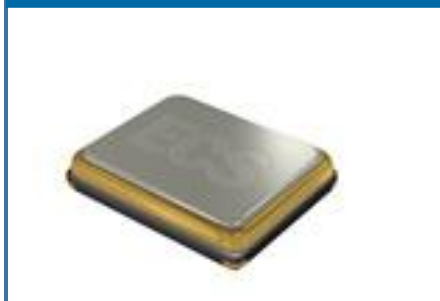


The miniature ECX-53B-DU is a compact SMD Crystal. The 5.0 x 3.2 x 0.85 mm ceramic package is ideal for communication and test equipment.

[Request a Sample](#)

## ECX-53B-DU SMD CRYSTAL



- -55 to +125°C Temp. Range
- 5 x 3.2 mm Footprint
- Pb Free/RoHS Compliant

## DIMENSIONS (mm)

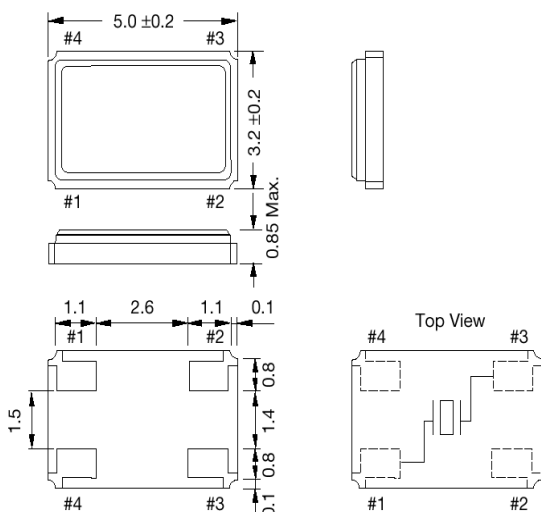


Figure 1) Top, Side, and Bottom

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

## OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

| PARAMETERS            | CONDITIONS     | ECX-53B-DU |     |        | UNITS |
|-----------------------|----------------|------------|-----|--------|-------|
|                       |                | MIN        | TYP | MAX    |       |
| Frequency             |                | 10.000     |     | 50.000 | MHz   |
| Mode of Oscillation   | Fundamental    |            |     |        |       |
| Frequency Tolerance   | @ +25°C        |            |     | ± 30   | ppm   |
| Frequency Stability   | -55 ~ +125°C   |            |     | ± 100  | ppm   |
| Shunt Capacitance     | Co             |            |     | 5      | pF    |
| Load Capacitance      | Specify in P/N | 8          | 20  | Series | pF    |
| Drive Level           | DL             |            |     | 300    | μW    |
| Operating Temperature | Topr           | -55        |     | +125   | °C    |
| Storage Temperature   | Tstg           | -55        |     | +125   | °C    |
| Aging (First Year)    | @ +25°C ±3°C   |            |     | ±5     | ppm   |

| Frequency (MHz) | ESR Ω Max. |
|-----------------|------------|
| 10.000 ~ 15.999 | 80         |
| 16.000 ~ 19.999 | 50         |
| 20.000 ~ 23.999 | 40         |
| 24.000 ~ 50.000 | 30         |

### Pad Connections

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

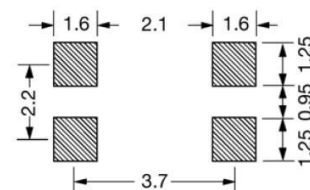
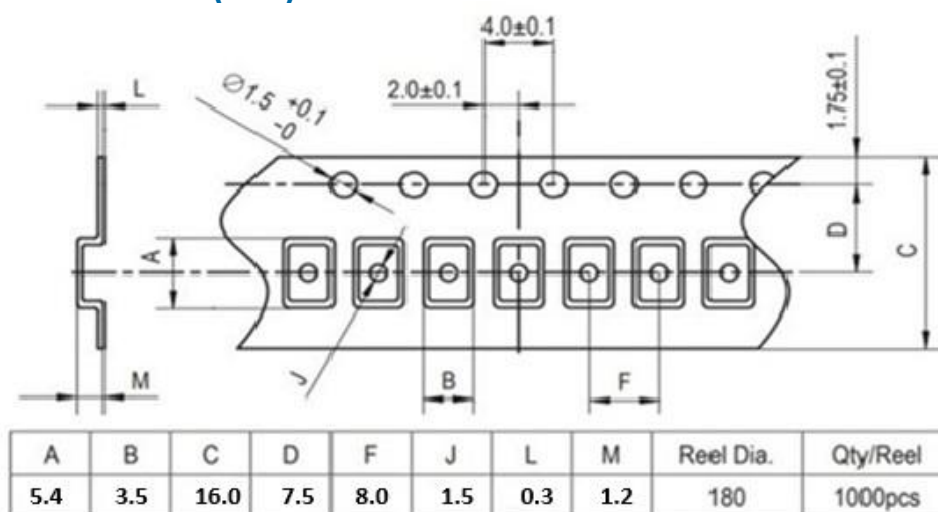


Figure 2) Suggested land

## PART NUMBERING GUIDE: Example ECS-200-20-30B-DU-TR

| ECS - FREQUENCY ABBREVIATION | LOAD CAPACITANCE                  | PACKAGE                  | Stability        | Temp Range  | PACKAGING        |                                   |
|------------------------------|-----------------------------------|--------------------------|------------------|-------------|------------------|-----------------------------------|
| ECS                          | 200 = 20.000 MHz<br>See P/N Guide | 20 = 20 pF<br>S = Series | 30B =<br>ECX-53B | D= ±100 ppm | U = -55 ~ +125°C | TR =<br>Tape<br>& Reel<br>1K/Reel |

## POCKET TAPE DIMENSIONS (mm)



### SOLDER PROFILE

Peak solder Temp  $+260^{\circ}\text{C}$  Max 10 sec Max.

2 Cycles Max.

MSL 1, Lead Finish Au

### DEVELOPED FREQUENCIES

| Abbreviation | Frequency (MHZ) |
|--------------|-----------------|
| 100          | 10.000          |
| 120          | 12.000          |
| 143          | 14.31818        |
| 147.4        | 14.7456         |
| 160          | 16.000          |
| 200          | 20.000          |
| 240          | 24.000          |
| 250          | 25.000          |
| 270          | 27.000          |
| 300          | 30.000          |
| 320          | 32.000          |
| 400          | 40.000          |
| 480          | 48.000          |

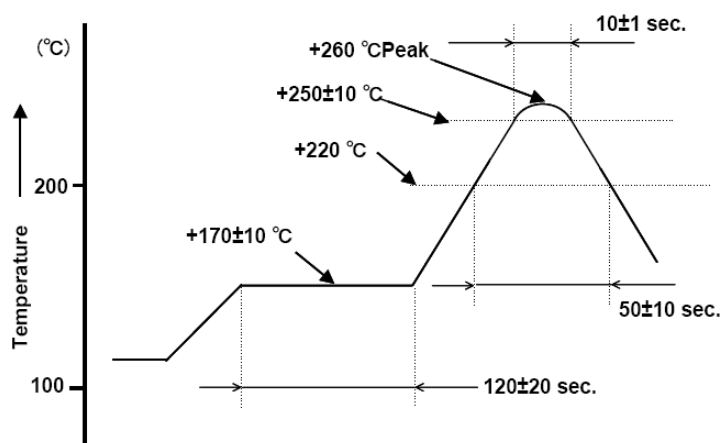


Figure 1) Suggested Reflow Profile

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