

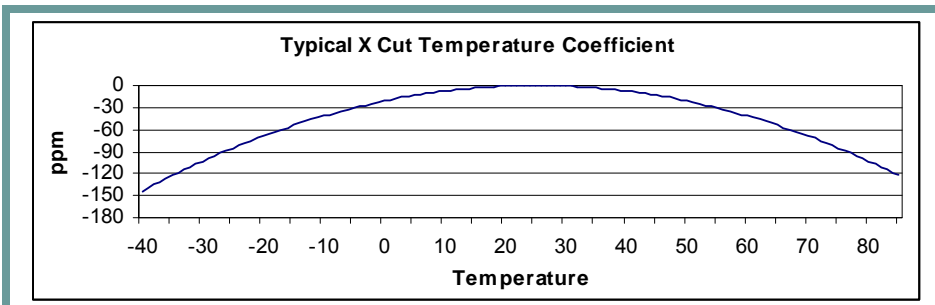
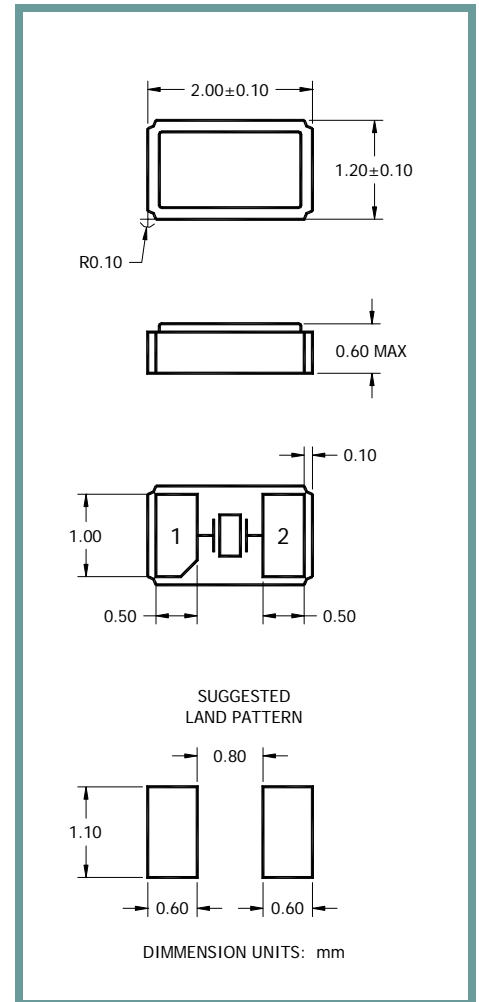
**Product Features:**

Low Cost SMD Package  
RoHS Compliant  
Compatible with Leadfree Processing  
Ultra Low Profile

**Applications:**

Real Time Clocks  
Metering  
Industrial Control  
Time Reference

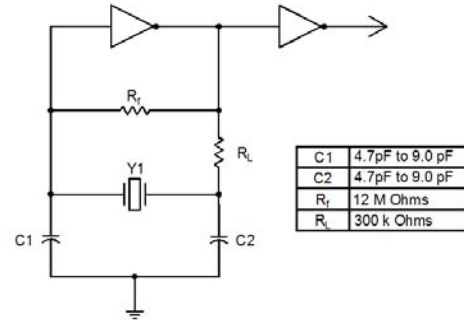
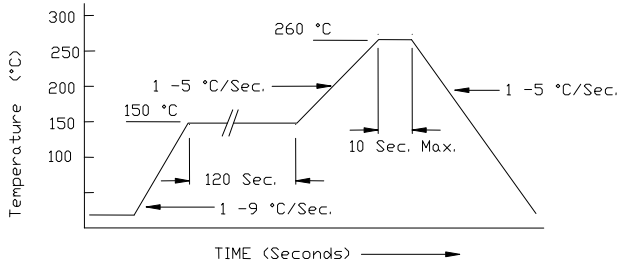
Frequency	32.768 KHz
ESR (Equivalent Series Resistance)	Less than 90 kΩ
Shunt Capacitance (C0)	1.3 pF Typ.
Motional Capacitance (C1)	6.5 fF Typ.
Frequency Tolerance @ 25° C ±5°C	±20 ppm Standard
Frequency Stability over Temperature	Parabolic -0.034 ppm / ° C <sup>2</sup> Typ. Turnover point +25° ±5°C See Graph Below
Crystal Cut	X-Cut
Load Capacitance	12.5 pF Standard
Drive Level	0.1 μW Typ., 0.5 μW Max.
Aging	±5 ppm Max. / Year Standard
Temperature	
Operating	-40° C to +85° C Standard
Storage	-55° C to +125° C Standard



Part Number Guide		Sample Part Number: IL3T - 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
IL3T -	H = ±20 ppm	X = X Cut	5 = -40°C to +85°C	F = Fundamental	12.5 pF Standard	- 32.768 KHz

**Pb Free Solder Reflow Profile:**

**Typical Circuit:**

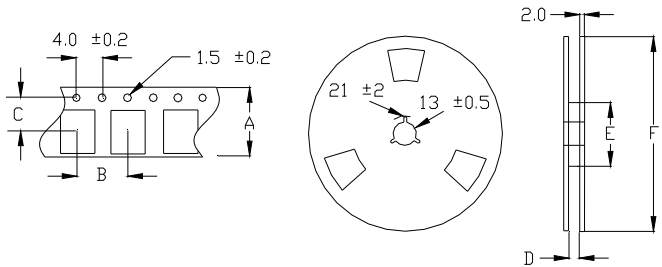


\*Units are backward compatible with 240C reflow processes

**Package Information:**

MSL = 2  
Termination = e1 (Sn/Cu/Ag over Ni over Kovar base metal)

**Tape and Reel Information:**



Quantity per Reel	3000
A	8.0 ±0.2
B	4.0 ±0.1
C	3.5 ±0.05
D	9.0 ±0.3
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 <sup>-8</sup> atm cc/s
Solvent Resistance	MIL-STD-202, Method 215

**Marking**

Line 1: Frequency, Date Code

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