



4 Pad Ceramic Package Quartz Crystal, 2.0mm x 1.6mm

IXA12 Series

Product Features:

AEC – Q200 qualified
IATF 16949 certified production lines
RoHS and REACH compliant
Suitable for use in harsh environments
Extended operating temperature range: -40°C to +125°C

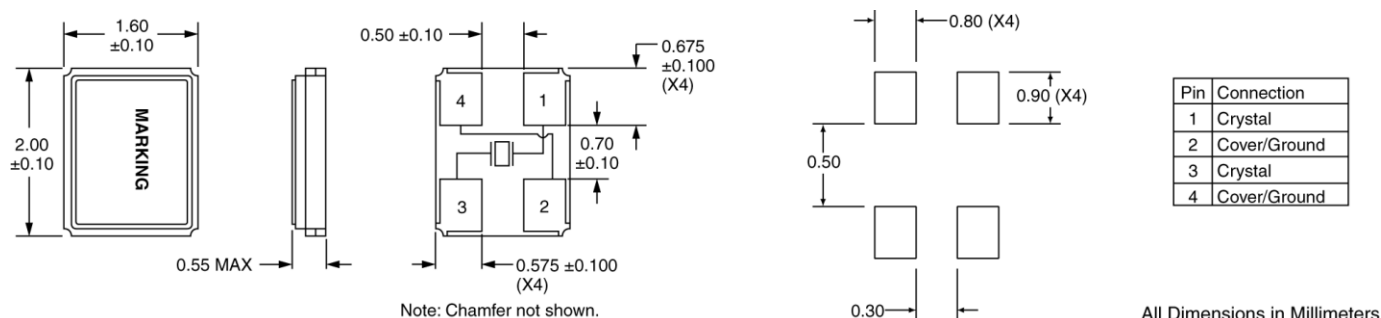
Applications:

Navigation, GPS
Infotainment System
Instrument Panel, Ethernet
ADAS Radar, Camera, Engine Control Units
Lidar Systems, TPMS

Electrical Specifications

Frequency	16MHz to 54MHz
Equivalent Series Resistance 16MHz – 20.999999MHz 20MHz – 25.999999MHz 25MHz – 39.999999MHz 40MHz – 54MHz	200 Ohms Maximum 120 Ohms Maximum 100 Ohms Maximum 60 Ohms Maximum
Shunt Capacitance (C0)	3pF Maximum
Frequency Tolerance (at 25°C)	±50ppm, ±30ppm, ±25ppm, ±20ppm, ±15ppm, or ±10ppm
Frequency Stability (over Temperature)	±100ppm, ±50ppm, ±30ppm, or ±20ppm
Mode of Operation	Fundamental
Crystal Cut	AT Cut
Load Capacitance	8pF to 32pF or Specify
Drive Level	100µW Maximum
Aging	±3ppm/Year Maximum
Operating Temperature Range	-40°C to +85°C, -40°C to +105°C, or -40°C to +125°C
Storage Temperature Range	-50°C to +150°C

Mechanical and Solder Pad Dimensions



Part Number Guide

Sample Part Number: IXA12 – FBDF18 - 20.000 MHz						
Package	Frequency Tolerance	Frequency Stability	Operating Temperature Range	Mode of Operations	Load Capacitance	Frequency
IXA12 -	B = ±50ppm	A = ±100ppm	5 = -40°C to +85°C	F = Fundamental	8pF to 32pF or Specify	- 20.000 MHz
	F = ±30ppm	B = ±50ppm	D = -40°C to +105°C			
	G = ±25ppm	F = ±30ppm*, **	F = -40°C to +125°C			
	H = ±20ppm	H = ±20ppm*, **				
	I = ±15ppm					
	J = ±10ppm					

* Not available at all frequencies. ** Not available for all temperature ranges.

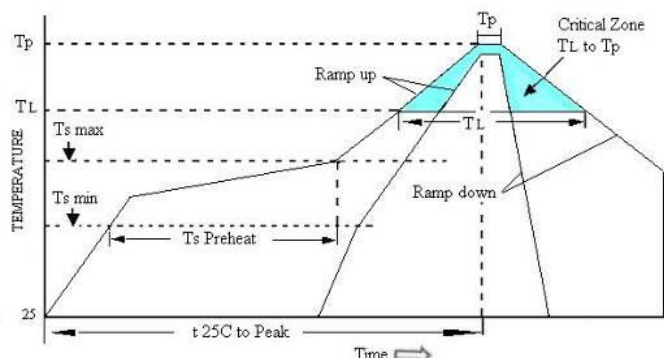
**QUALITY SYSTEM
CERTIFIED
= ISO 9001 =**

ILSI America Phone 775-851-8880 • Fax 775-851-8882 • email: e-mail@ilsiamerica.com •
www.ilsiamerica.com
Specifications subject to change without notice

Rev: 02/06/18_A

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Pb Free Solder Reflow Profile:



Units are backward compatible with +240°C reflow processes

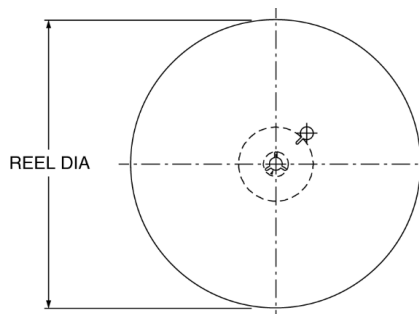
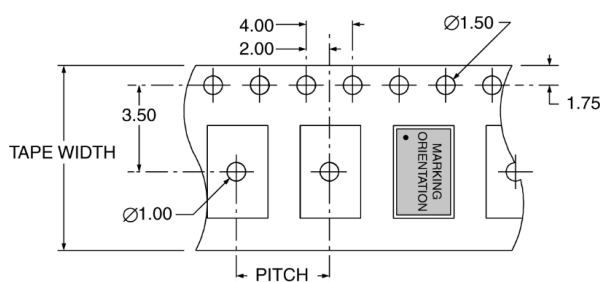
Ts max to T _L (Ramp-up Rate)	3°C / second max
Preheat	
Temperature min (Ts min)	150°C
Temperature typ (Ts typ)	175°C
Temperature max (Ts max)	200°C
Time (Ts)	60 to 180 seconds
Ramp-up Rate (T _L to Tp)	3°C / second max
Time Maintained Above Temperature (T _L)	217°C
Time (T _L)	60 to 150 seconds
Peak 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 = 1 (package does not contain plastic, storage life is unlimited under normal room conditions)

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

Tape and Reel Information:



PITCH	4.00
TAPE WIDTH	8.00
REEL DIA	180
QTY PER REEL	3,000

Environmental Specifications:

Mechanical Shock	MIL-STD-202, Method 213
Vibration	MIL-STD-202, Method 204
Resistance to Soldering Heat	MIL-STD-202, Method 210
Solderability	J-STD-002
Gross Leak	MIL-STD-883, Method 1014, Condition C
Fine Leak	MIL-STD-883, Method 1014, Condition A2

Marking:

Line 1: Frequency (XX.XX)

Line 2: Date Code (YWW)