

## ► Features

- HC-49SMD, 49/US Crystal
- Fundamental (3 to 48 Mhz)
- 3<sup>rd</sup> Overtone (36 to 90Mhz)
- AT-Cut Crystal
- 20to70°C, -40to85°C OPT Range.
- RoHS Compliant (pb-Free)



Dimensions(mm)      11.5 x 5.0 x 3.5max  
                                  11.5 x 5.0 x 2.5max

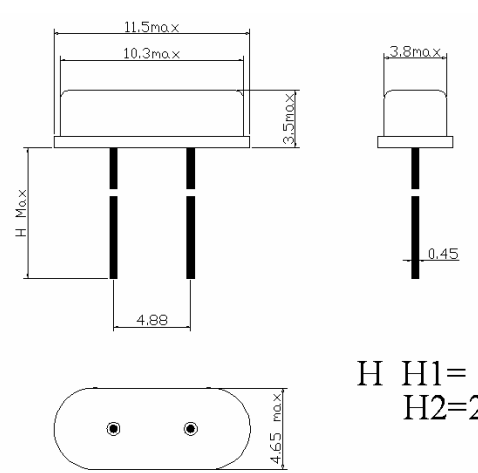
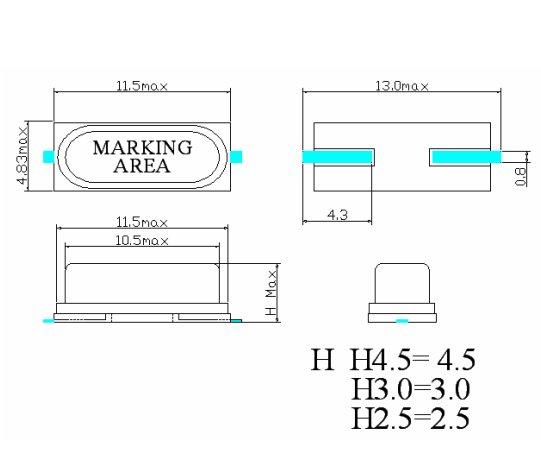
## Standard Specifications

Parameter	Maximum Value	Condition
Frequency	3.0 ~ 90 Mhz	Depending on Mode
Mode	Fundamental 3rd Overtone	3 to 48Mhz 36 to 90Mhz
Stability Options over temperature	C0=±30ppM A0=±10ppM	-40 to 85°C 0 to 70°C
Calibration Tolerance	±10 to ±30ppM	@25°C
Shunt Capacitance	7.0pF max	
Load Capacitance	9pF ~ 20pF or Series	
Drive Level	100uW	
Aging per year	< 2ppM	
ESR	50 ohm max 70 ohm max	5 ~ 50Mhz (fund) 25~90Mhz(3 <sup>rd</sup> )

## Absolute Maximum Ratings *(For user guidelines only)*

Parameter	Maximum Value	Units	Condition
Operating Temperature	-40 to 85	°C	
Storage Temperature	-50 to 120	°C	Max

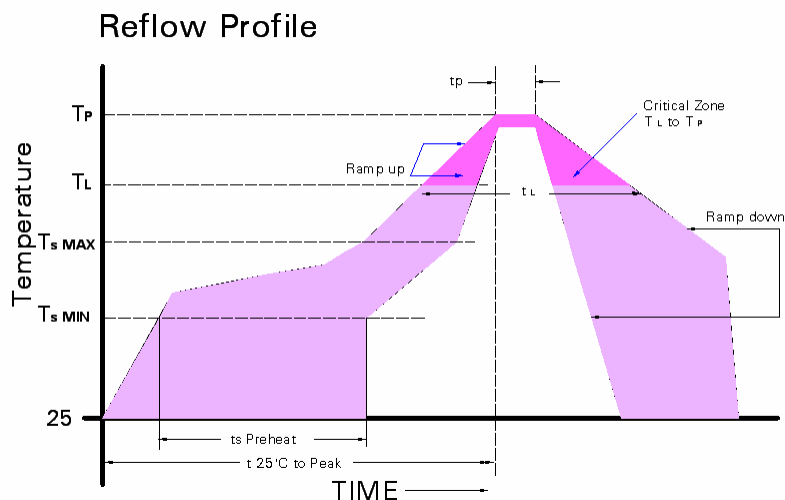
## Mechanical Dimensions

4S HC-49/US Package	4D HC-49SMD Package
 <p>H H1= 13.2 H2=20</p>	 <p>H H4.5= 4.5 H3.0=3.0 H2.5=2.5</p>

## Marking

25.000Mhz	-Frequency
● IMT wwy	-week/year

## Recommended Reflow Profile – for HC-49SMD Package



Note: Temperatures refer to body of device.  
Oscillators must be on the top side of the PCB during the reflow process.

Ts max to Tl (Ramp-up rate)	3°C/second max
Preheat -Temperature Min(Ts min)	150°C
-Temperature Typical(Ts TYP)	175°C
-Temperature Max(Ts Max)	200°C
-Time(ts)	60-180 Seconds

Ramp-up Rate(TL to TP)	3°C/Second max
Time Maintained Above-Temperature(TL) -Time(TL)	217°C 60-150 Seconds
Peak Temperature(Tp)	250°C Max for 10 seconds Max
Target Peak Temperature(Tp Target)	240°C
Time within 5°C of actual peak(tp)	20-40 seconds
Ramp-down Rate	6°C/second max
Time 25°C to peak Temperature	8 minutes max

## Part Numbering Guide & Code ...iCX4DF-EB5-F-25M000-T

iCX4D(Crystal)

Package	Mode	Operating Temperature	Stability	CL	Frequency	Packaging Option
iCX4D	F	E	B5	F	25M000	T
4S:49/US 4D:49SMD	F:fund 3:3 <sup>rd</sup> 5:5 <sup>th</sup>	B: 0...70°C C:-20...70°C E:-40...85°C	A0: ±10ppM B5: ±25ppM	X- series A-20pF B-18pF C-16pF D-12.5pF F-12pF G-10pF O-other	25Mhz	T: Tape & Reel B: Bulk

Above example, Crystal, HC-49SMD package, Fund mode, -40to 85°C Temperature range, Temp Stability ±25ppM, 12pF Load capacitance, at 25.000Mhz.