eg: 0800MHz = 8MHz. Whereas 10.000MHz is 1000 )
- 4) Table 2 above shows the range of available Stabilities Vs Operating Temperatures.
- 5) Not recommended for new builds, tape and reel limited to either production facility H3 or the HC49US (Standard) series.