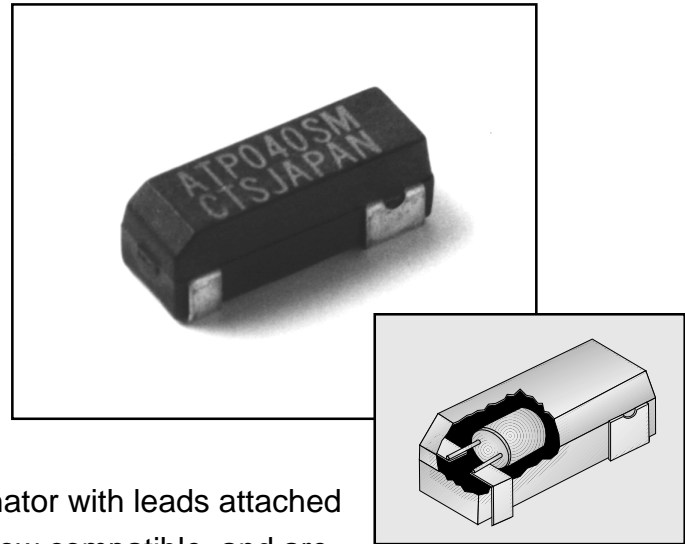


**Features:**

- Frequency Range 3.5 to 40.0 MHz
- Surface Mount Design
- Reflow Solderable
- AT-Cut Temperature Characteristic
- Bulk or Tape and Reel Loaded
- Stocked by CTS Distributors
- Standard Frequencies Stocked



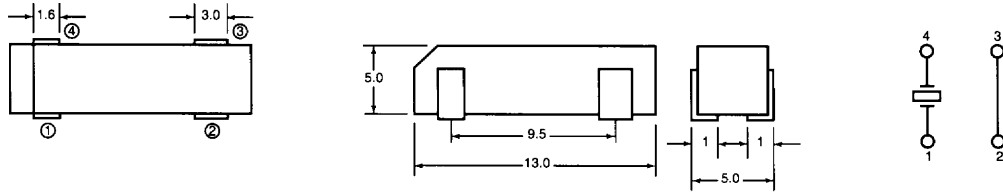
These plastic molded parts use a sealed resonator with leads attached to an external lead frame. They are solder reflow compatible, and are available either bulk-packed or in the 22mm tape and reel.

**Electrical Specifications:**

<i>Parameter</i>	
Frequency Range	3.5 - 40.0 MHz
Calibration Tolerance	± 50 ppm @ 25°C
Temperature Tolerance	±100 ppm
Operating Temperature Range	0° to 70°C
Drive Level	100 Microwatts, typ.
Shunt Capacitance	7 pF, Max
Aging	<10 ppm/Yr

**Standard Part Numbers:**

PART NUMBER	FREQUENCY (MHz)	LOAD/SERIES	PART NUMBER	FREQUENCY (MHz)	LOAD/SERIES
ATP036SM	3.579545	18 pF	ATP111SM	11.059200	20 pF
ATP037SM	3.686400	20 pF	ATP120SM	12.000000	SERIES
ATP040SM	4.000000	20 pF	ATP122SM	12.288000	20 pF
ATP042SM	4.915200	20 pF	ATP143SM	14.318180	SERIES
ATP050SM	5.068800	20 pF	ATP153SM	15.360000	20 pF
ATP060SM	6.000000	20 pF	ATP160SM	16.000000	SERIES
ATP08ASM	8.000000	20 pF	ATP204SM	20.480000	20 pF
ATP098SM	9.830400	20 pF	ATP245SM	24.576000	SERIES
ATP100SM	10.000000	SERIES			

**Outline Drawing:**

**Mechanical Specifications:**
**Package Type:**

Cylindrical crystal package connected to lead frame.

**Leads:**

Plastic injection molded, formed leads.

**Reflow Temperature:**

260°C, 10 seconds (max)

**Insulation Resistance:**

>500 Mohm

**Storage Temperature:**

-40 to 85°C (max)

**Environmental Specifications:**
**Reflow Temperature Capability:**

260°C, 10 seconds (max)

**Vibration:**

10-55 Hz, 0.7 mm, 1 hr. per plane,  
 $\Delta F$  10 ppm (max),  $\Delta R$  15% (max)

**Shock:**

100g's, 3 planes, 1 blow per plane,  
 $\Delta F$  10 ppm (max),  $\Delta R$  15% (max)

**Ordering Information:**

A complete part number looks like:

ATP \_\_\_ SM

Select from the "Standard Frequencies" Table\*

Optional Suffix codes are:

"1" = Tape and reel packaging (see "Tape and Reel" page for tape dimensions)

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