

The ECX-1637Q is a miniature SMD Crystal with a 2.0 x 1.6 mm footprint. AEC-Q200 Qualified

Request a Sample



OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

| PARAMETERS | CONDITIONS | ECX-1637Q | | | UNITS |
|------------------------|-----------------------------|-----------|-----|--------|-------|
| | | MIN | TYP | MAX | |
| Frequency | | 16.000 | | 60.000 | MHz |
| Mode of Oscillation | Fundamental | | | | |
| Frequency Tolerance* | @ +25°C | | | ± 30 | ppm |
| Frequency Stability* | -40 ~ +125°C (ES Option) | | | ± 50 | ppm |
| Shunt Capacitance | Co | | | 5 | pF |
| Load Capacitance | Specify in P/N | | 8 | | pF |
| Drive Level | DL | | 10 | 100 | μW |
| Operating Temperature* | Topr (ES Option) | -40 | | +125 | °C |
| Storage Temperature | Tstg | -40 | | +125 | °C |
| Aging (First Year) | @ +25°C ±3°C | | | ±5 | ppm |

- Low Profile
- 2.0 x 1.6 mm Footprint
- RoHS Compliant
- AEC-Q200 Qualified

DIMENSIONS (mm)

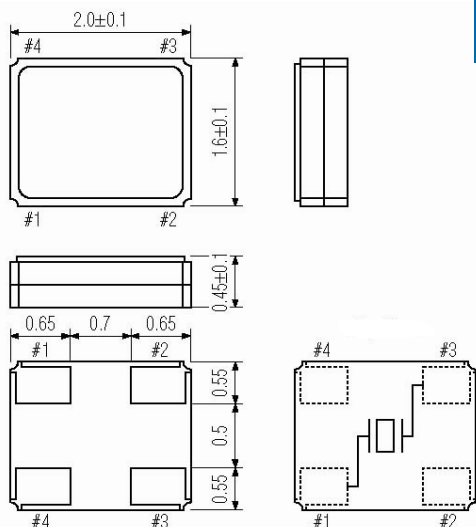


Figure 1) Top, Side, and Bottom

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

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

| Frequency (MHz) | ESR Ω Max. |
|-----------------|------------|
| 16.000 ~ 19.999 | 150 |
| 20.000 ~ 25.999 | 100 |
| 26.000 ~ 39.999 | 80 |
| 40.000 ~ 60.000 | 70 |

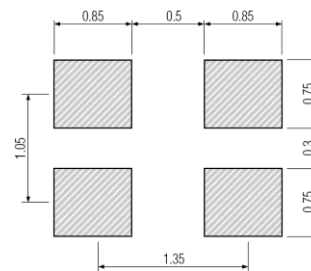


Figure 2) Suggested land pattern

PART NUMBERING GUIDE: Example ECS-240-8-37Q-ES-TR

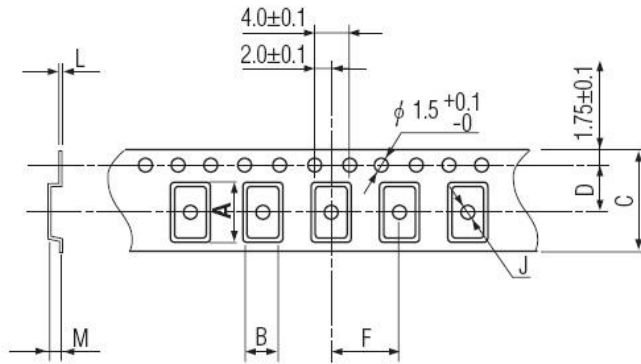
| ECS - FREQUENCY ABBREVIATION | LOAD CAPACITANCE | PACKAGE | AVAILABLE OPTIONS | PACKAGING |
|------------------------------|------------------|---------|--------------------------------------|-----------|
| | | | Tolerance Stability Temp Range | |

| | | | | | | | |
|-----|-----------------------------------|----------------------|--------------------|---|--|--|---------------------|
| ECS | 240 = 24.000 MHz See P/N Guide | 8 = 8 pF S=Series | 37Q = ECX-1637Q | Blank = Std A = ± 25 ppm J = ± 20 ppm R = ± 15 ppm C = ± 10 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 = Tape & Reel |
|-----|-----------------------------------|----------------------|--------------------|---|--|--|---------------------|

* Specify available options in P/N.

† Contact ECS for availability over extended temp range.

POCKET TAPE DIMENSIONS (mm)



| A | B | C | D | F | J | L | M | Reel Dia. | Qty/Reel |
|------|------|-----|-----|-----|-----|------|------|-----------|----------|
| 2.25 | 1.85 | 8.0 | 3.5 | 4.0 | 1.0 | 0.25 | 0.65 | 180 | 3000 |

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

| DEVELOPED FREQUENCIES | |
|-----------------------|-----------------|
| Abbreviation | Frequency (MHZ) |
| 192 | 19.200 |
| 200 | 20.000 |
| 240 | 24.000 |
| 245.7 | 24.5760 |
| 250 | 25.000 |
| 260 | 26.000 |
| 270 | 27.000 |
| 271.2 | 27.120 |
| 300 | 30.000 |
| 320 | 32.000 |
| 400 | 40.000 |
| 480 | 48.000 |

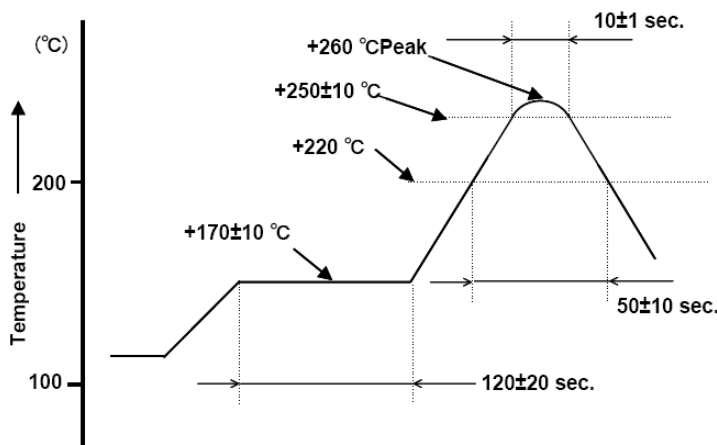


Figure 1) Suggested Reflow Profile