

The miniature ECX-2236B is a compact SMD Crystal that offers low aging of ± 1 ppm first year. The industry standard 2.5 x 2.0 x 0.55 mm ceramic package is ideal for wireless applications.

[Request a Sample](#)



- Low Profile
- 2.5 x 2.0 mm Footprint
- Extended Temp. Range
- IOT/Wearable applications

DIMENSIONS (mm)

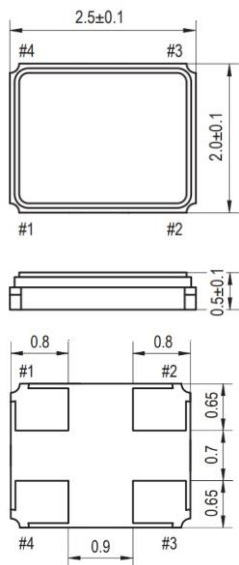


Figure 1) Top, Side, and Bottom

Crystal is symmetrical, pad 1 & 3 are interchangeable. Chamfer on the bottom pad has no electrical significance.

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

| PARAMETERS | CONDITIONS | ECX-2236B | | | UNITS |
|------------------------|--------------------------------|-----------|-----|----------|---------|
| | | MIN | TYP | MAX | |
| Frequency | | 12.000 | | 60.000 | MHz |
| Mode of Oscillation | Fundamental | | | | |
| Frequency Tolerance* | @ +25°C (C option) | | | ± 10 | ppm |
| Frequency Stability* | -30 ~ +85°C (KY option) | | | ± 10 | ppm |
| Shunt Capacitance | Co | | | 3 | pF |
| Load Capacitance | Specify in P/N | | 8 | | pF |
| Drive Level | DL | | | 100 | μ W |
| Operating Temperature* | T _{opr} (Y option) | -30 | | +85 | °C |
| Storage Temperature | T _{stg} | -55 | | +125 | °C |
| Aging (First Year) | @ +25°C ± 3 °C | | | ± 1 | ppm |

| Frequency (MHz) | ESR Ω Max. |
|-----------------|-------------------|
| 12.000 ~ 15.999 | 130 |
| 16.000 ~ 19.999 | 70 |
| 20.000 ~ 29.999 | 50 |
| 30.000 ~ 39.999 | 40 |
| 40.000 ~ 60.000 | 30 |

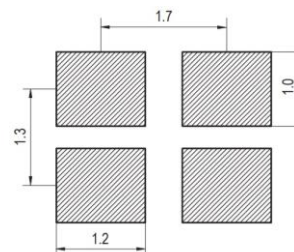
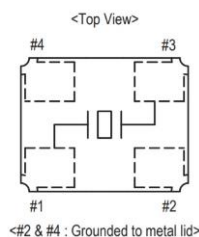


Figure 2) Suggested land

| Pad Connections | |
|-----------------|--------|
| 1 | In/Out |
| 2 | Gnd |
| 3 | Out/In |
| 4 | Gnd |

PART NUMBERING GUIDE: Example ECS-240-8-36B-CKY-TR

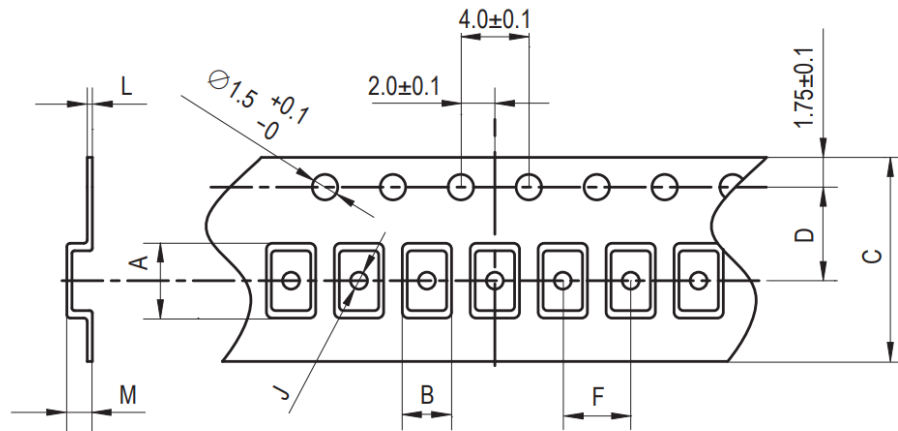
| ECS - FREQUENCY ABBREVIATION | LOAD CAPACITANCE | PACKAGE | AVAILABLE OPTIONS | | | PACKAGING | |
|------------------------------|-----------------------------------|----------------------|---------------------|--|---|--|------------------------------|
| | | | Tolerance Range | Stability | Temp | | |
| ECS | 240 = 24.000 MHz See P/N Guide | 8 = 8 pF 10=10 pF | -36B = ECX-2236B | Blank = Std A = ± 25 ppm J = ± 20 ppm R = ± 15 ppm C = ± 10 ppm 7 = ± 7 ppm | Blank= Std D = ± 100 ppm E = ± 50 ppm G = ± 30 ppm H = ± 25 ppm T = ± 20 ppm † W = ± 15 ppm † K = ± 10 ppm † | Blank= Std L = -10 ~ +70°C M = -20 ~ +70°C Y = -30 ~ +85°C N = -40 ~ +85°C P = -40 ~ +105°C S = -40 ~ +125°C U = -55 ~ +125°C | TR =1K TR3=3K Qty/Reel |

* Specify available options in P/N.

† Contact ECS for availability over extended temp range.

Rev.2022

POCKET TAPE DIMENSIONS (mm)



| A | B | C | D | F | J | L | M | Reel Dia. | Qty/Reel |
|-----|-----|-----|-----|-----|------|------|------|-----------|----------------------|
| 2.8 | 2.3 | 8.0 | 3.5 | 4.0 | 1.05 | 0.25 | 0.75 | 180 | 3000pcs (1000pcs) |

| SOLDER PROFILE |
|---|
| Peak solder Temp +260°C Max 10 sec Max. |
| 2 Cycles Max. |
| MSL 1, Lead Finish Au |

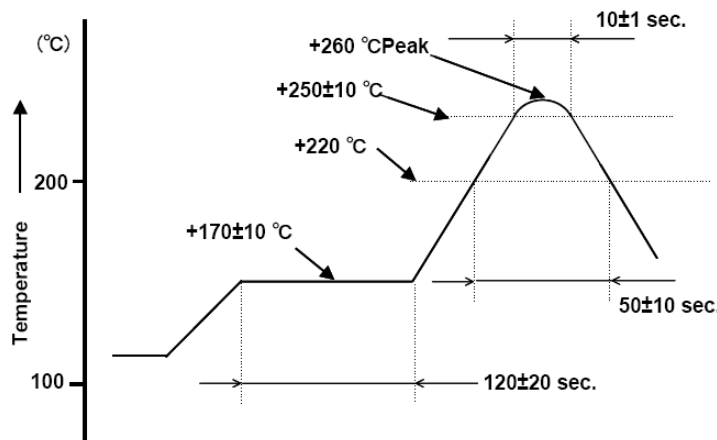


Figure 1) Suggested Reflow Profile

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