

## RF Power Plate Capacitors with Contoured Rim, Class 1 Ceramic



### FEATURES

- Small size
- High reliability
- Wide range of capacitance values

### APPLICATIONS

- Induction and dielectric heating
- Antenna units
- Filter, bypass and coupling circuits

### CAPACITANCE RANGE

5.6 pF to 2.0 nF

### CAPACITANCE TOLERANCE

< 10 pF:  $\pm 2$  pF,  $\pm 1$  pF,  $\pm 0.5$  pF  
 $\geq 10$  pF:  $\pm 20$  %,  $\pm 10$  %,  $\pm 5$  %

### CERAMIC DIELECTRIC

- R7 (TCC + 100 ppm/K)
- R16 (TCC + 100 ppm/K)
- R42 (TCC - 250 ppm/K)
- R85 (TCC - 750 ppm/K)
- N2200 (TCC - 2200 ppm/K)

### RATED VOLTAGE

- 5.0 kV<sub>p</sub>
- 7.5 kV<sub>p</sub>

### DIELECTRIC STRENGTH TEST

200 % of rated voltage, 50 Hz

### DISSIPATION FACTOR

R7: max. 0.07 %  
 R16: max. 0.04 %  
 R42, R85: max. 0.05 %  
 N2200: max. 0.10 %  
 Measuring frequencies:  
 1 MHz (< 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

### QUICK REFERENCE DATA

DESCRIPTION	VALUE				
Ceramic Class	1				
Ceramic Dielectric	R7, R16, R42, R85, N2200				
Type	PS 20	PS 30	PS 40	PS 55	
Voltage (V <sub>p</sub> )	5000	5000	7500	5000	5000
Min. Capacitance (pF)	5.6	10	120	22	22
Max. Capacitance (pF)	270	560	120	1000	2000
Mounting	Screw terminal				

### MATERIAL

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

Connection terminals:  
 made from copper / brass, silver plated.

### FINISH

Capacitor body completely protective lacquered.

### MARKING

Type designator, capacitance value and tolerance, rated peak 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>p</sub> )	RATED POWER <sup>(1)</sup> (kvar)	RATED CURRENT (A <sub>RMS</sub> )	
<b>TYPE PS 20</b>						
PS0020BE956##BF1	R7	5.6	5.0	5.0	5.0	
PS0020BE968##BF1		6.8				
PS0020BE982##BG1	R16	8.2		10		10
PS0020BE100##BG1		10				
PS0020BE120##BG1		12				
PS0020BE150##BG1		15				
PS0020BE180##BH1	R42	18		15		15
PS0020BE200##BH1		20				
PS0020BE220##BH1		22				
PS0020BE270##BH1		27				
PS0020BE330##BH1		33				
PS0020BE390##BJ1	R85	39		25		25
PS0020BE470##BJ1		47				
PS0020BE560##BJ1		56				
PS0020BE680##BJ1		68				
PS0020BE820##BJ1		82				
PS0020BE101##BJ1	N2200	100		10		10
PS0020BE121##AP1		120				
PS0020BE151##AP1		150				
PS0020BE181##AP1		180				
PS0020BE221##AP1		220				
PS0020BE271##AP1	270					
<b>TYPE PS 30</b>						
PS0030BE100##BF1	R7	10	5.0	8.0	10	
PS0030BE120##BF1		12				
PS0030BE150##BF1		15				
PS0030BE180##BF1		18				
PS0030BE200##BG1	R16	20		15		15
PS0030BE220##BG1		22				
PS0030BE270##BG1		27				
PS0030BE300##BG1		30				
PS0030BE330##BG1	R42	33		20		20
PS0030BE390##BG1		39				
PS0030BE470##BH1		47				
PS0030BE560##BH1		56				
PS0030BE680##BH1	R85	68	7.5	30		
PS0030BE820##BH1		82				
PS0030BE101##BJ1		100				
PS0030VZ121##BJ1		120				
PS0030BE151##BJ1	N2200	150	5.0	15		
PS0030BE181##BJ1		180				
PS0030BE201##BJ1		200				
PS0030BE221##BJ1		220				
PS0030BE271##AP1	N2200	270	15	15		
PS0030BE331##AP1		330				
PS0030BE391##AP1		390				
PS0030BE471##AP1		470				
PS0030BE561##AP1	560					

**Notes**

- # 14<sup>th</sup> to 15<sup>th</sup> digit: capacitance tolerance code < 10 pF: ± 2 pF = 15; ± 1 pF = 14; ± 0.5 pF = 13; ≥ 10 pF: ± 20 % = 38; ± 10 % = 36; ± 5 % = 33

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



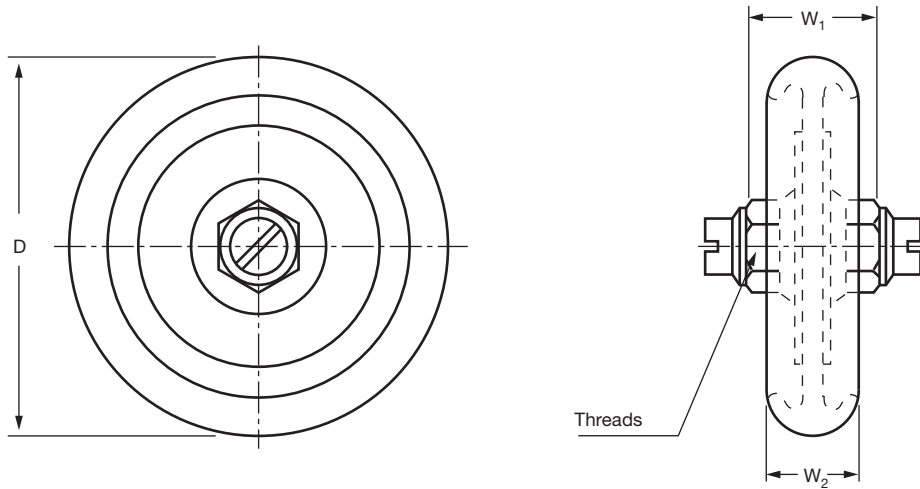
SAP PART NUMBER AND ELECTRICAL DATA					
PART NUMBER	CERAMIC	CAP. VALUES (pF)	RATED VOLTAGE (kV <sub>p</sub> )	RATED POWER <sup>(1)</sup> (kvar)	RATED CURRENT (A <sub>RMS</sub> )
<b>TYPE PS 40</b>					
PS0040BE220##BF1	R7	22	5.0	12	15
PS0040BE270##BF1		27			
PS0040BE300##BG1	R16	30		20	
PS0040BE330##BG1		33			
PS0040BE390##BG1		39			
PS0040BE470##BG1		47			
PS0040BE560##BG1		56			
PS0040BE680##BG1		68			
PS0040BE820##BH1	R42	82		25	
PS0040BE910##BH1		91			
PS0040BE101##BH1		100			
PS0040BE121##BH1		120			
PS0040BE151##BH1	R85	150		35	
PS0040BE181##BJ1		180			
PS0040BE201##BJ1		200			
PS0040BE221##BJ1		220			
PS0040BE241##BJ1		240			
PS0040BE251##BJ1		250			
PS0040BE271##BJ1		270			
PS0040BE331##BJ1		330			
PS0040BE361##BJ1	360	20			
PS0040BE391##BJ1	390				
PS0040BE471##AP1	470				
PS0040BE561##AP1	560				
PS0040BE681##AP1	N2200	680	20		
PS0040BE821##AP1		820			
PS0040BE102##AP1		1000			
<b>TYPE PS 55</b>					
PS0055BE220##BF1	R7	22	5.0	15	18
PS0055BE270##BF1		27			
PS0055BE330##BF1		33			
PS0055BE390##BF1		39			
PS0055BE470##BF1		47			
PS0055BE560##BG1	R16	56		40	
PS0055BE680##BG1		68			
PS0055BE820##BG1		82			
PS0055BE101##BG1		100			
PS0055BE121##BG1	R42	120		55	
PS0055BE151##BH1		150			
PS0055BE181##BH1		180			
PS0055BE221##BH1		220			
PS0055BE271##BH1	R85	270		25	
PS0055BE331##BJ1		330			
PS0055BE391##BJ1		390			
PS0055BE471##BJ1		470			
PS0055BE511##BJ1	N2200	510		25	
PS0055BE561##BJ1		560			
PS0055BE681##BJ1		680			
PS0055BE821##AP1		820			
PS0055BE102##AP1	N2200	1000	25		
PS0055BE122##AP1		1200			
PS0055BE152##AP1		1500			
PS0055BE182##AP1		1800			
PS0055BE202##AP1		2000			

**Notes**

- # 14<sup>th</sup> to 15<sup>th</sup> digit: capacitance tolerance code: ± 20 % = 38; ± 10 % = 36; ± 5 % = 33
- <sup>(1)</sup> The surface temperature during operation must not exceed +100 °C



## DIMENSIONS in millimeters (inches)



TYPE	PS 20	PS 30	PS 40	PS 55
Diameter D	24 ± 1 (0.95 ± 0.04)	34.5 ± 1.5 (1.36 ± 0.06)	44.5 ± 1.5 (1.75 ± 0.06)	56 ± 2 (2.20 ± 0.08)
Thread size	M5	M5	M6	M6
Width W <sub>1</sub> max.	22 (0.87)	22 (0.87)	21 (0.82)	21 (0.82)
Width W <sub>2</sub> max. <sup>(1)</sup>	16 (0.63)	16 (0.63)	15 (0.59)	15 (0.59)

**Note**

<sup>(1)</sup> Dimension W<sub>2</sub> will vary depending upon capacitance

## RELATED DOCUMENTS

General Information	<a href="http://www.vishay.com/doc?22071">www.vishay.com/doc?22071</a>
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