

## 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

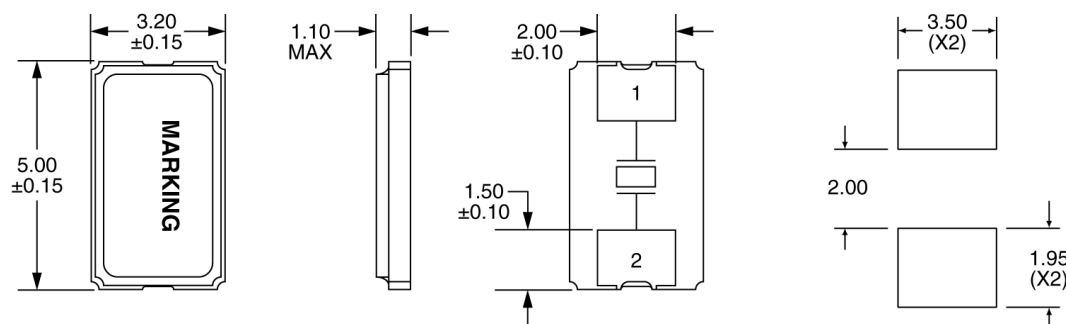
## Applications:

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

## Electrical Specifications

<b>Frequency</b>	7.6MHz to 54MHz
<b>Equivalent Series Resistance</b> 7.6MHz – 11.999999MHz 12MHz – 13.999999MHz 14MHz – 19.999999MHz 20MHz – 54MHz	100 Ohms Maximum 60 Ohms Maximum 50 Ohms Maximum 40 Ohms Maximum
<b>Shunt Capacitance (C0)</b>	5pF Maximum
<b>Frequency Tolerance (at 25°C)</b>	±50ppm, ±30ppm, ±25ppm, ±20ppm, ±15ppm, or ±10ppm
<b>Frequency Stability (over Temperature)</b>	±100ppm, ±50ppm, ±30ppm, or ±20ppm
<b>Mode of Operation</b>	Fundamental
<b>Crystal Cut</b>	AT Cut
<b>Load Capacitance</b>	8pF to 32pF or Specify
<b>Drive Level</b>	300µWatts Maximum
<b>Aging</b>	±3ppm/Year Maximum
<b>Operating Temperature Range</b>	-40°C to +85°C, -40°C to +105°C, or -40°C to +125°C
<b>Storage Temperature Range</b>	-50°C to +150°C

## Mechanical and Solder Pad Dimensions



Note: Chamfer not shown.

All Dimensions in Millimeters

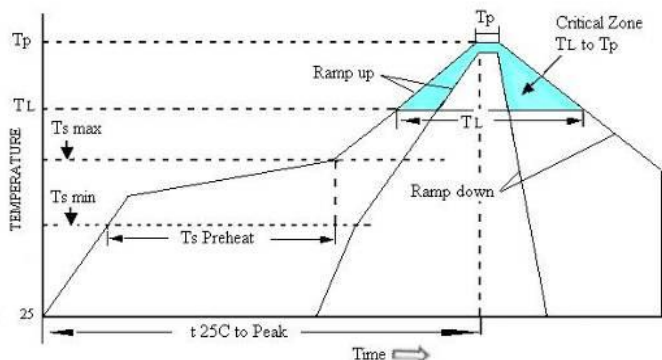
Pin	Connection
1	Crystal
2	Crystal

## Part Number Guide

Sample Part Number: IXA18 – FBDF18 - 25.000 MHz						
Package	Frequency Tolerance	Frequency Stability	Operating Temperature Range	Mode of Operations	Load Capacitance	Frequency
IXA18 -	B = ±50ppm	A = ±100ppm	5 = -40°C to +85°C	F = Fundamental	8pF to 32pF or Specify	- 25.000 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.

## Pb Free Solder Reflow Profile:



Units are backward compatible with +240°C reflow processes

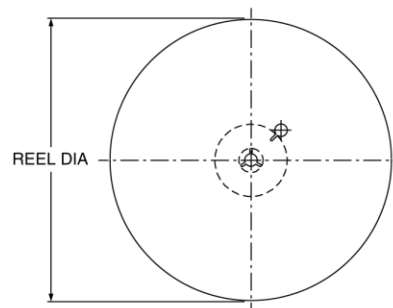
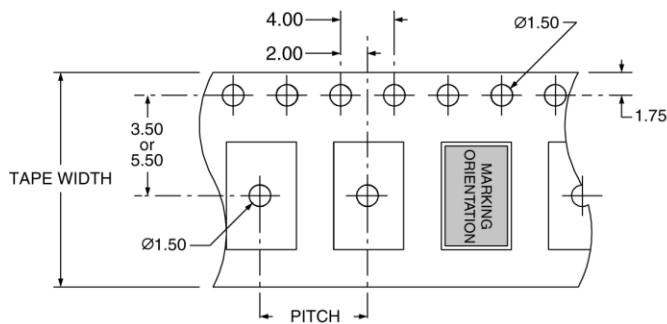
Ts max to $T_L$ (Ramp-up Rate)	3°C / second max
Preheat	
Temperature min ( $T_s$ min)	150°C
Temperature typ ( $T_s$ typ)	175°C
Temperature max ( $T_s$ max)	200°C
Time ( $T_s$ )	60 to 180 seconds
Ramp-up Rate ( $T_L$ to $T_p$ )	3°C / second max
Time Maintained Above Temperature ( $T_L$ )	217°C
Time ( $T_L$ )	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	12.00
REEL DIA	180
QTY PER REEL	1,000

## 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)