

SMD type (4 pads)
12.9 x 4.5 x 3.9 mm



Applications

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

General Specifications

Parameters	Electrical Spec.
Item / Type	MP4 (12.9 * 4.5 * 3.8 mm)
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	$\Delta F / F : \pm 3 \text{ ppm / year (max.)}$
Storage Temperature Range	- 50°C to 105°C

Table 1

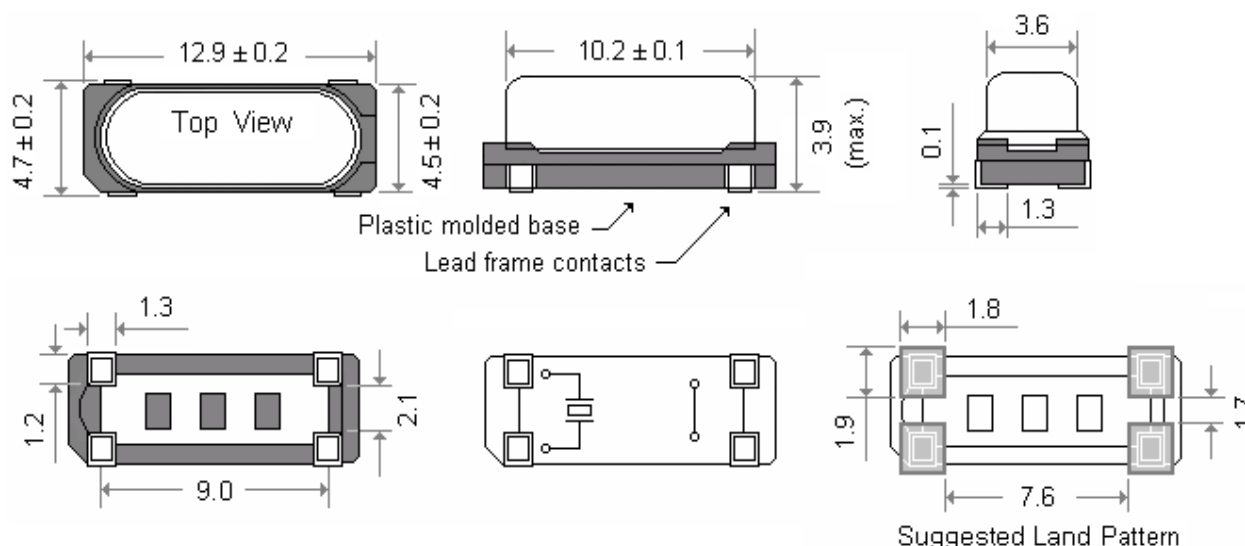
ESR (Equivalent Series Resistance)					
Freq.(MHz)	Osc. Mode	E.S.R.	Freq.(MHz)	Osc. Mode	E.S.R.
3.5 ~ 6.0	AT , Fund.	120 Ω	27.0 ~ 30.0	AT , 3rd	150 Ω
6.1 ~ 10.0	AT , Fund.	60 Ω	30.1 ~ 50.0	AT , 3rd	100 Ω
10.1 ~ 30.0	AT , Fund.	40 Ω	50.1 ~ 70.0	AT , 3rd	80 Ω

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

General Specifications (Unit : mm)



Mercury www.mercury-crystal.com