

## RF Power Plate Capacitors with Contoured Rim, Class 1 Ceramic



### FEATURES

- Low losses
- High reliability
- Wide range of capacitance values

### APPLICATIONS

- Induction and dielectric heating
- Antenna units
- Filter, bypass and coupling circuits

### QUICK REFERENCE DATA

| DESCRIPTION               | VALUE                        |        |        |        |                                |        |        |        |                            |        |        |        |                                |        |        |        |        |
|---------------------------|------------------------------|--------|--------|--------|--------------------------------|--------|--------|--------|----------------------------|--------|--------|--------|--------------------------------|--------|--------|--------|--------|
| Ceramic Class             | 1                            |        |        |        |                                |        |        |        |                            |        |        |        |                                |        |        |        |        |
| Ceramic Dielectric        | R7, R16, R42, R85, R230      |        |        |        |                                |        |        |        |                            |        |        |        |                                |        |        |        |        |
| Type                      | PA 70, PC 70, PD 70          |        |        |        | PA 100, PC 100, PD 100, PE 100 |        |        |        | PA140, PC140, PD140, PE140 |        |        |        | PA 200, PC 200, PD 200, PE 200 |        |        |        |        |
| Voltage (V <sub>p</sub> ) | 11 000                       | 12 000 | 13 000 | 14 000 | 11 000                         | 13 000 | 15 000 | 16 000 | 12 000                     | 13 000 | 14 000 | 15 000 | 16 000                         | 12 000 | 13 000 | 14 000 | 15 000 |
| Min. Capacitance (pF)     | 800                          | 80     | 120    | 25     | 1600                           | 160    | 250    | 50     | 3000                       | 600    | 300    | 100    | 3000                           | 400    | 4000   | 300    | 160    |
| Max. Capacitance (pF)     | 800                          | 600    | 500    | 300    | 1600                           | 1200   | 800    | 200    | 3000                       | 2500   | 1600   | 400    | 3000                           | 6000   | 5000   | 3000   | 800    |
| Mounting                  | Screw terminal/band terminal |        |        |        |                                |        |        |        |                            |        |        |        |                                |        |        |        |        |

### MATERIAL

Capacitor elements made from Class 1 ceramic dielectric with noble metal electrodes.

Flexible connection terminals made from copper/brass, silver plated, to allow for series and parallel interconnection

### FINISH

Noble metal electrodes and terminals are protective lacquered. The contoured insulating rim is additionally glazed

### MARKING

Type designator, capacitance value and tolerance, rated peak voltage, ceramic material code, production date code, manufacturer logo.

### ACCESSORIES ADDED

Two screws and washers (PD, PE)

### CAPACITANCE RANGE

25 pF to 6.0 nF

### CAPACITANCE TOLERANCE

< 10 pF:  $\pm 2$  pF;  $\pm 1$  pF;  $\pm 0.5$  pF

$\geq 10$  pF:  $\pm 20$  %;  $\pm 10$  %;  $\pm 5$  %

### CERAMIC DIELECTRIC

- R7 (TCC + 100 ppm/K)
- R16 (TCC + 100 ppm/K)
- R42 (TCC - 250 ppm/K)
- R85 (TCC - 750 ppm/K)
- R230 (TCC - 750 ppm/K)

### RATED VOLTAGE

- 11 kV<sub>p</sub>
- 12 kV<sub>p</sub>
- 13 kV<sub>p</sub>
- 14 kV<sub>p</sub>
- 15 kV<sub>p</sub>
- 16 kV<sub>p</sub>

### DIELECTRIC STRENGTH TEST

200 % of rated voltage, 50 Hz

### DISSIPATION FACTOR

R7: Max. 0.07 %

R16: Max. 0.04 %

R42, R85, R230: Max. 0.05 %

Measuring frequencies:

1 MHz (< 1 nF); 300 kHz or 100 kHz ( $\geq 1$  nF)

### INSULATION RESISTANCE

Min. 10 000 M $\Omega$  (at 25 °C)

### OPERATING TEMPERATURE RANGE

- 55 °C to + 100 °C



| SAP PART NUMBER AND ELECTRICAL DATA |         |                     |                        |                                      |                                      |        |
|-------------------------------------|---------|---------------------|------------------------|--------------------------------------|--------------------------------------|--------|
| PART NUMBER                         | CERAMIC | CAP. VALUES<br>(pF) | RATED VOLTAGE<br>(kVp) | RATED POWER <sup>(1)</sup><br>(kvar) | RATED CURRENT<br>(A <sub>RMS</sub> ) |        |
|                                     |         |                     |                        |                                      | PD                                   | PA, PC |
| TYPE P. 70                          |         |                     |                        |                                      |                                      |        |
| P#0070WJ250##BF1                    | R7      | 25                  | 14                     | 15                                   | 16                                   | 10     |
| P#0070WJ300##BF1                    |         | 30                  |                        |                                      |                                      |        |
| P#0070WJ400##BG1                    | R16     | 40                  | 14                     | 20                                   |                                      |        |
| P#0070WJ500##BG1                    |         | 50                  |                        |                                      |                                      |        |
| P#0070WJ600##BG1                    |         | 60                  |                        |                                      |                                      |        |
| P#0070WF800##BG1                    |         | 80                  |                        |                                      |                                      |        |
| P#0070WJ101##BH1                    | R42     | 100                 | 14                     | 20                                   |                                      |        |
| P#0070WH121##BH1                    |         | 120                 | 13                     |                                      |                                      |        |
| P#0070WH161##BH1                    |         | 160                 |                        |                                      |                                      |        |
| P#0070WJ201##BJ1                    | R85     | 200                 | 14                     | 20                                   |                                      |        |
| P#0070WJ251##BJ1                    |         | 250                 |                        |                                      |                                      |        |
| P#0070WJ301##BJ1                    |         | 300                 |                        |                                      |                                      |        |
| P#0070WH401##BJ1                    |         | 400                 | 13                     |                                      |                                      |        |
| P#0070WH501##BJ1                    |         | 500                 |                        |                                      |                                      |        |
| P#0070WF601##BJ1                    |         | 600                 | 12                     |                                      |                                      |        |
| P#0070WE801##BJ1                    |         | 800                 | 11                     |                                      |                                      |        |

| SAP PART NUMBER AND ELECTRICAL DATA |         |                  |                                  |                                   |                                   |    |        |
|-------------------------------------|---------|------------------|----------------------------------|-----------------------------------|-----------------------------------|----|--------|
| PART NUMBER                         | CERAMIC | CAP. VALUES (pF) | RATED VOLTAGE (kV <sub>P</sub> ) | RATED POWER <sup>(1)</sup> (kvar) | RATED CURRENT (A <sub>RMS</sub> ) |    |        |
|                                     |         |                  |                                  |                                   | PE                                | PD | PA, PC |
| TYPE P. 100                         |         |                  |                                  |                                   |                                   |    |        |
| P#0100BJ500##BF1                    | R7      | 50               | 15                               | 30                                | 35                                | 25 | 15     |
| P#0100BJ600##BF1                    |         | 60               |                                  |                                   |                                   |    |        |
| P#0100BJ800##BG1                    | R16     | 80               | 15                               | 40                                |                                   |    |        |
| P#0100BJ101##BG1                    |         | 100              |                                  |                                   |                                   |    |        |
| P#0100BJ121##BG1                    |         | 120              |                                  |                                   |                                   |    |        |
| P#0100WH161##BG1                    |         | 160              | 13                               |                                   |                                   |    |        |
| P#0100BJ201##BH1                    | R42     | 200              | 15                               | 40                                |                                   |    |        |
| P#0100WJ251##BH1                    |         | 250              | 14                               |                                   |                                   |    |        |
| P#0100WH301##BH1                    |         | 300              | 13                               |                                   |                                   |    |        |
| P#0100WJ401##BJ1                    | R85     | 400              | 14                               | 40                                |                                   |    |        |
| P#0100WJ501##BJ1                    |         | 500              |                                  |                                   |                                   |    |        |
| P#0100WJ601##BJ1                    |         | 600              |                                  |                                   |                                   |    |        |
| P#0100WJ801##BJ1                    |         | 800              |                                  |                                   |                                   |    |        |
| P#0100WH102##BJ1                    |         | 1000             | 13                               |                                   |                                   |    |        |
| P#0100WH122##BJ1                    |         | 1200             |                                  |                                   |                                   |    |        |
| P#0100WE162##BJ1                    |         | 1600             | 11                               |                                   |                                   |    |        |

**Notes**

- # 2<sup>nd</sup> digit: Code letter of terminal version A, C, D, E
- ## 14<sup>th</sup> to 15<sup>th</sup> digit: Capacitance tolerance code  $\pm 20\%$  = 38;  $\pm 10\%$  = 36;  $\pm 5\%$  = 33
- <sup>(1)</sup> The surface temperature during operation must not exceed + 100 °C

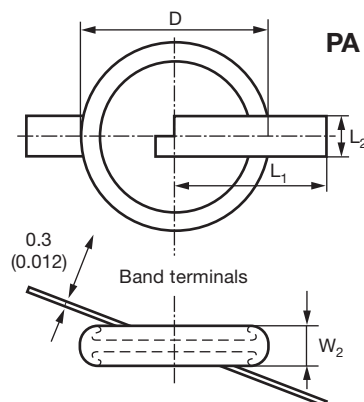
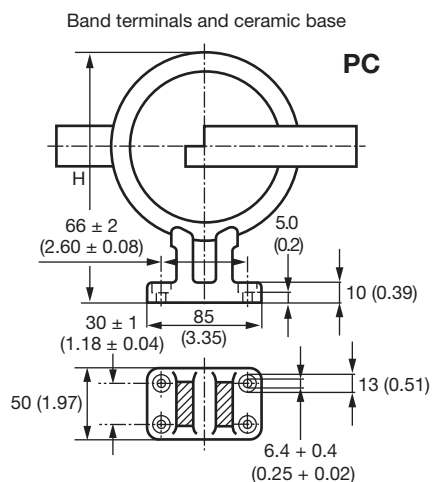
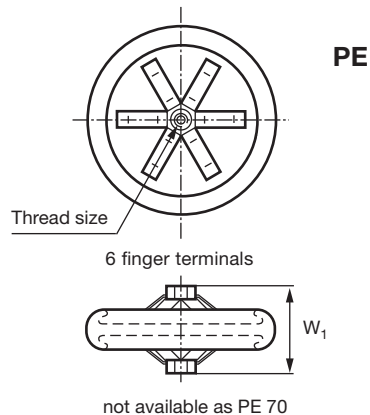
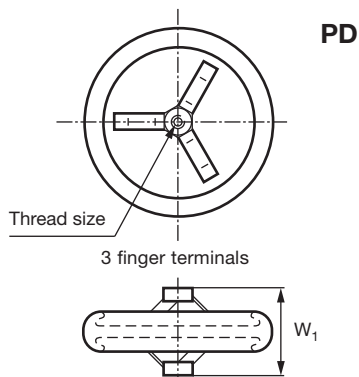


| SAP PART NUMBER AND ELECTRICAL DATA |         |                  |                                  |                                   |                                   |     |        |  |  |  |
|-------------------------------------|---------|------------------|----------------------------------|-----------------------------------|-----------------------------------|-----|--------|--|--|--|
| PART NUMBER                         | CERAMIC | CAP. VALUES (pF) | RATED VOLTAGE (kV <sub>P</sub> ) | RATED POWER <sup>(1)</sup> (kvar) | RATED CURRENT (A <sub>RMS</sub> ) |     |        |  |  |  |
|                                     |         |                  |                                  |                                   | PE                                | PD  | PA, PC |  |  |  |
| TYPE P. 140                         |         |                  |                                  |                                   |                                   |     |        |  |  |  |
| P#0140BJ101##BF1                    | R7      | 100              | 15                               | 67.5                              | 45                                | 30  | 20     |  |  |  |
| P#0140BJ121##BF1                    |         | 120              |                                  |                                   |                                   |     |        |  |  |  |
| P#0140BJ161##BG1                    | R16     | 160              | 15                               | 90                                |                                   |     |        |  |  |  |
| P#0140BJ201##BG1                    |         | 200              |                                  |                                   |                                   |     |        |  |  |  |
| P#0140BJ251##BG1                    |         | 250              |                                  |                                   |                                   |     |        |  |  |  |
| P#0140WJ301##BG1                    |         | 300              | 14                               |                                   |                                   |     |        |  |  |  |
| P#0140BJ401##BH1                    | R42     | 400              | 15                               | 90                                |                                   |     |        |  |  |  |
| P#0140WJ501##BH1                    |         | 500              | 14                               |                                   |                                   |     |        |  |  |  |
| P#0140WH601##BH1                    |         | 600              | 13                               |                                   |                                   |     |        |  |  |  |
| P#0140WH801##BH1                    |         | 800              |                                  |                                   |                                   |     |        |  |  |  |
| P#0140WJ102##BJ1                    | R85     | 1000             | 14                               | 90                                |                                   |     |        |  |  |  |
| P#0140WJ122##BJ1                    |         | 1200             |                                  |                                   |                                   |     |        |  |  |  |
| P#0140WJ162##BJ1                    |         | 1600             |                                  |                                   |                                   |     |        |  |  |  |
| P#0140WH202##BJ1                    |         | 2000             | 13                               |                                   |                                   |     |        |  |  |  |
| P#0140WH252##BJ1                    |         | 2500             |                                  |                                   |                                   |     |        |  |  |  |
| P#0140WF302##BJ1                    |         | 3000             | 12                               |                                   |                                   |     |        |  |  |  |
| P#0140WL302##BK1                    | R230    | 3000             | 16                               | 90                                | 45                                | (2) | (2)    |  |  |  |

| SAP PART NUMBER AND ELECTRICAL DATA |         |                  |                                  |                                   |                                    |    |        |
|-------------------------------------|---------|------------------|----------------------------------|-----------------------------------|------------------------------------|----|--------|
| PART NUMBER                         | CERAMIC | CAP. VALUES (pF) | RATED VOLTAGE (kV <sub>P</sub> ) | RATED POWER <sup>(1)</sup> (kvar) | RATED CURRENT (A <sub> RMS</sub> ) |    |        |
|                                     |         |                  |                                  |                                   | PE                                 | PD | PA, PC |
| TYPE P. 200                         |         |                  |                                  |                                   |                                    |    |        |
| P#0200BJ161##BF1                    | R7      | 160              | 15                               | 112                               | 60                                 | 40 | 25     |
| P#0200BJ201##BF1                    |         | 200              |                                  |                                   |                                    |    |        |
| P#0200BJ251##BF1                    |         | 250              |                                  |                                   |                                    |    |        |
| P#0200WJ301##BF1                    |         | 300              | 14                               |                                   |                                    |    |        |
| P#0200WF401##BF1                    |         | 400              | 12                               |                                   |                                    |    |        |
| P#0200BJ501##BG1                    | R16     | 500              | 15                               | 150                               |                                    |    |        |
| P#0200BJ601##BG1                    |         | 600              |                                  |                                   |                                    |    |        |
| P#0200BJ801##BH1                    | R42     | 800              | 15                               | 150                               |                                    |    |        |
| P#0200WJ102##BH1                    |         | 1000             | 14                               |                                   |                                    |    |        |
| P#0200WJ122##BH1                    |         | 1200             |                                  |                                   |                                    |    |        |
| P#0200WJ162##BH1                    |         | 1600             |                                  |                                   |                                    |    |        |
| P#0200WJ202##BJ1                    | R85     | 2000             | 14                               | 150                               |                                    |    |        |
| P#0200WJ252##BJ1                    |         | 2500             |                                  |                                   |                                    |    |        |
| P#0200WJ302##BJ1                    |         | 3000             |                                  |                                   |                                    |    |        |
| P#0200WH402##BJ1                    |         | 4000             | 13                               |                                   |                                    |    |        |
| P#0200WH502##BJ1                    |         | 5000             |                                  |                                   |                                    |    |        |
| P#0200WF602##BJ1                    |         | 6000             | 12                               |                                   |                                    |    |        |

**Notes**

- # 2<sup>nd</sup> digit: Code letter of terminal version A, C, D, E
- ## 14<sup>th</sup> to 15<sup>th</sup> digit: Capacitance tolerance code  $\pm 20\% = 38$ ;  $\pm 10\% = 36$ ;  $\pm 5\% = 33$
- <sup>(1)</sup> The surface temperature during operation must not exceed + 100 °C
- <sup>(2)</sup> Only PE type available

**DIMENSIONS** in millimeters (inches)


| TYPE               | PA 70<br>PC 70<br>PD 70<br>(2) | PA 100<br>PC 100<br>PD 100<br>PE 100 | PA 140<br>PC 140<br>PD 140<br>PE 140 | PA 200<br>PC 200<br>PD 200<br>PE 200 |
|--------------------|--------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Diameter $D_{max}$ | 70 (2.76)                      | 100 (3.52)                           | 140 (5.51)                           | 200 (7.87)                           |
| Thread size        | M6                             | M8                                   | M8                                   | M10                                  |
| Width $W_1$        | $35 \pm 1$ (1.38 $\pm$ 0.04)   | $40 \pm 1$ (1.58 $\pm$ 0.04)         | $40 \pm 1$ (1.58 $\pm$ 0.04)         | $45 \pm 1$ (1.77 $\pm$ 0.04)         |
| Width $W_2$ (1)    | 30 (1.81)                      | 30 (1.81)                            | 30 (1.81)                            | 32 (1.26)                            |
| Height H           | 116 (4.57)                     | 146 (5.75)                           | 186 (7.32)                           | 246 (9.69)                           |
| Length $L_1$       | 100 (3.94)                     | 140 (5.51)                           | 140 (5.51)                           | 200 (7.87)                           |
| Length $L_2$       | 15 (0.59)                      | 30 (1.18)                            | 30 (1.18)                            | 30 (1.18)                            |

**Notes**

(1) Dimension  $W_2$  will vary depending upon capacitance

(2) Type PE 70 is not available



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