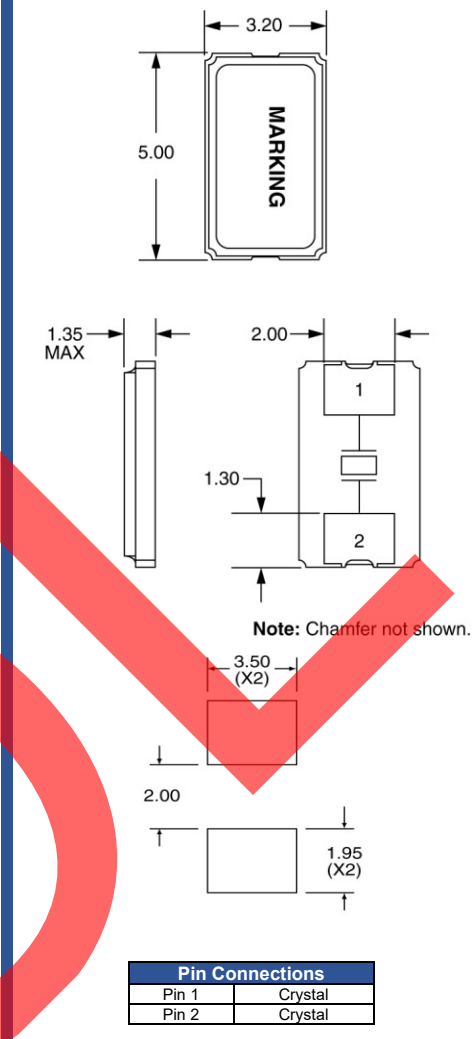
Product Feature:
Glass Sealed, Ceramic SMD Package
Low Equivalent Series Resistance
Leadfree Package SMD Pads
RoHS Compliant (Exemption 7(c)-I)

Applications:
Fiber Channel
Server & Storage
Sonet / SDH
802.11 / Wifi
T1/E1, T3/E3

Frequency	7.6MHz to 54MHz
Equivalent Series Resistance 7.6MHz – 11.999999MHz 12MHz – 13.999999MHz 14MHz – 19.999999MHz 20MHz – 23.999999MHz 24MHz – 54MHz	 100 Ohms Maximum 60 Ohms Maximum 50 Ohms Maximum 40 Ohms Maximum 30 Ohms Maximum
Shunt Capacitance (C0)	5pF Maximum
Frequency Tolerance (at 25°C)	±50ppm, ±30ppm, ±25ppm, ±20ppm, or ±15ppm
Frequency Stability (over Temperature)	±50ppm, ±30ppm, ±25ppm, ±20ppm, or ±15ppm
Mode of Operation	Fundamental
Crystal Cut	AT Cut
Load Capacitance	8pF to 32pF or Specify
Drive Level	100µWatts Typical 300µWatts Maximum
Aging	±3ppm/Year Maximum
Operating Temperature Range	See Part Number Guide below
Storage Temperature Range	-40°C to +85°C



Pin Connections	
Pin 1	Crystal
Pin 2	Crystal

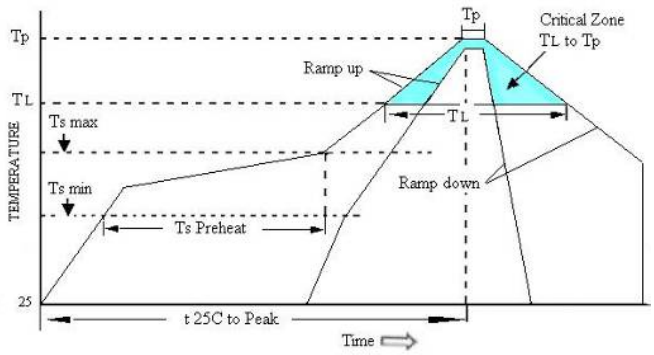
Part Number Guide **Sample Part Number: ILCX03A-FB1F18- 20.000 MHz**

Package	Tolerance (ppm) at Room Temperature	Stability (ppm) over Operating Temperature	Operating Temperature Range	Mode (overtone)	Load Capacitance (pF)	Frequency
ILCX03A-	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			
			9 = -10°C to +50°C			

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

NOT

Pb Free Solder Reflow Profile:



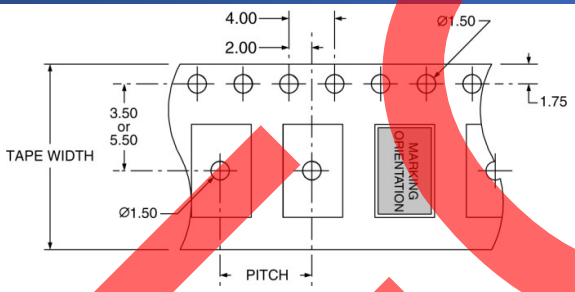
Units are backward compatible with 240C reflow processes

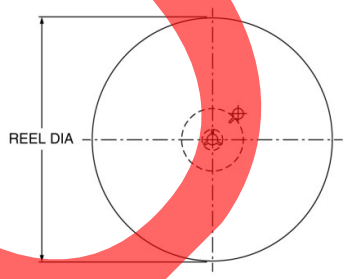
Ts max to T_L (Ramp-up Rate)	3ºC / second max
Preheat Temperature min (Ts min) Temperature typ (Ts typ) Temperature max (Ts max) Time (Ts)	 150ºC 175ºC 200ºC 60 to180 seconds
Ramp-up Tate (T_L to Tp	3ºC / second max
Time Maintained Above Temperature (T_L) Time (T_L)	 217ºC 60 to 150 seconds
Peak Temperature (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 metal).
Cover: Ceramic
Glass Seal

Tape and Reel Information:





Quantity per Reel	1000
Pitch	4.0
Tape Width	12.0
Reel DIA	180

Environmental Specifications:

Thermal Shock	MIL-STD-883, Method 1011, Condition A
Moisture Resistance	MIL-STD-883, Method 1004
Mechanical Shock	MIL-STD-883, Method 2002, Condition B
Mechanical Vibration	MIL-STD-883, Method 2007, Condition A
Resistance to Soldering Heat	J-STD-020C, Table 5-2 Pb-free devices (except 2 cycles max)
Hazardous Substance	Pb-Free / RoHS Compliant
Solderability	JESD22-B102-D Method 2 (Preconditioning E)
Terminal Strength	MIL-STD-883, Method 2004, Test Condition D
Gross Leak	MIL-STD-883, Method 1014, Condition C
Fine Leak	MIL-STD-883, Method 1014, Condition A2
Solvent Resistance	MIL-STD-202, Method 215

OBSOLETE