



# 4.0mm x 2.5mm Ceramic SMD Crystal

# C4BS

(Former FX425B)

## DATASHEET

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

• SPECIFICATIONS	
PARAMETERS	MAX (unless otherwise noted)
Frequency Range	12.000 ~ 50.000MHz
Frequency Tolerance @ 25°C	(See options on page 3)
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 (Co)	5pF
Load Capacitance (CL)	(See options on page 2)
Drive Level	0.1mW
Aging per year	$\pm 5.0$ PPM
Maximum Soldering Temp / Time	$260^{\circ}\text{C} / 10$ Seconds x 2
Moisture Sensitivity Level (MSL)	1
Termination Finish	Au over Ni
Seal Method	Seam
Lead (Pb) Free	Yes
RoHS/REACH Compliant	Yes

Frequency Range	Operating Mode	Max ESR $\Omega$
12.000 ~ 12.999999	Fundamental	120
13.000 ~ 50.000	Fundamental	80

### Available Operating Temperatures and Stabilities

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

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

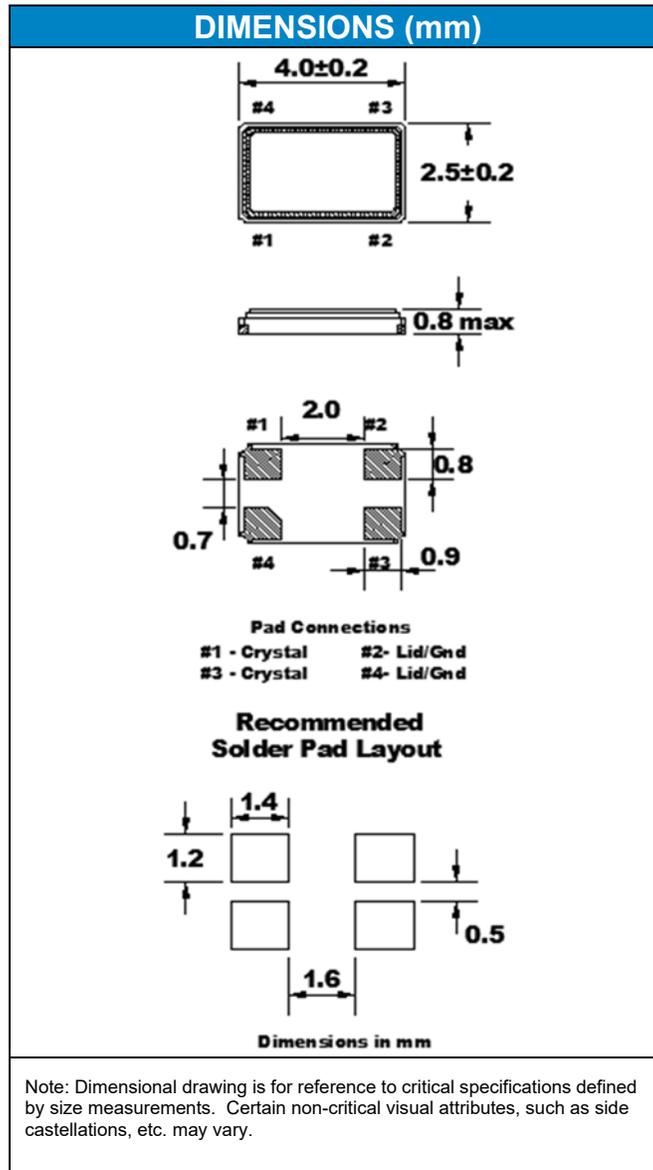


<b>Title / Description:</b> C4BS SERIES STANDARD SPECIFICATIONS		
<b>Drawing Number:</b> C4BS-DOC-1		<b>Size:</b> A
<b>Part Number:</b>		<b>Cage:</b> 61429
<b>Draftsperson:</b> BEC	<b>Approved:</b> MAJ	<b>Revision Date:</b> 10/03/2019



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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
Ø1.5	4.0	4.0	5.5	12.0	1.3	-T1 = 1,000	2.0	Ø13	Ø21	Ø80	Ø180	13.5	2.0

### Available Options & Part Identification for Crystal Model C4BS<sup>1</sup>

#### F C4BS B B M D 12.0

F	C4BS	B	B	M	D	12.0
FOX	Model Number	Tolerance	Stability	Load Capacitance <sup>2</sup>	Operating Temperature	Frequency (MHz)
		<b>B = ±50 PPM</b> C = ±30 PPM D = ±25 PPM E = ±20 PPM F = ±15 PPM H = ±10 PPM	A = ±100PPM <b>B = ±50 PPM</b> C = ±30 PPM D = ±25 PPM E = ±20 PPM F = ±15 PPM H = ±10 PPM	B = 10 pF G = 12 pF U = 13 pF K = 16 pF L = 18 pF <b>M = 20 pF</b>	C = 0 ~ +70°C <b>D = -10 ~ +60°C</b> E = -10 ~ +70°C F = -20 ~ +70°C K = -30 ~ +85°C M = -40 ~ +85°C I = -40 ~ +105°C P = -40 ~ +125°C T = -55 ~ +125°C	

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

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



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<b>Draftsperson:</b> BEC	<b>Approved:</b> MAJ	<b>Revision Date:</b> 10/03/2019