

12mm x 4.5mm SMD

- Low frequencies from 3.5MHz to 70.0MHz
- Fully RoHS compliant
- Two height profiles available, 4.8 or 3.8mm
- Standard EIA tape and reel supply

DESCRIPTION

The MP crystal provides an ideal source of low frequency clock signals (from 3.5MHz) in a low-profile SMD package. The part is electrically and mechanically compatible with traditional industry SMD packages and may be used as a 'drop-in' replacement.

SPECIFICATION

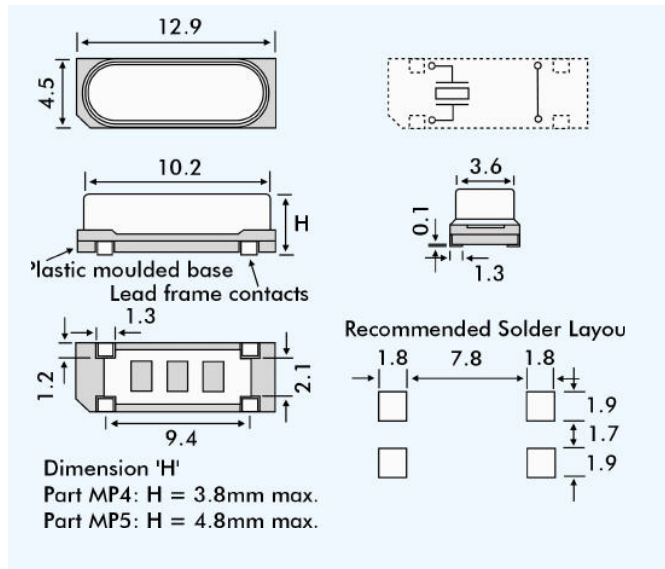
Frequency Range	
AT-Cut Fundamental:	3.5MHz to 30.0MHz
AT-Cut 3rd Overtone:	30.1MHz to 70.0MHz
BT-Cut Fundamental:	25.0MHz to 48.0MHz
Calibration Tolerance at 25°C*:	from ±10ppm at 25°C (±30ppm standard)
Frequency stability	
AT-Cut:	±30ppm over -10° to +60°C
BT-Cut:	±100ppm over -10° to +60°C
Storage Temperature:	-40°~+85°C
Equivalent Series Resistance:	See table
Shunt Capacitance (C0):	7pF maximum
Load Capacitance (CL):	Series or from 8pF to 32pF (Customer specified CL)
Ageing:	<±5ppm per year at +25°C
Drive level:	0.5mW maximum
Reflow Soldering:	10s maximum at 260°C twice or 180s at 230°C, once.
Packaging:	24mm EIA tape and reel, 1k per.

EQUIVALENT SERIES RESISTANCE

Frequency Range MHz	ESR Ohms Max.	Frequency Range MHz	ESR Ohms Max.
AT-Cut Fundamental		AT-Cut 3rd Overtone	
3.5~4.0	150	27.0~30.0	150
4.1~4.9	120	30.1~50.0	100
5.0~5.9	100	50.1~70.0	80
6.0~8.9	80		
9.0~9.9	60		
10.0~12.9	50		
13.0~30.0	40		
		Frequency Range MHz	ESR Ohms Max.
		BTCut Fundamental	
		24.0~48.0	40



OUTLINE & DIMENSIONS



PART NUMBER GENERATION

Part numbers for MP crystals are generated as follows:

Example: 3.5000MHz MP4 30/50/-10+60/12pF/60R

