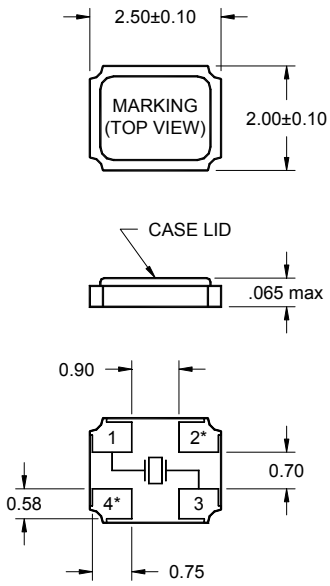
4 Pad Ceramic Crystal, 2.0 mm x 2.5 mm

ILCX18 Series

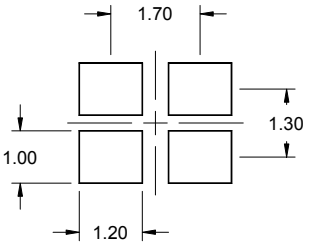
Product Feature:
- SMD Package
- Small package Foot Print
- Supplied in Tape and Reel
- Compatible with Leadfree Processing
- Fundamental Mode up to 80.0 MHz

Applications:
- PCMCIA Cards
- Storage
- PC's
- GSM Cell Phone
- Wireless Lan
- USB
- GSM Cell Phone

Frequency	12.0 MHz to 80.0 MHz
ESR (Equivalent Series Resistance) 12 MHz – 19.9 MHz 20 MHz – 29.9 MHz 30 MHz – 39.9 MHz 40 MHz – 60.0 MHz 60 MHz – 80.0 MHz	 100 Ω Max. 80 Ω Max. 60 Ω Max. 40 Ω Max. 40 Ω Max
Shunt Capacitance (C0)	3.5 pF Max.
Frequency Tolerance @ 25° C	±30 ppm Standard (see Part Number Guide for more options)
Frequency Stability over Temperature	±50 ppm Standard (see Part Number Guide for more options)
Crystal Cut	AT Cut
Load Capacitance	18 pF Standard (see Part Number Guide for more options)
Drive Level	100 µW Max.
Aging	±3 ppm Max. / Year Standard
Temperature	
Operating	0° C to +70° C Standard (see Part Number Guide for more options)
Storage	-40° C to +85° C Standard



*PIN 2 AND 4 ARE INTERNALLY CONNECTED TO CASE LID AND SHOULD BE CONNECTED TO GROUND.



RECOMMEND LAND PATTERN

DIMENSION IN mm

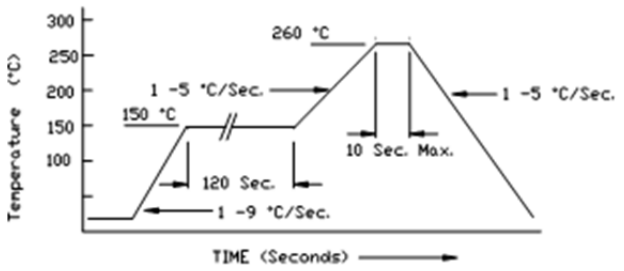
Notes:

Part Number Guide **Sample Part Number: ILCX18 - FB1F18 - 20.000**

Package	Tolerance (ppm) at Room Temperature	Stability (ppm) over Operating Temperature	Operating Temperature Range	Mode (overtone)	Load Capacitance (pF)	Frequency
ILCX18 -	B = ±50 ppm	B = ±50 ppm	0 = 0°C to +50°C	F = Fundamental	18 pF Standard 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			
			D = -10°C to +105°C*			
			E = -40°C to +105°C*			

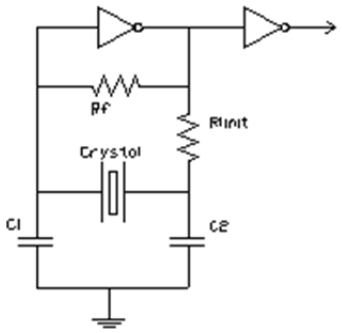
** Not available for all temperature ranges.

Pb Free Solder Reflow Profile:



*Units are backward compatible with 240C reflow processes

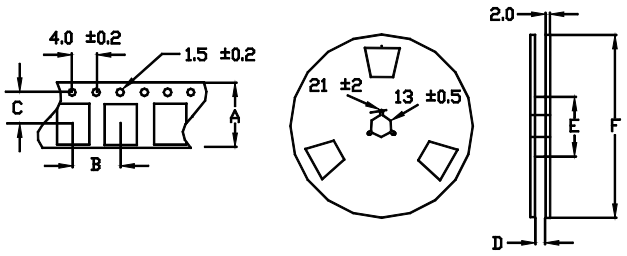
Typical Application:



Package Information:

MSL = 1
Termination = e4 (Au over Ni over W base metal).

Tape and Reel Information:



Quantity per Reel	3000
A	8.0 ±0.3
B	4.0 ±0.2
C	3.5 ±0.2
D	9.0±1.0 or 12.0 ±3.0
E	60 / 80
F	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 / Green 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, R1=2x10-8 atm cc/s
Solvent Resistance	MIL-STD-202, Method 215

Marking:

Line 1: I-Date Code (yww)
Line 2: Frequency