

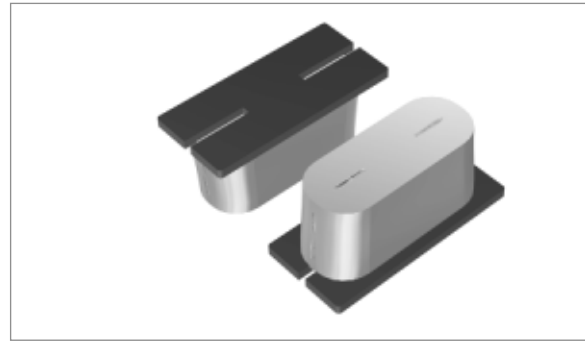
## Quartz Crystal HC49USM/USM(SMD)

### Features

- Low Profile
- Industry Standard footprint
- Resistance Weld for a good aging factor
- AT Strip cut offering good tolerance and stability

### Options

- Extended Temp. Range
- Tighter Tolerance such as  $\pm 10$  ppm over - 10°C to + 60°C



IDA offers 2 different low profile HC-49US/UM of SMD configuration crystals with respectively 4.0 mm and 3.0 mm height having industry standard SMD footprint available on tape and reel for automatic parts placing. Our secondary process of soldering dip of SMD terminals assure excellent soldering characteristics.

### Specifications

Operating Temp.	0°C ~ + 70°C
Storage Temp.	-30°C ~ +85°C
Aging characteristics	$\pm 5$ ppm max @ 25°C per year

Parameters	Conditions	Min.	TYP.	Max.	Unit
Frequency Range		3.579545		70.000	MHz
Fraquency Tolerance	3.5 - 41MHz AT Fund 27 - 70MHz AT 3rd 26 - 50MHz BT Fund	-30 -30 -50		+30 +30 +50	PPM
Frequency stability reference @ 25°C	3.5 - 41MHz AT Fund 27 - 70MHz AT 3rd 26 - 50MHz BT Fund	-50 -50 -100		+50 +50 +100	PPM
Shunt Capacitance (Co)				7.0	pF
Load Capacitance (CL)	To be specified	10.0	18.0 standard		pF
Drive Level	3.579545 - 70.0MHz		0.1	0.5	mW

### Equivalent Series Resistance

Frequency Range (MHz)	OSC. Mode	Max. ESR ( $\Omega$ )	Frequency Range (MHz)	OSC. Mode	Max. ESR ( $\Omega$ )
3.579 - 3.999	AT Fund	200	13.000 - 19.999	AT Fund	40
4.000 - 4.999	AT Fund	150	20.000 - 30.000	AT Fund	30
5.000 - 5.999	AT Fund	120	13.000 - 19.999	AT Fund	40
6.000 - 6.999	AT Fund	100	20.000 - 41.000	AT Fund	30
7.000 - 8.999	AT Fund	80	26.000 - 50.000	BT Fund	30
9.000 - 12.999	AT Fund	60	27.000 - 70.000	AT 3rd	100

