

H49

[10.7 * 4.5 * 13.6 mm]

49T

[10.7 * 4.5 * 11.2 mm]

Thru - Hole Crystals

Fund.

3rd O.T.

5th O.T.

Min.

1.0MHz

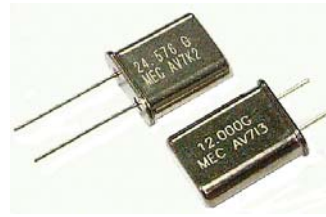
Max.

160MHz

Features

Specifications

- Tight tolerance and stability. Ideal for communication equipment
- Available up to 200 MHz using a 5th overtone crystal mode
- RoHS compliant versions are also available.

**General Specifications**

Item / Type	H49 ; 49T ; H49MJ ; 49TMJ series	
Frequency Range	H49	1.0 ~ 1.3MHz , 1.8 ~ 200.0MHz (see Table 1)
	49T	3.1 ~ 200.0MHz (see Table 1)
Load Capacitance	Series or Parallel (8 to 32 pF) resonance	
Drive Level	100μ W typical (500μ W max.)	
Frequency Tolerance	AT-cut: ± 5 ppm , ± 10 ppm , ± 20 ppm or ± 30 ppm at 25°C	
	SL-cut: ± 50 ppm at 25°C	
Frequency Stability	See Table 2	
Aging	ΔF / F : ±2 ppm / year (max.)	
Storage Temperature Range	- 50°C to 105°C	

Table 1

H49 ; 49T ESR (Equivalent Series Resistance)							
Freq. (MHz)	Hold Type	crystal cut and osc. Mode	E.S.R.	Freq. (MHz)	Hold Type	crystal cut and osc. Mode	E.S.R.
1.0 ~ 1.3	H49	SL , Fund.	5K Ω	7.1 ~ 10.0	H49 , 49T	AT , Fund.	35 Ω
1.8 ~ 3.0	H49	AT , Fund.	400 Ω	10.1 ~ 30.0	H49 , 49T	AT , Fund.	25 Ω
3.1 ~ 3.5	H49	AT , Fund.	150 Ω	30.1 ~ 45.0	H49 , 49T	AT , Fund.	20 Ω
3.6 ~ 5.0	H49 , 49T	AT , Fund.	100 Ω	24.0 ~ 100.0	H49 , 49T	AT , 3rd	60 Ω
5.1 ~ 7.0	H49 , 49T	AT , Fund.	50 Ω	80.0 ~ 160.0	H49 , 49T	AT , 5th	70 Ω

Table 2

Frequency stability vs Operating temperature range									
Stability code	Temp. (°C) \ ppm	± 5	± 10	± 15	± 20	± 25	± 30	± 50	± 100 (SL-cut)
X	-10 to 60°C	○	○	○	○	○	○	○	○
Y	-20 to 70°C	▲	○	○	○	○	○	○	○
I	-40 to 85°C		○	○	○	○	○	○	○

○ : available ; ▲ : contact Mercury

Outline Dimensions (Unit : mm)

Dip type (H49 , 49T)				Jacket type (H49MJ , 49TMJ)																		
<p>Spot welded 3rd lead (option only)</p> <p>glass insulator</p>																						
		<table border="1"> <thead> <tr> <th></th> <th>H</th> </tr> </thead> <tbody> <tr> <td>H49</td> <td>13.6 ± 0.2</td> </tr> <tr> <td>49T</td> <td>11.2 ± 0.2</td> </tr> </tbody> </table>			H	H49	13.6 ± 0.2	49T	11.2 ± 0.2			<table border="1"> <thead> <tr> <th></th> <th>H</th> <th>W</th> </tr> </thead> <tbody> <tr> <td>H49MJ</td> <td>13.8 ± 0.2</td> <td>17.1 ± 0.2</td> </tr> <tr> <td>49TMJ</td> <td>11.4 ± 0.2</td> <td>14.7 ± 0.2</td> </tr> </tbody> </table>			H	W	H49MJ	13.8 ± 0.2	17.1 ± 0.2	49TMJ	11.4 ± 0.2	14.7 ± 0.2
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