



QEHC49U

HC49 Crystal – Through Hole packaged
Specification (Rev-D)

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June 27th, 2006

Electrical Characteristics

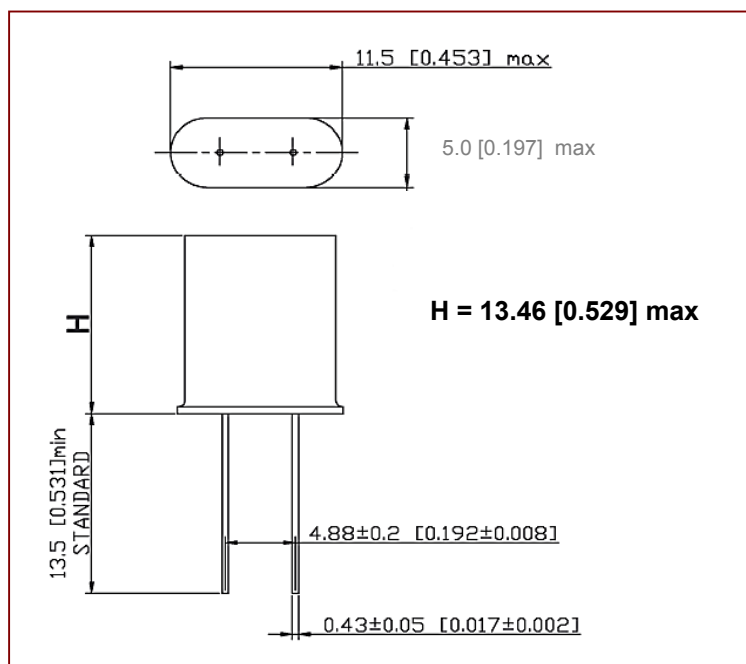
Electrical Parameters	Unit	Minimum	Typical	Maximum	Test conditions
Frequency range	MHz	1.8432		125	
Frequency Tolerance (at 25°C)	± ppm	10	30	50	Refer to Ordering Information
Temperature Stability	± ppm	10	30	50	Refer to Ordering Information
Operating Temperature Range	°C		-20/+70	-40/+85	Refer to Ordering Information
Storage temperature range	°C	-40		+85	
Shunt capacitance C ₀	pF			7.0	
Load capacitance	pF	10pF ~ 32pF or series			Refer to Ordering Information
Drive level	µW		100	500	
Aging (First Year)	± ppm			5	Ref at 25°C
Insulator resistance	MΩ	500			At 100V _{DC}

Customized specification upon request

ESR vs. frequency range and Mode of vibration

Frequency range (MHz)	Mode of vibration	Max ESR (Ω)	Frequency range (MHz)	Mode of vibration	Max ESR (Ω)
1.8432 to 1.999	Fund.	650	6.000 to 7.9999	Fund.	50
2.000 to 2.999	Fund.	500	8.000 to 12.999	Fund.	35
3.000 to 3.499	Fund.	250	13.00 to 35.000	Fund.	25
3.500 to 3.999	Fund.	150	24.00 to 29.999	3rd	60
4.000 to 4.999	Fund.	100	30.00 to 79.999	3rd	40
5.000 to 5.999	Fund.	80	80.000 to 125.000	5th	90

Mechanical Characteristics



Marking for QEHC49-GW	
Line 1	VRDxxx (Temex code)
Line 2	Frequency in MHz (6 digits)
Line 3	YYWW – production code

Mechanical conditions	
Vibration	10g, 10Hz to 2KHz according to standard CEI 68-2-63
Shocks	100g, 6ms according to standard CEI 68-2-27

Note 1 : QEHC49U is fully RoHS compliant.

QEHC49U

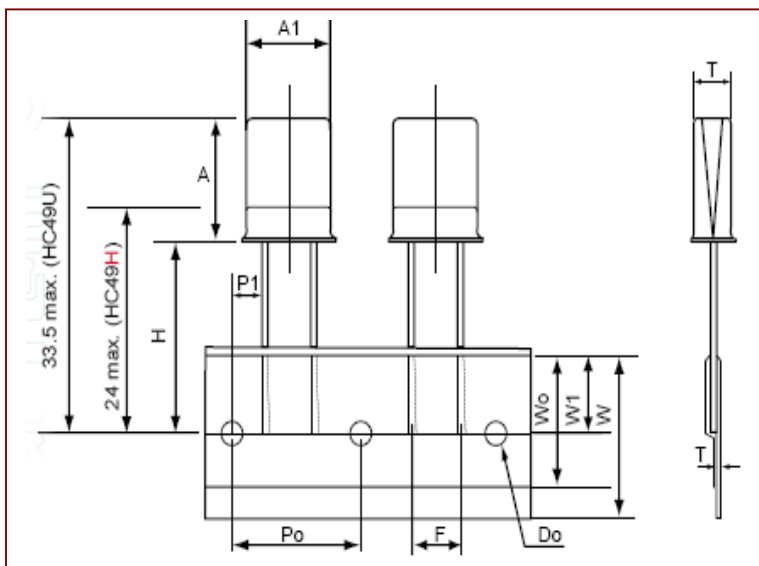
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Ordering Information

Part numbering system						
QEHC49U	1	30	HQ	50	16	25.000MHZ
Package type	Vibration mode	Frequency tolerance	Operating temperature range	Frequency stability	Load Capacitance	Nominal Frequency (MHz)
SMD Package QEHC49U : HC49U Through Hole packaged	1 = Fundamental 3 = 3 rd Overtone 5 = 5 th Overone	10=±10ppm 30=±30ppm 50=±30ppm	D=-40°C F= -30°C H=-20°C J=-10°C L=0°C M=+50°C N=+55°C O=+60°C Q=+70°C T=+85°C	10=±10ppm 30=±20ppm 50=±30ppm	16=16pF Please, enter the value of load capacitance	Please enter the nominal frequency

Radial tapping specification



Item	Symbol	Dimensions
Product size	A1 x A	11.05x13.46 max
Product thickness	T	4.65 max
Feed hole location	P1	3.81±0.7
Feed hole pitch	P ₀	12.7±0.3
Lead span	F	5.0±0.5
Tape width	X	18.0±1.0
Cover tape width	W ₀	12.7±1.0
Tolerance of leading hole	W1	9.0±0.5
Masking tape location	H	20.0±0.5
Feed hole diameter	D ₀	4.0±0.2
Tape thickness	t	0.6±0.2