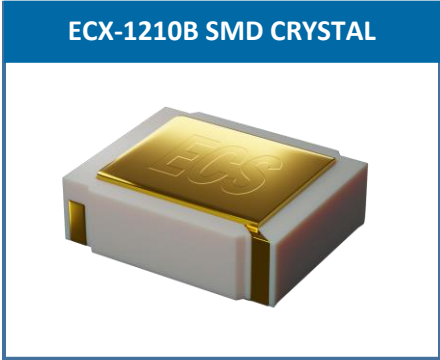


The ultra-miniature 4-Pad ECX-1210B is a very compact SMD Tuning Fork Crystal. The 1.2 x 1.0 x 0.35 mm ceramic package is the smallest in it's class. This is very popular with small wearables and medical devices.

[Request a Sample](#)

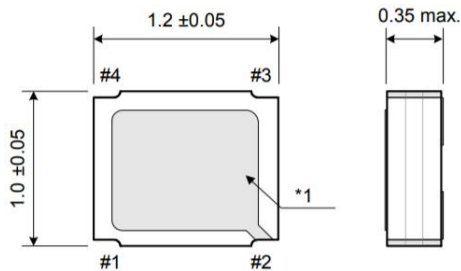


OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

| PARAMETERS | CONDITIONS | ECX-1210B | | | UNITS |
|------------------------------|------------------|-----------|--------|-------|---------------------|
| | | MIN | TYP | MAX | |
| Frequency | | | 32.768 | | KHz |
| Frequency Tolerance* | @ +25°C | | | ± 20 | ppm |
| Load Capacitance | Specify in P/N | | 12.5 | | pF |
| Drive Level | DL | | | 1.0 | μW |
| Equivalent Series Resistance | R1 | | | 80K | Ω |
| Turnover Temperature | | +20 | +25 | +30 | °C |
| Temperature Coefficient | | -0.02 | -0.03 | -0.04 | ppm/°C ² |
| Shunt Capacitance | Co | | 1.5 | | pF |
| Aging (First Year) | @ +25°C ±3°C | | | ±3 | ppm |
| Operating Temperature* | T _{opr} | -40 | | +105 | °C |
| Storage Temperature | T _{stg} | -40 | | +105 | °C |

- Low Power RTC Applications such as STM32 [AN2867](#)
- 1.2 x 1.0 mm Footprint
- Extended Temp. Range
- RoHS Compliant
- Applications: Smartphones, wireless modules, wearable devices

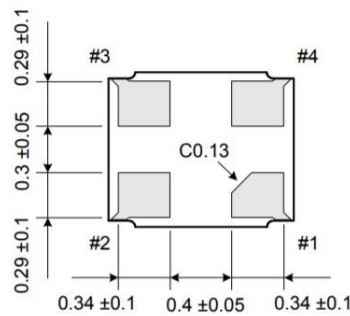
DIMENSIONS (mm)



Pin #2 is connected to the gold plate(*1)

Figure 1) Top, Side, and Bottom views

* Specify options in part number



PAD CONNECTIONS

| | |
|----|------------|
| #1 | In/Out |
| #2 | Ground |
| #3 | Out/In |
| #4 | No Connect |

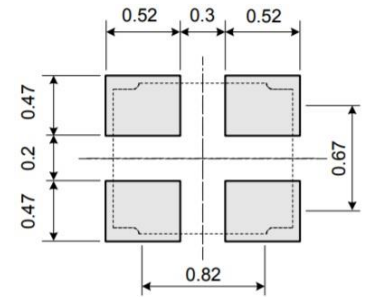


Figure 2) Suggested Land Pattern

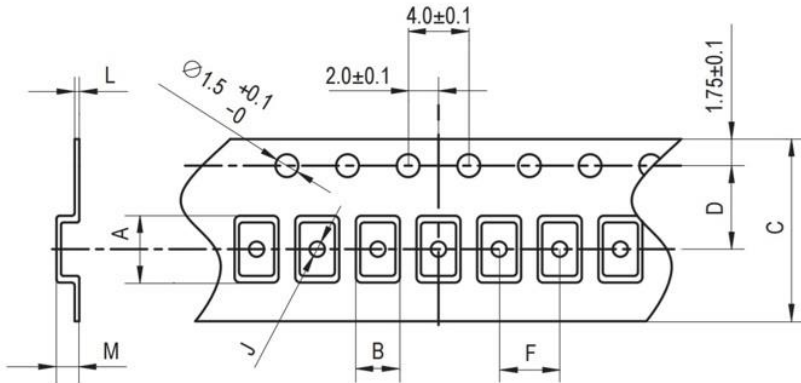
PART NUMBERING GUIDE: Example ECS-.327-12.5-1210B-CN-TR

| ECS - FREQUENCY ABBREVIATION | LOAD CAPACITANCE | PACKAGE | CUSTOM OPTIONS Tolerance | PACKAGING Operating Temp |
|------------------------------|--|--------------------|-----------------------------------|--|
| ECS | 12.5 = 12.5 pF 9 = 9 pF 7 = 7 pF 6 = 6 pF | -1210B = ECX-1210B | Blank = ±20 ppm * C = ± 10 ppm | M = -20 ~ +70°C N = -40 ~ +85°C P = -40 ~ +105°C |
| .327 = 32.768 KHz | | | | TR = Tape & Reel 5K/Reel |

* Contact ECS for availability

Rev.2020

POCKET TAPE DIMENSIONS (mm)



| A | B | C | D | F | J | L | M | Reel Dia. | Qty/Reel |
|------|------|-----|-----|-----|-----|-----|------|-----------|----------|
| 1.42 | 1.17 | 8.0 | 3.5 | 4.0 | 0.5 | 0.2 | 0.65 | 180 | 5000pcs |

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



Figure 1) Suggested Reflow Profile

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

ECS:

[ECS-.327-12.5-1210B-N-TR](#)