

# IL3W Series



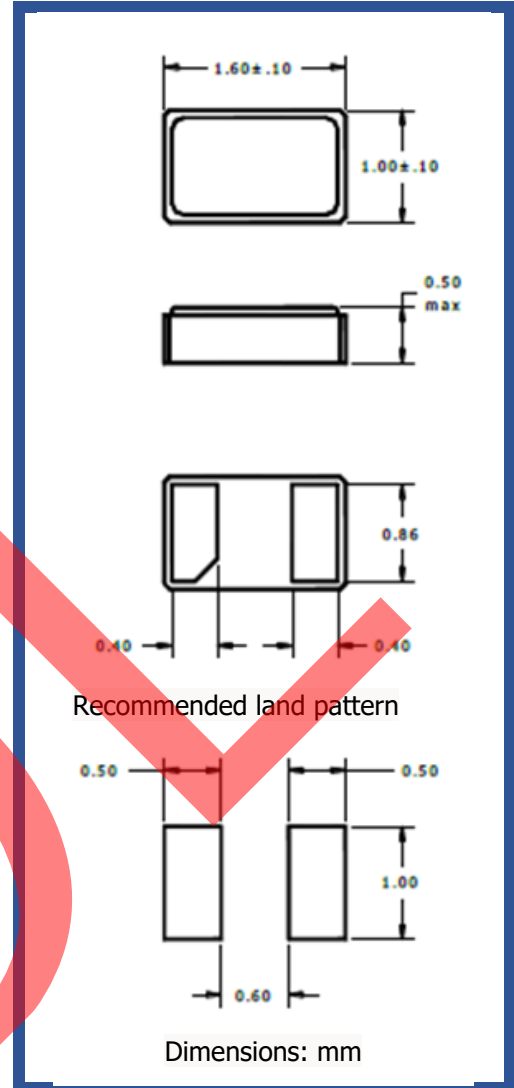
**Product Feature:**

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

**Applications:**

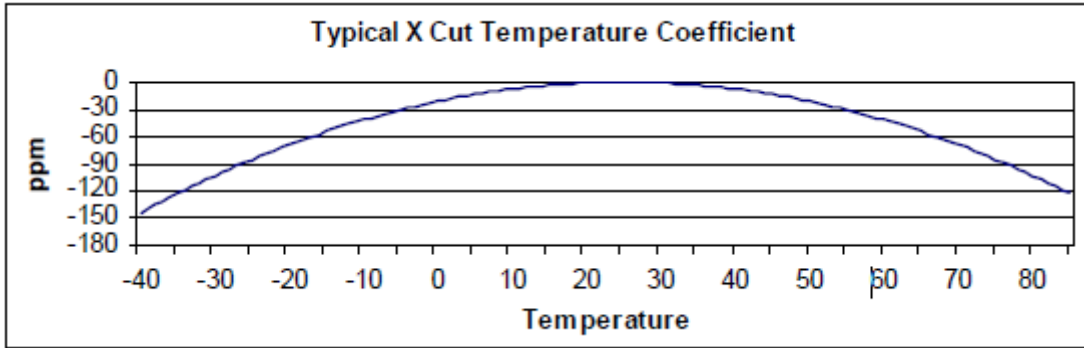
Real Time Clock Source  
 Metering  
 Industrial Control  
 Time Reference

<b>Frequency</b>	32.768kHz
<b>Equivalent Series Resistance</b>	90 kOhms Maximum
<b>Frequency Tolerance (at 25°C)</b>	±10ppm, ±20ppm, or ±30ppm
<b>Frequency Stability (over Temperature)</b>	Parabolic, -0.030ppm / ° C <sup>2</sup> ± 0.010 ppm / ° C <sup>2</sup>
<b>Turn over Temperature</b>	+25°C ±5°C
<b>Mode of Operation</b>	Flexural
<b>Crystal Cut</b>	Tuning Fork
<b>Load Capacitance</b>	9pF, or 12.5pF
<b>Drive Level</b>	0.1 µW Typical, 0.5 µWatt Maximum
<b>Aging</b>	±3ppm Maximum / First Year
<b>Operating Temperature Range</b>	-40°C to +85°C
<b>Storage Temperature Range</b>	-40° C to +85° C

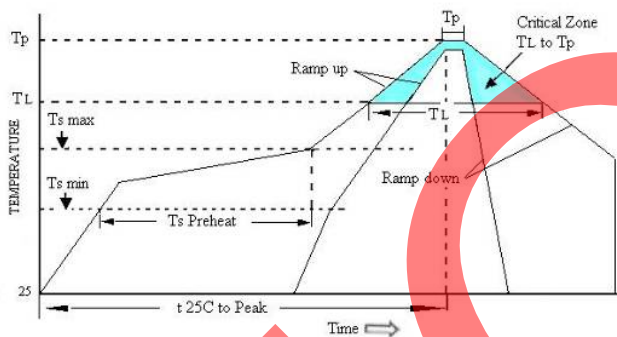


Part Number Guide		Sample Part Number: IL3W – HX5F12.5 – 32.768 kHz				
Package	Stability (ppm) at Room Temperature	Stability (ppm) over Operating Temperature	Operating Temperature Range	Mode (Overtone)	Load Capacitance (pF)	Frequency
IL3W -	F = ±30 H = ±20 J = ±10	X = X Cut	5 = -40C to +85C	F = Fundamental	9 = 9pF 12.5 = 12.5pF	-32.768 kHz

Typical X Cut Temperature Coefficient:



Pb Free Solder Reflow Profile:



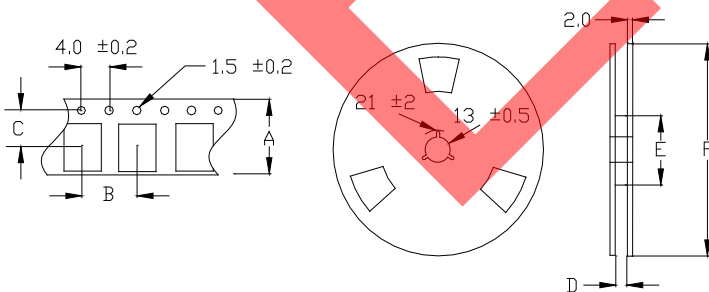
Units are backward compatible with 240C reflow processes

Ts max to TL (Ramp-up Rate)	3°C / second max
Preheat	
Temperature min (Ts min)	150°C
Temperature typ (Ts typ)	175°C
Temperature max (Ts max)	200°C
Time (Ts)	60 to 180 seconds
Ramp-up Rate (TL to Tp)	3°C / second max
Time Maintained Above Temperature (TL)	217°C
Time (TL)	60 to 150 seconds
Peak Temperature (Tp)	260°C max for 10 seconds
Time within 5°C to Peak Temperature (Tp)	20 to 40 seconds
Ramp-down Rate	6°C / second max
Time 25°C to Peak Temperature	8 minutes max

Package Information:

MSL = This product is Hermetically Sealed and not Moisture Sensitive-MSL = N/A: Not Applicable

Tape and Reel Information:



Quantity per Reel	5000
A	8.0 ±0.3
B	4.0 ±0.2
C	3.5 ±0.2
D	9.0 ±1.0
E	60 / 80
F	180

## Environmental Specifications:

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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 A1
Solvent Resistance	MIL-STD-202, Method 215

