



2 Pad Ceramic Package, 1.5 mm x 3.2 mm



IL3X Series

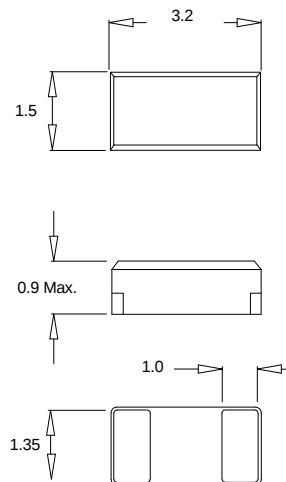
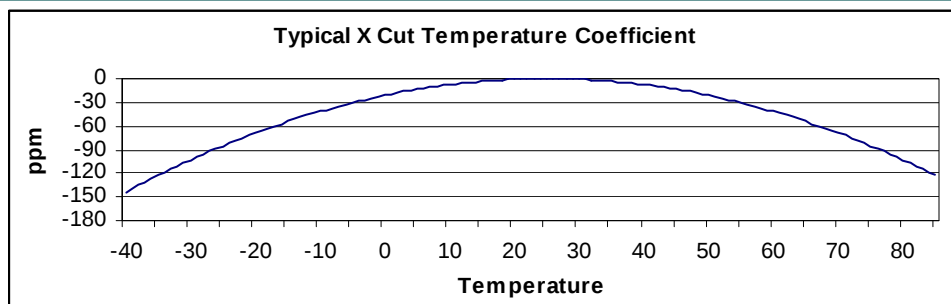
Product Features:

±20 ppm Stability
SMD Package
Low Profile
RoHS Compliant
Compatible with Leadfree Processing

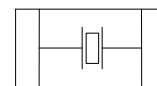
Applications:

Real Time Clocks
Metering
Industrial Control
Time Reference

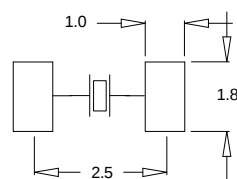
Frequency	32.768 kHz
ESR (Equivalent Series Resistance)	65 k Ω Max.
Shunt Capacitance (C0)	1.7 pF Typical
Frequency Tolerance @ 25° C	±20 ppm Standard
Frequency Stability over Temperature	Parabolic -0.034 ppm / ° C ² Typical. Inflection point approx. 27° C See Graph Below.
Crystal Cut	X-Cut
Load Capacitance	12.5 pF Standard
Drive Level	1 uW Max.
Aging	±3 ppm Max. / Year
Temperature	
Operating	-40° C to +85° C Standard
Storage	-40° C to +85° C Standard



Connection Diagram



Recommended Pad Layout



Dimension Units: mm

Part Number Guide		Sample Part Number: IL3X - HX5F12.5 - 32.768 kHz				
Package	Stability (ppm) at Room Temperature	Stability (ppm) over Operating Temperature	Operating Temperature Range	Mode (overtone)	Load Capacitance (pF)	Frequency
IL3X – IL3X2-(Metal Lid)	H = ±20 ppm	X = X Cut	5 = -40°C to +85°C	F = Fundamental	12.5 pF 6pF, 9pF available	- 32.768 kHz



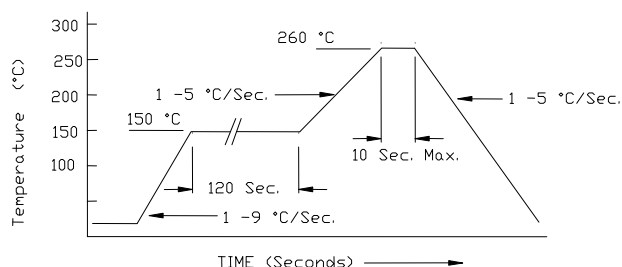
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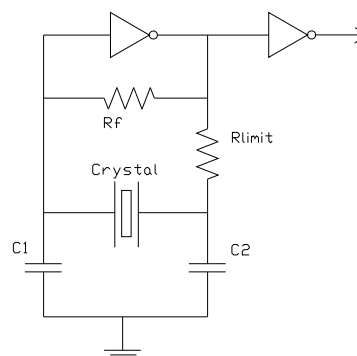
IL3X Series

Pb Free Solder Reflow Profile:

Typical Circuit:



*Units are backward compatible with 240C reflow processes

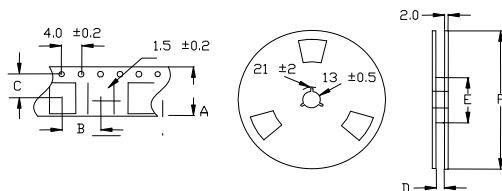


Package Information:

MSL = N/A

Termination = e4 (Au over Ni over W base metal)

Tape and Reel Information:



Quantity per Reel	3000
A	12 +/- .3
B	8 +/- .2
C	5.5 +/- .2
D	13.5 +/- .1 or 12 +/- .3
E	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: Factory Designator, Date Code (yyww)