



7 x 5mm Auto Grade Crystal

C7BA

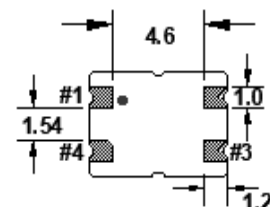
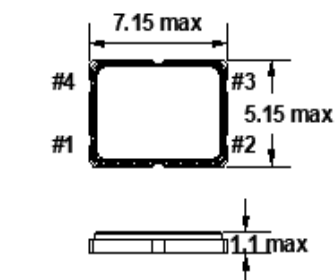
(former FXA7050B)

DATASHEET

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

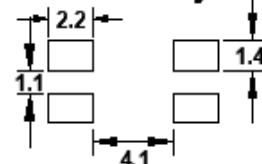
• SPECIFICATIONS

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)	5 pF
Load Capacitance (C _L)	(See options on page 2)
Drive Level	100 μ W
Aging per year	± 5 PPM
Maximum Soldering Temp / Time	260°C / 10 Seconds x 2
Moisture Sensitivity Level (MSL) per J-STD-033	N/A
Termination Finish	Au (0.3~0.75 μ m) over Ni (1.27~8.89 μ m)
Seal Method	Seam
Lead (Pb) Free	Yes
RoHS Compliant	Yes, no exemptions
REACH Compliant (latest version)	Yes



Dimensions in mm

Recommended Solder Pad Layout



Pin Connections

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

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

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,

1

Reference / Comments

7/21/2020 – Added thickness info to termination metals, adjusted MSL info to include J-STD-033 and N/A

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Title / Description: C7BA SERIES STANDARD SPECIFICATIONS

Drawing Number: C7BA-DOC-1

Size: A

Part Number:

Cage: 61429

Draftsperson: BEC

Approved: MAJ

Date: 07/21/2020



7 x 5mm Auto Grade Crystal

C7BA (former FXA7050B) 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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For datasheet type definitions and a glossary of common terms, visit <http://www.foxonline.com/tgcrystals.html>.

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Mouser Electronics

Authorized Distributor

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