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 coupling
- Filter, bypass and coupling circuits

LINKS TO ADDITIONAL RESOURCES

3D Models

QUICK REFERENCE DATA																	
DESCRIPTION	VALUE																
Ceramic class	1																
Ceramic dielectric	R7, R16, R42, R85				R7, R16, R42, R85				R7, R16, R42, R85, R230					R7, R16, R42, R85			
Type	PD 70				PE 100				PE 140					PE 200			
Voltage (V_p)	11 000	12 000	13 000	14 000	11 000	13 000	14 000	15 000	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																

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 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: ± 2 pF; ± 1 pF; ± 0.5 pF

≥ 10 pF: ± 20 %; ± 10 %; ± 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_p
- 12 kV_p
- 13 kV_p
- 14 kV_p
- 15 kV_p
- 16 kV_p

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 (≥ 1 nF)

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. VALUES (pF)**	**RATED VOLTAGE (kV_P)**	**RATED POWER [1] (kvar)**	**RATED CURRENT (A_{RMS})**
TYPE PD0070					
PD0070WJ250##BF1	R7	25	14	15	16
PD0070WJ300##BF1		30			
PD0070WJ400##BG1	R16	40	14	20	
PD0070WJ500##BG1		50			
PD0070WJ600##BG1		60			
PD0070WF800##BG1		80	12		
PD0070WJ101##BH1	R42	100	14	20	
PD0070WH121##BH1		120	13		
PD0070WH161##BH1		160			
PD0070WJ201##BJ1	R85	200	14	20	
PD0070WJ251##BJ1		250			
PD0070WJ301##BJ1		300			
PD0070WH401##BJ1		400	13		
PD0070WH501##BJ1		500			
PD0070WF601##BJ1		600	12		
PD0070WE801##BJ1		800	11		
TYPE PE0100					
PE0100BJ500##BF1	R7	50	15	30	35
PE0100BJ600##BF1		60			
PE0100BJ800##BG1	R16	80	15	40	
PE0100BJ101##BG1		100			
PE0100BJ121##BG1		120			
PE0100WH161##BG1		160	13		
PE0100BJ201##BH1	R42	200	15	40	
PE0100WJ251##BH1		250	14		
PE0100WH301##BH1		300	13		
PE0100WJ401##BJ1	R85	400	14	40	
PE0100WJ501##BJ1		500			
PE0100WJ601##BJ1		600			
PE0100WJ801##BJ1		800			
PE0100WH102##BJ1		1000	13		
PE0100WH122##BJ1		1200			
PE0100WE162##BJ1		1600	11		

Notes

- ## 14th to 15th digit: capacitance tolerance code ± 20 % = 38; ± 10 % = 36; ± 5 % = 33
- RoHS-compliant parts on request

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

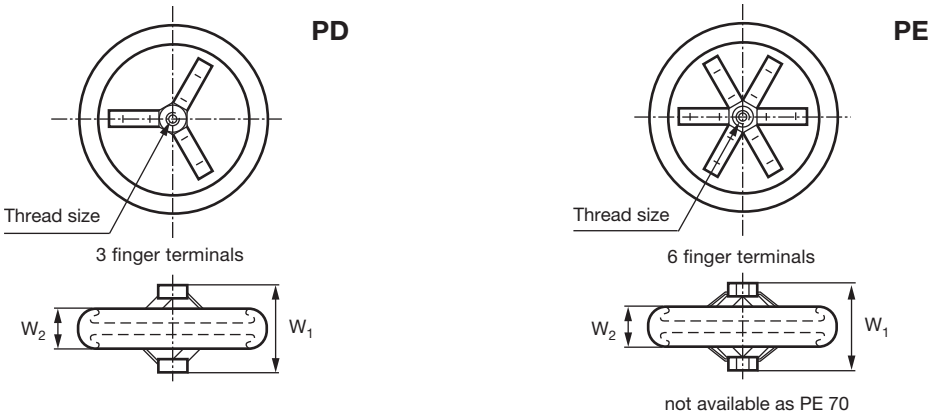
SAP PART NUMBER AND ELECTRICAL DATA					
PART NUMBER	**CERAMIC**	**CAP. VALUES (pF)**	**RATED VOLTAGE (kV_P)**	**RATED POWER [1] (kvar)**	**RATED CURRENT (A_{RMS})**
TYPE PE0140					
PE0140BJ101##BF1	R7	100	15	67.5	45
PE0140BJ121##BF1		120			
PE0140BJ161##BG1	R16	160	15	90	
PE0140BJ201##BG1		200			
PE0140BJ251##BG1		250			
PE0140WJ301##BG1		300	14		
PE0140BJ401##BH1	R42	400	15	90	
PE0140WJ501##BH1		500	14		
PE0140WH601##BH1		600	13		
PE0140WH801##BH1		800			
PE0140WJ102##BJ1	R85	1000	14	90	
PE0140WJ122##BJ1		1200			
PE0140WJ162##BJ1		1600			
PE0140WH202##BJ1		2000	13		
PE0140WH252##BJ1		2500			
PE0140WF302##BJ1		3000	12		
PE0140WL302##BK1	R230	3000	16	90	45
TYPE PE0200					
PE0200BJ161##BF1	R7	160	15	112	60
PE0200BJ201##BF1		200			
PE0200BJ251##BF1		250			
PE0200WJ301##BF1		300	14		
PE0200WF401##BF1		400	12		
PE0200BJ501##BG1	R16	500	15	150	
PE0200BJ601##BG1		600			
PE0200BJ801##BH1	R42	800	15	150	
PE0200WJ102##BH1		1000	14		
PE0200WJ122##BH1		1200			
PE0200WJ162##BH1		1600			
PE0200WJ202##BJ1	R85	2000	14	150	
PE0200WJ252##BJ1		2500			
PE0200WJ302##BJ1		3000			
PE0200WH402##BJ1		4000	13		
PE0200WH502##BJ1		5000			
PE0200WF602##BJ1		6000	12		

Notes

- ## 14th to 15th digit: capacitance tolerance code ± 20 % = 38; ± 10 % = 36; ± 5 % = 33
- RoHS-compliant parts on request

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

DIMENSIONS in millimeters (inches)



TYPE	PD 70 (2)	PE 100 (3)	PE 140 (3)	PE 200 (3)
Diameter D	70 ± 2 (2.76 ± 0.08)	100 ± 2 (3.94 ± 0.08)	140 ± 3 (5.51 ± 0.12)	200 ± 4 (7.87 ± 0.16)
Thread size	M6	M8	M8	M10
Width W_1	35 ± 1 (1.38 ± 0.04)	40 ± 1 (1.58 ± 0.04)	40 ± 1 (1.58 ± 0.04)	45 ± 1 (1.77 ± 0.04)
Width $W_{2\ max.}$ (1)	31 (1.22)	31 (1.22)	31 (1.22)	32 (1.26)

Notes

(1) Dimension W_2 will vary depending upon capacitance

(2) Type PE 70 is not available

(3) Types PD 100, PD 140, and PD 200 are not available

RELATED DOCUMENTS

General Information	www.vishay.com/doc?22071

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