

The sub miniature ECX-1247B is a very compact SMD Crystal. The 1.6 x 1.2 x 0.3 mm ceramic package is ideal for RFID, NFC, WiFi, RF, Video, and Audio applications.

[Request a Sample](#)



- Low 1st Year Aging
- 1.6 x 1.2 mm Footprint
- Extended Temp. Range Option
- RoHS Compliant

DIMENSIONS (mm)

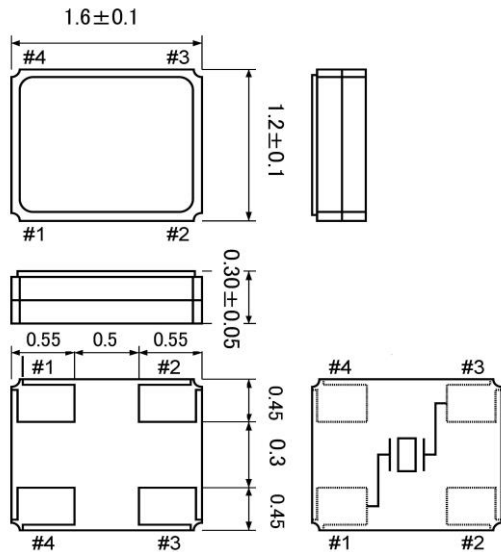


Figure 1) Top, Side, and Bottom

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

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

| PARAMETERS | CONDITIONS | ECX-1247B | | | UNITS |
|------------------------|------------------|-----------|-----|--------|-------|
| | | MIN | TYP | MAX | |
| Frequency | | 24.000 | | 80.000 | MHz |
| Mode of Oscillation | Fundamental | | | | |
| Frequency Tolerance* | @ +25°C | | | ± 7 | ppm |
| Frequency Stability* | -20 ~ +70°C | | | ± 10 | ppm |
| Shunt Capacitance | Co | | | 5 | pF |
| Load Capacitance | Specify in P/N | | 8 | | pF |
| Drive Level | DL | | | 100 | μW |
| Operating Temperature* | T _{opr} | -40 | | +85 | °C |
| Storage Temperature | T _{stg} | -40 | | +125 | °C |
| Aging (First Year) | @ +25°C ±3°C | | | ±1 | ppm |

| Frequency (MHz) | ESR Ω Max. |
|-----------------|------------|
| 24.000 ~ 29.999 | 100 |
| 30.000 ~ 48.999 | 80 |
| 49.000 ~ 80.000 | 50 |

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

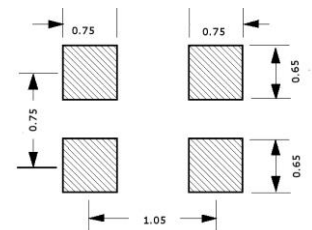


Figure 2) Suggested land

PART NUMBERING GUIDE: Example ECS-320-8-47B-7KM-TR

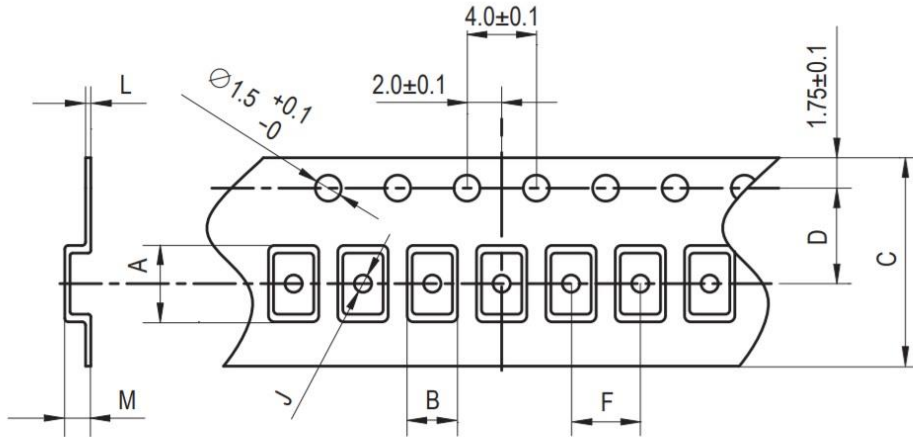
| ECS - FREQUENCY ABBREVIATION | LOAD CAPACITANCE | PACKAGE | AVAILABLE OPTIONS | | PACKAGING | | |
|------------------------------|-----------------------------------|----------------------|-------------------|--|--|---|-----------------------------------|
| | | | Tolerance | Stability | | | |
| ECS | 320 = 32.000 MHz See P/N Guide | 8 = 8 pF S=Series | -47 = ECX-1247 | 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 | TR = Tape & Reel 1K/Reel |

* Specify available options in P/N.

† Contact ECS for availability over extended temp range.

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POCKET TAPE DIMENSIONS (mm)



| A | B | C | D | F | J | L | M | Reel Dia. | Qty/Reel |
|------|------|-----|-----|-----|-----|------|------|-----------|----------|
| 1.84 | 1.55 | 8.0 | 3.5 | 4.0 | 0.5 | 0.25 | 0.45 | 180 | 1000 |

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

| DEVELOPED FREQUENCIES | |
|-----------------------|-----------------|
| Abbreviation | Frequency (MHZ) |
| 240 | 24.000 |
| 245.7 | 24.576 |
| 260 | 26.000 |
| 320 | 32.000 |
| 360 | 36.000 |
| 400 | 40.000 |
| 480 | 48.000 |
| 500 | 50.000 |



Figure 1) Suggested Reflow Profile