



**THE DATASHEET OF
FC5BAEEMM8.0-T1**



Features

- AEC Q200 Qualified
- IATF-16949 QMS
- Tolerances down to ± 10 PPM
- Stabilities down to ± 20 PPM

| STANDARD SPECIFICATIONS | |
|--|--|
| PARAMETERS | MAX (Unless otherwise noted) |
| Frequency Range | 8.000 ~ 133.000 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 ~ +150°C |
| Shunt Capacitance (C_o) | 7 pF |
| Load Capacitance (C_L) | (See options below) |
| Drive Level | 100 μ W |
| 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 | N/A |
| Termination Finish | Au (0.3~1 μ m) over Ni (1.27~8.89 μ m) |
| Seal Method | Seam |
| Lead (Pb) Free | Yes |
| RoHS Compliant | Yes, no exemptions |
| REACH Compliant (latest version) | 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 ~ 54.000 | Fundamental | 20 |
| 40.000 ~ 79.999999 | 3 RD OT | 100 |
| 80.000 ~ 99.999999 | 3 RD OT | 80 |
| 100.000 ~ 133.000 | 3 RD OT | 60 |

| DIMENSIONS / MECHANICAL SPECIFICATIONS | |
|--|--|
| | |
| | |
| | |
| <p style="text-align: center;">Recommended Solder Pad Layout</p> | |
| <p style="text-align: center;">Dimensions in mm</p> | |
| <p style="text-align: center;">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.</p> | |

| AVAILABLE OPERATING TEMPERATURES AND STABILITIES | | | | | |
|--|--------------|--------------|--------------|--------------|---------------|
| Operating Temperature | ± 20 PPM | ± 25 PPM | ± 30 PPM | ± 50 PPM | ± 100 PPM |
| -40°C ~ +85°C | O | O | O | O | O |
| -40°C ~ +105°C | X | X | O | O | O |
| -40°C ~ +125°C | X | X | X | O | O |
| -55°C ~ +125°C | X | X | X | O | O |
| Key: O = Available, X = Not Available | | | | | |

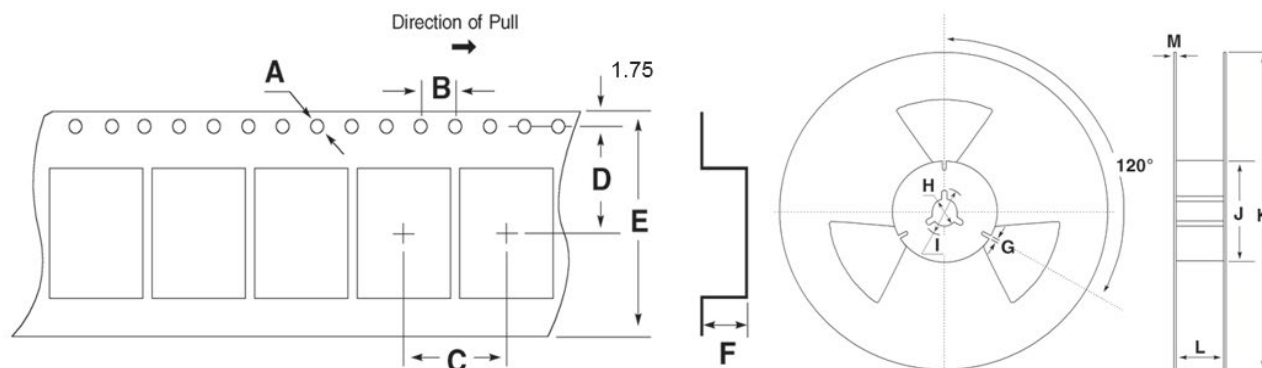
FC5BA

(Former FXA5032B)

5mm x 3.2mm
Auto Grade 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 | 8.0 | 5.5 | 12.0 | 1.4 | -T1 = 1,000 | 2.0 | ø13 | ø21 | ø62 | ø180 | 13.5 | 2.0 |



Available Options & Part Identification for Automotive Crystal Model C5BA¹

Sample PN: FC5BABCVI40.0-T1

| F | C5BA | B | C | V | I | 40.0 | -T1 |
|------------|---------------------|--|---|---|--|------------------------|---|
| Fox | Model Number | Tolerance B = ±50 PPM C = ±30 PPM D = ±25 PPM E = ±20 PPM F = ±15 PPM H = ±10 PPM | Stability A = ±100 PPM B = ±50 PPM C = ±30 PPM D = ±25 PPM E = ±20 PPM | Load Capacitance² V = 7pF D = 8pF E = 10pF G = 12pF J = 15pF K = 16pF L = 18pF M = 20pF | Operating Temperature M = -40 to +85°C P = -40 to +105°C I = -40 to +125°C T = -55 to +125°C | Frequency (MHz) | Values Added Options 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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