

## THT QUARTZ CRYSTAL SERIES HC-49/US

### FEATURES

- High reliability for low cost
- Low profile – 3.5 and 2.5 mm max. package height
- Extended temperature range to -40/+125°C
- Excellent clock signal generator for CPU's
- Qualified for automotive applications

Pb free  
 RoHS-2 2011/65/EU  
 compliant

### GENERAL DATA

THT CRYSTAL SERIES	HC-49/US
NUMBER OF LEADS	HC-49/US = 2 (standard) HC-49/3US = 3 (middle pin for grounding)
OPTIONS FOR HOUSING	Insulator = for 2 leads and 3 leads housing Cutted leads = only for 2 leads housing
FREQUENCY RANGE	3.5 ~ 40.0 MHz AT-Fundamental 24.0 ~ 40.5504 MHz BT-Fundamental 24.576 ~ 80.0 MHz 3 <sup>rd</sup> Overtone
FREQUENCY TOLERANCES AT 25°C	±5 ppm ~ ±50 ppm
LOAD CAPACITANCE (C <sub>L</sub> )	6 pF ~ 50 pF
WORKING TEMPERATURE RANGES	0/+50°C ~ -40/+125°C
SHUNT CAPACITANCE C <sub>0</sub>	7 pF max.
DRIVE LEVEL	100 µW typical (0.01 mW ~ 1 mW possible)
AGING	±3 ~ ±5 ppm per year standard (±2 ppm available as option)
INSULATION RESISTANCE	>500 MΩ DC/100V ±10%
STORAGE TEMPERATURE	-55°+125°C
DELIVERY FORM	Standard = Bulks for 2 leads and 3 leads housing Option = Paper Tape on Reel only for 2 leads housing

**OTHER PARAMETERS ARE AVAILABLE ON REQUEST / CREATE HERE YOUR SPECIFICATION**

### FREQUENCY STABILITY VS. TEMPERATURE

	±3ppm	±5ppm	±10ppm	±15ppm	±20ppm	±30ppm	±50ppm
0°/+50°C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-10°/+60°C		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0°/+70°C			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-20°/+70°C			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-40°/+85°C				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-40°/+125°C							<input type="checkbox"/>

**CRYSTALS**

**OSCILLATORS**

**CERAMIC RESONATORS**



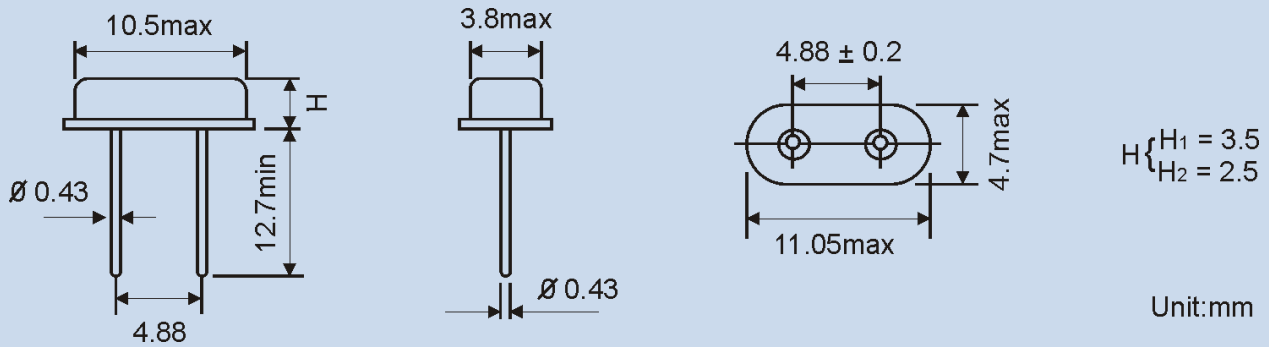
Premium Quality by  
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**CERAMIC FILTERS**

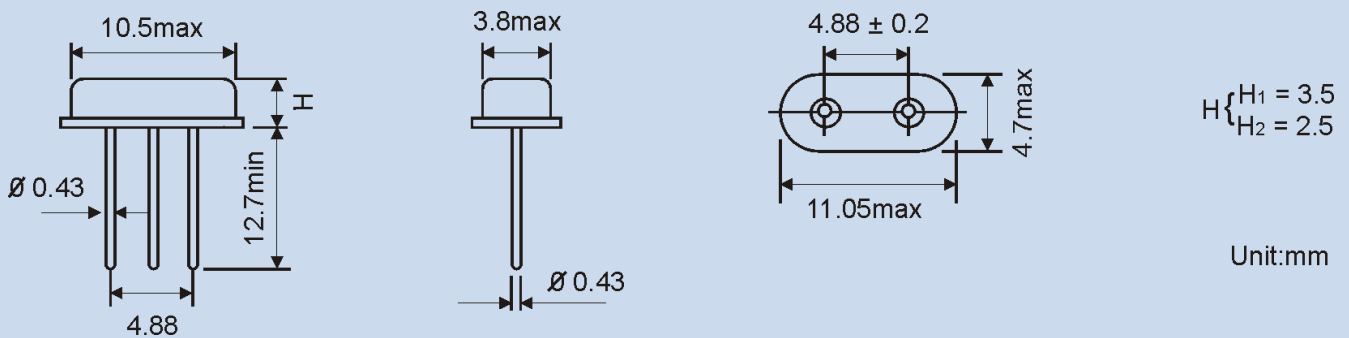
**SAW COMPONENTS**

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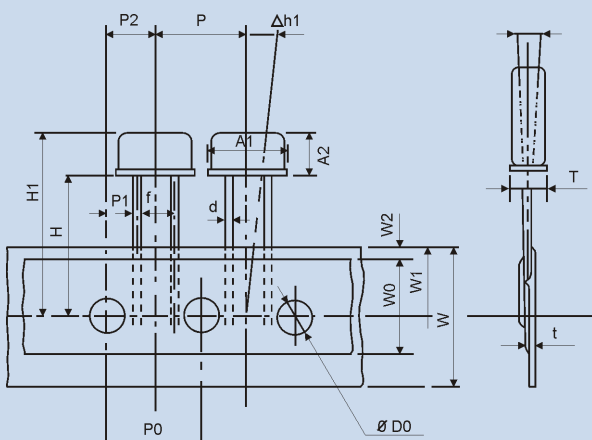
## DIMENSIONS OF HC- 49/US



## DIMENSIONS OF HC- 49/3US



## REEL SPECIFICATION (only for 2pin housing HC-49/US)



Description	Symbol	Dimensions
Outside Diameter of Part	A1x A2	11.1x3.5
Thickness of Part	T	5.0max
Lead Wire Diameter	d	Ø0.43 <sup>+0.05</sup> / <sub>-0.02</sub>
Interval Spacing of Part	P	12.7±1.0
Pitch fo Leading Hole	P0	12.7±1.0
Tolerance of Leading Hole	P1	3.85±0.7
	P2	6.35±1.0
Lead Pitch	F	5.0 <sup>+0.05</sup> / <sub>-0.2</sub>
Inclination	Δh	0±1.0
Tape Width	W	18.2±0.2
Adhesive Tape Width	W0	13.0 <sup>+0.8</sup> / <sub>-0.2</sub>
Tolerance of Leading Hole(Vertical)	W1	9.0±0.5
Tolerance of Cover Tape	W2	2.0max
Bottom Surface Position of Part	H	20.5±0.5
Top Surface Position of Part	H1	24.0max
Hole Diameter	D0	Ø4.0±0.2
Tape Thickness	t	0.7±0.1
Inclination	Δh1	0±1.0

Unit:mm

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## ORDERING INFORMATION

Series	Housing Height	Frequency	Frequency Stability at 25°C	Temperature Stability	Temperature Range	Load Capacitance
HC-49/US	3.5 mm	27.000 MHz	30	50	-40+125°C	20 pF

## RESONANCE RESISTANCE

Frequency in MHz	Vibration mode	ESR max. in $\Omega$
3.5 ~ 3.79	AT Fund.	120
3.9 ~ 4.99	AT Fund.	100
4.5 ~ 5.99	AT Fund.	90
6.0 ~ 6.99	AT Fund.	70
7.0 ~ 7.99	AT Fund.	70
8.0 ~ 8.99	AT Fund.	60
9.0 ~ 9.99	AT Fund.	60
10.0 ~ 11.99	AT Fund.	50
12.0 ~ 19.99	AT Fund.	40
20.0 ~ 26.99	AT Fund.	30
27.0 ~ 40.00	AT Fund.	25
27.0 ~ 40.00	3rd OT AT	100
40.0 ~ 40.00	3rd OT AT	60

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