4 Pad Ceramic Package Quartz Crystal, 2.0mm x 1.6mm

ILCX19 Series

Product Features:

Low Cost SMD Package
Ultra Miniature Package
Compatible with Leadfree Processing

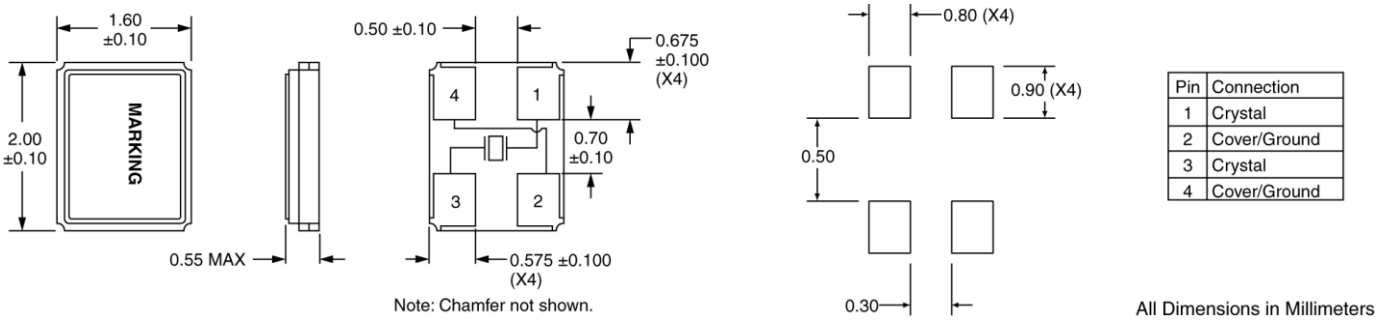
Applications:

Fibre Channel
Server & Storage
Sonet / SDH
802.11 / WiFi
T1/E1, T3/E3

Electrical Specifications

Frequency	16MHz to 72MHz
Equivalent Series Resistance 16MHz – 23.999999MHz 24MHz – 25.999999MHz 26MHz – 72MHz	 150 Ohms Maximum 80 Ohms Maximum 60 Ohms Maximum
Shunt Capacitance (C0)	3pF Maximum
Frequency Tolerance (at 25°C)	±50ppm, ±30ppm, ±25ppm, ±20ppm, ±15ppm, or ±10ppm
Frequency Stability (over Temperature)	±50ppm, ±30ppm, ±25ppm, ±20ppm, ±15ppm, or ±10ppm
Mode of Operation	Fundamental
Crystal Cut	AT Cut
Load Capacitance	8pF to 32pF or Specify
Drive Level	100µW Maximum
Aging	±5ppm/Year Maximum
Operating Temperature Range	See Part Number Guide
Storage Temperature Range	-40°C to +85°C

Mechanical and Solder Pad Dimensions



Pin	Connection
1	Crystal
2	Cover/Ground
3	Crystal
4	Cover/Ground

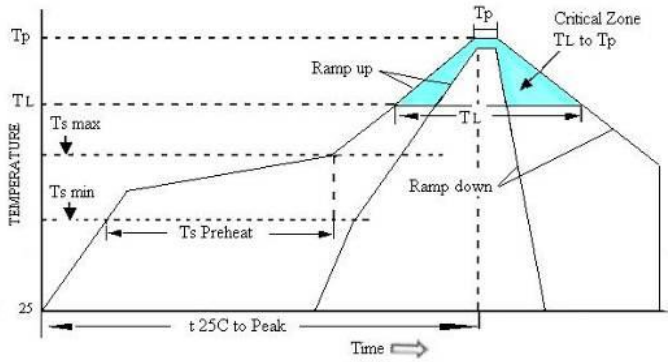
All Dimensions in Millimeters

Part Number Guide

Sample Part Number: ILCX19 – FB1F18 - 20.000 MHz						
Package	**Frequency Tolerance**	**Frequency Stability**	**Operating Temperature Range**	**Mode of Operations**	**Load Capacitance**	**Frequency**
ILCX19 -	B = ±50ppm	B = ±50ppm	0 = 0°C to +50°C	F = Fundamental	8pF to 32pF or Specify	20.000 MHz
	F = ±30ppm	F = ±30ppm	1 = 0°C to +70°C			
	G = ±25ppm	G = ±25ppm	2 = -10°C to +60°C			
	H = ±20ppm	H = ±20ppm	3 = -20°C to +70°C			
	I = ±15ppm	I = ±15ppm*, **	5 = -40°C to +85°C			
	J = ±10ppm*	J = ±10ppm*, **	9 = -10°C to +50°C			

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

Pb Free Solder Reflow Profile:



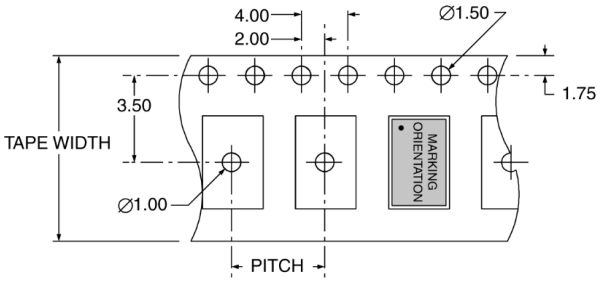
Units are backward compatible with +240°C reflow processes

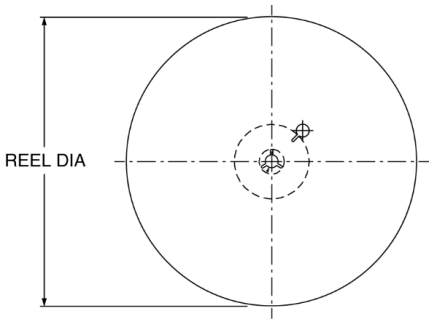
Ts max to T_L (Ramp-up Rate)	3ºC / second max
Preheat Temperature min (Ts min) Temperature typ (Ts typ) Temperature max (Ts max) Time (Ts)	 150ºC 175ºC 200ºC 60 to180 seconds
Ramp-up Tate (T_L to Tp	3ºC / second max
Time Maintained Above Temperature (T_L) Time ($T_{L)}$	 217ºC 60 to 150 seconds
Peak Temperature (Tp)	260ºC max for 10 seconds
Time within 5ºC to Peak Temperature (Tp)	20 to 40 seconds
Ramp-down Rate	6ºC / second max
Tune 25ºC 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 metallization)

Tape and Reel Information:





PITCH	4.00
TAPE WIDTH	8.00
REEL DIA	180
QTY PER REEL	3,000

Environmental Specifications:

Mechanical Shock	MIL-STD-202, Method 213
Vibration	MIL-STD-202, Method 204
Resistance to Soldering Heat	MIL-STD-202, Method 210
Solderability	J-STD-002
Gross Leak	MIL-STD-883, Method 1014, Condition C
Fine Leak	MIL-STD-883, Method 1014, Condition A2

Marking:

Line 1: I, Date Code (YWW)