



**THE DATASHEET OF  
ECG-C0JB330R**



## Chip Type Specialty Polymer Aluminum Electrolytic Capacitors (SP Cap)

Japan

Series: **CB**

### ■ Features

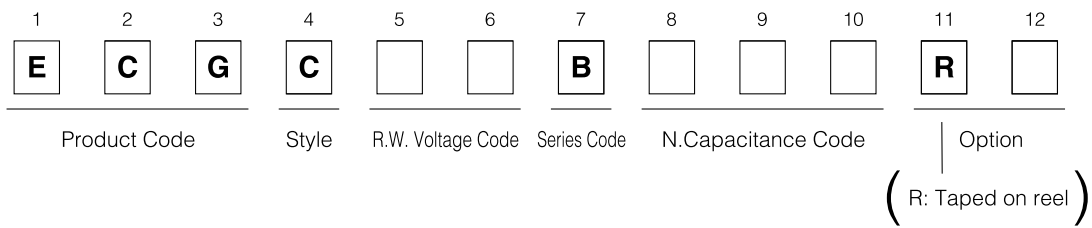
- Low impedance at high frequency (10 kHz to 10 MHz) as low as ceramic capacitors (Reduced ESR due to an applying speciality polymer with high conductivity.)
- Excellent Noise-absorbent Characteristics
- Surface Mount (Reflow soldering method available)
- Very stable capacitance, impedance and ESR against temperature
- Excellent endurance characteristics due to adoption of solid electrolyte
- 4-terminal-construction helps further low impedance.

### ■ Specifications

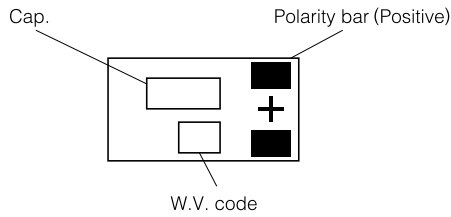
|  |   |  |                    |  |      |  |                    |                           |
|--|---|--|--------------------|--|------|--|--------------------|---------------------------|
| Operating Temp. Range                                    | -40 to +105 °C  |  |                    |  |      |  |                    |                           |
| Rated W.V. Range   | 4 to 16 V.DC  |  |                    |  |      |  |                    |                           |
| Nominal Cap. Range                                       | 2.2 to 82 μF  |  |                    |  |      |  |                    |                           |
| Capacitance Tolerance                                    | ±20 % (120 Hz/+20 °C)   |  |                    |  |      |  |                    |                           |
| DC Leakage Current                                       | I ≤ 0.04 CV or 3 (μA) after 2 minutes (Whichever is the greater)<br>(4W.V.:0.06CV)  |  |                    |  |      |  |                    |                           |
| Dissipation Factor                                       | ≤ 0.06 (120 Hz/+20°C)   |  |                    |  |      |  |                    |                           |
| Surge Voltage  | Rated Working Voltage × 1.25 (15 to 35 °C)  |  |                    |  |      |  |                    |                           |
| Endurance  | <p>After applying rated working voltage for 1000 hours at +105 °C, and then being stabilized at +20 °C, capacitor shall meet the following limits.</p> <table border="1"> <tbody> <tr> <td>Capacitance change</td> <td>±10 % of initial measured value</td> </tr> <tr> <td>D.F.</td> <td>≤ Initial specified value</td> </tr> <tr> <td>DC leakage current</td> <td>≤ Initial specified value</td> </tr> </tbody> </table>                 |  | Capacitance change | ±10 % of initial measured value  | D.F. | ≤ Initial specified value  | DC leakage current | ≤ Initial specified value |
| Capacitance change                                       | ±10 % of initial measured value   |  |                    |  |      |  |                    |                           |
| D.F.   | ≤ Initial specified value   |  |                    |  |      |  |                    |                           |
| DC leakage current                                       | ≤ Initial specified value   |  |                    |  |      |  |                    |                           |
| Moisture Resistance                                      | <p>After storing for 500 hours at +60 °C, 90 % R.H.</p> <table border="1"> <tbody> <tr> <td>Capacitance change</td> <td>+40 %, -20 % of initial measured value (4W.V.:+60 %, -20 % 6.3W.V.:+50 %, -20 %)</td> </tr> <tr> <td>D.F.</td> <td>≤ Initial specified value<br/>(4W.V., ECGC□□B□□□RA: ≤ 200 % of Initial specified value)</td> </tr> <tr> <td>DC leakage current</td> <td>≤ Initial specified value</td> </tr> </tbody> </table> |  | Capacitance change | +40 %, -20 % of initial measured value (4W.V.:+60 %, -20 % 6.3W.V.:+50 %, -20 %) | D.F. | ≤ Initial specified value<br>(4W.V., ECGC□□B□□□RA: ≤ 200 % of Initial specified value) | DC leakage current | ≤ Initial specified value |
| Capacitance change                                       | +40 %, -20 % of initial measured value (4W.V.:+60 %, -20 % 6.3W.V.:+50 %, -20 %)  |  |                    |  |      |  |                    |                           |
| D.F.   | ≤ Initial specified value<br>(4W.V., ECGC□□B□□□RA: ≤ 200 % of Initial specified value)  |  |                    |  |      |  |                    |                           |
| DC leakage current                                       | ≤ Initial specified value   |  |                    |  |      |  |                    |                           |
| Permissible Current Between Terminals with Same Polarity | 2 A DC max. (This shall be applicable only when each terminal is landed or the circuit individually).   |  |                    |  |      |  |                    |                           |

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### ■ Explanation of Part Numbers

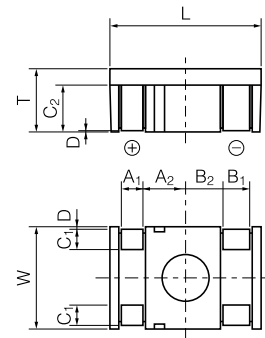


### ■ Marking



|             |   |     |   |      |    |
|-------------|---|-----|---|------|----|
| (V)         | 4 | 6.3 | 8 | 12.5 | 16 |
| (W.V. code) | g | j   | k | B    | C  |

### ■ Dimensions in mm (not to scale)



|           |                     |                     |                     |                     |                     |
|-----------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Size code | L ±0.2              | W ±0.1              | T ±0.1              | A <sub>1</sub> ±0.1 | A <sub>2</sub> ±0.1 |
|           | 7.9                 | 5.3                 | 3.3                 | 1.2                 | 2.2                 |
| Size code | B <sub>1</sub> ±0.1 | B <sub>2</sub> ±0.1 | C <sub>1</sub> ±0.2 | C <sub>2</sub> ±0.1 | D ±0.1              |
|           | 1.5                 | 1.9                 | 1.2                 | 2.4                 | 0                   |

### ■ Standard product

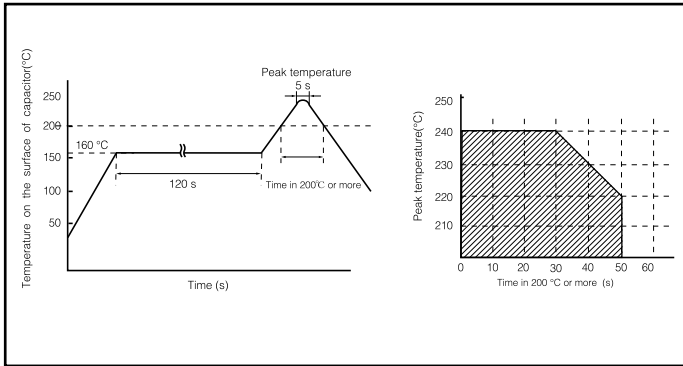
| Rated W.V.<br>(V.DC) | Capacitance<br>(μF) | Part number  | Impedance (Ω)<br>(400 kHz/+20 °C) | Ripple current<br>(A r.m.s.)<br>(100 kHz/<br>+20 ~ +105 °C) |
|----------------------|---------------------|--------------|-----------------------------------|---|
| 4(0G)                | 15 (150)            | ECGC0GB150R  | 0.11                              | 1.3   |
|                      | 33 (330)            | ECGC0GB330R  | 0.06                              | 1.6   |
|                      | 47 (470)            | ECGC0GB470R  | 0.05                              | 1.6   |
|                      | 68 (680)            | ECGC0GB680R  | 0.04                              | 1.6   |
|                      | 82 (820)            | ECGC0GB820RA | 0.04                              | 1.6   |
| 6.3 (0J)             | 10 (100)            | ECGC0JB100R  | 0.13                              | 1   |
|                      | 22 (220)            | ECGC0JB220R  | 0.09                              | 1.3   |
|                      | 33 (330)            | ECGC0JB330R  | 0.06                              | 1.6   |
|                      | 47 (470)            | ECGC0JB470R  | 0.05                              | 1.6   |
|                      | 68 (680)            | ECGC0JB680RA | 0.04                              | 1.6   |
| 8 (0K)               | 8.2 (8R2)           | ECGC0KB8R2R  | 0.14                              | 1   |
|                      | 15 (150)            | ECGC0KB150R  | 0.11                              | 1.3   |
|                      | 22 (220)            | EEFCD0K220R  | 0.09                              | 1.6   |
|                      | 33 (330)            | ECGC0KB330R  | 0.06                              | 1.6   |
|                      | 47 (470)            | ECGC0KB470RA | 0.05                              | 1.6   |
| 12.5 (1B)            | 4.7 (4R7)           | ECGC1BB4R7R  | 0.18                              | 1   |
|                      | 10 (100)            | ECGC1BB100R  | 0.13                              | 1   |
|                      | 15 (150)            | ECGC1BB150R  | 0.11                              | 1.3   |
|                      | 22 (220)            | ECGC1BB220R  | 0.09                              | 1.6   |
|                      | 33 (330)            | EEFCD1B330RA | 0.06                              | 1.6   |
| 16 (1C)              | 2.2 (2R2)           | ECGC1CB2R2R  | 0.38                              | 1   |
|                      | 4.7 (4R7)           | ECGC1CB4R7R  | 0.18                              | 1   |
|                      | 6.8 (6R8)           | ECGC1CB6R8R  | 0.15                              | 1   |
|                      | 10 (100)            | ECGC1CB100R  | 0.13                              | 1   |

( ) shows W.V. and capacitance code.

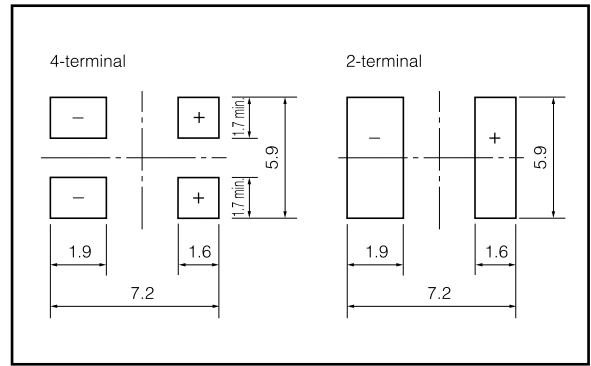
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### ■ Mounting Specifications.

- Recommendable reflow soldering temperature

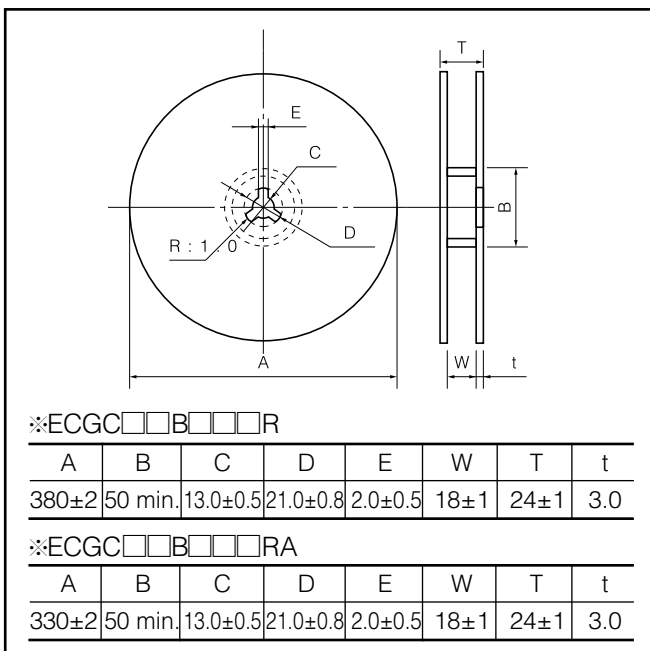


- Typical land pattern (mm)

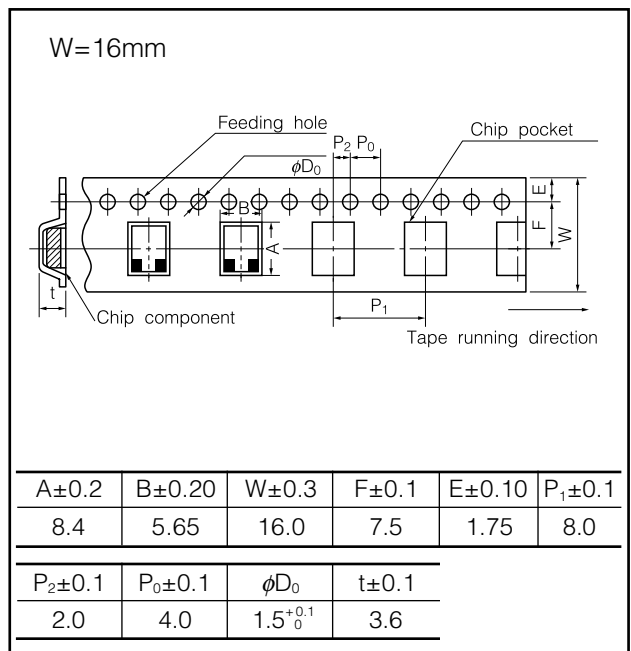


### ■ Packaging Specifications

- Reel Dimensions (mm)



- Embossed Taping (mm)



### ■ Packaging Quantity

※ECGC□□B□□□R

Embossed taping

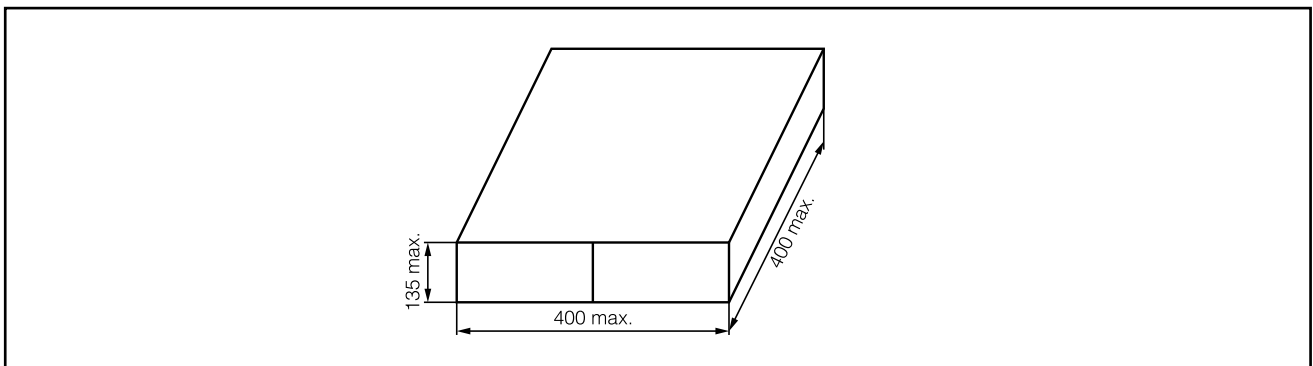
3000 pcs./reel, 15000 pcs./box

※ECGC□□B□□□RA

Embossed taping

2200 pcs./reel, 11000 pcs./box

### ■ Packaging Box Dimensions (mm)





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## MEMO

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