

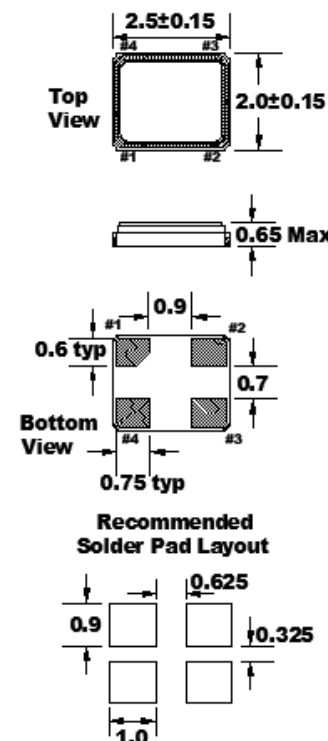
### Features

- Tolerances down to  $\pm 10$  PPM
- Stabilities down to  $\pm 10$  PPM

STANDARD SPECIFICATIONS	
PARAMETERS	MAX (Unless otherwise noted)
Frequency Range	12.000 ~ 80.000 MHz
Frequency Tolerance @ 25°C	(See options below)
Frequency Stability, ref 25°C	(See options below)
Temperature Range	
Operating ( $T_{OPR}$ )	(See options below)
Storage ( $T_{STG}$ )	-55°C ~ +125°C
Shunt Capacitance ( $C_o$ )	3 pF
Load Capacitance ( $C_L$ )	(See options below)
Drive Level	100 $\mu$ W
Aging per year (@ 25°C)	$\pm 5$ PPM
Maximum Soldering Temp / Time	260°C / 10 Seconds
Moisture Sensitivity Level (MSL) per J-STD-033	1
Termination Finish	Au over Ni
Seal Method	Seam
Lead (Pb) Free	Yes
RoHS Compliant	Yes

Frequency Range (MHz)	Operating Mode	Max ESR $\Omega$
12.000 ~ 13.999999	Fundamental	200
14.000 ~ 15.999999	Fundamental	150
16.000 ~ 19.999999	Fundamental	90
20.000 ~ 23.999999	Fundamental	70
24.000 ~ 24.999999	Fundamental	60
25.000 ~ 44.999999	Fundamental	50
45.000 ~ 80.000	Fundamental	40

**DIMENSIONS / MECHANICAL SPECIFICATIONS**



*Dimensions in millimeters.*

**Pin Connections**  
 #1 Crystal    #3 Crystal  
 #2 Lid/Gnd   #4 Lid/Gnd

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.

### AVAILABLE OPERATING TEMPERATURES AND STABILITIES\*

Operating Temperature	$\pm 10$ PPM	$\pm 15$ PPM	$\pm 20$ PPM	$\pm 25$ PPM	$\pm 30$ PPM	$\pm 50$ PPM	$\pm 100$ PPM
0°C ~ +70°C	O	O	O	O	O	O	N/A
-10°C ~ +60°C	O	O	O	O	O	O	N/A
-10°C ~ +70°C	O	O	O	O	O	O	N/A
-20°C ~ +70°C	O	O	O	O	O	O	N/A
-30°C ~ +85°C	X	O	O	O	O	O	N/A
-40°C ~ +85°C	X	O	O	O	O	O	N/A
-40°C ~ +105°C	X	X	X	X	X	O	O
-40°C ~ +125°C	X	X	X	X	X	O	O
-55°C ~ +125°C	X	X	X	X	X	O	O

Key: O = Available, X = Not Available, N/A = Not applicable \*Does not imply a stocked part.

# FC2BS

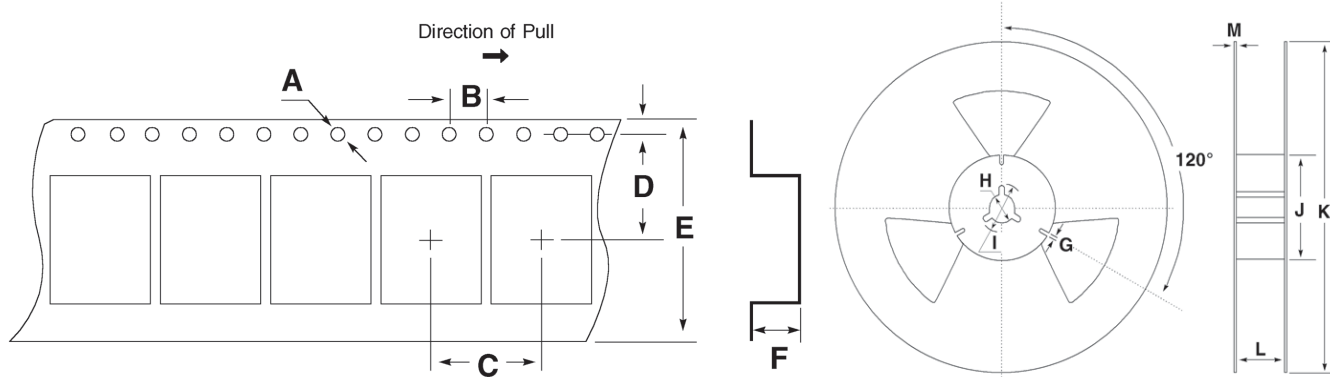
(Former FX252BS)

2.5mm x 2.0mm

SMD Crystal



TAPE SPECIFICATIONS (mm)							REEL SPECIFICATIONS (mm)						
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 -T2 = 2,000 -T1 = 1,000	2.0	ø13	ø21	ø60	ø180	9.0	2.0



Available Options & Part Identification for SMD Crystal C2BS <sup>1</sup>							
Sample PN: <u>FC2BSCCDM24.0-T3</u>							
F	C2BS	C	C	D	M	24.0	-T3
<u>Fox</u>	<u>Model Number</u>	<u>Tolerance</u> B = ±50 PPM <b>C = ±30 PPM</b> D = ±25 PPM E = ±20 PPM F = ±15 PPM H = ±10 PPM	<u>Stability</u> A = ±100 PPM B = ±50 PPM <b>C = ±30 PPM</b> D = ±25 PPM E = ±20 PPM F = ±15 PPM H = ±10 PPM	<u>Load Capacitance<sup>2</sup></u> <b>D = 8pF</b> W = 9pF E = 10pF G = 12pF L = 18pF M = 20pF	<u>Operating Temperature</u> 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	<u>Frequency (MHz)</u>	<u>Values Added Options</u> Blank = Bulk T1 = 1,000 pcs T2 = 2,000 pcs <b>T3 = 3,000 pcs</b>

<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 us for assistance

Reliability Test Conditions
Please contact Abracon Quality Assurance department