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	100	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 lacquered (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

100 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_{pp} (peak-to-peak voltage)
- 25 kV_{pp} (peak-to-peak voltage)
- 27 kV_{pp} (peak-to-peak voltage)
- 30 kV_{pp} (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

For technical questions, contact: powcap@vishay.com

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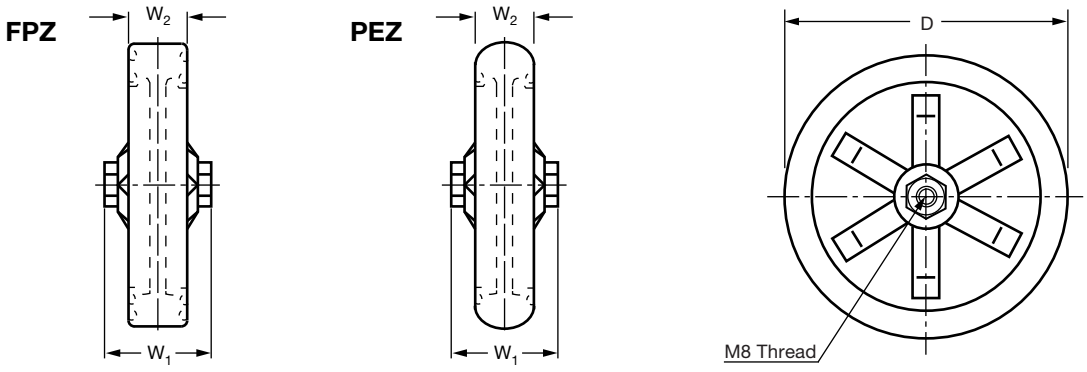
SAP PART NUMBER AND ELECTRICAL DATA

PART NUMBER	CERAMIC	CAP. VALUES (pF)	RATED VOLTAGE (kV_{PP})	RATED VOLTAGE AT 50 °C (kV_{DC})	RATED VOLTAGE AT 70 °C (kV_{DC})	RATED POWER [1] AT 50 °C (kVAR)	RATED POWER [1] AT 70 °C (kVAR)	RATED CURRENT MAX. (A_{RMS})
TYPE FPZ 140								
FPZ140WV10136BG1	R16	100	30	25	20	90	60	35
FPZ140WT20136BG1		200	27					27
FPZ140WV25136BH1	R42	250	30					
FPZ140WV30136BH1		300						
FPZ140WV40136BJ1	R85	400						35
FPZ140WV50136BJ1		500						
TYPE PEZ 140								
PEZ140WV60136BJ1	R85	600	30	25	25	90	60	35
PEZ140WV80136BJ1		800			20			45
PEZ140BQ10236BJ1		1000	25	21	17			
PEZ140BJ15236BJ1		1500	15	13	10			
PEZ140BJ20236BJ1		2000						
PEZ140BJ25236BJ1		2500						

Note

[1] The surface temperature during operation must not exceed +100 °C

DIMENSIONS in millimeters (inches)



TYPE	FPZ140WV10136BG1	FPZ140WT20136BG1	FPZ140WV25136BH1, FPZ140WV30136BH1, FPZ140WV40136BJ, FPZ140WV50136BJ1	PEZ140WV60136BJ1
Diameter $D_{max.}$	140 (5.51) ± 10 %			
Width W_1	52 ± 3 (2.05 ± 0.12)	50 ± 3 (2.97 ± 0.12)	52 ± 3 (2.05 ± 0.12)	52 ± 3 (2.05 ± 0.12)
Width W_2	29 ± 3 (1.14 ± 0.12)	27 ± 3 (1.06 ± 0.12)	29 ± 3 (1.14 ± 0.12)	30 ± 3 (1.18 ± 0.12)
Thread size	M8			

TYPE	PEZ140WV80136BJ1	PEZ140BQ10236BJ1	PEZ140BJ15236BJ1	PEZ140BJ20236BJ1, PEZ140BJ25236BJ1
Diameter $D_{max.}$	140 (5.51) ± 10 %			
Width W_1	51 ± 3 (2.01 ± 0.12)	49 ± 3 (1.79 ± 0.12)	46 ± 3 (1.68 ± 0.12)	
Width W_2	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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