

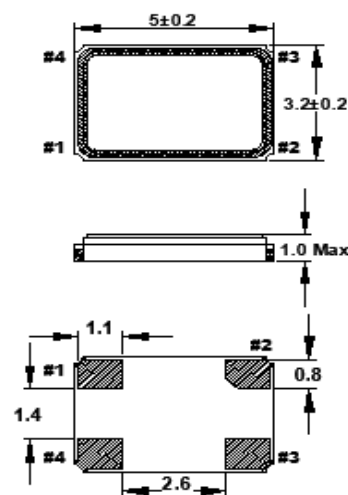
Features

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

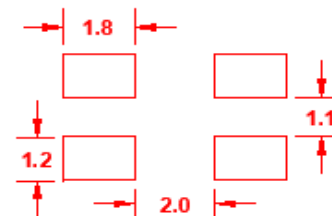
STANDARD SPECIFICATIONS	
PARAMETERS	MAX (Unless otherwise noted)
Frequency Range	8.000 ~ 200.000 MHz
Frequency Tolerance @ 25°C	(See options below)
Frequency Stability, ref 25°C Over Operating Temp Range	(See options below)
Temperature Range	
Operating (T_{OPR})	(See options below)
Storage (T_{STG})	$-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$
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



Recommended Solder Pad Layout



Dimensions in mm

Pin Connections

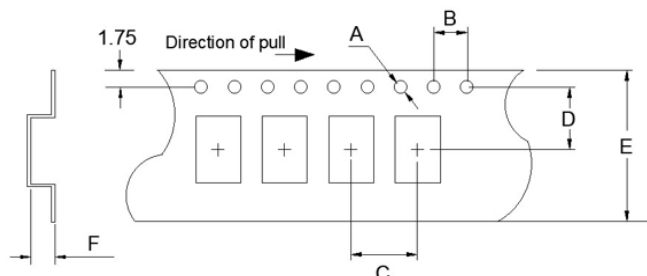
#1 - Crystal #2 - Lid/Gnd
#3 - Crystal #4 - Lid/Gnd

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.

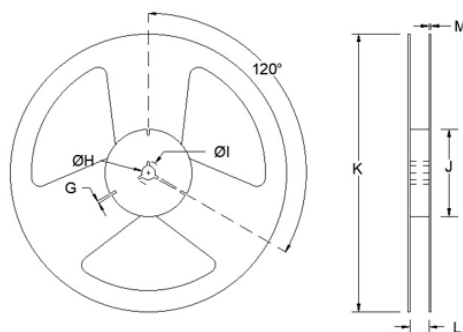
AVAILABLE OPERATING TEMPERATURES AND STABILITIES*								
Operating Temperature	±5 PPM	±10 PPM	±15 PPM	±20 PPM	±25 PPM	±30 PPM	±50 PPM	±100 PPM
0 ~ 70°C	X	O	O	O	O	O	O	N/A
-10 ~+60°C	O	O	O	O	O	O	O	N/A
-10 ~+70°C	X	O	O	O	O	O	O	N/A
-20 ~+70°C	X	O	O	O	O	O	O	N/A
-30 ~+85°C	X	X	O	O	O	O	O	N/A
-40 ~+85°C	X	X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

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[FC5BSCCEM19.6608-T1](#) [FC5BSHFEM25.0-T1](#)