

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



### 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 (≥ 1 nF)

### INSULATION RESISTANCE

Min. 10 000 MΩ (at 25 °C)

### OPERATING TEMPERATURE RANGE

- 55 °C to + 100 °C

### QUICK REFERENCE DATA

DESCRIPTION	VALUE				
Ceramic Class	1				
Ceramic Dielectric	R16, R42, R85				
Type	FPZ 140		PEZ 140		
Voltage (V <sub>pp</sub> )	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



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				



## **Disclaimer**

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.