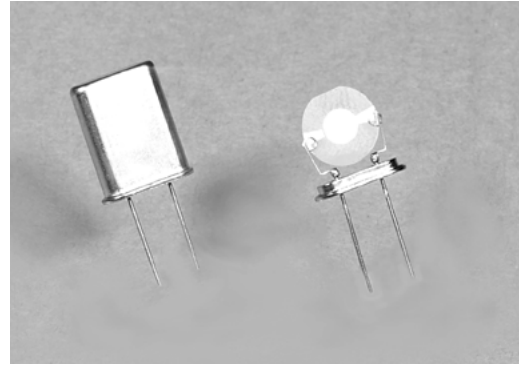


### Features:

- Frequency Range: 1.8 - 48 MHz
- Thru Hole or Surface Mount
- Standard Frequencies Stocked by CTS Distributors
- Rugged Resistance Weld Seal
- Low Cost: AT-Cut Resonators
- Non-Standard Frequencies or Tolerances also Available, Consult Factory



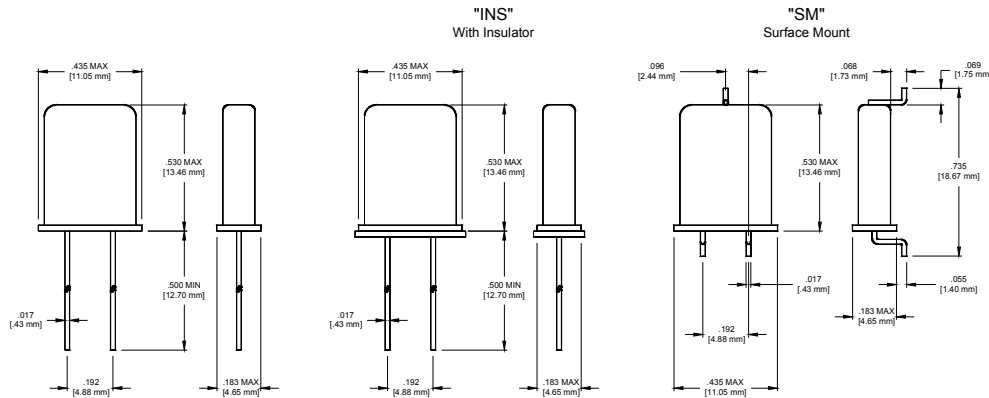
The MP Series are the right choice for Microprocessor, controller, or other standard crystal applications. These hermetic packages use Resistance Weld sealing for improved aging and reliability. Surface mount lead forming is available as well as insulating sleeve, top wire, bent leads, or tape reel packaging.

### Electrical Specifications:

<i>Parameter</i>	<i>Specification</i>
Frequency Range	1.8 - 48 MHz
Calibration Tolerance	±0.005% (±50 ppm) at +25°C
Temperature Stability	±0.005% (±50 ppm) of +25°C reading
Operating Temperature Range	-20°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

### Example Part Numbers:

PART NUMBER	FREQUENCY (MHz)	LOAD/SERIES	PART NUMBER	FREQUENCY (MHz)	LOAD/SERIES	PART NUMBER	FREQUENCY (MHz)	LOAD/SERIES
MP018S	1.843200	13pF	MP060	6.000000	20pF	MP122	12.288000	32pF
MP020S	2.000000	20pF	MP061	6.144000	20pF	MP143	14.318180	SERIES
MP024S	2.457600	32pF	MP073	7.372800	SERIES	MP147	14.745600	SERIES
MP036S	3.579545	18pF	MP080	8.000000	SERIES	MP150	15.000000	SERIES
MP037	3.686400	20pF	MP080A	8.000000	20pF	MP160	16.000000	SERIES
MP040	4.000000	20pF	MP098	9.830400	20pF	MP184	18.432000	SERIES
MP04A	4.000000	SERIES	MP100	10.000000	SERIES	MP196	19.660800	SERIES
MP041	4.194304	12pF	MP101	10.000000	30pF	MP200	20.000000	SERIES
MP042	4.915200	20pF	MP107	10.738635	32pF	MP221	22.118400	SERIES
MP05A	5.000000	20pF	MP110	11.000000	18pF	MP240	24.000000	SERIES
MP05B	5.000000	SERIES	MP111	11.059200	SERIES	MP245	24.576000	SERIES
MP050	5.068800	SERIES	MP120	12.000000	SERIES	MP250	25.000000	SERIES



## Mechanical/Environmental Specifications

### Package Type:

Metal cover; hermetic seal base  
resistance weld seal

### Leak Test

<2x10<sup>-8</sup>cc-atm/sec

### Storage Temperature:

-55 to +125°C

### Insulation Resistance:

500 Mohm min @ 100V

### Solder Reflow Capability:

+260°C for 10 seconds Maximum

## Ordering Information

MP \_\_\_\_\_ \* \_\_\_\_\_ \*\* \_\_\_\_\_

The first three digits come from "MP-Crystals --Example Part Numbers

\* This space is optional and may be an "A", "B", or "S" from the same Example Part Numbers

\*\* This space is optional and may define:

- "TW" = Hold down Top Wire
- "SLV" = Insulating Sleeve
- "SM" = Surface Mount lead form
- "INS" = Insulating Spacer
- "1" = Tape and Reel loading for Surface Mount
- "2" = (Axial) Tape and Reel for Through Hole

Custom frequencies specified upon request. Contact CTS for more information