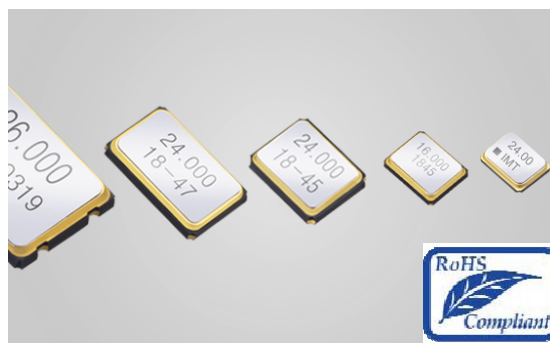


## ► Features

- Ceramic SMD Crystal
- Fundamental (8 to 45Mhz)
- 3<sup>rd</sup> Overtone (40to 125Mhz)
- AT-Cut Crystal
- 20to70°C, -40to85°C OPT Range.
- RoHS Compliant (pb-Free)



Dimensions(mm)	5.0 x 7.0 x 1.30max
	5.0 x 3.2 x 1.0 max
	3.2 x 2.5 x 0.80max
	2.5 x 2.0 x 0.55max
	2.0 x 1.6 x 0.5max

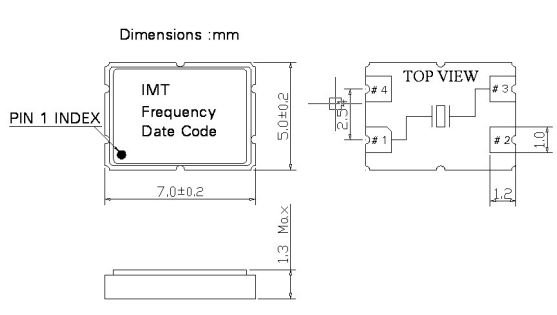
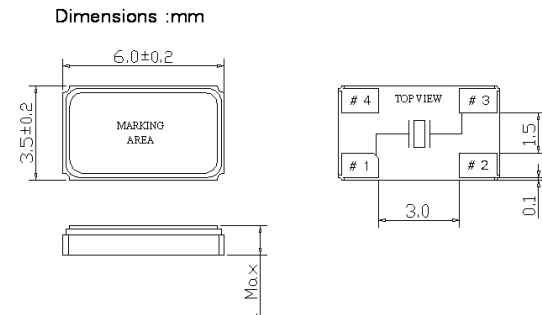
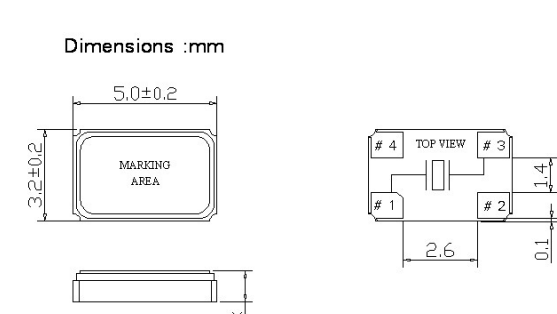
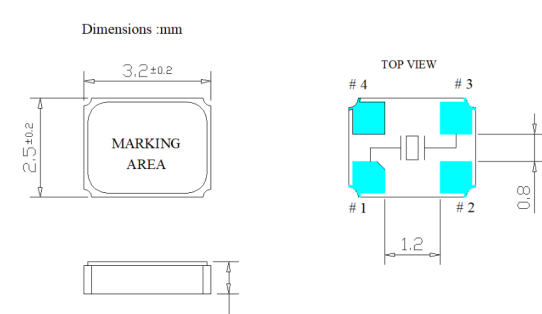
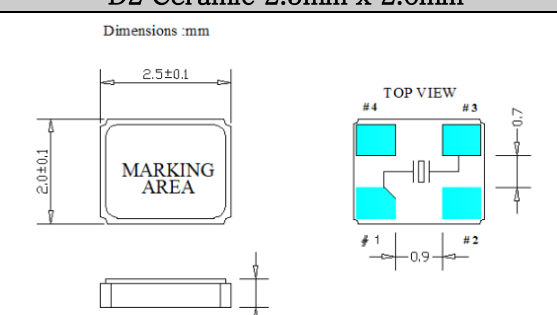
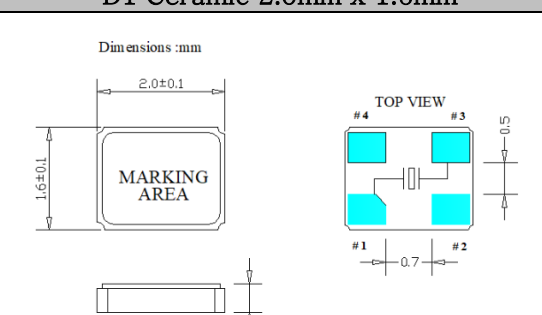
## Standard Specifications

Parameter	Maximum Value	Condition
Package & Code	D7 = 5.0 x 7.0 x 1.3 mm D6 = 6.0 x 3.5 x 1.1 mm D5 = 5.0 x 3.5 x 1.0 mm D3 = 3.2 x 2.5 x 0.8 mm D2 = 2.5 x 2.0 x 0.55 mm D1 = 2.0 x 1.6 x 0.5 mm	
Frequency	8.000 ~ 125.000	Depending on package
Mode	Fundamental 3rd Overtone	8 to 45Mhz 40 to 125Mhz
Stability Options over temperature	EO=±50ppM A0=±10ppM	-40 to 85°C 0 to 70°C
Calibration Tolerance	±10 to ±25ppM	@25°C
Shunt Capacitance	7pF max	
Load Capacitance	6pF~ 50pF or Series	
Drive Level	100uW	
Aging per year	< 2ppM	
ESR	80 Ohm max	

## 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

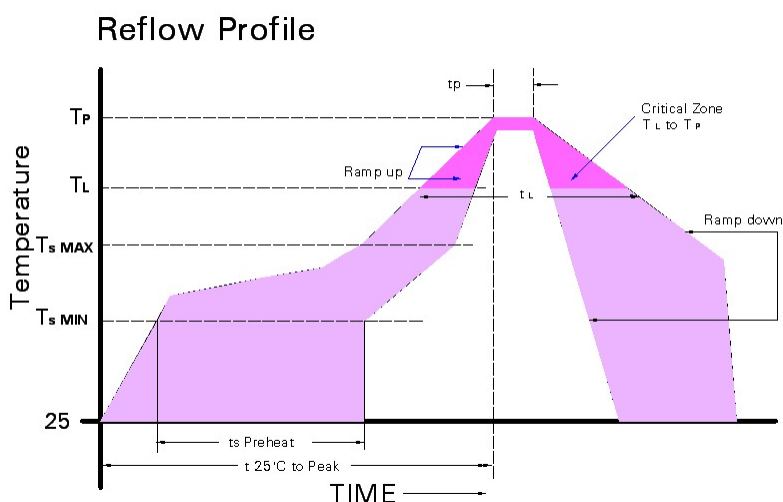
## Mechanical Dimensions — All dimensions are in mm

D7 Ceramic 5mm x 7mm	D6 Ceramic 6.0mm x 3.5mm
 <p>Dimensions :mm</p> <p>PIN 1 INDEX</p> <p>IMT Frequency Date Code</p> <p>TOP VIEW</p> <p>#4 #3 #1 #2</p> <p>1.0</p> <p>1.3 Max</p>	 <p>Dimensions :mm</p> <p>6.0±0.2</p> <p>3.5±0.2</p> <p>MARKING AREA</p> <p>TOP VIEW</p> <p>#4 #3 #1 #2</p> <p>1.5</p> <p>0.1</p> <p>3.0</p> <p>1.1 Max</p>
D5 Ceramic 5.0mm x 3.2mm	D3 Ceramic 3.2mm x 2.5mm
 <p>Dimensions :mm</p> <p>5.0±0.2</p> <p>3.2±0.2</p> <p>MARKING AREA</p> <p>TOP VIEW</p> <p>#4 #3 #1 #2</p> <p>1.4</p> <p>0.1</p> <p>2.6</p> <p>1.0 Max</p>	 <p>Dimensions :mm</p> <p>3.2±0.2</p> <p>2.5±0.2</p> <p>MARKING AREA</p> <p>TOP VIEW</p> <p>#4 #3 #1 #2</p> <p>0.8</p> <p>1.2</p> <p>0.8 Max</p>
D2 Ceramic 2.5mm x 2.0mm	D1 Ceramic 2.0mm x 1.6mm
 <p>Dimensions :mm</p> <p>2.5±0.1</p> <p>2.0±0.1</p> <p>MARKING AREA</p> <p>TOP VIEW</p> <p>#4 #3 #1 #2</p> <p>0.7</p> <p>0.9</p> <p>0.5±0.05</p>	 <p>Dimensions :mm</p> <p>2.0±0.1</p> <p>1.6±0.1</p> <p>MARKING AREA</p> <p>TOP VIEW</p> <p>#4 #3 #1 #2</p> <p>0.5</p> <p>0.7</p> <p>0.5±0.05</p>
Pin1 : X-Tal, Pin 2 : GND, Pin3 : X-Tal, Pin 4 : GND	

## Marking

13.000Mhz	-Frequency
iCXD7F-EE0	-Part No.
● IMT wwyy	-week/year

## Recommended Reflow Profile



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)	217°C
-Time(tL)	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 ...iCXD7F-EE0-B-13M000-T

iCXD7F(Crystal)

Package	Mode	Operating Temperature	Stability	CL	Frequency	Packaging Option
iCXD7F	F	E	E0	B	13M000	T
D7:5x7 D6:6x3.5 D5:5x3.2 D3:3.2x2.5 D2:2.5x2.0 D1:2.0x1.6	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 E0: ±50ppM	X- series A-20pF B-18pF C-16pF D-12.5pF F-12pF G-10pF O-other	13Mhz	T: Tape & Reel B: Bulk

Above example, Crystal, 5.0 x 7.0 package, Fund mode, -40to 85°C Temperature range, Temp Stability ±50ppM, 18pF Load capacitance, at 13.000Mhz.