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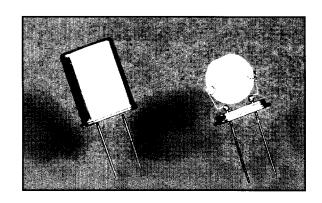
Jameco Part Number 2039161

## CTS Reeves

# Standard Crystals MP Series

#### **Features:**

- Frequency Range: 1-25 MHz
- Thru Hole or Surface Mount
- Standard Frequencies Stocked by Local Distributors
- Rugged Resistance Weld Seal
- Low Cost: AT-Cut Resonators
- Non-Standard Frequencies or Tolerances also Available, Consult Factory



The MP Series are the right choice for Microprocessor, controller, or other standard crystal applications. These hermetic packages use Resistance Weld sealing for improved aging and reliability. Surface mount lead forming is available as well as insulating sleeve, top wire, bent leads, or tape/reel packaging.

## **Electrical Specifications:**

| Parameter                   |   |  |  |  |  |  |  |  |
|-----------------------------|---|--|--|--|--|--|--|--|
| Frequency Range             | 1.0 - 48 MHz                            |  |  |  |  |  |  |  |
| Calibration Tolerance       | ±0.005% (±50 ppm) at +25°C              |  |  |  |  |  |  |  |
| Temperature Stability       | ±0.005% (±50 ppm) of +25°C reading      |  |  |  |  |  |  |  |
| Operating Temperature Range | -0°C to +70°C                           |  |  |  |  |  |  |  |
| Operating Mode              | Fundamental (or 3rd O.T. as applicable) |  |  |  |  |  |  |  |
| Drive Level                 | 100 Microwatts                          |  |  |  |  |  |  |  |
| Shunt Capacitance           | 7 pF, Max                               |  |  |  |  |  |  |  |
| Aging                       | <10 ppm/Yr                              |  |  |  |  |  |  |  |

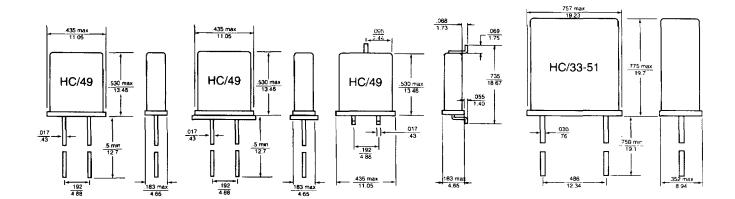
## **Standard Frequency Table:**

| PART<br>NUMBER | FREQUENCY<br>(MHz) | MODEL    | LOAD/<br>SERIES | PART<br>Number | FREQUENCY<br>(MHz) | MODEL | LOAD/<br>SERIES | PART<br>NUMBER | FREQUENCY<br>(MHz) | MODEL  | LOAD/<br>SERIES |
|----------------|--------------------|----------|-----------------|----------------|--------------------|-------|-----------------|----------------|--------------------|--------|-----------------|
| MP010          | 1.000000           | HC/33-51 | 13pF            | MP05A          | 5.000000           | HC/49 | 20pF            | MP120          | 12.000000          | HC/49  | SERIES          |
| MP018          | 1.843200           | HC/33-51 | 13pF            | MP05B          | 5.000000           | HC/49 | SERIES          | MP122          | 12.288800          | HC/49  | 32pF            |
| MP018S         | 1.843200           | HC/49    | 13pF            | MP050          | 5.068800           | HC/49 | SERIES          | MP143          | 14.318180          | HC/49  | SERIES          |
| MP020          | 2.000000           | HC/33-51 | 20pF            | MP060          | 6.000000           | HC/49 | 20pF            | MP147          | 14.745600          | HC/49  | SERIES          |
| MP020S         | 2.000000           | HC/49    | 20pF            | MP061          | 6.144000           | HC/49 | 20pF            | MP150          | 15.000000          | HC/49  | SERIES          |
| MP024          | 2.457600           | HC/33-51 | 32pF            | MP073          | 7.372800           | HC/49 | SERIES          | MP160          | 16.000000          | HC/49  | SERIES          |
| MP024S         | 2.457600           | HC/49    | 32pF            | MP080          | 8.000000           | HC/49 | SERIES          | MP184          | 18.432000          | HC/49  | SERIES          |
| MP036          | 3.579545           | HC/33/51 | 18pF            | MP080A         | 8.000000           | HC/49 | 20pF            | MP196          | 19.660800          | HC/49  | SERIES          |
| MP036S         | 3.579545           | HC/49    | 18pF            | MP098          | 9.830400           | HC/49 | 20pF            | MP200          | 20.000000          | HC/49  | SERIES          |
| MP037          | 3.686400           | HC/49    | 20pF            | MP100          | 10.000000          | HC/49 | SERIES          | MP221          | 22.118400          | HC/49  | SERIES          |
| MP040          | 4.000000           | HC/49    | 20pF            | MP101          | 10.000000          | HC/49 | 30pF            | MP240          | 24.000000          | HC/49  | SERIES          |
| MP04A          | 4.000000           | HC/49    | SERIES          | MP107          | 10.738635          | HC/49 | 32pF            | MP245          | 24.576000          | HC/49  | SERIES          |
| MP041          | 4.194304           | HC/49    | 12pF            | MP110          | 11.000000          | HC/49 | 18pF            | MP250          | 25.000000          | HC/49  | SERIES          |
| MP042          | 4.915200           | HC/49    | 20pF            | MP111          | 11.059200          | HC/49 | SERIES          |                |                    | ad Hab |                 |

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## CTS Reeves FREQUENCY PRODUCTS

# Standard Crystals MP Series



### **Mechanical/Environmental Specifications**

#### Package Type:

Metal cover; hermetic seal base, resistance weld seal

### **Storage Temperature:**

-40 to +85°C

#### Solderability:

63Sn/37Pb solder, 5 sec. @ 245°C using RMA flux; 95% coverage, minimum

#### **Leak Test:**

<2x10-8cc-atm/sec

#### **Insulation Resistance:**

500 Mohm min @ 100v.

## **Ordering Information**

MP \* \*\*

The first three digits come from "MP-Crystals — Standard Frequencies Table"

\*The next space is optional and may be an "A", "B", or "S" from the same Standard Frequency table.

\*\*The next blank is optional and may define:

"TW" = hold down Top Wire

"SLV" = Insulating Sleeve

"SM" = Surface Mount lead form

"INS" = Insulating Spacer

"1" = (axial) Tape and Reel loading

(see "Tape and Reel" page for tape dimensions.)

Custom frequencies specified upon request. Contact CTS Reeves for more information.

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