

# CRYSTAL UNITS

## HC-49S / HC-49S SMD

### 49MN / 49LN / 49SN / 49RN SERIES



#### Applications

#### Features

Actual Size:

- Metal Welded Package
- High Shock Resistance
- Excellent Frequency Aging Stability
- RoHS Compliant

#### Specification

##### MODEL

##### FREQUENCY

FREQUENCY RANGE ( Fundamental )	MHz	3.500 ~ 40.000
FREQUENCY RANGE ( 3rd Overtone )	MHz	24.000 ~ 80.000
FREQUENCY TOLERANCE ( 25 °C )	ppm	± 30 Or Specify
FREQUENCY STABILITY ( Ref to 25 °C )	ppm	± 30 Or Specify

##### ENVIRONMENTAL CONDITION

OPERATING TEMPERATURE RANGE	°C	- 20 ~ + 70 Or Specify
STORAGE TEMPERATURE RANGE	°C	- 55 ~ + 125
AGING / YEAR	ppm	± 5

##### ELECTRICAL SPECIFICATIONS

TEST CIRCUIT		S&A 250B With $\pi$ Fixture
LOAD CAPACITANCE	pF	SERIES, 6pF to 47pF, or Specify
DRIVE LEVEL	uW	10, 50, 100, 500, 1000 or special requirement
EQUIVALENT SERIES RESISTANCE	$\Omega$	See Table
INSULATION RESISTANCE	$\Omega$	More than 500M $\Omega$ at DC 100V
SHUNT CAPACITANCE	pF	7.0 Max.

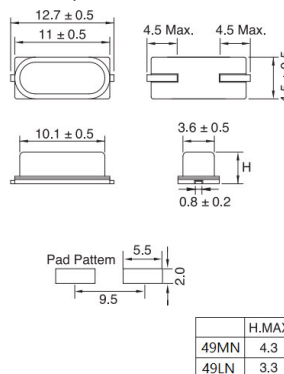
\*Specification subject to change without notice.

#### Equivalent Series Resistance ( $\Omega$ )

Frequency Range	Mode of Operation	ESR
3.500 ~ 3.999	Fundamental	200 $\Omega$ Max.
4.000 ~ 4.999	Fundamental	120 $\Omega$ Max.
5.000 ~ 5.999	Fundamental	90 $\Omega$ Max.
6.000 ~ 7.999	Fundamental	80 $\Omega$ Max.
8.000 ~ 11.999	Fundamental	60 $\Omega$ Max.
12.000 ~ 14.999	Fundamental	40 $\Omega$ Max.
15.000 ~ 19.999	Fundamental	35 $\Omega$ Max.
20.000 ~ 40.000	Fundamental	25 $\Omega$ Max.
24.000 ~ 29.999	3rd Overtone	120 $\Omega$ Max.
30.000 ~ 39.999	3rd Overtone	80 $\Omega$ Max.
40.000 ~ 80.000	3rd Overtone	60 $\Omega$ Max.

#### Dimension(mm)

##### 49MN, 49LN



##### 49SN, 49RN

