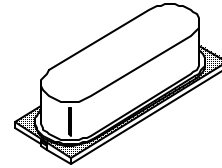




# SM42, SM30

LP49 CRYSTALS MOUNTED ON SURFACE MOUNT PLATFORM (HC-49/SM)  
SM42 (4.4 mm high), SM30 (3.3 mm high)



## STANDARD SPECIFICATIONS:

<b>Frequency Range</b>	3.1875 MHz - 72.000 MHz (Consult factory for specific available frequencies)	
<b>Oscillation Modes</b>	Fundamental (AT-cut)	3rd overtone (AT-cut)
	3.1875 - 30.000 MHz	27.000 - 72.000 MHz
<b>Calibration Frequency Tolerance at 25°C</b>	± 50 PPM is standard, but tighter tolerances also available for certain frequencies.	
<b>Frequency Stability over Operating Temperature range</b>	± 50 PPM is standard, but tighter tolerances also available for certain operating temperature ranges.	
<b>Operating Temperature Range</b>	0 - 70°C is standard, but can be extended to -40 - +85°C (just add 'E' after model number)	
<b>Load Capacitance</b>	10 pF - ∞ pF (∞ pF means Series Resonance). To be specified by customer.	
<b>Equivalent Series Resistance (ESR)</b>	See table on the next page.	
<b>Drive Level</b>	50µW is standard, but customer may specify different drive level	
<b>Aging at 25°C</b>	± 5 PPM per year.	
<b>Shunt Capacitance</b>	7 pF maximum	
<b>Pullability</b>	May be specified by customer in terms of frequency shift required over a certain range of load capacitance, (e.g.+100 PPM from CL=12 to CL=18 pF) This requirement may be expressed also in terms of motional capacitance in fF.	
<b>Packaging (see page R1, Figure 2)</b>	24 mm tape, 330 mm reel: 1000 parts per reel	

## PART NUMBERING GUIDE:

■ The Pletronics part number for an SM crystal consists of the following 3 elements:

1. **Model Number:** SM42, or SM30

2. **Load Capacitance:**

When the load required is ∞ pF, that is, the calibration is at **series resonance**:  
SM42-SR or SM30-SR;

When the load required is XX pF: SM42-XX or SM30.

3. **Frequency of Operation in MHz**

EXAMPLE: SM42-SR-10.000 MHz, SM42-18-10.000 MHz, SM30-20-10.000 MHz

■ When customer's requirements are non-standard, a special engineering part number will be assigned.

(continued)

# SM42, SM30

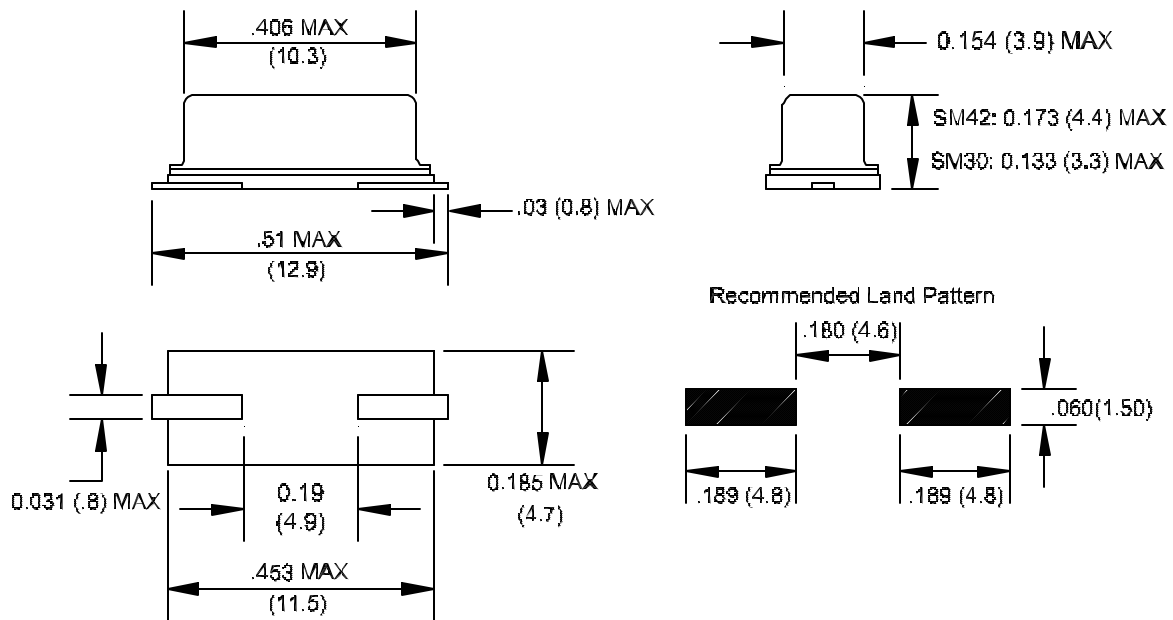
LP49 CRYSTALS MOUNTED ON SURFACE MOUNT PLATFORM (HC-49/SM)

## STANDARD EQUIVALENT SERIES RESISTANCE VALUES:

Oscillation Mode	Frequency Range	ESR **
Fundamental Mode (AT-cut)	3.1875 - 7.000 MHz	130 ohms maximum
	7.001 - 15.999 MHz	50 ohms maximum
	16.000 - 25.000 MHz	40 ohms maximum
	25.001 - 30.000 MHz	40 ohms maximum
3rd Overtone Mode (AT-cut)	27.000 - 56.000 MHz	100 ohms maximum
	56.001 - 72.000 MHz	100 ohms maximum

\*\* ESR values lower than indicated may be available. Please contact factory for lower ESR values.

## PACKAGE OUTLINE (NOT TO SCALE):



INCHES (MILLIMETERS)

October 2000