

ECN/PCN No.: 3919

For Manufacturer			
Product Description: 32.768kHz SMD Crystal	Abrakon Part Number / Part Series: IL3X	☐ Documentation only ☐ ECN ☒ EOL	☒ Series ☐ Part Number
Affected Revision: J	New Revision: EOL	Application:	☐ Safety ☒ Non-Safety
Prior to Change: IL3X Rev. J https://abracon.com/datasheets/ILSI/IL3X.pdf			
After Change: Removal of OE option. EOL			
Cause/Reason for Change: Discontinuation of this older product package type and associated manufacturing capability.			
Change Plan			
Effective Date: 8/9/2021	Additional Remarks:		
Change Declaration: EOL of glass seal/ceramic cover, transition to seam seal/metal cover.			
Issued Date: 8/9/2021	Issued By: <i>Stephanie López</i>	Issued Department: Engineering	
Approval: <i>Thomas Culhane</i> Engineering Director	Approval: <i>Reuben Quintanilla</i> Quality Director	Approval: <i>Ying Huang</i> Purchasing Director	
For Abracon EOL only			
Last Time Buy (if applicable): None	Alternate Part Number / Part Series: IL3X2 https://abracon.com/datasheets/ILSI/IL3X2.pdf		
Additional Approval:	Additional Approval:	Additional Approval:	
Customer Approval (If Applicable)			
Qualification Status: ☐ Approved ☐ Not accepted <i>Note: It is considered approved if there is no feedback from the customer 1 month after ECN/PCN is released.</i>			
Customer Part Number:		Customer Project:	
Company Name:	Company Representative:	Representative Signature:	
Customer Remarks:			

Product Features:

±10ppm Tolerance Available
Glass Sealed, Ceramic SMD Package
Low Profile
RoHS Compliant (Exemption 7(c)-I)

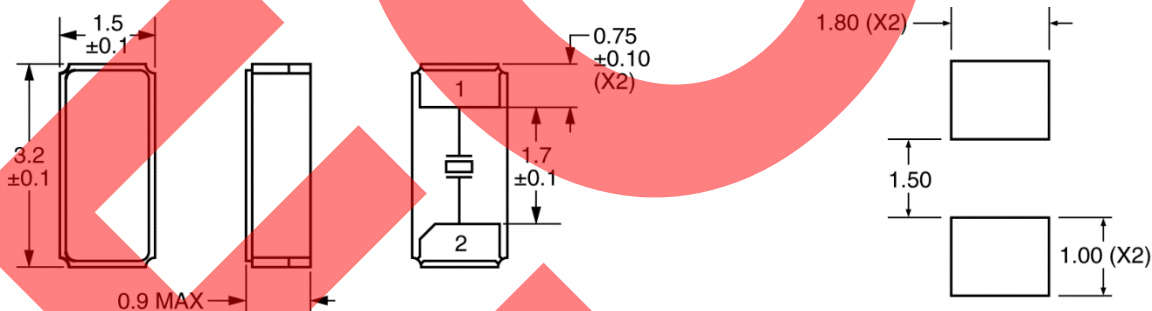
Applications:

Real Time Clock Source
Metering
Industrial Control
Time Reference

Electrical Specifications:

Frequency	32.768kHz
Equivalent Series Resistance	65 k Ohms Maximum
Shunt Capacitance (C0)	1.7pF Typical, 2.0pF Maximum
Frequency Tolerance (at 25°C)	±10ppm or ±20ppm
Frequency Stability (over Temperature)	-0.034ppm/(Change in °C)2 Typical
Turn over Temperature	25°C ±5°C
Mode of Operation	Fundamental
Crystal Cut	X-Cut (Tuning Fork)
Load Capacitance	6pF, 7pF, 9pF, 12.5pF or Specify
Drive Level	1µWatt Maximum
Aging	±3ppm/Year Maximum
Operating Temperature Range	-40°C to +85°C
Storage Temperature Range	-40°C to +85°C

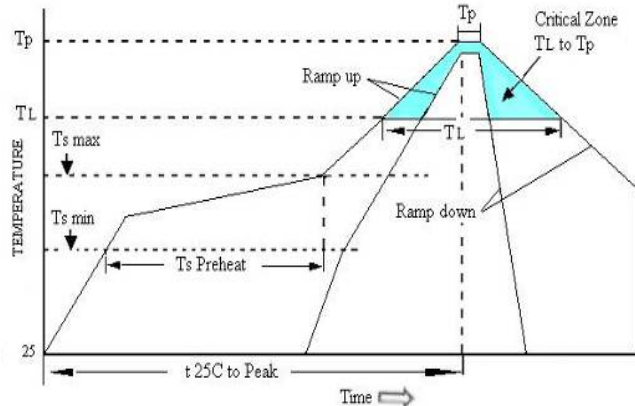
Mechanical and Solder Pad Dimensions:



All Dimensions in Millimeters

Part Number Guide			Sample Part Number: IL3X – HX5F12.5 – 32.768 kHz			
Package	Frequency Tolerance	Frequency Stability	Operating Temperature Range	Mode of Operations	Load Capacitance	Frequency
IL3X-	J = ±10ppm H = ±20ppm	X = X Cut	5 = -40°C to +85°C	F = Fundamental	6 = 6pF 7 = 7pF 9 = 9pF 12.5 = 12.5pF (or Specify)	- 32.768 kHz

Pb Free Solder Reflow Profile:



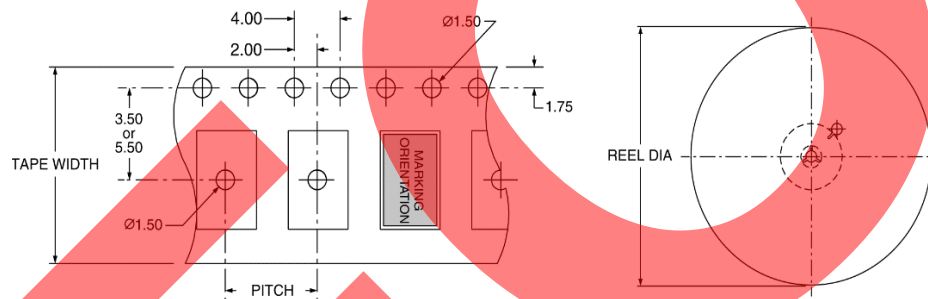
Ts max to T _L (Ramp-up Rate)	3°C / second max
Preheat	
Temperature min (Ts min)	150°C
Temperature typ (Ts typ)	175°C
Temperature max (Ts max)	200°C
Time (Ts)	60 to 180 seconds
Ramp-up Rate (T _L to T _p)	3°C / second max
Time Maintained Above Temperature (T _L)	217°C
Time (T _L)	60 to 150 seconds
Peak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

Units are backward compatible with +240°C reflow processes

Package Information:

MSL = 1 (package does not contain plastic, storage life is unlimited under normal room conditions).
 Termination = e4 (Au over Ni over W base metallization).
 Cover: Ceramic
 Glass Seal

Tape and Reel Information:



PITCH	4.00
TAPE WIDTH	12.00
REEL DIA	180
QTY PER REEL	3,000

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[ABRACON:](#)

[IL3X-HX5F6-32.768KHz](#) [IL3X-HX5F12.5-32.768KHz](#) [IL3X-HX5F9-32.768KHz](#)