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QT Quarztechnik GmbH
Schwingquarze • Oszillatoren

Reg.-Nr. 4923

Datenblatt / Datasheet

Specification: QTC-HC49SMD

Crystal unit: HC-49-SMD

Date: 11.03.2009
ROHS compliance

Metal housing: Resistance weld
Inert gas N_2/H_2
Laser engraving

Table 1

Enclosure	H/mm	Code	
HC 49/U-SMD	13,2	31	
	10,6	32	starting with 4 MHz
	9,2	33	starting with 10 MHz

Scale 1:1

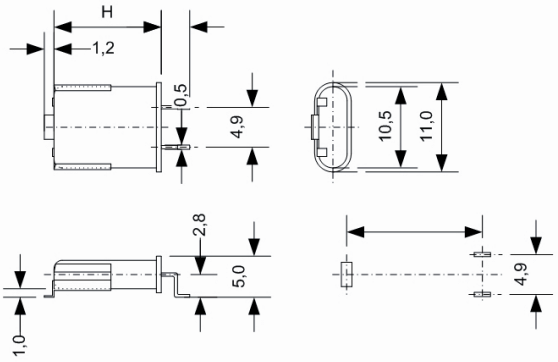

Table 2

1,8 ... 250 MHz		Unit	Condition
Frequency range	1,8 - 250	MHz	
Crystal cut	AT		
Enclosure	HC-49-SMD		
Mode	1. 1,8 – 40 MHz 3. 15 – 100 MHz 5. 45 – 160 MHz 7. 100 – 210 MHz 9. 140 – 250 MHz		Fundamental mode 3rd overtone 5th overtone 7th overtone 9th overtone
Load capacitance	10 – 60 pF or Series	pF	
Shunt capacitance	1,8 – 4 MHz: < 3,0 pF 4 – 10 MHz: < 5,0 pF 10 – 250 MHz: < 7,0 pF	pF	
Motional capacitance			
Resistance R_R			see table 5
Frequency adjustment			see table 3
Frequency stability over temperature			see table 4
Aging 1st year	< 2,0 – 3,0	ppm	
Shock	100g / 6ms		
Vibration	10 g_{ss} / 1,5 mm_{ss} 50 – 500 Hz		
Δf / f	< 5	ppm	
ΔR/R	< 20%		

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Table 3

Frequency Adjustment at +25°C ± 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

Frequency Stability over Temperature related to +25 °C		Frequency Deviation / ppm							
1,8 ... 4,0 MHz: + 4,0 ... 6,0 MHz: x 6,0 ... 250 MHz: o		± 3	± 5	± 7	± 10	± 20	± 25	± 30	± 50
Temperature range	Code	03	05	07	10	12	13	14	20
0 ... + 50°C	B	o	xo	+xo	+xo	+xo	+xo	+xo	+xo
-10 ... + 60°C	H	o	xo	xo	+xo	+xo	+xo	+xo	+xo
-20 ... + 70°C	M		o	xo	xo	+xo	+xo	+xo	+xo
-30 ... + 80°C	R			o	xo	xo	xo	+xo	+xo
-40 ... + 90°C	U				o	xo	xo	+xo	+xo
-55 ... + 105°C	W						o	xo	+xo
-55 ... + 125°C	X							o	xo

Table 5

Max. Resistance R_R	Mode	Frequency / MHz	R_{MAX} / Ohm
	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

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	Temp. Range Code: Table 4	Freq. Stab. Over Temp. Code: Table 4	Shunt Capacitance 35: 3,5 pF Table 2
	12,800	31	1	32	J1	M	10	35

(1) Other specification on request