



7 x 5mm Auto Grade Crystal

C7BA

(former FXA7050B)

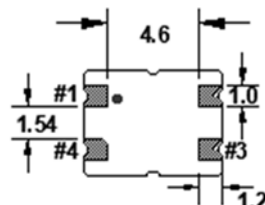
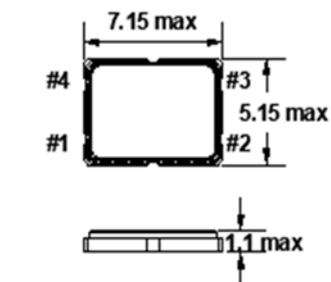
DATASHEET

- AEC Q200 Qualified
- IATF-16949 QMS
- Tolerances down to ± 10 PPM
- Stabilities down to ± 20 PPM

• SPECIFICATIONS

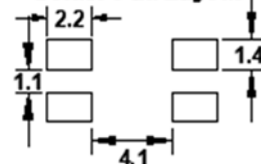
| PARAMETERS | MAX (unless otherwise noted) |
|-------------------------------------|------------------------------|
| Frequency Range | 6.000 ~ 133.000 MHz |
| Frequency Tolerance @ 25°C | (See options on page 2) |
| Frequency Stability, ref @ 25°C | (See options below) |
| Temperature Range | |
| Operating (T _{OPR}) | See options below |
| Storage (T _{STG}) | -55°C ~ +150°C |
| Shunt Capacitance (C ₀) | 5pF |
| Load Capacitance (C _L) | (See options on page 2) |
| Drive Level | 100µW |
| Aging per year | ± 5 PPM |
| Maximum Soldering Temp / Time | 260°C / 10 Seconds x 2 |
| Moisture Sensitivity Level (MSL) | 1 |
| Termination Finish | Au over Ni |
| Seal Method | Seam |
| Lead (Pb) Free | Yes |
| RoHS Compliant | Yes |

| Frequency Range (MHz) | Operating Mode | Max ESR Ω |
|-----------------------|--------------------|------------------|
| 6.000 ~ 7.999999 | Fundamental | 70 |
| 8.000 ~ 9.999999 | Fundamental | 40 |
| 10.000 ~ 14.999999 | Fundamental | 35 |
| 15.000 ~ 39.999999 | Fundamental | 30 |
| 40.000 ~ 50.000 | Fundamental | 20 |
| 40.000 ~ 79.999999 | 3 RD OT | 70 |
| 80.000 ~ 133.000 | 3 RD OT | 60 |



Dimensions in mm

Recommended Solder Pad Layout



Pin Connections


#4 - Lid/Gnd #3 - Crystal
#1 - Crystal #2 - Lid/Gnd

Note: Dimensional drawing is for reference to critical specifications defined by size measurements.

• Available Operating Temperatures and Stabilities

| Operating Temperature | ± 20 PPM | ± 25 PPM | ± 30 PPM | ± 50 PPM | ± 100 PPM |
|-----------------------|--------------|--------------|--------------|--------------|---------------|
| -40 ~ +85°C | O | O | O | O | O |
| -40 ~ +105°C | X | X | O | O | O |
| -40 ~ +125°C | X | X | X | O | O |
| -55 ~ +125°C | X | X | X | O | O |

Key: O=Available, X=Not Available,
*Does not imply stocked part.

| Reference / Comments | Title / Description: C7BA SERIES STANDARD SPECIFICATIONS | | |
|---|--|---------------|------------------|
|  © Copyright 2019 Fox Electronics. All rights reserved | Drawing Number: C7BA-DOC-2 | | Size: A |
| | Part Number: | | Cage: 61429 |
| | Draftsperson: BEC | Approved: MAJ | Date: 06/04/2019 |



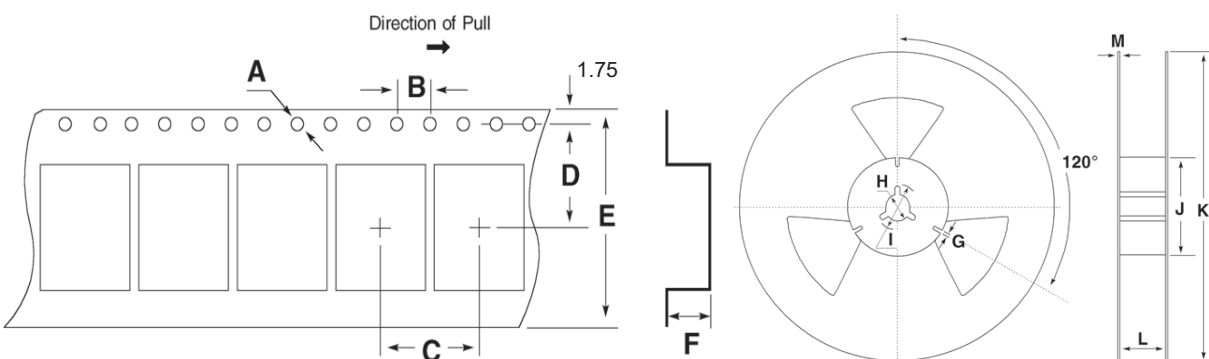
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DATASHEET

| • TAPE SPECIFICATIONS (millimeters) | | | | | | | • REEL SPECIFICATIONS (millimeters) | | | | | | |
|-------------------------------------|-----|-----|-----|------|-----|----------------------------|-------------------------------------|-----|-----|-----|------|----|-----|
| A | B | C | D | E | F | Reel QTY | G | H | I | J | K | L | M |
| Ø1.55 | 4.0 | 8.0 | 7.5 | 16.0 | 2.0 | -T2 = 2,000 -T1 = 1,000 | 2.5 | Ø13 | Ø21 | Ø62 | Ø180 | 17 | 2.0 |



Available Options & Part Identification for Automotive Crystal Model C7BA¹

F C7BA B C V I 40.0

| F | C7BA | B | C | V | I | 40.0 |
|-----|--------------|--|--|--|---|-----------------|
| FOX | Model Number | Tolerance | Stability | Load Capacitance ² | Operating Temperature | Frequency (MHz) |
| | | B = ±50 PPM C = ±30 PPM D = ±25 PPM E = ±20 PPM F = ±15 PPM H = ±10 PPM | A = ±100 PPM B = ±50 PPM C = ±30 PPM D = ±25 PPM E = ±20 PPM | V=7pF D=8pF E=10pF G=12pF J=15pF K=16pF L=18pF M=20pF | M = -40 to +85°C P = -40 to +105°C I = -40 to +125°C T = -55 to +125°C | |

¹Not all frequency, tolerance, stability, load, and operating temperature combinations may be available.

² Listed load capacitances represent the most commonly used. Other load capacitances are available. Contact Fox Technical Support for assistance



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Reference / Comments

Title / Description: C7BA SERIES STANDARD SPECIFICATIONS



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Drawing Number: C7BA-DOC-2

Size: A

Part Number:

Cage: 61429

Draftsperson: BEC

Approved: MAJ

Date: 06/04/2019