

Quartz Crystals

MP4G , MP5G

[12.9 * 4.5 * 4.8 (3.8) mm]

MP24G , MP25G

[11.4 * 5.0 * 4.8 (3.8) mm]

SMD

Fundamental

3rd Overtone

Min.

3.2 MHz

Max.

70 MHz

Features

Specifications

- Designed for top board assembly and an one time solder reflow only
- Do not mount with the metal housing downward

General Specifications

Item / Type	MP4 (12.9 * 4.5 * 3.8 mm) series	MP5 (12.9 * 4.5 * 4.8 mm) series
	MP24 (11.4 * 5.0 * 3.8 mm) series	MP25 (11.4 * 5.0 * 4.8 mm) series
Frequency Range & Crystal Cut	3.200 ~ 48.000 MHz , AT-cut , Fundamental Mode (see Table 1) 27.000 ~ 70.000 MHz , AT-cut , 3rd overtone (see Table 1)	
Load Capacitance	Series or Parallel (8 to 32 pF) resonance	
Drive Level	100μ W typical (500μ W max.)	
Frequency Tolerance	± 10 ppm , ± 20 ppm or ± 30 ppm (max.) at 25°C	
Frequency Stability	See Table 2	
Aging	ΔF / F : ± 3 ppm / year (max.)	
Storage Temperature Range	- 50°C to 105°C	



RoHS Compliance

Table 1

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

[MP4G] ; [MP5G]	[MP24G] ; [MP25G]												
Top View Plastic molded base Lead frame contacts <table><thead><tr><th>MEC P/N</th><th>H (height)</th></tr></thead><tbody><tr><td>MP5G</td><td>4.8 mm (max.)</td></tr><tr><td>MP4G</td><td>4.1 mm (max.)</td></tr></tbody></table> suggested land pattern	MEC P/N	H (height)	MP5G	4.8 mm (max.)	MP4G	4.1 mm (max.)	Top View <table><thead><tr><th>MEC P/N</th><th>H (height)</th></tr></thead><tbody><tr><td>MP25G</td><td>4.8 mm (max.)</td></tr><tr><td>MP24G</td><td>3.8 mm (max.)</td></tr></tbody></table> suggested land pattern	MEC P/N	H (height)	MP25G	4.8 mm (max.)	MP24G	3.8 mm (max.)
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