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

| QUICK REFERENCE DATA | | |
|---|---|---|
| DESCRIPTION | VALUE | |
| Ceramic Class | 1 | |
| Ceramic Dielectric | R85 | |
| Type | FPE 200 | FPE 210 |
| Voltage ($V_p$) | 30 000 | |
| Min. Capacitance (pF) | 1000 | 1500 |
| Max. Capacitance (pF) | 1000 | 1500 |
| Mounting | Screw terminal | |

## MATERIAL

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

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

## MARKING

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

## FINISH

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

## FEATURES

- Low losses
- High reliability
- High voltage ratings

## APPLICATIONS

These high technology are designed for usage in high frequency heating and welding equipment where high voltage ratings are required.

## CAPACITANCE RANGE

1000 pF to 1500 pF

## CAPACITANCE TOLERANCE

± 20 %, ± 10 %

## CERAMIC DIELECTRIC

R85 (TCC - 750 ppm/K)

## RATED VOLTAGE

30 $kV_p$ (= RF peak voltage + DC voltage)

## DIELECTRIC STRENGTH TEST

50 000 $V_{DC}$, 5 minutes
30 000 $V_{AC}$, 50 Hz, 5 minutes

## DISSIPATION FACTOR

Max. 0.05 %

Measuring frequencies:
300 kHz or 100 kHz

## INSULATION RESISTANCE

Min. 10 000 MΩ (at 25 °C)

## OPERATING TEMPERATURE RANGE

-55 °C to +100 °C

## SAP PART NUMBER AND ELECTRICAL DATA

| PART NUMBER | CERAMIC | CAP. VALUE (pF) | RATED VOLTAGE (1) ($kV_p$) | RATED POWER (2) (kvar) | RATED CURRENT ($A_{RMS}$) |
|---|---|---|---|---|---|
| FPE200WV102##BJ1 | R85 | 1000 | 30 | 160 | 60 |
| FPE210WV152##BJ1 | | 1500 | | 90 | 90 |

**Notes**

- ## 14th to 15th digit: capacitance tolerance code ± 20 % = 38, ± 10 % = 36

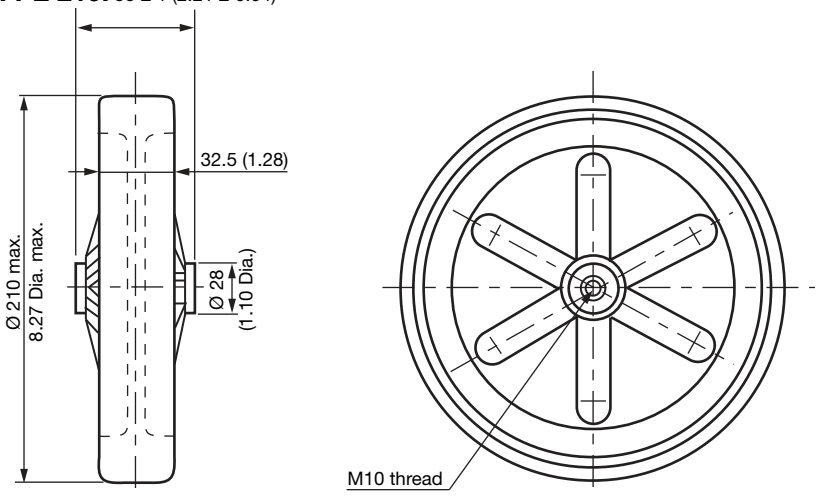
(1) Rated voltage = RF peak value + DC voltage when min. 80 % $U_{DC}$

(2) The surface temperature during operation must not exceed +100 °C

## DIMENSIONS in millimeters (inches)

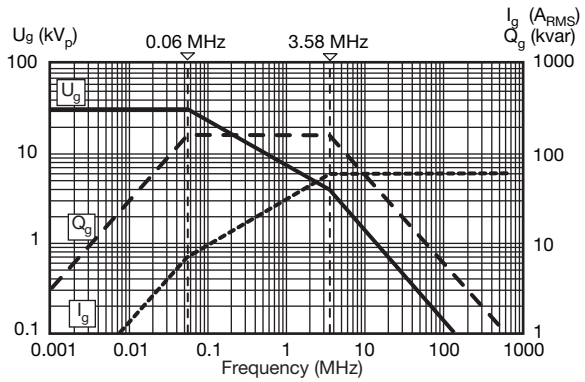
**FPE 200:** 73 ± 2 (2.87 ± 0.08)

**FPE 210:** 56 ± 1 (2.21 ± 0.04)

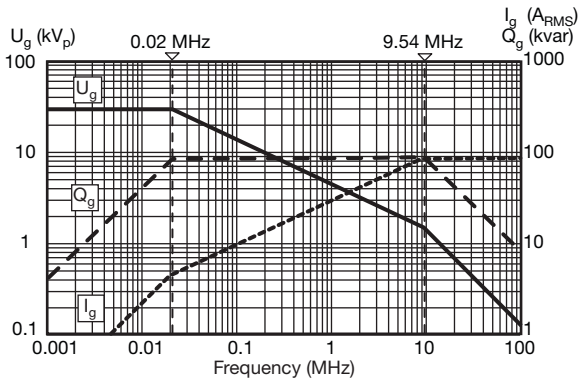



## DERATING DIAGRAMS

**FPE200WV102##BJ1**




**FPE210WV152##BJ1**




## RELATED DOCUMENTS

| | |
|---|---|
| General Information | www.vishay.com/doc?22071 |

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