



**THE DATASHEET OF
FC5BSCBJF12.0-1-T1**



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 |

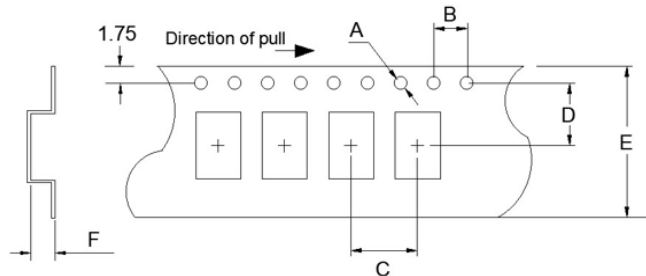
| Frequency Range (MHz) | Operating Mode | Max ESR Ω |
|-----------------------|----------------|------------------|
| 8.000 ~ 9.749999 | Fundamental | 70 |
| 9.750 ~ 9.999999 | Fundamental | 60 |
| 10.000 ~ 11.999999 | Fundamental | 45 |
| 12.000 ~ 15.999999 | Fundamental | 35 |
| 16.000 ~ 19.999999 | 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>Recommended Solder Pad Layout</p> <p>Dimensions in mm</p> <p>Pin Connections #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> |

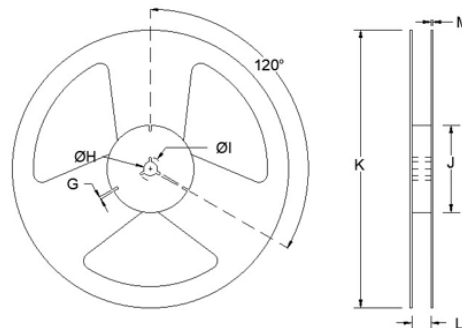
| AVAILABLE OPERATING TEMPERATURES AND STABILITIES* | | | | | | | | |
|---|--------|---------|---------|---------|---------|---------|---------|----------|
| Operating Temperature | ±5 PPM | ±10 PPM | ±15 PPM | ±20 PPM | ±25 PPM | ±30 PPM | ±50 PPM | ±100 PPM |
| 0 ~ 70°C | X | O | O | O | O | O | O | 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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