



# 7.5x5mm Ceramic SMD Crystal

# C7BS

(former FD)

## DATASHEET

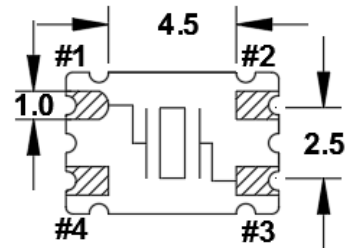
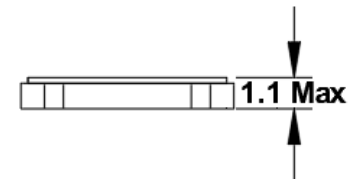
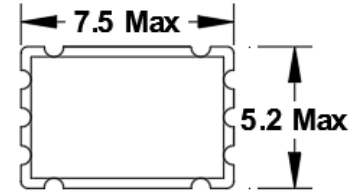
Tolerances down to  $\pm 10$  PPM

Stabilities down to  $\pm 5$  PPM

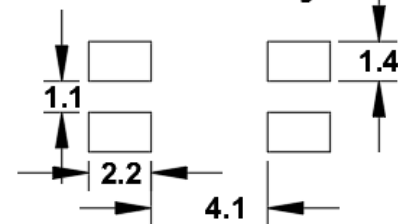
Operating Temperature Range to  $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$

Fundamental (Inverted Mesa) 50-218 MHz

• SPECIFICATIONS	
PARAMETERS	MAX (unless otherwise noted)
Frequency Range ( $F_0$ )	6.000 ~ 218.000 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 ( $T_{STG}$ )	$-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$
Shunt Capacitance ( $C_0$ )	5 pF
Load Capacitance ( $C_L$ )	(See options on page 2)
Drive Level	
6.000 ~ 160.000 MHz (Fund to 50MHz, 3rd OT, 5th OT)	0.5 mW
50.000 ~ 218 MHz (Fund Inverted Mesa)	0.1 mW
Aging per year	$\pm 5$ PPM
Maximum Soldering Temp / Time	$260^{\circ}\text{C} / 10$ Seconds
Moisture Sensitivity Level (MSL)	1
Termination Finish	Au
Seal Method	Seam Seal
Lead (Pb) Free	Yes
RoHS Compliant	Yes



### Recommended Solder Pad Layout



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.

Frequency Range (MHz)	Operating Mode	Max ESR $\Omega$
6.000 ~ 10.000	Fundamental	110
10.000001 ~ 16.000	Fundamental	60
16.000001 ~ 50.000	Fundamental	40
50.000001 ~ 218.000	Fundamental (Inv. Mesa)	30
28.000 ~ 176.000	3 <sup>rd</sup> OT	60
84.000 ~ 200.000	5 <sup>th</sup> OT	80

### •Standard Operating Temperatures and Stabilities

Operating Temperature	$\pm 5$ PPM	$\pm 10$ PPM	$\pm 15$ PPM	$\pm 20$ PPM	$\pm 25$ PPM	$\pm 30$ PPM	$\pm 50$ PPM
$-10 \sim +60^{\circ}\text{C}$	O	O	O	O	O	O	O
$-20 \sim +70^{\circ}\text{C}$	$\Delta$	O	O	O	O	O	O
$-40 \sim +85^{\circ}\text{C}^{**}$	X	X	O	O	O	O	O

Key: O=Available, X=Not Available,  $\Delta$ =Consult Fox Technical Support



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Title / Description: C7BS SERIES STANDARD SPECIFICATIONS	
Drawing Number: 100876	Size: A
Part Number:	Cage: 61429
Draftsperson: CMR	Approved: SM
	Revision Date: 01/12/2017



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## DATASHEET

• TAPE SPECIFICATIONS (millimeters)								• REEL SPECIFICATIONS (millimeters)							
MODEL	A	B	C	D	E	F	STD Reel QTY	MODEL	G	H	I	J	K	L	M
C7BS	∅1.5	4.0	8.0	7.5	16.	1.7	1,000	C7BS	2.0	∅13	∅21	∅80	∅250	17.5	2.0

### Available Options & Part Identification for Automotive Crystal Model C7BS

#### F C7BS B B M D 25.0

F	C7BS	B	B	M	D	25.0
<u>FOX</u>	<u>Model Number</u>	<u>Tolerance</u> B = 50 PPM C = 30 PPM D = 25 PPM E = 20 PPM F = 15 PPM H = 10 PPM	<u>Stability</u> B = 50 PPM C = 30 PPM D = 25 PPM E = 20 PPM F = 15 PPM H = 10 PPM L = 5 PPM	<u>Load Capacitance</u> A = Series E = 10 pF G = 12 pF J = 15 pF K = 16 pF L = 18 pF M = 20 pF N = 20 pF	<u>Operating Temperature</u> D = -10 ~ +60°C F = -20 ~ +70°C M = -40 ~ +85°C	<u>Frequency (MHz)</u>

\*Other tolerances, stabilities, & operating temperatures available. Consult Fox Customer Service for specific requirements.



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