

MP4 , MP5

[12.9 * 4.5 * 4.8 (3.8) mm]

MP24 , MP25

[11.4 * 5.0 * 4.8 (3.8) mm]

Surface Mount Crystals

Fund.

3rd O.T.

Min.

3.2MHz

Max.

70MHz

Features

Specifications

- MP4 , MP5 , MP24 and MP25 are designed for top board assembly and a one time solder reflow only . Do not mount these products with the metal housing downward.



RoHS Compliance

General Specifications

Item / Type	MP4 (12.9 * 4.5 * 3.8 mm) , MP5 (12.9 * 4.5 * 4.8 mm) series
	MP24 (11.4 * 5.0 * 3.8 mm) , MP25 (11.4 * 5.0 * 4.8 mm) series
Frequency Range & Crystal Cut	3.2.000 ~ 48.000 MHz , AT-cut , Fundamental Mode (see Table 1) 27.000 ~ 70.000 MHz , AT-cut , 3rd overtone (see Table 1) 24.000 ~ 48.000 MHz , BT-cut , Fundamental Mode (see Table 1)
Load Capacitance	Series or Parallel (8 to 32 pF) resonance
Drive Level	100μ W typical (500μ W max.)
Frequency Tolerance	± 5 ppm , ± 10 ppm , ± 20 ppm or ± 30 ppm at 25°C
Frequency Stability	See Table 2
Aging	ΔF / F : ±3 ppm / year (max.)
Storage Temperature Range	- 50°C to 105°C

Table 1

ESR (Equivalent Series Resistance)					
Freq. (MHz)	Osc. Mode	E.S.R	Freq. (MHz)	Osc. Mode	E.S.R
3.2 ~ 3.4	AT , Fund.	300 Ω	24.0 ~ 48.0	BT , Fund.	40 Ω
3.5 ~ 6.0	AT , Fund.	120 Ω	27.0 ~ 30.0	AT , 3rd	150 Ω
6.1 ~ 10.0	AT , Fund.	60 Ω	30.1 ~ 50.0	AT , 3rd	100 Ω
10.1 ~ 30.0	AT , Fund.	40 Ω	50.1 ~ 70.0	AT , 3rd	80 Ω

Table 2

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

○ : available ; ▲ : contact Mercury

Outline Dimensions (Unit : mm)

[MP4] ; [MP5]				[MP24] ; [MP25]															
<table border="1"> <thead> <tr> <th>MEC P/N</th> <th>H (height)</th> </tr> </thead> <tbody> <tr> <td>MP5</td> <td>4.8 mm (max.)</td> </tr> <tr> <td>MP4</td> <td>3.8 mm (max.)</td> </tr> </tbody> </table>				MEC P/N	H (height)	MP5	4.8 mm (max.)	MP4	3.8 mm (max.)	<table border="1"> <thead> <tr> <th>MEC P/N</th> <th>H (height)</th> </tr> </thead> <tbody> <tr> <td>MP25</td> <td>4.8 mm (max.)</td> </tr> <tr> <td>MP24</td> <td>3.8 mm (max.)</td> </tr> </tbody> </table>				MEC P/N	H (height)	MP25	4.8 mm (max.)	MP24	3.8 mm (max.)
MEC P/N	H (height)																		
MP5	4.8 mm (max.)																		
MP4	3.8 mm (max.)																		
MEC P/N	H (height)																		
MP25	4.8 mm (max.)																		
MP24	3.8 mm (max.)																		

Mercury www.mercury-crystal.com

■ Taiwan : Tel (886)-2-2406-2779 / sales-tw@mercury-crystal.com ■ U.S.A: Tel: (1)-909-466-0427 / sales-us@mercury-crystal.com ■ China: Tel: (86)-512-5763-8100 / sales-cn@mecxtal.com