



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

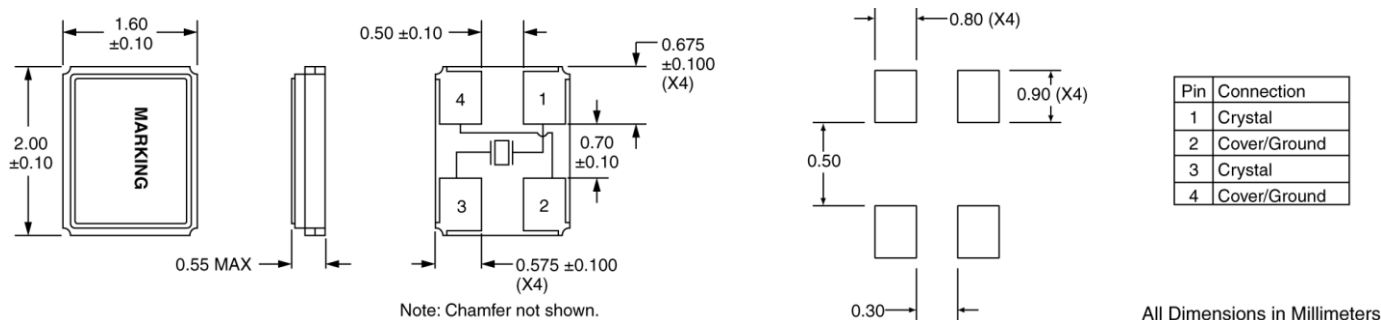
Applications:

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 – 19.999999MHz 20MHz – 24.999999MHz 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

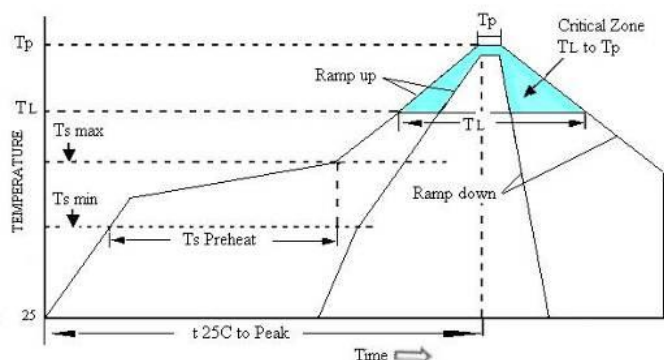
Sample Part Number: IXA12 – FBDF18 - 20.000 MHz						
Package	Frequency Tolerance	Frequency Stability	Operating Temperature Range	Mode of Operations	Load Capacitance	Frequency
IXA12 -	B = ±50ppm	A = ±100ppm	5 = -40°C to +85°C	F = Fundamental	8pF to 32pF or Specify	- 20.000 MHz
	F = ±30ppm	B = ±50ppm	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 Operating Temperature Range option F.

*** Not available for Operating Temperature Range option D or F.

Pb Free Solder Reflow Profile:



Units are backward compatible with +240°C reflow processes

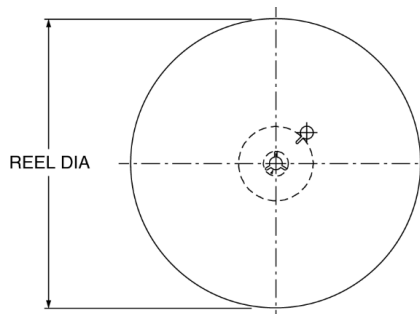
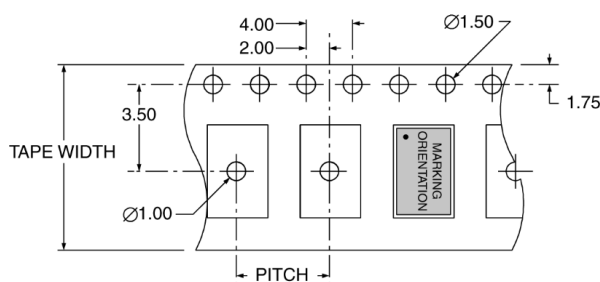
Ts max to T_L (Ramp-up Rate)	3°C / second max
Preheat	
Temperature min (T_s min)	150°C
Temperature typ (T_s typ)	175°C
Temperature max (T_s max)	200°C
Time (T_s)	60 to 180 seconds
Ramp-up Rate (T_L to T_p)	3°C / second max
Time Maintained Above Temperature (T_L)	217°C
Time (T_L)	60 to 150 seconds
Peak 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

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)

Mouser Electronics

Authorized Distributor

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

ABRACON:

<u>IXA12-FBFF10-24.000MHz</u>	<u>IXA12-FBFF10-24.576 MHz</u>	<u>IXA12-FBFF10-25.000MHz</u>	<u>IXA12-FBFF10-26.000MHz</u>
<u>IXA12-FBFF10-27.000MHz</u>	<u>IXA12-FBFF10-27.120MHz</u>	<u>IXA12-HF5F10-26.000MHz</u>	<u>IXA12-HF5F10-27.000MHz</u>
<u>IXA12-HF5F10-27.120MHz</u>	<u>IXA12-HF5F10-32.000MHz</u>	<u>IXA12-FBFF10-32.000MHz</u>	<u>IXA12-HF5F10-19.200MHz</u>
<u>IXA12-HF5F10-20.000MHz</u>	<u>IXA12-HF5F10-24.000MHz</u>	<u>IXA12-HF5F10-24.576MHz</u>	<u>IXA12-HF5F10-25.000MHz</u>