

# BF 01/02/07/06/05/04: Radial Leads



## BQ 01/02/07/06/05/04: Lead Free

CPM-83----- pitch = 5.08mm (0.200")



### GENERAL DESCRIPTION

Dielectric: Metallized polyester film (Polyethylene terephthalate)

Stacked-film

Leads: Radial tin - plated wire

Protection: Plastic case (UL 94: V-O) / Epoxy Resin

Marking: Logo

Nominal Capacitance

Tolerance (EIA)

DC Nominal Voltage

Example: **T 100nK 63**

Delivery Mode: Bulk

Taped (reel or ammpack)

### STANDARDIZATION

**Generic specifications:**

CEI 384-1/CECC 30000

**Sectional specifications:**

CEI 384-2/CECC 30400

**Complies with special specification:**

CECC 30401-069

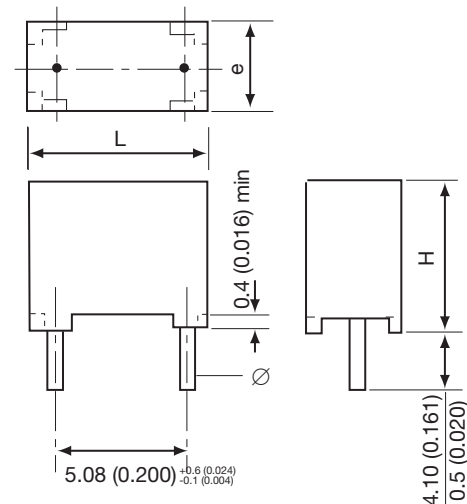
### APPLICATIONS

- Commodity Product:
  - Supply decoupling
  - Filter
  - Integrators
  - Treatment of analog signals
  - Rejection of line perturbations, etc.

### DIMENSIONS

millimeters (inches)

| Case | L max       | H max        | e max       | $\phi \pm 0.02$ |
|------|-------------|--------------|-------------|-----------------|
| 01   | 7.5 (0.295) | 6.5 (0.256)  | 2.5 (0.098) | 0.5 (0.020)     |
| 02   | 7.5 (0.295) | 8.0 (0.315)  | 3.2 (0.126) | 0.5 (0.020)     |
| 05   | 7.5 (0.295) | 12.0 (0.472) | 6.0 (0.236) | 0.5 (0.020)     |
| 06   | 7.5 (0.295) | 9.6 (0.378)  | 6.0 (0.236) | 0.5 (0.020)     |
| 07   | 7.5 (0.295) | 8.0 (0.315)  | 5.0 (0.197) | 0.5 (0.020)     |
| 04   | 7.5 (0.295) | 13.0 (0.512) | 7.5 (0.295) | 0.5 (0.020)     |



\*L dimension measured 3mm above base of case

### HOW TO ORDER

**BF01 or BQ01**

Type

**4**

Class

**D**

Voltage

**0104**

Capacitance

**K**

Tolerance

**--**

Suffix



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### PERFORMANCE CHARACTERISTICS

|                    |                                                   |
|--------------------|---------------------------------------------------|
| Climatic Category  | 55/100/56 Performance Class 2                     |
| Capacitance Range  | $C_R$ 1nF to 2.2μF (E12)                          |
| Tolerance on $C_R$ | ±5%; ±10%<br>(other values on request)            |
| Nominal Voltages   | VR_ 63/100/250/400/630V<br>VR~ 40/63/160/200/220V |
| Category Voltage   | $V_C = 0.8V_R$ at 100°C                           |
| Test Voltage       | $V_e = 1.6V_R/2s$ at 25°C                         |

#### • Tangent of Loss Angle: D.F.

| Measurement Frequency | Capacitance       | DF: Performance Category 2 |
|-----------------------|-------------------|----------------------------|
| 1kHz                  | $C_R \leq 1\mu F$ | $\leq 1.0\%$               |
| 100 Hz                | $C_R > 1\mu F$    | $\leq 1.0\%$               |

#### • Insulation Resistance: IR

| Measuring Points             | $C_R \leq 0.33\mu F$ |                  | $C_R > 0.33\mu F$        |                  |
|------------------------------|----------------------|------------------|--------------------------|------------------|
|                              | IR min (GΩ)          |                  | IR * $C_R$ min (MΩ * μF) |                  |
|                              | Performance Class 2  |                  | Performance Class 2      |                  |
| Between Terminals            | $V_{R_L} \leq 100V$  | $V_{R_L} > 100V$ | $V_{R_L} \leq 100V$      | $V_{R_L} > 100V$ |
|                              | 3.75                 | 7.5              | 1.25                     | 2.5              |
| Between Terminals and Ground | $\geq 30,000 \Omega$ |                  |                          |                  |

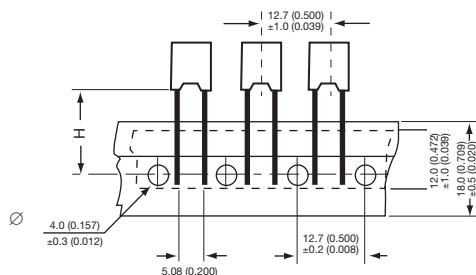
#### • Max voltage gradient

|                 |    |     |     |     |     |
|-----------------|----|-----|-----|-----|-----|
| $V_R$           | 63 | 100 | 250 | 400 | 630 |
| $(dv/dt)_R$ max | 38 | 100 | 250 | 400 | 630 |

### PACKAGING

millimeters (inches)

|   | Panasert                                | Avisert                                  |
|---|-----------------------------------------|------------------------------------------|
| H | $16.5 \pm 0.50$<br>( $0.65 \pm 0.020$ ) | $19.5 \pm 0.50$<br>( $0.768 \pm 0.020$ ) |



Thermoadhesive tape ▲

(Other sizes according to standard CEI : 286-2)  
Dimensions: millimeters (inches)

| Case     | Quantity    |            |             |            |          |                    |
|----------|-------------|------------|-------------|------------|----------|--------------------|
|          | Reel        |            | Ammopack    |            | Bulk     |                    |
| Suffix x | DB panasert | DD avisert | DA panasert | DC avisert | USA Std. | Europe / Asia Std. |
| 01       | 2500        |            | 2500        |            | 1000     | 5000               |
| 02       | 1800        |            | 2000        |            | 1000     | 3800               |
| 07       | 1200        |            | 1250        |            | 1000     | 2500               |
| 06       | 900         |            | 1100        |            | 1000     | 1500               |
| 05       | 900         |            | 1100        |            | 1000     | 1500               |
| 04       | 750         |            | 750         |            | 1000     | 1000               |

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### CAPACITANCE VALUES ( $C_R$ ) and NOMINAL VOLTAGES ( $V_R$ )

| Capacitance Range ( $C_R$ ) | Reference                      |                                |                                |                                |                           |
|-----------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|---------------------------|
|                             | BF or BQ                       |                                |                                |                                |                           |
|                             | $V_R / V_{R-}$                 |                                |                                |                                |                           |
|                             | 63/40 (voltage code: D)        | 100/63 (voltage code: E)       | 250/160 (voltage code: G)      | 400/200 (voltage code: I)      | 630/230 (voltage code: K) |
| 1,000 pF                    | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01              |
| 1,200                       | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   |                           |
| 1,500                       | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   | BF02 or BQ02              |
| 1,800                       | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   |                           |
| 2,200 pF                    | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   | BF02 or BQ02              |
| 2,700                       | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   |                           |
| 3,300                       | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   | BF07 or BQ07              |
| 3,900                       | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   |                           |
| 4,700 pF                    | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   | BF07 or BQ07              |
| 5,600                       | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   |                           |
| 6,800                       | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   | BF06 or BQ06              |
| 8,200                       | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   |                           |
| 10,000 pF                   | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   | BF05 or BQ05              |
| 12,000                      | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   | BF02/****BF01 or BQ02/****BQ01 |                           |
| 15,000                      | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   | BF02/****BF01 or BQ02/****BQ01 |                           |
| 18,000                      | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   | BF02/****BF01 or BQ02/****BQ01 |                           |
| 22,000                      | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   | BF02 or BQ02                   |                           |
| 27,000                      | BF01 or BQ01                   | BF01 or BQ01                   | BF01 or BQ01                   | BF07/****BF02 or BQ07/****BQ02 | BF05 or BQ05              |
| 33,000                      | BF01 or BQ01                   | BF01 or BQ01                   | BF02 or BQ02                   | BF07/****BF02 or BQ07/****BQ02 |                           |
| 39,000                      | BF01 or BQ01                   | BF01 or BQ01                   | BF02/****BF01 or BQ02/****BQ01 | BF07 or BQ07                   | BF05 or BQ05              |
| 47,000 pF                   | BF01 or BQ01                   | BF01 or BQ01                   | BF02 or BQ02                   | BF06 or BQ06                   |                           |
| 56,000                      | BF01 or BQ01                   | BF01 or BQ01                   | BF07 or BQ07                   |                                |                           |
| 68,000                      | BF01 or BQ01                   | BF01 or BQ01                   | BF07 or BQ07                   |                                |                           |
| 82,000                      | BF01 or BQ01                   | BF01 or BQ01                   | BF07 or BQ07                   |                                |                           |
| 100 nF                      | BF01 or BQ01                   | BF01 or BQ01                   | BF07 or BQ07                   |                                |                           |
| 120                         | BF01 or BQ01                   | BF01 or BQ01                   | BF06/****BF07 or BQ06/****BQ07 |                                |                           |
| 150                         | BF01 or BQ01                   | BF01 or BQ01                   | BF06 or BQ06                   |                                |                           |
| 180                         | BF01 or BQ01                   | BF02 or BQ02                   |                                |                                |                           |
| 220 nF                      | BF01 or BQ01                   | BF02 or BQ02                   | BF05 or BQ05                   |                                |                           |
| 270                         | BF02 or BQ02                   | BF07/****BF02 or BQ07/****BQ02 |                                |                                |                           |
| 330                         | BF02/****BF01 or BQ02/****BQ01 |                                |                                |                                |                           |
| 390                         | BF02 or BQ02                   | BF07 or BQ07                   |                                |                                |                           |
| 470 nF                      | BF02 or BQ02                   | BF07 or BQ07                   |                                |                                |                           |
| 560                         | BF07 or BQ07                   | BF05/****BF06 or BQ05/****BQ06 |                                |                                |                           |
| 680                         | BF07 or BQ07                   | BF05/****BF06 or BQ05/****BQ06 |                                |                                |                           |
| 820                         | BF07 or BQ07                   | BF05/****BF06 or BQ05/****BQ06 |                                |                                |                           |
| 1 $\mu$ F                   | BF07 or BQ07                   | BF05 or BQ05                   |                                |                                |                           |
| 1.5 $\mu$ F                 | BF05* or BQ05*                 |                                |                                |                                |                           |
| 2.2 $\mu$ F                 | BF05** or BQ05**               |                                |                                |                                |                           |

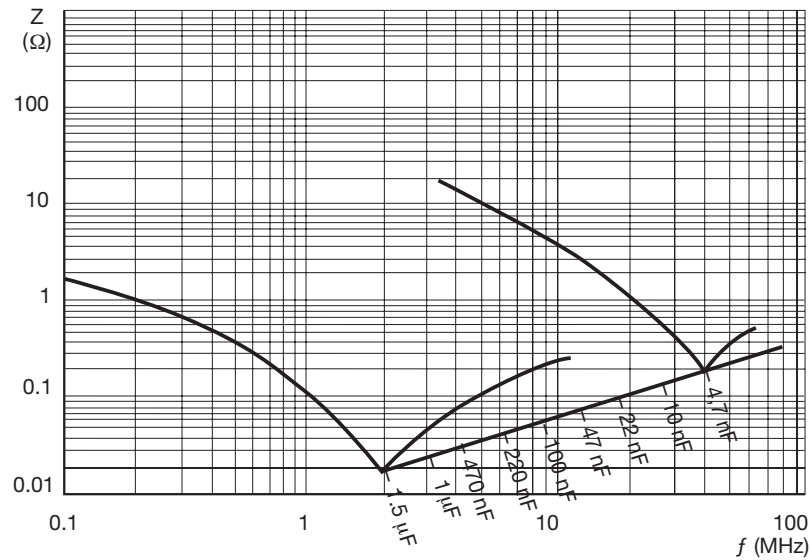
\*Upon request - no change

\*\*Upon request & only available 50 V ( $V_R$ ) - no change

\*\*\*\*New Case size reduction: BF02 to BF 01, BF07 to BF02, BF06 to BF07, BF04 to BF05, BF05 to BF06

### CHARACTERISTICS CURVES

Influence of the frequency on the impedance (room temperature).



Nominal RMS voltage vs. frequency (room temperature) allowing a  $10^\circ\text{C}$  increase of the external temperature of the box.

