Crest Technologies Pty Ltd
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QUARTZ CRYSTAL - HC49S SERIES
LOW PROFILE PACKAGE - RESISTANCE WELDED

FEATURES

- Standard height 3.5mm, the part is compact at about one-quarter of the HC-49/U package
- A resistance weld completely sealed type
- Good stability and high reliability
- Copes with high density mounting and is the optimum for mass production

ELECTRICAL SPECIFCATIONS

Nominal frequency	3.000MHz to 100MHz
Operating temperature	-10 to 60ºC -20 to 70ºC (Std) -40 to 85ºC
Storage temperature	-40 to 85ºC
Frequency tolerance	Typical: ±30PPM at 25±2ºC (or specify)
Frequency Stability over operating temperature range	Typical: ±50PPM -20 to +70ºC (or specify)
Load Capacitance	Series, 16pF,20pF,30pF,or specify
Equivalent series resistance (ESR)	See Table
Parallel capacitance(Co)	7PF Max
Drive Level	100µW
Insulation resistance	More than 500MΩ at DC100V

ESR and OPERATING MODE

Frequency Range MHz	E.S.R (Ω Max)	Mode
3.000~5.999	150	Fundamental AT
6.000~7.999	60	Fundamental AT
8.000~15.999	50	Fundamental AT
16.000~30.000	30	Fundamental AT
24.000~40.320	30	Fundamental AT
24.000~29.999	80	Third Overtone/AT
30.000~49.999	100	Third Overtone/AT
50.000~100.000	60	Third Overtone/AT

Mechanical Characteristics

Resistance to shock:	±3PPM Max, ±3ΩMax, Drop test 3 times on a hard wood plate from 100cm height
Resistance to vibration:	±3PPM Max, ±3Ω Max

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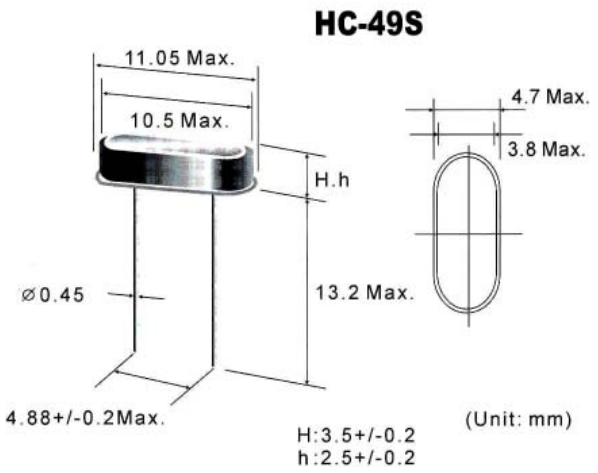
Reliability

Aging		±3PPM Max/Year
Air tightness	(1)Gross leak	should be immerged in hot water (90±5ºC)for5minutes
	(2)Fine leak	should be less than $5x10^{-8}$atmcc/sec by helium leak detector
Low drive characteristics		Measured Δ1,C1,3point at 1.0,,10,100μW

Dimensions



Ordering

HC49S -	20.000	- 20	- 30	- 40	- F	- B	- 50	- H
Series	Frequency in MHz	Load Capaci-tance (pf)	Frequency Tolerance in ppm	E.S.R. Ω Max	oscillate mode	operating temperature range	tempera-ture stability in ppm	Height
	Please specify frequency required.	Options: 12,16,18, **20 (std), 30** s = series Please specify	30 = std	40 = std	F=Fundemental 3=3rdovertone 5=5thovertone	A=-10to60ºC **B=-20to70ºC std** C=-40to85ºC	50 = std	**H= 3.2mm std** h= 2.5mm