2 Pad Ceramic Base SMD Crystal, 1.6 mm x 1.0 mm

IL3W Series

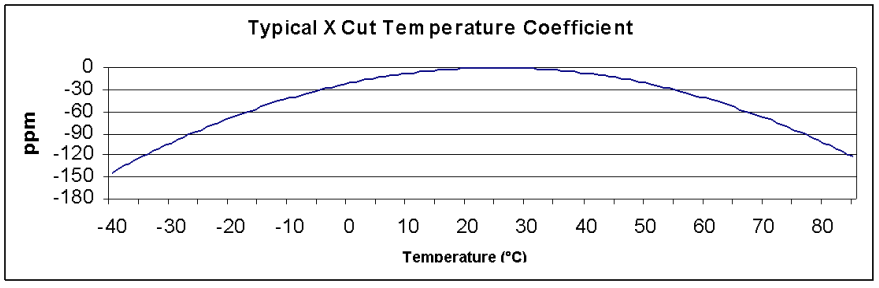
Product Features:

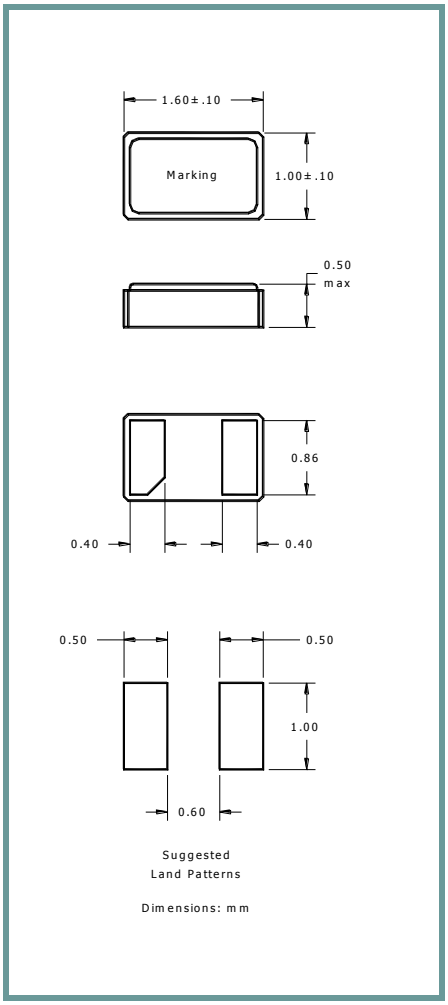
- 2 Pad SMD Package
- RoHS Compliant
- Compatible with Leadfree Processing
- Ultra Low Profile

Applications:

- Real Time Clocks
- Metering
- Industrial Control
- Time Reference

Frequency	32.768kHz
ESR (Equivalent Series Resistance)	90,000 Ohms Maximum
Shunt Capacitance (C0)	2.0pF Maximum
Motional Capacitance (C1)	6.5fF Typical
Frequency Tolerance @ 25° C ±5ºC	±20ppm Maximum
Frequency Stability over Temperature	Parabolic -0.045ppm/°C^2 Typical Turnover point +25ºC ±5ºC (See Graph Below)
Crystal Cut	X-Cut
Load Capacitance	12.5pF (See Table Below)
Drive Level	0.1µWatt Typical, 0.5µWatt Maximum
Aging	±3ppm/year Maximum
Operating Temperature Range	-40°C to +85°C
Storage Temperature Range	-55°C to +125°C





Part Number Guide **Sample Part Number: IL3W-HX5F12.5- 32.768 KHz**

Package	Stability (ppm) at Room Temperature	Stability (ppm) over Operating Temperature	Operating Temperature Range	ode (overtone)	Load Capacitance (pF)	Frequency
IL3W	H = ±20 ppm	X = X Cut	5 = -40°C to +85°C	F = Fundamental	12.5 = 12.5pF 9.0 = 9.0pF 7.0 = 7.0pF	32.768 KHz

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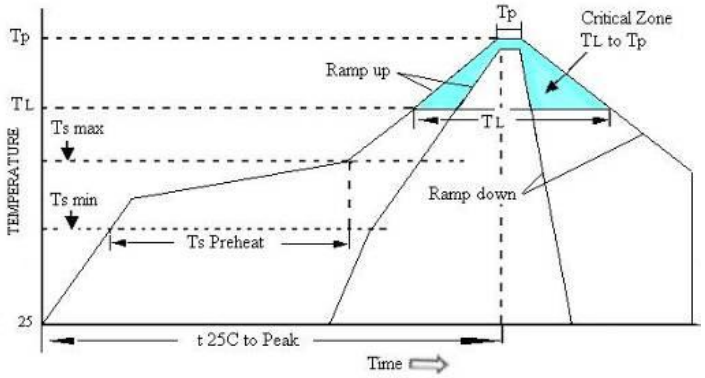
Pb Free Solder Reflow Profile:



Units are backward compatible with +240ºC reflow processes

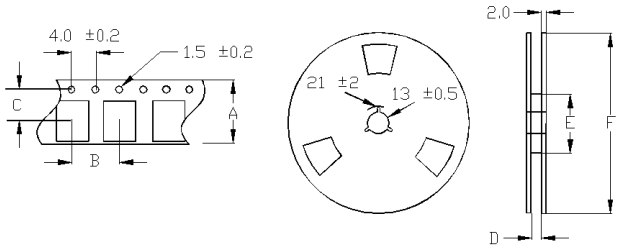
Typical Circuit:

Ts max to T_L (Ramp-up Rate)	3ºC / second max
Preheat Temperature min (Ts min) Temperature typ (Ts typ) Temperature max (Ts max) Time (Ts)	 150ºC 175ºC 200ºC 60 to180 seconds
Ramp-up Tate (T_L to Tp	3ºC / second max
Time Maintained Above Temperature (T_L) Time (T_L)	 217ºC 60 to 150 seconds
Peak Temperature (Tp)	260ºC max for 10 seconds
Time within 5ºC to Peak Temperature (Tp)	20 to 40 seconds
Ramp-down Rate	6ºC / second max
Tune 25ºC to Peak Temperature	8 minutes max

Package Information:

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

Tape and Reel Information:



Quantity per Reel	5000
A	8.0 ±0.3
B	4.0 ±0.2
C	3.5 ±0.02
D	9.0 ±1.0
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
Solderability	JESD22-B102 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 A1
Solvent Resistance	MIL-STD-202, Method 215

Marking

Line 1: I, Date Code (YWW)