

## RF Power Plate Capacitors for Higher Voltages Class 1 Ceramic



| QUICK REFERENCE DATA  |                |        |         |        |        |
|-----------------------|----------------|--------|---------|--------|--------|
| DESCRIPTION           | VALUE          |        |         |        |        |
| Ceramic Class         | 1              |        |         |        |        |
| Ceramic Dielectric    | R16, R42, R85  |        |         |        |        |
| Type                  | FPZ 140        |        | PEZ 140 |        |        |
| Voltage ( $V_{pp}$ )  | 27 000         | 30 000 | 15 000  | 25 000 | 30 000 |
| Min. Capacitance (pF) | 200            | 50     | 1500    | 1000   | 600    |
| Max. Capacitance (pF) | 200            | 500    | 2500    | 1000   | 800    |
| Mounting              | Screw 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

Capacitor body completely protective laquered (FPZ)

The contoured insulating rim is additionally glazed (PEZ)

### MARKING

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

### ACCESSORIES ADDED

Two screws and washers

### FEATURES

- Low losses
- High reliability
- High voltage ratings

### APPLICATIONS

- Industrial high frequency appliances
- Medical RF equipment
- Filter, bypass and coupling circuits

### CAPACITANCE RANGE

50 pF to 2.5 nF

### CAPACITANCE TOLERANCE

± 10 %

### CERAMIC DIELECTRICS

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

### RATED VOLTAGE

- 15 kV<sub>pp</sub> (peak-to-peak voltage)
- 25 kV<sub>pp</sub> (peak-to-peak voltage)
- 27 kV<sub>pp</sub> (peak-to-peak voltage)
- 30 kV<sub>pp</sub> (peak-to-peak voltage)

### DIELECTRIC STRENGTH TEST

200 % of rated AC voltage 50 Hz

### DISSIPATION FACTOR

R16: Max. 0.04 %

R42, R85: Max. 0.05 %

Measuring frequencies:

1 MHz ( $C < 1$  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 (pF) | RATED VOLTAGE (kV <sub>PP</sub> ) | RATED VOLTAGE AT 50 °C (kV <sub>DC</sub> ) | RATED VOLTAGE AT 70 °C (kV <sub>DC</sub> ) | RATED POWER <sup>(1)</sup> AT 50 °C (kvar) | RATED POWER <sup>(1)</sup> AT 70 °C (kvar) | RATED CURRENT MAX. (A <sub>RMS</sub> ) |
| <b>TYPE FPZ 140</b>                 |         |                  |                                   |  |  |  |  |  |
| FPZ140WV50036BG1                    | R16     | 50               | 30                                | 25   | 20   | 90   | 60   | 35                                     |
| FPZ140WV10136BG1                    |         | 100              |                                   |  |  |  |  |  |
| FPZ140WT20136BG1                    |         | 200              |                                   |  |  |  |  |  |
| FPZ140WV25136BH1                    | R42     | 250              | 30                                | 25   | 20   | 90   | 60   | 27                                     |
| FPZ140WV30136BH1                    |         | 300              |                                   |  |  |  |  |  |
| FPZ140WV40136BJ1                    | R85     | 400              | 30                                | 25   | 20   | 90   | 60   | 35                                     |
| FPZ140WV50136BJ1                    |         | 500              |                                   |  |  |  |  |  |
| <b>TYPE PEZ 140</b>                 |         |                  |                                   |  |  |  |  |  |
| PEZ140WV60136BJ1                    | R85     | 600              | 30                                | 25   | 25   | 90   | 60   | 35                                     |
| PEZ140WV80136BJ1                    |         | 800              |                                   |  | 20   |  |  |  |
| PEZ140BQ10236BJ1                    |         | 1000             |                                   |  | 17   |  |  |  |
| PEZ140BJ15236BJ1                    |         | 1500             | 15                                | 13   | 10   | 90   | 60   | 45                                     |
| PEZ140BJ20236BJ1                    |         | 2000             |                                   |  |  |  |  |  |
| PEZ140BJ25236BJ1                    |         | 2500             |                                   |  |  |  |  |  |

**Note**

<sup>(1)</sup> The surface temperature during operation must not exceed + 100 °C

| DIMENSIONS in millimeters (inches) |                         |                         |                         |  |   |
|------------------------------------|-------------------------|-------------------------|-------------------------|--|---|
|                                    |                         |                         |                         |  |   |
| <b>TYPE</b>                        | <b>FPZ140WV50036BG1</b> | <b>FPZ140WV10136BG1</b> | <b>FPZ140WT20136BG1</b> | <b>FPZ140WV25136BH1, FPZ140WV30136BH1, FPZ140WV40136BJ, FPZ140WV50136BJ1</b> |   |
| Diameter D <sub>max.</sub>         | 140 (5.51) ± 10 %       |                         |                         |  |   |
| Width W <sub>1</sub>               | 52 ± 3 (2.05 ± 0.12)    |                         | 50 ± 3 (2.97 ± 0.12)    | 52 ± 3 (2.05 ± 0.12)   |   |
| Width W <sub>2</sub>               | 33 ± 3 (1.30 ± 0.12)    | 29 ± 3 (1.14 ± 0.12)    | 27 ± 3 (1.06 ± 0.12)    | 29 ± 3 (1.14 ± 0.12)   |   |
| Thread size                        | M8                      |                         |                         |  |   |
| <b>TYPE</b>                        | <b>PEZ140WV60136BJ1</b> | <b>PEZ140WV80136BJ1</b> | <b>PEZ140BQ10236BJ1</b> | <b>PEZ140BJ15236BJ1</b>  | <b>PEZ140BJ20236BJ1, PEZ140BJ25236BJ1</b> |
| Diameter D <sub>max.</sub>         | 140 (5.51) ± 10 %       |                         |                         |  |   |
| Width W <sub>1</sub>               | 52 ± 3 (2.05 ± 0.12)    | 51 ± 3 (2.01 ± 0.12)    | 49 ± 3 (1.79 ± 0.12)    | 46 ± 3 (1.68 ± 0.12)   |   |
| Width W <sub>2</sub>               | 30 ± 3 (1.18 ± 0.12)    |                         |                         | 27 ± 3 (1.06 ± 0.12)   | 26 ± 3 (1.02 ± 0.12)                      |
| Thread size                        | M8                      |                         |                         |  |   |



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