



# 6mm x 3.5mm Ceramic SMD Crystal

**C6BS**  
(Former FMB)  
**DATASHEET**

- Tolerances down to 10 PPM
- Stabilities down to 5 PPM
- Temperature Ranges as wide as -55°C to +125°C

C6BS STANDARD SPECIFICATIONS	
PARAMETERS	MAX (unless otherwise noted)
Frequency Range	7.3728 ~ 133.000 MHz
Frequency Tolerance @ 25°C	(See options on page 2)
Frequency Stability, ref @ 25°C	(See options below)
Temperature Range Operating (T <sub>OPR</sub> ) Storage (T <sub>STG</sub> )	(See options below) -55°C ~ +125°C
Shunt Capacitance (C <sub>0</sub> )	5.0 pF
Load Capacitance (C <sub>L</sub> )	(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)	1
Termination Finish	Au over Ni
Seal Method	Seam
Lead (Pb) Free	Yes
RoHS/REACH Compliant	Yes

Frequency Range (MHz)	Operating Mode	Max ESR (Ω)
7.3728 ~ 7.999999	Fundamental	100
8.000 ~ 9.999999	Fundamental	70
10.000 ~ 11.999999	Fundamental	50
12.000 ~ 19.999999	Fundamental	30
20.000 ~ 24.999999	Fundamental	25
25.000 ~ 200.000	Fundamental	20
40.000 ~ 51.999999	3 <sup>RD</sup> OT	100
52.000 ~ 71.999999	3 <sup>RD</sup> OT	80
72.000 ~ 133.000	3 <sup>RD</sup> OT	70

Available Operating Temperatures and Stabilities*								
Operating Temperature	±5PPM	±10PPM	±15PPM	±20PPM	±25PPM	±30PPM	±50PPM	±100PPM
0 ~ 70°C	X	O	O	O	O	O	O	N/A
-10 ~ +60°C	O	O	O	O	O	O	O	N/A
-10 ~ +70°C	X	O	O	O	O	O	O	N/A
-20 ~ +70°C	X	O	O	O	O	O	O	N/A
-30 ~ +85°C	X	X	O	O	O	O	O	N/A
-40 ~ +85°C	X	X	O	O	O	O	O	N/A
-40 ~ +105°C	X	X	X	X	X	X	O	O
-40 ~ +125°C	X	X	X	X	X	X	O	O
-55 ~ +125°C	X	X	X	X	X	X	O	O

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

\*Does not imply a stocked part.

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	<b>Drawing Number:</b> C6BS-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> 06/10/2019



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**DIMENSIONS (mm)**

**Pad Connections**

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

**Recommended Solder Pad Layout**

Dimensions in mm

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.



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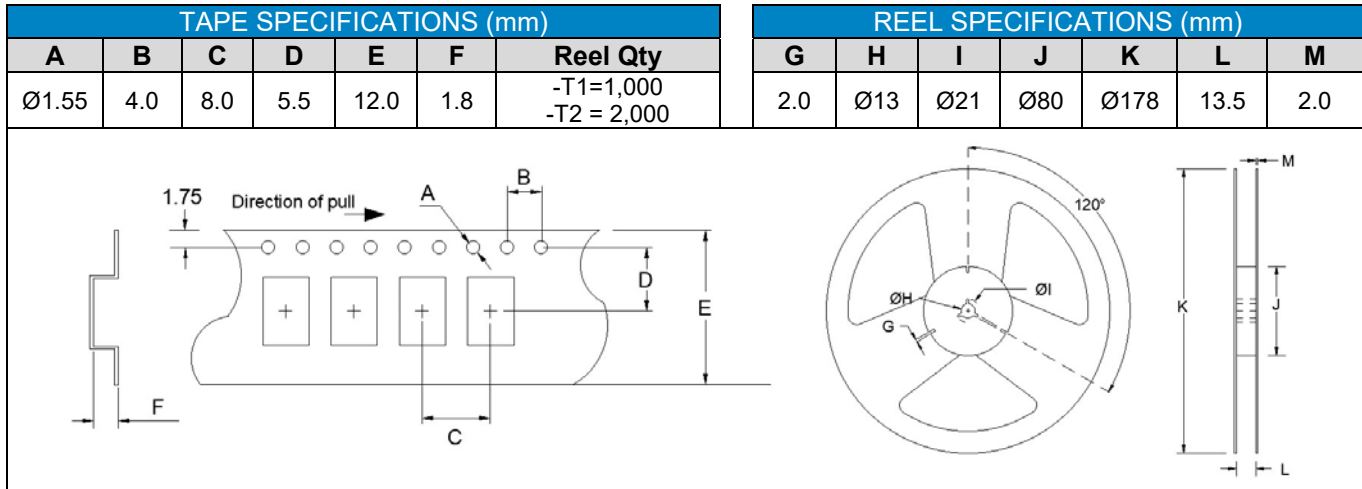


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AVAILABLE OPTIONS & PART IDENTIFICATION <sup>1</sup>						
Example: <u>F</u> <u>C6BS</u> <u>C</u> <u>C</u> <u>E</u> <u>M</u> <u>25.0</u>						
F	C6BS	C	C	E	M	40.0
Fox	Model Number	Tolerance	Stability	Load Capacitance <sup>2</sup>	Operating Temperature	Frequency (MHz)
		B = ±50ppm <b>C = ±30ppm</b> D = ±25ppm E = ±20ppm F = ±15ppm H = ±10ppm	B = ±50ppm <b>C = ±30ppm</b> D = ±25ppm E = ±20ppm F = ±15ppm H = ±10ppm L = ±5ppm	<b>E=10pF</b> G=12pF J=15pF K=16pF L=18pF M=20pF	C = 0 to +70°C D = -10 to +60°C E = -10 to +70°C F = -20 to +70°C K = -30 to +85°C <b>M = -40 to +85°C</b> P = -40 to +105°C I = -40 to +125°C T = -55 to +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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