



2.0x1.6mm Ceramic SMD Crystal C1BS

(former FX216B)

DATASHEET

- Tolerances down to ± 10 PPM
- Stabilities down to ± 10 PPM
- Temperature Ranges as wide as -55°C to $+125^{\circ}\text{C}$

• SPECIFICATIONS

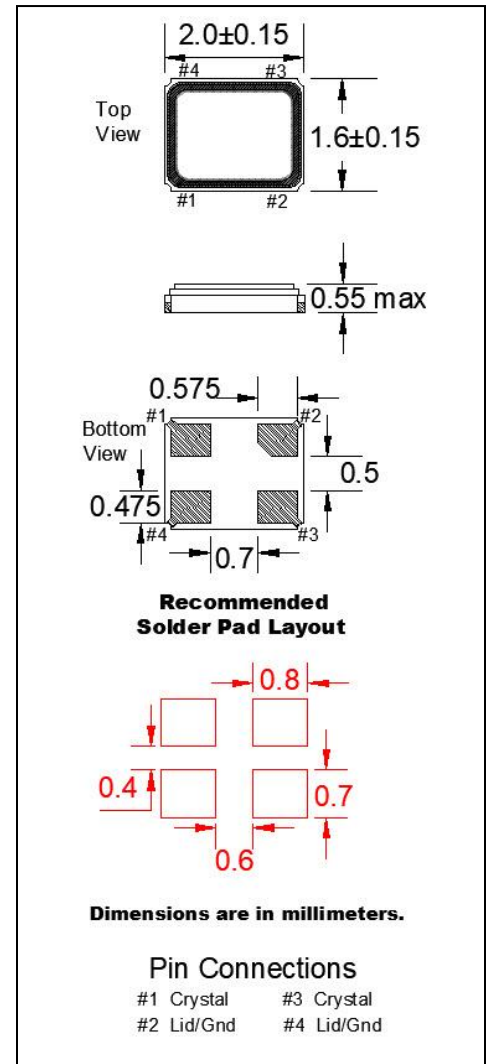
PARAMETERS	MAX (unless otherwise noted)
Frequency Range	16.000 ~ 200.000 MHz
Frequency Tolerance @ 25°C	(See options on page 2)
Frequency Stability, ref @ 25°C	(See options below)
Temperature Range	
Operating (TOPR)	(See options below)
Storage (TSTG)	$-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$
Shunt Capacitance (C_0)	3 pF
Load Capacitance (C_L)	(See options on page 2)
Drive Level	0.1 mW
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 (0.3~1 μm) over Ni (1.27~8.89 μm)
Seal Method	Seam Seal
Lead (Pb) Free	Yes
RoHS Compliant	Yes, no exemptions
REACH Compliant (latest version)	Yes

Frequency Range (MHz)	Operating Mode	Max ESR Ω
16.000 ~ 19.999999	Fundamental	200
20.000 ~ 23.999999	Fundamental	120
24.000 ~ 29.999999	Fundamental	100
30.000 ~ 39.999999	Fundamental	80
40.000 ~ 200.000	Fundamental	60

• Available Operating Temperatures and Stabilities

Operating Temperature	± 10 PPM	± 15 PPM	± 20 PPM	± 25 PPM	± 30 PPM	± 50 PPM	± 100 PPM
0 ~ $+70^{\circ}\text{C}$	O	O	O	O	O	O	N/A
-10 ~ $+60^{\circ}\text{C}$	O	O	O	O	O	O	N/A
-10 ~ $+70^{\circ}\text{C}$	O	O	O	O	O	O	N/A
-20 ~ $+70^{\circ}\text{C}$	O	O	O	O	O	O	N/A
-30 ~ $+85^{\circ}\text{C}$	O	O	O	O	O	O	N/A
-40 ~ $+85^{\circ}\text{C}$	X	O	O	O	O	O	N/A
-40 ~ $+105^{\circ}\text{C}$	X	X	X	X	X	O	O
-40 ~ $+125^{\circ}\text{C}$	X	X	X	X	X	O	O
-55 ~ $+125^{\circ}\text{C}$	X	X	X	X	X	O	O

Key: O=Available, X=Not Available, N/A = Not Applicable



Note: Dimensional drawing is for reference to critical specifications defined by size measurements. Certain non-critical visual attributes, such as side castellations, etc. may vary.

7/23/2020 – Added thickness info to termination metals, adjusted MSL info to include J-STD-033 and N/A. Increased freq range to 200MHz.

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Title / Description: C1BS SERIES STANDARD SPECIFICATIONS

Drawing Number: C1BS-DOC-1

Part Number:

Draftsperson: BEC

Approved: MAJ

Size: A

Cage: 61429

Revision Date: 07/23/2020



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• 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	4.0	3.5	8.0	0.65	-T3 = 3,000 default -T2 = 2,000 -T1 = 1,000	2.0	Ø13.0	21.0	60.0	180.0	9.0	2.0

Available Options & Part Identification for Crystal Model C1BS¹

F C1BS E E E M 32.0

F	C1BS	E	E	E	M	32.0
FOX	Model Number	Tolerance B = ±50 PPM C = ±30 PPM D = ±25 PPM E = ±20 PPM F = ±15 PPM H = ±10 PPM	Stability B = ±50 PPM C = ±30 PPM D = ±25 PPM E = ±20 PPM F = ±15 PPM H = ±10 PPM	Load Capacitance² V = 7 pF D = 8 pF W = 9 pF E = 10 pF G = 12 pF J = 15 pF L = 18 pF M = 20 pF	Operating Temperature C = 0 ~ +70°C D = -10 ~ +60°C E = -10 ~ +70°C F = -20 ~ +70°C K = -30 ~ +85°C M = -40 ~ +85°C P = -40 ~ +105°C I = -40 ~ +125°C T = -55 ~ +125°C	Frequency (MHz)

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

²Listed load capacitances represent the most commonly used.

Other load capacitances are available. Contact Fox Technical Support for assistance.



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Mouser Electronics

Authorized Distributor

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