

Product Features:

AEC – Q200 qualified
 TS16949 certified production lines
 RoHS and REACH compliant
 Suitable for use in harsh environments
 Extended operating temperature range: -40°C to +125°C

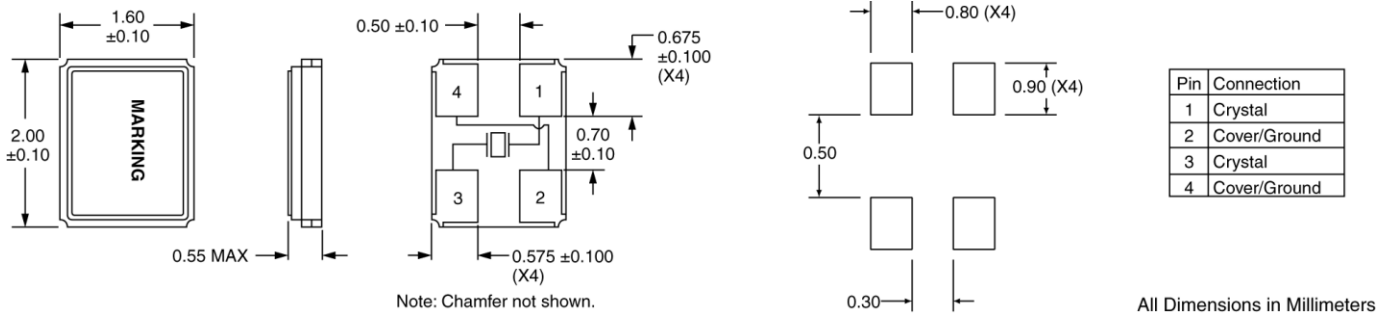
Applications:

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

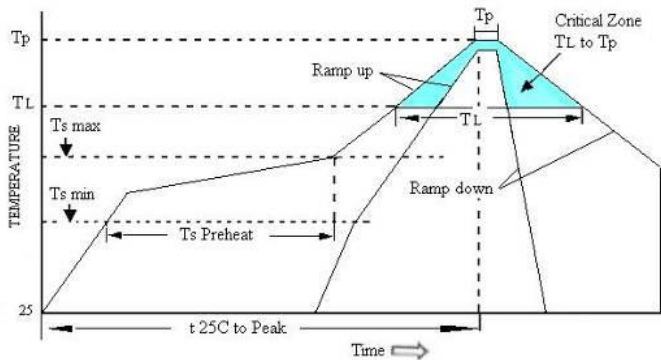


Part Number Guide

| 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.

Pb Free Solder Reflow Profile:

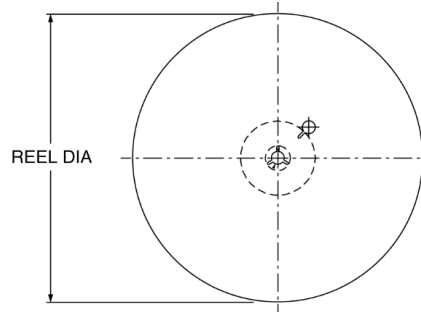
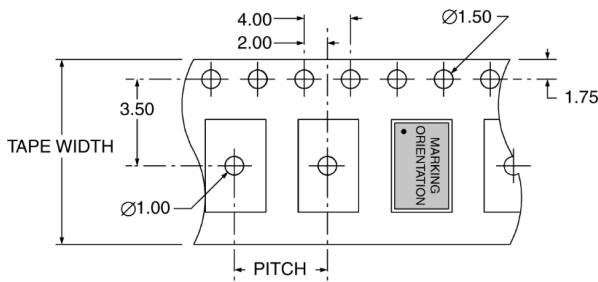


| | |
|---|--------------------------|
| Ts max to T _L (Ramp-up Rate) | 3°C / second max |
| Preheat | |
| Temperature min (Ts min) | 150°C |
| Temperature typ (Ts typ) | 175°C |
| Temperature max (Ts max) | 200°C |
| Time (Ts) | 60 to 180 seconds |
| Ramp-up Rate (T _L to T _p) | 3°C / second max |
| 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 |
| Tune 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)