

4 Pad Ceramic Crystal, 2.0 mm x 2.5 mm

ILCX18 Series

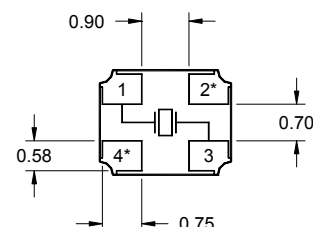
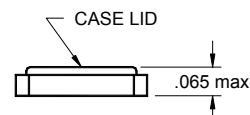
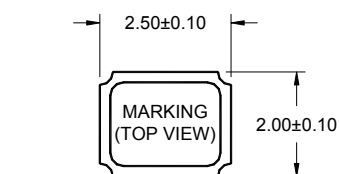
Product Feature:

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

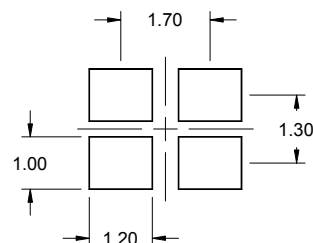
Applications:

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	100 Ω Max.
20 MHz – 29.9 MHz	80 Ω Max.
30 MHz – 39.9 MHz	60 Ω Max.
40 MHz – 60.0 MHz	40 Ω Max.
60 MHz – 80.0 MHz	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 μ W 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*			

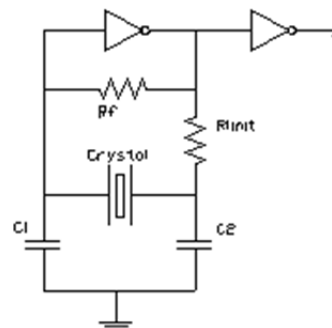
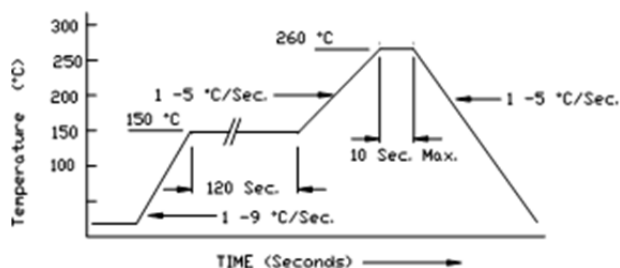
** Not available for all temperature ranges.

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Pb Free Solder Reflow Profile:

Typical Application:



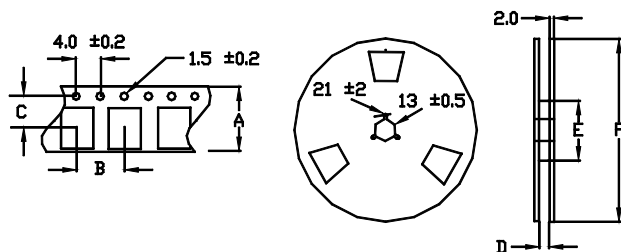
*Units are backward compatible with 240C reflow processes

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