

# ILCX19 Series



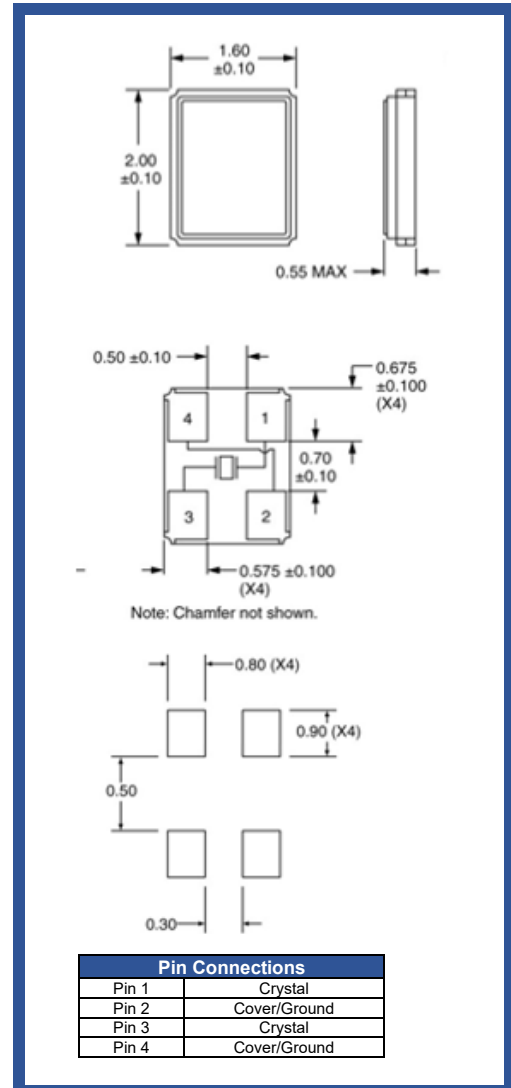
### Product Feature:

SMD Package  
 Small package Foot Print  
 Supplied in Tape and Reel  
 Compatible with Leadfree Processing

### Applications:

PCMCIA Cards  
 Storage  
 PC's  
 Wireless Lan

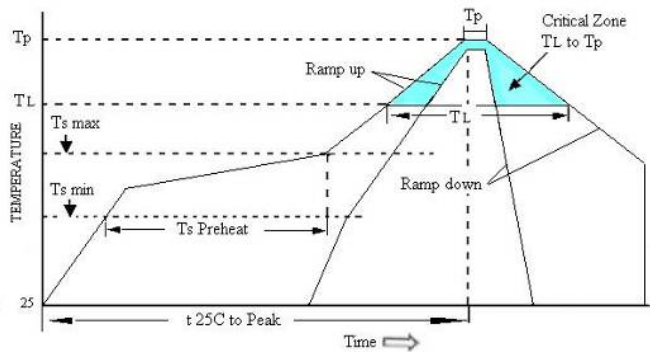
<b>Frequency</b>	16MHz to 72MHz
<b>ESR (Equivalent Series Resistance)</b> 16MHz – 23.999999MHz 24MHz – 25.999999MHz 26MHz – 72MHz	150 Ohms Maximum 80 Ohms Maximum 60 Ohms Maximum
<b>Shunt Capacitance (C0)</b>	3pF Maximum
<b>Frequency Tolerance @ 25° C</b>	(See Part Number Guide)
<b>Frequency Stability over Temperature</b>	(See Part Number Guide)
<b>Mode of Operation</b>	Fundamental
<b>Crystal Cut</b>	AT Cut
<b>Load Capacitance</b>	8pF to 32pF or Specify
<b>Drive Level</b>	100µW Maximum
<b>Aging</b>	±5ppm/Year Maximum
<b>Operating Temperature Range</b>	(See Part Number Guide)
<b>Storage Temperature Range</b>	-40°C to +85°C



Part Number Guide		Sample Part Number: ILCX19 - FB1F18 - 20.000000 MHz				
Package	Tolerance (ppm) at Room Temperature	Stability (ppm) over Operating Temperature	Operating Temperature Range	Mode (overtone)	Load Capacitance (pF)	Frequency
ILCX19 -	B = ±50 ppm	B = ±50 ppm	0 = 0°C to +50°C	F = Fundamental	8pF to 32pF Or Specify	- 20.000 MHz
	F = ±30 ppm	F = ±30 ppm	1 = 0°C to +70°C			
	G = ±25 ppm	G = ±25 ppm	2 = -10°C to +60°C			
	H = ±20 ppm	H = ±20 ppm	3 = -20°C to +70°C			
	I = ±15 ppm	I = ±15 ppm**	5 = -40°C to +85°C			
J = ±10 ppm*	J = ±10 ppm**	9 = -10°C to +50°C				

\* Not available at all frequencies. \*\* Not available for all temperature ranges.

## Pb Free Solder Reflow Profile:



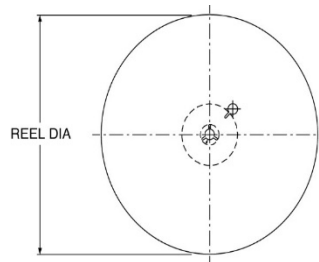
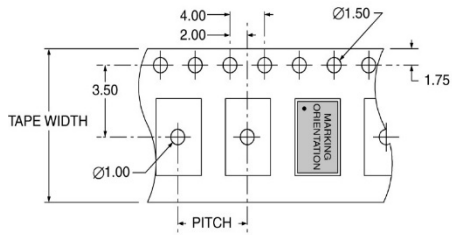
Units are backward compatible with 240C reflow processes

Ts max to T <sub>L</sub> (Ramp-up Rate)	3°C / second max
Preheat	
Temperature min (Ts min)	150°C
Temperature typ (Ts typ)	175°C
Temperature max (Ts max)	200°C
Time (Ts)	60 to 180 seconds
Ramp-up Rate (T <sub>L</sub> to T <sub>p</sub> )	3°C / second max
Time Maintained Above Temperature (T <sub>L</sub> )	217°C
Time (T <sub>L</sub> )	60 to 150 seconds
Peak Temperature (T <sub>p</sub> )	260°C max for 10 seconds
Time within 5°C to Peak Temperature (T <sub>p</sub> )	20 to 40 seconds
Ramp-down Rate	6°C / second max
Time 25°C to Peak Temperature	8 minutes max

## Package Information:

MSL = 1 (package does not contain plastic; storage life is unlimited under normal room conditions)  
 Termination = e4 (Au over Ni over W base metal).

## Tape and Reel Information:



Quantity per Reel	3000
Pitch	4.0 ±0.2
Tape Width	8.0 ±0.2
Reel DIA	180

Dimensions: mm