

## Quartz Crystal Units

**NUSD**

[ 12.7×4.8×4.0 mm ]

**NUSSD**

[ 12.7×4.8×3.0 mm ]

**SMD Type**

Oscillation Mode

Fundamental /3rd

Frequency Range

3MHz~100MHz

### Features

- AT-strip crystal inside. Optimized for low spurious
- Wide frequency range from 3MHz to 100MHz
- Low profile and cost effective
- Excellent frequency stability
- High stability and reliability with temperature
- The crystal package will withstand solder reflow (HC-49S SMD).
- Applications: Bluetooth, Security, IoT, Wireless communications, Consumer electronic, PC peripherals, etc.



### Standard Specifications

Item / Type	NUSD (12.7×4.8×4.0 mm)	NUSSD (12.7×4.8×3.0 mm)
Frequency Range	3~100 MHz(Fund. /3rd)	3~100 MHz(Fund. /3rd)
Load Capacitance	5pF~50pF, or specify	
Drive Level	10 μW typical (1000 μW max.)	
Frequency Tolerance (at 25°C)	± 10ppm, ±20ppm or ±30ppm (max.)	
Aging	±5ppm / Year (max.)	
Storage Temperature Range	-55°C~+125°C	

### ESR (Equivalent Series Resistance)

NUSD / NUSSD (HC-49S /HC-49S SMD)			
Frequency Range	E.S.R	Frequency Range	E.S.R
3~3.4MHz	300 Ω max.	27~30MHz	100 Ω max.
3.5~6MHz	120 Ω max.	30~50MHz	80 Ω max.
6.1~10MHz	60 Ω max.	50~100MHz	60 Ω max.
10~14MHz	40 Ω max.		
14~30MHz	30 Ω max.		

### Frequency stability Vs Operating temperature range

Temp. (°C) \ ppm	ppm					
	±5	±10	±15	±20	±25	±30
-10~+60	×	○	○	○	○	○
-20~+70	×	▲	○	○	○	○
-40~+85	×	×	○	○	○	○

▲: Conditional  
○: Available  
×: Not available

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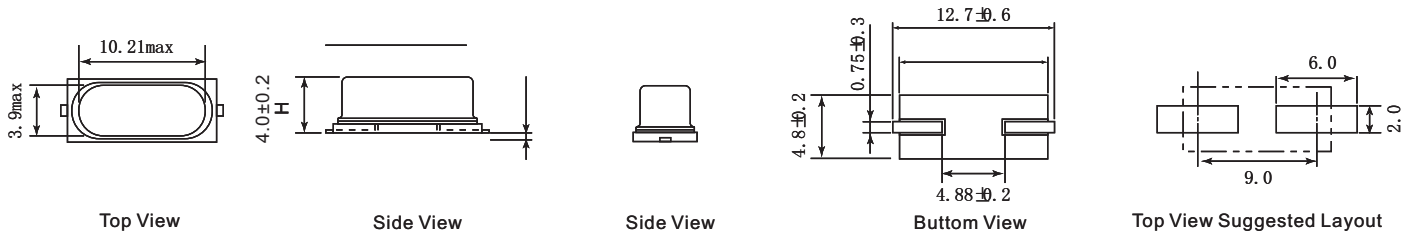
Fundamental /3rd

Frequency Range

3MHz~100MHz

**Outline Dimensions (Unit: mm)**

**NUS...D (HC-49SMD)**



**NUSS...D (HC-49SSMD)**

