# ECX-1637BQ
# SMD CRYSTAL

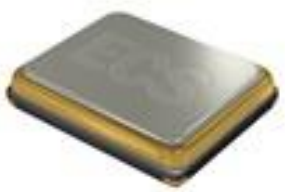
RoHS COMPLIANT

The sub miniature ECX-1637BQ is a very compact SMD Crystal with low aging and AECQ-200 qualified. The 2.0 x 1.6 x 0.45 mm ceramic package is ideal for automotive and industrial applications.

Request a Sample

ECS INC INTERNATIONAL®

## ECX-1637BQ SMD CRYSTAL



- Low 1st Year Aging ±1 ppm Max.
- 2.0 x 1.6 mm Footprint
- Extended Temp. Range Option
- AEC-Q200

## DIMENSIONS (mm)

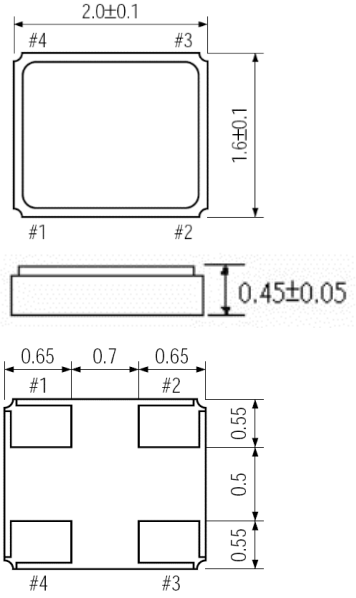
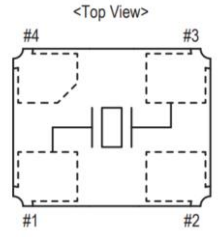



*Figure 1) Top, Side, and Bottom*

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




<#2 & #4 : Grounded to metal lid>

## OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

| PARAMETERS | CONDITIONS | ECX-1637BQ | | | UNITS |
|---|---|---|---|---|---|
| | | MIN | TYP | MAX | |
| Frequency | | 16.000 | | 50.000 | 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 | | | 200 | µW |
| Operating Temperature* | Topr (Y option) | -30 | | +85 | °C |
| Storage Temperature | Tstg | -55 | | +125 | °C |
| Aging (First Year) | @ +25°C ±3°C | | | ±1 | ppm |

| Frequency (MHz) | ESR Ω Max. |
|---|---|
| 16.000 ~ 19.999 | 150 |
| 20.000 ~ 23.999 | 70 |
| 24.000 ~ 39.999 | 50 |
| 40.000 ~ 50.000 | 40 |

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

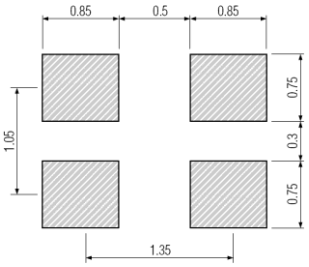



*Figure 2) Suggested land*

## PART NUMBERING GUIDE: Example ECS-240-8-37BQ-CKY-TR

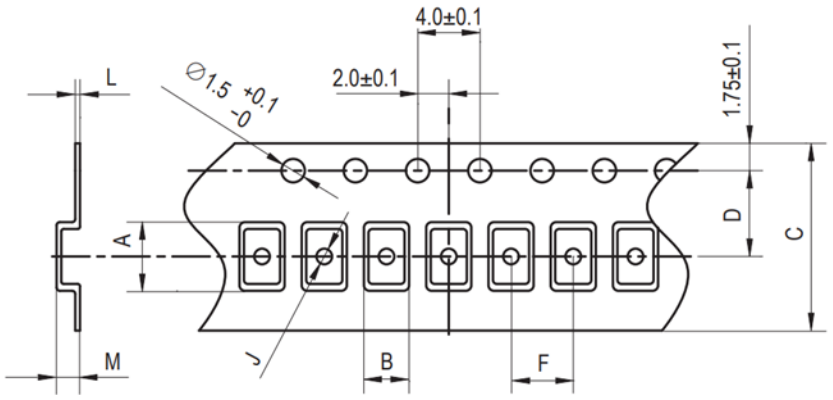
| ECS - | FREQUENCY ABBREVIATION | LOAD CAPACITANCE | PACKAGE | AVAILABLE OPTIONS | | | PACKAGING |
|---|---|---|---|---|---|---|---|
| | | | | Tolerance | Stability | Temp Range | |
| ECS | 240 = 24.000 MHz<br>See P/N Guide | 8 = 8 pF<br>10 = 10 pF<br>S=Series | -37BQ =<br>ECX-1637BQ | Blank = Std<br>A = ± 25 ppm<br>J = ± 20 ppm<br>R = ± 15 ppm<br>C = ± 10 ppm<br>7 = ± 7 ppm | Blank= Std<br>D= ±100 ppm<br>E = ± 50 ppm<br>G = ± 30 ppm<br>H = ± 25 ppm<br>T = ± 20 ppm †<br>W = ±15 ppm †<br>K = ± 10 ppm † | Blank= Std<br>L = -10 ~ +70°C<br>M = -20 ~ +70°C<br>Y = -30 ~ +85°C<br>N = -40 ~ +85°C<br>P = -40 ~ +105°C<br>S = -40 ~ +125°C<br>U = -55 ~ +125°C | TR =1K<br>TR3=3K<br>Qty/Reel |

* Specify available options in P/N.

† Contact ECS for availability over extended temp range.

Rev.2020

## 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 | 1.05 | 0.25 | 0.65 | 180 | 3000pcs (1000pcs) |

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

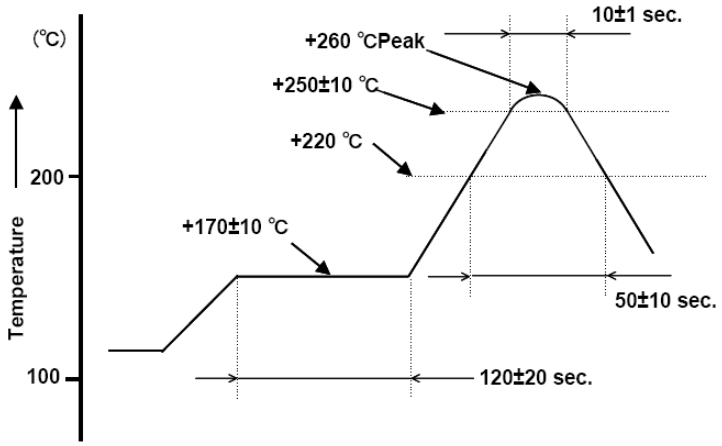



***Figure 1)*** *Suggested Reflow Profile*

# Unikeyic Electronics

Global Electronic Components Distributor

Click to view pricing, inventory, delivery, and lifecycle information:

## ECS:

ECS-120-18-33-JEM-TR ECS-160-8-30Q-AES-TR ECS-3225MVQ-120-CN-TR ECS-120-18-30-JEM-TR
ECS-060-18-20BM-JEN-TR ECS-120-9-42-CKM-TR ECS-260-13-42-CKM-TR ECS-384-10-33B-CKY-TR3
ECS-200-CDX-0914 ECS-24-32-1X ECS-240-12-37B2-CKM-TR ECS-250-12-33-AGN-TR3
ECS-80-20-5PX-TR ECS-.327-12.5-34QCS-TR ECS-.327-6-34B-C-TR ECS-120-12-36-AGN-TR3
ECS-320-8-37B-7KM-TR ECS-40-20-5PX-TR ECX-.327-CDX-1293 ECS-271.2-18-33-JGN-TR
ECS-50-18-4XEN ECS-160-20-33-AEN-TR ECS-80-12-33Q-GN-TR ECS-3963-250-BN-TR
ECS-60-20-5PXDU-TR ECS-.327-9-12R-C-TR ECS-2033-080-BN ECS-240-12-37B-CKY-TR
ECS-320-8-36CKM-TR3 ECS-3225MV-240-BN-TR