

Features

- Tolerances down to ± 10 ppm
- Stabilities down to ± 5 ppm
- Temperature Ranges as wide as -55°C to $+125^{\circ}\text{C}$

STANDARD SPECIFICATIONS	
PARAMETERS	MAX (Unless otherwise noted)
Frequency Range	8.000 ~ 200.000 MHz
Frequency Tolerance @ 25°C	(See options below)
Frequency Stability, ref 25°C	
Over Operating Temp Range	(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)	5.0 pF
Load Capacitance (C_L)	(See options below)
Drive Level	100 μW
Aging per year (@ 25°C)	± 5 PPM
Maximum Soldering Temp / Time	260°C / 10 Seconds x 2
Moisture Sensitivity Level (MSL) per J-STD-033	1
Termination Finish	Au over Ni
Seal Method	Seam
Lead (Pb) Free	Yes
RoHS Compliant	Yes

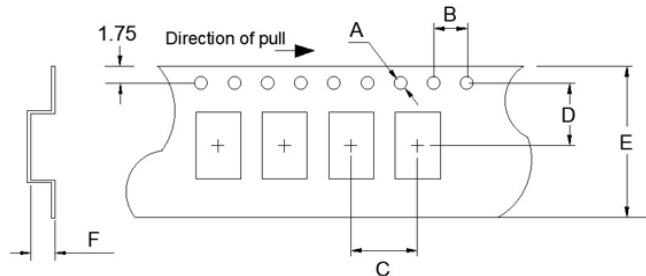
Frequency Range (MHz)	Operating Mode	Max ESR Ω
8.000 ~ 9.749999	Fundamental	70
9.750 ~ 9.999999	Fundamental	60
10.000 ~ 11.999999	Fundamental	45
12.000 ~ 15.999999	Fundamental	35
16.000 ~ 19.999999	Fundamental	30
20.000 ~ 49.999999	Fundamental	25
50.000 ~ 200.000	Fundamental	20
40.000 ~ 79.999999	3rd OT	100
80.000 ~ 99.999999	3rd OT	80
100.000 ~ 133.000	3rd OT	60

DIMENSIONS / MECHANICAL SPECIFICATIONS
<p>The drawing includes a top view with dimensions 5±0.2 mm width and 3.2±0.2 mm height. A side view shows a maximum thickness of 1.0 mm. A detailed view of the solder pads shows a 2.6 mm width between pads, 1.1 mm pad width, and 0.8 mm pad height. Pin locations are labeled #1, #2, #3, and #4.</p>
<p>Recommended Solder Pad Layout</p> <p>The diagram shows four rectangular solder pads. The horizontal distance between the centers of the two inner pads is 2.0 mm. The width of each pad is 1.8 mm. The vertical distance between the centers of the two inner pads is 1.1 mm. The vertical distance between the center of an inner pad and the center of an outer pad is 1.2 mm.</p>
<p>Dimensions in mm</p> <p>Pin Connections</p> <p>#1 - Crystal #2 - Lid/Gnd #3 - Crystal #4 - Lid/Gnd</p>
<p>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.</p>

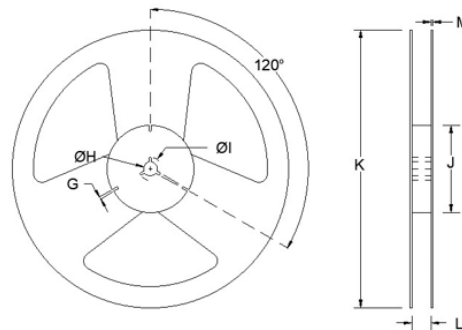
AVAILABLE OPERATING TEMPERATURES AND STABILITIES*								
Operating Temperature	±5 PPM	±10 PPM	±15 PPM	±20 PPM	±25 PPM	±30 PPM	±50 PPM	±100 PPM
0 ~ 70°C	X	O	O	O	O	O	O	N/A
-10 ~+60°C	O	O	O	O	O	O	O	N/A
-10 ~+70°C	X	O	O	O	O	O	O	N/A
-20 ~+70°C	X	O	O	O	O	O	O	N/A
-30 ~+85°C	X	X	O	O	O	O	O	N/A
-40 ~+85°C	X	X	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.

TAPE SPECIFICATIONS (mm)						
A	B	C	D	E	F	REEL QTY
ø1.55	4.0	8.0	5.5	12.0	1.4	-T1 = 1,000



REEL SPECIFICATIONS (mm)						
G	H	I	J	K	L	M
2.0	ø13	ø21	ø80	ø178	13.5	2.0





Available Options & Part Identification for Crystal Model C5BS¹

Sample PN: FC5BSCCEM25.0-T1

F	C5BS	C	C	E	M	25.0	-T1
<u>Fox</u>	<u>Model Number</u>	<u>Tolerance</u> B = ±50ppm C = ±30ppm D = ±25ppm E = ±20ppm F = ±15ppm H = ±10ppm	<u>Stability</u> A = ±100 ppm B = ±50 ppm C = ±30 ppm D = ±25 ppm E = ±20 ppm F = ±15 ppm H = ±10 ppm L = ±5 ppm	<u>Load Capacitance²</u> E = 10pF G = 12pF J = 15pF K = 16pF 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 M = -40 to +85°C 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

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

2 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

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