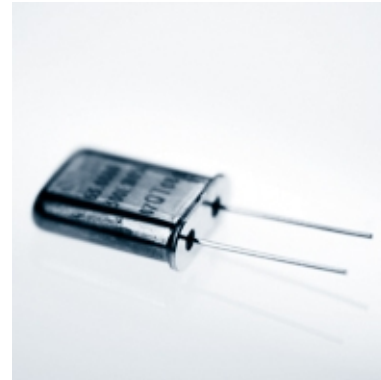
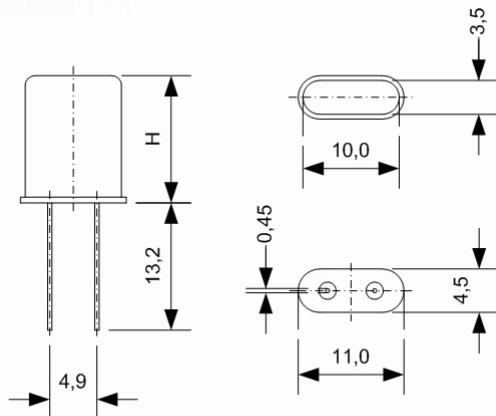




ENCLOSURE	H [mm]	CODE	
HC 49/U	13,2	20	
	10,6	21	starting with 4 MHz
	9,2	22	starting with 10 MHz



Metal housing: Resistance weld
Inert gas N₂/He
Laser engraving



1,8 ... 250 MHz		UNIT	CONDITION
Frequency range	1,8 - 250	MHz	
Crystal cut	AT		
Enclosure	HC-49/U		
Mode	1. 1,8 - 40 3. 15 - 100 5. 45 - 160 7. 100 - 210 9. 140 - 250	MHz MHz MHz MHz MHz	Fundamental mode 3 rd overtone 5 th overtone 7 th overtone 9 th overtone
Load capacitance	10 - 60 pF or Series	pF	
Shunt capacitance	1,8 - 4,0 MHz: < 3,0 pF 4,0 - 10 MHz: < 5,0 pF 10 - 250 MHz: < 7,0pF	pF	
Motional capacitance			
Resistance R _R			see table 5
Frequency adjustment			see table 3
Nominal temperature and temp. tolerance			see table 4
Aging 1 st year	< 2,0 - 3,0	ppm	
Shock	100g / 6ms		
Vibration	10g _{ss} / 1,5mm _{ss} 50 - 500 Hz		
Δf / f	< 5	ppm	
ΔR / R	< 20 %		



Specification: QTTC-HC49U

Crystal unit: HC-49/U

TABLE 3

FREQUENCY ADJUSTMENT AT +25 ± 2°C	FREQUENCY [MHz]					
	1,8 ... 40	15 ... 100	45 ... 160	100 ... 210	140 ... 250	CODE
Mode	1	3	5	7	9	
Frequency adjustment / ppm	± 3	± 3	± 3			C1
	± 5	± 5	± 5	± 5	± 5	E1
	± 10	± 10	± 10	± 10	± 10	J1
	± 20	± 20	± 20	± 20	± 20	B2
	± 50	± 50	± 50	± 50	± 50	H2

TABLE 4

NOMINAL TEMPERATURE AND TEMPERATURE TOLERANCE			
Temperature	Code	Temperature tolerance	Code
+ 40°C	40	± 3°C	C
+ 50°C	50	± 5°C	E
+ 55°C	55		
+ 60°C	60		
+ 65°C	65		
+ 70°C	70		
+ 75°C	75		
+ 80°C	80		
+ 85°C	85		
+ 90°C	90		
+ 95°C	95		

TABLE 5

MAX. RESISTANCE R _R	MODE	FREQUENCY [MHz]	R _{RMAX} [Ω]
	1	1,8 - 2,0	500
		2,0 - 3,0	300
		3,0 - 5,0	120
		5,0 - 12	40
		12 - 40	15
	3	10 - 20	30
		20 - 100	22
	5	45 - 55	70
		55 - 160	50
	7	100 - 210	100
	9	140 - 250	180

TABLE 6

ORDERING CODE ⁽¹⁾	FREQUENCY [MHz]	ENCLOSURE CODE: TABLE 1	MODE: 1: FUND. 3,5,7,9: OT TABLE 2	LOAD CAP.: 00: SERIES 32:32 pF TABLE 2	ADJ. TOLERANCE CODE: TABLE 3	NOMINAL TEMPRATURE CODE: TABLE 4	SHUNT CAPACITANCE 25: 2,5pF TABLE 2
	12,8	20	1	32	J1	70C	25

⁽¹⁾ Other specifications on request