4 Pad Ceramic Package, 5 mm x 7 mm

ILCX04 Series

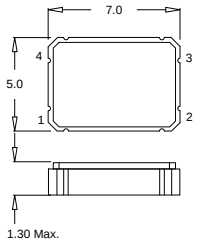
Product Features:

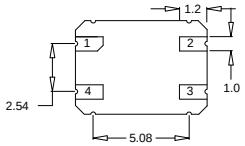
Small SMD Package
AT Cut Perfomance
Compatible with Leadfree Processing
Supplied in Tape and Reel

Applications:

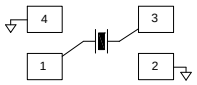
Fibre Channel
Server & Storage
USB
802.11 / Wifi
PC's

Frequency	6 MHz to 150 MHz
ESR (Equivalent Series Resistance) 6.0 MHz – 7.9 MHz 8.0 MHz – 9.9 MHz 10.0 MHz – 13.9 MHz 14.0 MHz – 19.9 MHz 20.0 MHz – 40.0 MHz 30.0 MHz – 150.0 MHz (3rd O.T.)	 100 Ω Max. 60 Ω Max. 50 Ω Max. 40 Ω Max. 30 Ω Max. 80 Ω Max.
Shunt Capacitance (C0)	7 pF Max.
Frequency Tolerance @ 25° C	±30 ppm Standard (see Part Number Guide for options)
Frequency Stability over Temperature	±50 ppm Standard (see Part Number Guide for options)
Crystal Cut	AT Cut
Load Capacitance	18 pF Standard (see Part Number Guide for more options)
Drive Level	100 uW Max.
Aging	±5 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

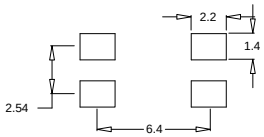




Connection Diagram



Recommended pad layout



Dimension Units: mm

Part Number Guide **Sample Part Number: ILCX04 - FB1F18 - 20.000**

Package	Tolerance (ppm) at Room Temperature	Stability (ppm) over Operating Temperature	Operating Temperature Range	Mode (overtone)	Load Capacitance (pF)	Frequency
ILCX04 -	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	3 = 3rd overtone		
	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 at all frequencies. ** Not available for all temperature ranges.

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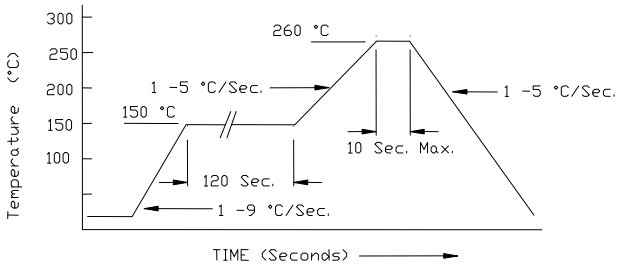
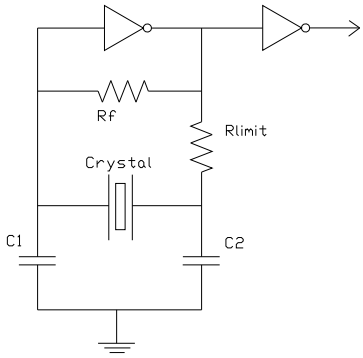
Pb Free Solder Reflow Profile:



*Units are backward compatible with 240C reflow processes

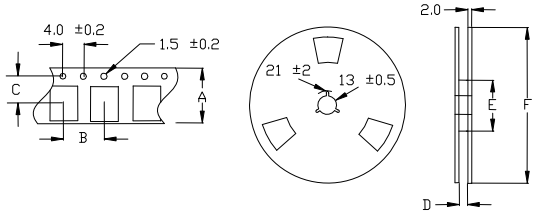
Typical Circuit:



Package Information:

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

Tape and Reel Information:



Quantity per Reel	1000
A	16 +/-.3
B	8 +/-.2
C	7.5 +/-.2
D	17.5 +/-1
E	50 / 60 / 80
F	180 / 250

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: ILSI, Frequency, Date Code