

# Polypropylene Capacitors (KP)

## Humidity Category E

**B 33063-B**
**GP grade**
**Construction**

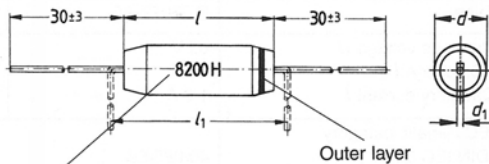
- Wound capacitor
- Central axial leads
- Available on tape

**Features**

- Stabilized mechanical and electrical characteristics due to a special heat treatment

**Application**

- RF and IF filters
- Timing circuits
- Resonant circuits



Legend: Rated capacitance (pF)  
Tolerance (code letter)  
Rated voltage (uncoded or color ring)

Outer layer: Bar or color ring

Length $l_2$	$l_{1\text{min}}$	$d_1$
11.0	15.0	0.6
16.5	20.0	0.8
21.5	25.0	0.8

Rated dc voltage $U_n$	160 V red	630 V black	
Color ring			
Type with marking of revision status and rated voltage	B 33063-B1	B 33063-B6	
Rated capacitance $C_n$	Dimensions (mm)		
Tolerance	pF	$d_{\text{max}} \times l_{\text{max}}$	
$\pm 1 \text{ pF} \hat{=} F$	2 to 20	$d_{\text{max}} \times l_{\text{max}}$	
$\pm 1 \text{ pF}; \pm 5 \%$	> 20 to 40	4.0 x 11.0	
$\pm 1 \text{ pF}; \pm 2.5 \%; \pm 5 \%$	> 40 to 47	4.0 x 11.0	
	> 47 to 100	4.5 x 11.0	
$\pm 1 \%$ $\hat{=} F$	> 100 to 330	4.5 x 11.0	
	> 330 to 1 000	4.5 x 11.0	
	> 1 000 to 1 500	4.5 x 11.0	
	> 1 500 to 2 200	5.0 x 11.0	
	> 2 200 to 3 300	5.7 x 11.0	
	> 3 300 to 7 500	7.8 x 11.0	
	> 7 500 to 8 200	8.1 x 11.0	
	$\pm 2.5 \%$ $\hat{=} H$	> 8 200 to 10 000	8.7 x 11.0
		> 10 000 to 15 000	8.0 x 16.5
		> 15 000 to 22 000	9.5 x 16.5
		> 22 000 to 27 000	10.2 x 16.5
	$\pm 5 \%$ $\hat{=} J$	> 27 000 to 33 000	10.0 x 21.5
> 33 000 to 47 000		11.7 x 21.5	
> 47 000 to 82 000		15.0 x 21.5	
> 82 000 to 100 000		16.5 x 21.5	

The dimensions apply to the highest capacitance value.

Diameters for lower capacitance values can be interpolated.

These capacitors are preferably available on tape. Please refer to chapter "Tape packaging".

### Technical data

Type	B 33063-B1	B 33063-B6																																	
Rated dc voltage $U_R$	160 V	630 V																																	
AC voltage $U_{ac}$	65 V	210 V																																	
Category	$I = 11.0$ mm	1.0 A																																	
current $I_c$	$I = 16.5$ mm	1.2 A																																	
	$I = 21.5$ mm	1.5 A																																	
IEC climatic category (DIN IEC 68-1)	40/085/21																																		
Lower category temperature $T_{min}$	- 40 °C																																		
Upper category temperature $T_{max}$	+ 85 °C																																		
Test duration	21 days																																		
Category values after damp heat test:																																			
Capacitance change $ \Delta C/C $	$\leq (0.75 \% + 0.5 \text{ pF})$																																		
Dissipation factor $\tan \delta_e$	$\leq 1.4 \cdot \text{tabulated value}$																																		
Insulation resistance $R_e$	$\geq 50 \text{ G}\Omega$																																		
Climatic category DIN 40 040	GPE																																		
Capacitance drift $i_c^{1)}$	$\leq (0.3 \% + 0.4 \text{ pF})$																																		
Temperature coefficient $\alpha_c$ of capacitance <sup>1)</sup>	- (100 to 300) · 10 <sup>-9</sup> /K																																		
Dissipation factor $\tan \delta$ (10 <sup>-9</sup> )	<table border="1"> <thead> <tr> <th></th> <th>≤ 100 pF</th> <th>... 1000 pF</th> <th>... 4 700 pF</th> <th>... 22 000 pF</th> <th>... 100 000 pF</th> </tr> </thead> <tbody> <tr> <td>≤ 1 kHz</td> <td>-</td> <td>-</td> <td>0.2</td> <td>0.3</td> <td>0.5</td> </tr> <tr> <td>10 kHz</td> <td>0.2</td> <td>0.3</td> <td>0.3</td> <td>0.4</td> <td>-</td> </tr> <tr> <td>100 kHz</td> <td>0.3</td> <td>0.4</td> <td>0.5</td> <td>-</td> <td>-</td> </tr> <tr> <td>1000 kHz</td> <td>0.4</td> <td>0.7</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table>						≤ 100 pF	... 1000 pF	... 4 700 pF	... 22 000 pF	... 100 000 pF	≤ 1 kHz	-	-	0.2	0.3	0.5	10 kHz	0.2	0.3	0.3	0.4	-	100 kHz	0.3	0.4	0.5	-	-	1000 kHz	0.4	0.7	-	-	-
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Insulation resistance $R_i$ (minimum as-delivered value)	100 GΩ																																		

### Ordering code example

Type	B33063-B1823-H 7				
Revision status, rated voltage	1 ± 160 V				
					Code figure for taping (AMMO pack)
					Capacitance tolerance: H ± 2.5%
					Rated capacitance: 823 ± 82 · 10 <sup>3</sup> pF = 82000 pF

For ordering information refer to page 38.

<sup>1)</sup> for  $C_R \geq 100 \text{ pF}$