

## for High Frequency Metallized Polypropylene Film Capacitor

Type: **ECWF**

Designed for applications where high current and high frequency are required

### ■Features

- Low-loss
- Excellent frequency characteristics
- Flame retardant epoxy resin coating

### ■Recommended Applications

- High frequency and high current circuits (TV, display, monitor, power supply etc.)
- ※ECWF(S) : TV, display only

### ■Explanation of Part Numbers

| 1             | 2                         | 3        | 4             | 5 | 6                        | 7 | 8 | 9         | 10     | 11           |
|---------------|---------------------------|----------|---------------|---|--------------------------|---|---|-----------|--------|--------------|
| <b>E</b>      | <b>C</b>                  | <b>W</b> | <b>F</b>      |   |                          |   |   |           |        |              |
| Products code | Dielectric & construction |          | Rated voltage |   | Capacitance              |   |   | Cap. Tol. | Suffix | Suffix       |
|               |                           |          |               | 2 | 250VDC(150Vrms, 250Vo-p) |   |   | H         | ±3%    | Blank        |
|               |                           |          |               | 4 | 400VDC                   |   |   | J         | ±5%    | Type1        |
|               |                           |          |               |   |                          |   |   |           |        | Type2        |
|               |                           |          |               |   |                          |   |   |           |        | Type2        |
|               |                           |          |               |   |                          |   |   |           |        | Crimped lead |
|               |                           |          |               |   |                          |   |   |           |        | Crimped lead |

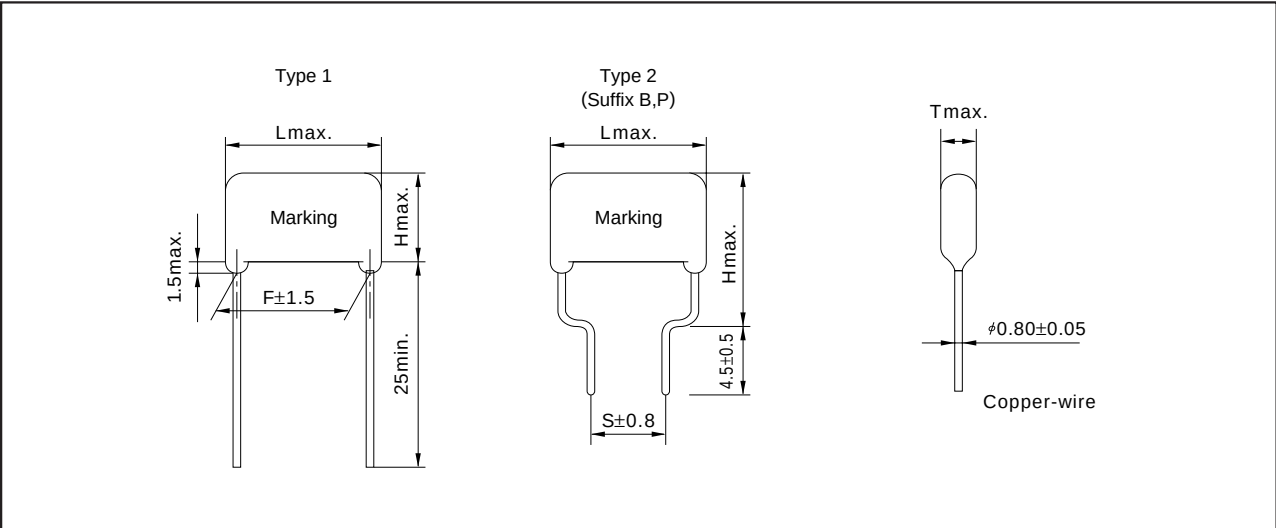
### ●Explanation of Part Numbers for Odd Size Taping

| 1             | 2                         | 3        | 4             | 5 | 6           | 7 | 8 | 9                  | 10        | 11     |
|---------------|---------------------------|----------|---------------|---|-------------|---|---|--------------------|-----------|--------|
| <b>E</b>      | <b>C</b>                  | <b>W</b> | <b>F</b>      |   |             |   |   | <b>R</b>           |           |        |
| Products code | Dielectric & construction |          | Rated voltage |   | Capacitance |   |   | 7.5mm Crimped lead | Cap. Tol. | Suffix |

### ■Specifications

|                       |                                                                          |                                                                                                                               |
|-----------------------|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Category temp. range  | -25 to +85°C (+105°C.....75% of Rated voltage)                           |                                                                                                                               |
| Rated voltage         | 250VDC(150Vrms, 250Vo-p), 400VDC                                         |                                                                                                                               |
| Capacitance range     | 0.022 to 4.7μF                                                           |                                                                                                                               |
| Capacitance tolerance | ±3%(H), ±5%(J)                                                           |                                                                                                                               |
| Dissipation factor    | 250VDC                                                                   | 0.068 to 0.51μF : 0.05%max. (20°C, 1kHz)<br>0.56 to 4.7μF : 0.1%max. (20°C, 10kHz)<br>0.068 to 4.7μF : 0.2%max. (20°C, 10kHz) |
|                       | 400VDC                                                                   | 0.1% max. (20°C, 1kHz)                                                                                                        |
| Withstand voltage     | Between terminals : Rated volt. (VDC)×150% 60s                           |                                                                                                                               |
| Insulation resistance | C≤0.33μF : 9000MΩ min.<br>C>0.33μF : 3000MΩ . μFmin. (20°C, 100VDC, 60s) |                                                                                                                               |

## ■Dimensions in mm (not to scale)

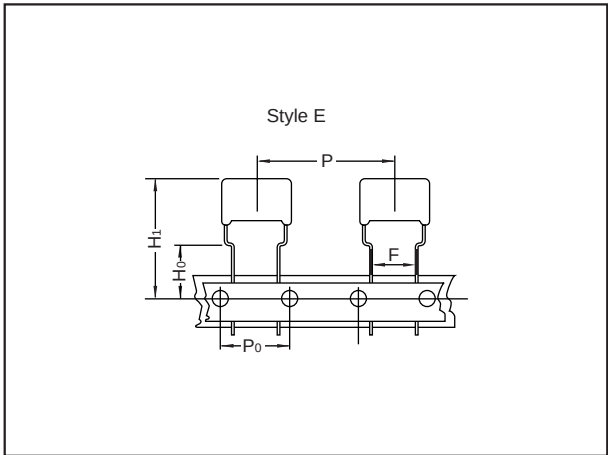


## ■Packaging Specifications for Bulk Package

Packing quantity: 100pcs./bag

## ■Taping Specifications for Automatic Insertion

### ●Taping style



※See page 22 for Taping dimensions.

### ●Packaging Specification

| Type     | Rated volt. | Cap. range<br>(μF) | Taping style |    |   |   |   |   | Packing |
|----------|-------------|--------------------|--------------|----|---|---|---|---|---------|
|          |             |                    | AD           | AS | B | C | D | E |         |
| ECWF (S) | 250VDC      | 0.068 to 1.5       |              |    |   |   |   | ○ | Ammo    |
| ECWF (B) |             |                    | 0.022 to 1.2 |    |   |   |   |   | ○       |
|          | 400VDC      | 0.022 to 0.68      |              |    |   |   |   | ○ | Ammo    |

### ●Lead Spacing

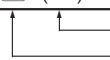
| Style | Lead Spacing |
|-------|--------------|
| E     | 7.5mm        |

※See the column "Rating, Dimensions & Quantity Box" for packing quantity.

■ Rating, Dimensions & Quantity/Ammo Box

● Type ECWF(S) Rated voltage : 250VDC(150Vrms, 250V<sub>o-p</sub>) Capacitance tolerance : ±3%(H), ±5%(J)

| Part No.      | Cap.<br>(μF) | Dimensions (mm)   |                   |                   |          |      |      |      | Quantity      |
|---------------|--------------|-------------------|-------------------|-------------------|----------|------|------|------|---------------|
|               |              | L <sub>max.</sub> | T <sub>max.</sub> | H <sub>max.</sub> |          | F    | S    | ød   | Ammo<br>7.5mm |
|               |              |                   |                   | Type - 1          | Type - 2 |      |      |      |               |
| ECWF2683□S( ) | 0.068        | 15.5              | 6.0               | 12.5              | 17.5     | 12.5 | 7.5  | 0.80 | 500           |
| ECWF2753□S( ) | 0.075        | 15.5              | 6.0               | 13.0              | 18.0     | 12.5 | 7.5  | 0.80 |               |
| ECWF2823□S( ) | 0.082        | 15.5              | 6.0               | 13.0              | 18.0     | 12.5 | 7.5  | 0.80 |               |
| ECWF2913□S( ) | 0.091        | 15.5              | 6.0               | 12.5              | 17.5     | 12.5 | 7.5  | 0.80 | 600           |
| ECWF2104□S( ) | 0.1          | 15.5              | 6.0               | 12.5              | 17.5     | 12.5 | 7.5  | 0.80 | 500           |
| ECWF2114□S( ) | 0.11         | 15.5              | 6.5               | 13.0              | 18.0     | 12.5 | 7.5  | 0.80 |               |
| ECWF2124□S( ) | 0.12         | 15.5              | 7.0               | 13.0              | 18.0     | 12.5 | 7.5  | 0.80 |               |
| ECWF2134□S( ) | 0.13         | 15.5              | 7.5               | 13.5              | 18.5     | 12.5 | 7.5  | 0.80 |               |
| ECWF2154□S( ) | 0.15         | 15.5              | 7.0               | 12.5              | 17.5     | 12.5 | 7.5  | 0.80 |               |
| ECWF2164□S( ) | 0.16         | 15.5              | 7.5               | 12.5              | 17.5     | 12.5 | 7.5  | 0.80 |               |
| ECWF2184□S( ) | 0.18         | 15.5              | 7.0               | 13.0              | 18.0     | 12.5 | 7.5  | 0.80 |               |
| ECWF2204□S( ) | 0.2          | 15.5              | 7.0               | 13.5              | 18.5     | 12.5 | 7.5  | 0.80 |               |
| ECWF2224□S( ) | 0.22         | 15.5              | 7.5               | 13.5              | 18.5     | 12.5 | 7.5  | 0.80 |               |
| ECWF2244□S( ) | 0.24         | 15.5              | 7.5               | 13.5              | 18.5     | 12.5 | 7.5  | 0.80 |               |
| ECWF2274□S( ) | 0.27         | 18.0              | 8.0               | 13.0              | 18.0     | 15.0 | 10.0 | 0.80 |               |
| ECWF2304□S( ) | 0.3          | 18.0              | 8.5               | 13.5              | 18.5     | 15.0 | 10.0 | 0.80 |               |
| ECWF2334□S( ) | 0.33         | 18.0              | 9.5               | 13.5              | 18.5     | 15.0 | 10.0 | 0.80 |               |
| ECWF2364□S( ) | 0.36         | 18.0              | 8.0               | 14.0              | 19.0     | 15.0 | 10.0 | 0.80 |               |
| ECWF2394□S( ) | 0.39         | 18.0              | 9.0               | 14.0              | 19.0     | 15.0 | 10.0 | 0.80 | 400           |
| ECWF2434□S( ) | 0.43         | 18.0              | 10.0              | 14.5              | 19.5     | 15.0 | 10.0 | 0.80 |               |
| ECWF2474□S( ) | 0.47         | 18.0              | 10.5              | 15.0              | 20.0     | 15.0 | 10.0 | 0.80 |               |
| ECWF2514□S( ) | 0.51         | 18.0              | 11.5              | 15.0              | 20.0     | 15.0 | 10.0 | 0.80 |               |
| ECWF2564□S( ) | 0.56         | 18.0              | 12.5              | 15.5              | 20.5     | 15.0 | 10.0 | 0.80 |               |
| ECWF2624□S( ) | 0.62         | 18.0              | 12.0              | 16.0              | 21.0     | 15.0 | 10.0 | 0.80 | 300           |
| ECWF2684□S( ) | 0.68         | 18.0              | 12.5              | 16.0              | 21.0     | 15.0 | 10.0 | 0.80 |               |
| ECWF2754□S( ) | 0.75         | 20.0              | 14.5              | 16.0              | 21.0     | 17.0 | 12.5 | 0.80 |               |
| ECWF2824□S( ) | 0.82         | 20.0              | 15.0              | 16.0              | 21.0     | 17.0 | 12.5 | 0.80 |               |
| ECWF2914□S( ) | 0.91         | 20.0              | 16.0              | 16.5              | 21.5     | 17.0 | 12.5 | 0.80 |               |
| ECWF2105□S( ) | 1.0          | 20.0              | 16.0              | 17.0              | 22.0     | 17.0 | 12.5 | 0.80 |               |
| ECWF2115□S( ) | 1.1          | 20.0              | 16.0              | 17.5              | 22.5     | 17.0 | 12.5 | 0.80 |               |
| ECWF2125□S( ) | 1.2          | 20.0              | 16.0              | 18.0              | 23.0     | 17.0 | 12.5 | 0.80 |               |
| ECWF2135□S( ) | 1.3          | 23.0              | 16.0              | 17.0              | 22.0     | 20.0 | 12.5 | 0.80 |               |
| ECWF2155□S( ) | 1.5          | 23.0              | 16.0              | 18.0              | 23.0     | 20.0 | 12.5 | 0.80 |               |
| ECWF2165□S( ) | 1.6          | 23.0              | 16.0              | 18.0              | 23.0     | 20.0 |      | 0.80 | —             |
| ECWF2185□S( ) | 1.8          | 23.0              | 16.0              | 19.5              | 24.5     | 20.0 |      | 0.80 |               |
| ECWF2205□S( ) | 2.0          | 23.0              | 16.0              | 20.0              | 25.0     | 20.0 |      | 0.80 |               |
| ECWF2225□S( ) | 2.2          | 23.0              | 16.0              | 20.5              | 25.5     | 20.0 |      | 0.80 |               |
| ECWF2245□S( ) | 2.4          | 23.0              | 16.0              | 21.0              | 26.0     | 20.0 |      | 0.80 |               |
| ECWF2275□S( ) | 2.7          | 28.0              | 16.0              | 20.0              | 25.0     | 25.0 |      | 0.80 |               |
| ECWF2305□S( ) | 3.0          | 28.0              | 16.0              | 20.5              | 25.5     | 25.0 |      | 0.80 |               |
| ECWF2335□S( ) | 3.3          | 28.0              | 16.0              | 21.5              | 26.5     | 25.0 |      | 0.80 |               |


 Suffix for lead crimped or taped type  
 Cap. tol. code

## ■ Rating &amp; Dimensions

● Rated voltage : 250VDC(150Vrms, 250V0-p) Cap. tolerance : ±3%(H), ±5%(J)

| Part No.      | Cap.<br>(μF) | Dimensions (mm)  |                  |                  |        |      |      |      | Quantity      |
|---------------|--------------|------------------|------------------|------------------|--------|------|------|------|---------------|
|               |              | L <sub>max</sub> | T <sub>max</sub> | H <sub>max</sub> |        | F    | S    | ød   | Ammo<br>7.5mm |
|               |              |                  |                  | Type-1           | Type-2 |      |      |      |               |
| ECWF2223□B( ) | 0.022        | 15.5             | 5.5              | 12.5             | 17.5   | 12.5 | 7.5  | 0.80 | 500           |
| ECWF2243□B( ) | 0.024        | 15.5             | 5.5              | 12.5             | 17.5   | 12.5 | 7.5  | 0.80 |               |
| ECWF2273□B( ) | 0.027        | 15.5             | 6.0              | 12.5             | 17.5   | 12.5 | 7.5  | 0.80 |               |
| ECWF2303□B( ) | 0.03         | 15.5             | 6.0              | 13.0             | 17.5   | 12.5 | 7.5  | 0.80 |               |
| ECWF2333□B( ) | 0.033        | 15.5             | 5.5              | 12.5             | 17.5   | 12.5 | 7.5  | 0.80 |               |
| ECWF2363□B( ) | 0.036        | 15.5             | 6.0              | 12.5             | 17.5   | 12.5 | 7.5  | 0.80 |               |
| ECWF2393□B( ) | 0.039        | 15.5             | 6.0              | 12.5             | 17.5   | 12.5 | 7.5  | 0.80 |               |
| ECWF2433□B( ) | 0.043        | 15.5             | 6.0              | 13.0             | 17.5   | 12.5 | 7.5  | 0.80 |               |
| ECWF2473□B( ) | 0.047        | 15.5             | 6.5              | 13.0             | 17.5   | 12.5 | 7.5  | 0.80 |               |
| ECWF2513□B( ) | 0.051        | 15.5             | 6.5              | 13.5             | 17.5   | 12.5 | 7.5  | 0.80 |               |
| ECWF2563□B( ) | 0.056        | 15.5             | 6.5              | 13.5             | 17.5   | 12.5 | 7.5  | 0.80 |               |
| ECWF2623□B( ) | 0.062        | 15.5             | 7.0              | 14.0             | 17.5   | 12.5 | 7.5  | 0.80 |               |
| ECWF2683□B( ) | 0.068        | 18.0             | 6.0              | 13.0             | 18.0   | 15.0 | 10.0 | 0.80 |               |
| ECWF2753□B( ) | 0.075        | 18.0             | 6.5              | 13.0             | 18.0   | 15.0 | 10.0 | 0.80 |               |
| ECWF2823□B( ) | 0.082        | 18.0             | 6.5              | 13.5             | 18.5   | 15.0 | 10.0 | 0.80 |               |
| ECWF2913□B( ) | 0.091        | 18.0             | 7.0              | 13.5             | 18.5   | 15.0 | 10.0 | 0.80 |               |
| ECWF2104□B( ) | 0.1          | 18.0             | 7.0              | 14.0             | 19.0   | 15.0 | 10.0 | 0.80 | 400           |
| ECWF2114□B( ) | 0.11         | 18.0             | 7.5              | 14.0             | 19.0   | 15.0 | 10.0 | 0.80 |               |
| ECWF2124□B( ) | 0.12         | 18.0             | 7.5              | 14.5             | 19.5   | 15.0 | 10.0 | 0.80 |               |
| ECWF2134□B( ) | 0.13         | 18.0             | 8.0              | 14.5             | 19.5   | 15.0 | 10.0 | 0.80 |               |
| ECWF2154□B( ) | 0.15         | 18.0             | 8.5              | 15.0             | 20.0   | 15.0 | 10.0 | 0.80 |               |
| ECWF2164□B( ) | 0.16         | 18.0             | 6.0              | 13.0             | 18.0   | 15.0 | 10.0 | 0.80 | 500           |
| ECWF2184□B( ) | 0.18         | 18.0             | 6.5              | 13.5             | 18.5   | 15.0 | 10.0 | 0.80 |               |
| ECWF2204□B( ) | 0.2          | 18.0             | 7.0              | 13.5             | 18.5   | 15.0 | 10.0 | 0.80 |               |
| ECWF2224□B( ) | 0.22         | 18.0             | 7.0              | 14.0             | 19.0   | 15.0 | 10.0 | 0.80 |               |
| ECWF2244□B( ) | 0.24         | 18.0             | 7.5              | 14.0             | 19.0   | 15.0 | 10.0 | 0.80 |               |
| ECWF2274□B( ) | 0.27         | 18.0             | 8.0              | 14.5             | 19.5   | 15.0 | 10.0 | 0.80 | 400           |
| ECWF2304□B( ) | 0.3          | 18.0             | 8.0              | 15.0             | 20.0   | 15.0 | 10.0 | 0.80 |               |
| ECWF2334□B( ) | 0.33         | 18.0             | 8.5              | 15.0             | 20.0   | 15.0 | 10.0 | 0.80 |               |
| ECWF2364□B( ) | 0.36         | 18.0             | 8.5              | 15.0             | 20.0   | 15.0 | 10.0 | 0.80 |               |
| ECWF2394□B( ) | 0.39         | 18.0             | 9.0              | 16.0             | 21.0   | 15.0 | 10.0 | 0.80 |               |
| ECWF2434□B( ) | 0.43         | 18.0             | 9.5              | 16.0             | 21.0   | 15.0 | 10.0 | 0.80 | 300           |
| ECWF2474□B( ) | 0.47         | 23.0             | 8.0              | 15.0             | 20.0   | 20.0 | 12.5 | 0.80 | 400           |
| ECWF2514□B( ) | 0.51         | 23.0             | 8.5              | 15.0             | 20.0   | 20.0 | 12.5 | 0.80 |               |
| ECWF2564□B( ) | 0.56         | 23.0             | 8.5              | 15.5             | 20.5   | 20.0 | 12.5 | 0.80 |               |
| ECWF2624□B( ) | 0.62         | 23.0             | 9.0              | 16.0             | 21.0   | 20.0 | 12.5 | 0.80 |               |
| ECWF2684□B( ) | 0.68         | 23.0             | 9.5              | 16.5             | 21.5   | 20.0 | 12.5 | 0.80 |               |
| ECWF2754□B( ) | 0.75         | 23.0             | 10.0             | 16.5             | 21.5   | 20.0 | 12.5 | 0.80 | 300           |
| ECWF2824□B( ) | 0.82         | 23.0             | 10.5             | 17.0             | 22.0   | 20.0 | 12.5 | 0.80 |               |
| ECWF2914□B( ) | 0.91         | 23.0             | 11.0             | 17.5             | 22.5   | 20.0 | 12.5 | 0.80 |               |
| ECWF2105□B( ) | 1.0          | 23.0             | 11.5             | 18.0             | 23.0   | 20.0 | 12.5 | 0.80 |               |
| ECWF2115□B( ) | 1.1          | 23.0             | 12.0             | 19.0             | 24.0   | 20.0 | 12.5 | 0.80 |               |
| ECWF2125□B( ) | 1.2          | 23.0             | 12.5             | 19.5             | 24.5   | 20.0 | 12.5 | 0.80 |               |
| ECWF2135□B( ) | 1.3          | 23.0             | 13.0             | 20.0             | 25.0   | 20.0 | 12.5 | 0.80 |               |
| ECWF2155□B( ) | 1.5          | 23.0             | 14.0             | 21.0             | 26.0   | 20.0 | 12.5 | 0.80 |               |
| ECWF2165□B( ) | 1.6          | 28.0             | 11.5             | 20.5             | 25.5   | 25.0 | 17.5 | 0.80 |               |
| ECWF2185□B( ) | 1.8          | 28.0             | 12.5             | 21.0             | 26.0   | 25.0 | 17.5 | 0.80 |               |
| ECWF2205□B( ) | 2.0          | 28.0             | 13.0             | 22.0             | 27.0   | 25.0 | 17.5 | 0.80 | -             |
| ECWF2225□B( ) | 2.2          | 28.0             | 14.0             | 22.5             | 27.5   | 25.0 | 17.5 | 0.80 |               |
| ECWF2245□B( ) | 2.4          | 28.0             | 14.5             | 23.0             | 28.0   | 25.0 | 17.5 | 0.80 |               |
| ECWF2275□B( ) | 2.7          | 28.0             | 15.5             | 24.0             | 29.0   | 25.0 | 17.5 | 0.80 |               |
| ECWF2305□B( ) | 3.0          | 28.0             | 16.5             | 25.5             | 30.5   | 25.0 | 17.5 | 0.80 |               |
| ECWF2335□B( ) | 3.3          | 28.0             | 17.0             | 26.0             | 31.0   | 25.0 | 17.5 | 0.80 |               |
| ECWF2365□B( ) | 3.6          | 33.0             | 16.0             | 25.0             | 30.0   | 30.0 | 22.5 | 0.80 |               |
| ECWF2395□B( ) | 3.9          | 33.0             | 16.5             | 25.5             | 30.5   | 30.0 | 22.5 | 0.80 |               |
| ECWF2435□B( ) | 4.3          | 33.0             | 17.5             | 26.5             | 31.5   | 30.0 | 22.5 | 0.80 |               |
| ECWF2475□B( ) | 4.7          | 33.0             | 18.0             | 27.0             | 32.0   | 30.0 | 22.5 | 0.80 |               |

Suffix for lead crimped or taped type

Cap. tol. code

## ■ Rating, Dimensions &amp; Quantity/Ammo Box

● Type ECWF(B), Rated voltage : 400VDC, Capacitance tolerance :  $\pm 3\%$ (H),  $\pm 5\%$ (J)

| Part No.       | Cap.<br>( $\mu$ F) | Dimensions (mm)  |                  |                  |        |        |        |      | Quantity |
|----------------|--------------------|------------------|------------------|------------------|--------|--------|--------|------|----------|
|                |                    | L <sub>max</sub> | T <sub>max</sub> | H <sub>max</sub> |        | F      |        | S    | ød       |
|                |                    |                  |                  | Type-1           | Type-2 | Type-1 | Type-2 |      |          |
| ECWF4223□B( )  | 0.022              | 15.5             | 5.5              | 12.5             | 17.5   | 12.5   | 7.5    | 0.80 | 500      |
| ECWF4243□B( )  | 0.024              | 15.5             | 5.5              | 12.5             | 17.5   | 12.5   | 7.5    | 0.80 |          |
| ECWF4273□B( )  | 0.027              | 15.5             | 6.0              | 12.5             | 17.5   | 12.5   | 7.5    | 0.80 |          |
| ECWF4303□B( )  | 0.030              | 15.5             | 6.0              | 13.0             | 18.0   | 12.5   | 7.5    | 0.80 |          |
| ECWF4333□B( )  | 0.033              | 15.5             | 5.5              | 12.5             | 17.5   | 12.5   | 7.5    | 0.80 |          |
| ECWF4363□B( )  | 0.036              | 15.5             | 6.0              | 12.5             | 17.5   | 12.5   | 7.5    | 0.80 |          |
| ECWF4393□B( )  | 0.039              | 15.5             | 6.0              | 12.5             | 17.5   | 12.5   | 7.5    | 0.80 |          |
| ECWF4433□B( )  | 0.043              | 15.5             | 6.0              | 13.0             | 18.0   | 12.5   | 7.5    | 0.80 |          |
| ECWF4473□B( )  | 0.047              | 15.5             | 6.5              | 13.0             | 18.0   | 12.5   | 7.5    | 0.80 |          |
| ECWF4513□B( )  | 0.051              | 15.5             | 6.5              | 13.5             | 18.5   | 12.5   | 7.5    | 0.80 |          |
| ECWF4563□B( )  | 0.056              | 15.5             | 6.5              | 13.5             | 18.5   | 12.5   | 7.5    | 0.80 |          |
| ECWF4623□B( )  | 0.062              | 15.5             | 7.0              | 14.0             | 19.0   | 12.5   | 7.5    | 0.80 |          |
| ECWF4683□B( )  | 0.068              | 18.0             | 6.5              | 13.0             | 18.0   | 15.0   | 10.0   | 0.80 |          |
| ECWF4753□B( )  | 0.075              | 18.0             | 6.5              | 13.5             | 18.5   | 15.0   | 10.0   | 0.80 |          |
| ECWF4823□B( )  | 0.082              | 18.0             | 7.0              | 13.5             | 18.5   | 15.0   | 10.0   | 0.80 |          |
| ECWF4913□B( )  | 0.091              | 18.0             | 7.0              | 14.0             | 19.0   | 15.0   | 10.0   | 0.80 | 400      |
| ECWF4104□B( )  | 0.1                | 18.0             | 7.5              | 14.0             | 19.0   | 15.0   | 10.0   | 0.80 |          |
| ECWF4114□B( )  | 0.11               | 18.0             | 7.5              | 14.5             | 19.5   | 15.0   | 10.0   | 0.80 |          |
| ECWF4124□B( )  | 0.12               | 18.0             | 8.0              | 15.0             | 20.0   | 15.0   | 10.0   | 0.80 |          |
| ECWF4134□B( )  | 0.13               | 18.0             | 8.0              | 15.0             | 20.0   | 15.0   | 10.0   | 0.80 |          |
| ECWF4154□B( )  | 0.15               | 18.0             | 8.5              | 15.5             | 20.5   | 15.0   | 10.0   | 0.80 |          |
| ECWF4164□B( )  | 0.16               | 18.0             | 9.0              | 16.0             | 21.0   | 15.0   | 10.0   | 0.80 | 300      |
| ECWF4184□B( )  | 0.18               | 18.0             | 9.5              | 16.5             | 21.5   | 15.0   | 10.0   | 0.80 |          |
| ECWF4204□B( )  | 0.2                | 20.0             | 9.0              | 16.0             | 21.0   | 17.0   | 10.0   | 0.80 |          |
| ECWF4224□B( )  | 0.22               | 20.0             | 9.5              | 16.5             | 21.5   | 17.0   | 10.0   | 0.80 |          |
| ECWF4244□B( )* | 0.24               | 20.0             | 10.0             | 16.5             | 21.5   | 17.0   | 10.0   | 0.80 |          |
| ECWF4274□B( )* | 0.27               | 20.0             | 10.5             | 17.0             | 22.0   | 17.0   | 10.0   | 0.80 |          |
| ECWF4304□B( )* | 0.3                | 20.0             | 11.0             | 17.5             | 22.5   | 17.0   | 10.0   | 0.80 |          |
| ECWF4334□B( )* | 0.33               | 20.0             | 11.5             | 18.0             | 23.0   | 17.0   | 10.0   | 0.80 |          |
| ECWF4364□B( )  | 0.36               | 23.0             | 12.5             | 20.0             | 25.0   | 20.0   | 12.5   | 0.80 |          |
| ECWF4394□B( )  | 0.39               | 23.0             | 13.5             | 20.5             | 25.5   | 20.0   | 12.5   | 0.80 |          |
| ECWF4434□B( )  | 0.43               | 23.0             | 14.0             | 21.0             | 26.0   | 20.0   | 12.5   | 0.80 | 200      |
| ECWF4474□B( )  | 0.47               | 23.0             | 14.5             | 21.5             | 26.5   | 20.0   | 12.5   | 0.80 |          |
| ECWF4514□B( )  | 0.51               | 23.0             | 12.5             | 19.5             | 24.5   | 20.0   | 12.5   | 0.80 | 300      |
| ECWF4564□B( )  | 0.56               | 23.0             | 13.0             | 20.0             | 25.0   | 20.0   | 12.5   | 0.80 |          |
| ECWF4624□B( )  | 0.62               | 23.0             | 14.0             | 21.0             | 26.0   | 20.0   | 12.5   | 0.80 | 200      |
| ECWF4684□B( )  | 0.68               | 23.0             | 14.5             | 21.5             | 26.5   | 20.0   | 12.5   | 0.80 |          |
| ECWF4754□B( )  | 0.75               | 28.0             | 13.0             | 20.0             | 25.0   | 25.0   | 17.5   | 0.80 | -        |
| ECWF4824□B( )  | 0.82               | 28.0             | 14.0             | 20.5             | 25.5   | 25.0   | 17.5   | 0.80 |          |
| ECWF4914□B( )  | 0.91               | 28.0             | 14.5             | 21.5             | 26.5   | 25.0   | 17.5   | 0.80 |          |
| ECWF4105□B( )  | 1.0                | 28.0             | 15.0             | 22.0             | 27.0   | 25.0   | 17.5   | 0.80 |          |
| ECWF4115□B( )  | 1.1                | 28.0             | 16.0             | 22.5             | 27.5   | 25.0   | 17.5   | 0.80 |          |
| ECWF4125□B( )  | 1.2                | 28.0             | 16.5             | 23.5             | 28.5   | 25.0   | 17.5   | 0.80 |          |
| ECWF4135□B( )  | 1.3                | 28.0             | 17.0             | 24.0             | 29.0   | 25.0   | 17.5   | 0.80 |          |
| ECWF4155□B( )  | 1.5                | 28.0             | 18.5             | 25.5             | 30.5   | 25.0   | 17.5   | 0.80 |          |
| ECWF4165□B( )  | 1.6                | 28.0             | 19.5             | 26.5             | 31.5   | 25.0   | 17.5   | 0.80 |          |

↑ Suffix for lead crimped or taped type  
 ↑ Cap. tol. code

\* Lead crimped type last Suffix is "P"