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# Film Capacitors

## Metallized Polypropylene Film Capacitors (MKP)

**Series/Type:** B32774H ... B32778H

**Date:** June 2018

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**MKP DC link – high density THB series****Typical applications**

- Frequency converters
- Industrial and high-end power supplies
- Solar inverters

**Climatic**

- Max. operating temperature: 105 °C (case)
- Climatic category (IEC 60068-1:2013):  
40/105/56

**Construction**

- Dielectric: Polypropylene (MKP)
- Plastic case (UL 94 V-0)
- Epoxy resin sealing (UL 94 V-0)

**Features**

- For severe ambient conditions
- High CV product, compact
- Good self-healing properties
- Over-voltage capability
- Low losses with high current capability
- High reliability
- Long useful life
- RoHS-compatible
- AEC-Q200D compliant

**Terminals**

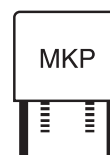
- Parallel wire leads, lead-free tinned
- 2-pin and 4-pin versions
- Standard lead lengths: 6 – 1 mm

**Marking**

Manufacturer's logo and lot number, date code, rated capacitance (coded), capacitance tolerance (code letter) and rated DC voltage

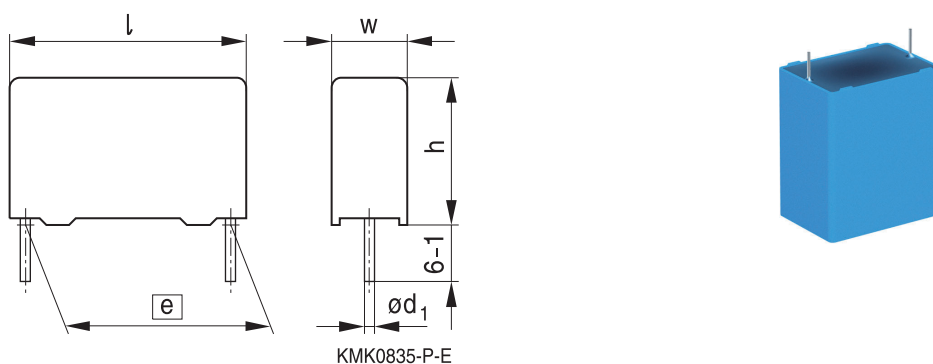
**Delivery mode**

Bulk (untaped)


**Dimensional drawings**

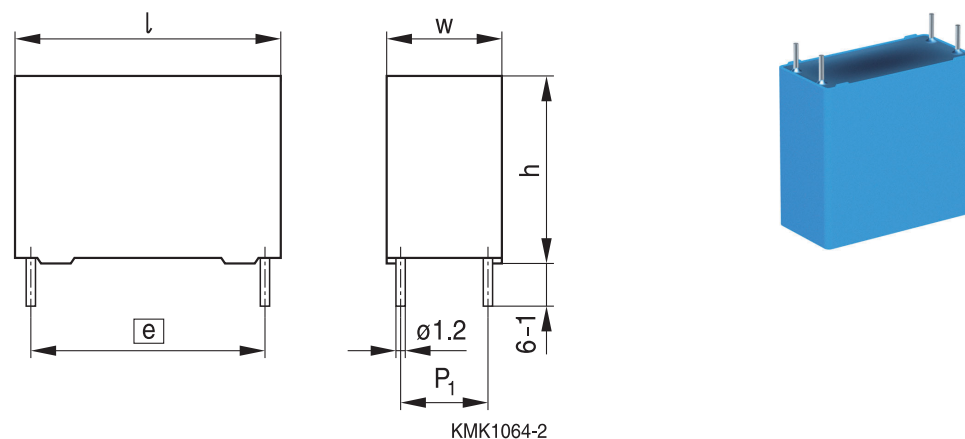
Number of wires	Lead spacing $e \pm 0.4$	Lead diameter $d_1 \pm 0.05$	Type
2-pin	27.5	0.8	B32774H
2-pin	37.5	1.0	B32776H
4-pin	37.5	1.2	B32776H
4-pin	52.5	1.2	B32778H

Dimensions in mm

**Dimensional drawings 2-pin versions**
**B32774H, B32776H**


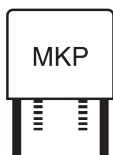
	B32774H	B32776H
Lead spacing $e \pm 0.4$ :	27.5	37.5
Lead diameter $d_1$ :	0.8	1.0

Dimensions in mm

**Dimensional drawings 4-pin versions**
**B32776H, B32778H**


	B32776H	B32778H
Lead spacing $e \pm 0.4$ :	37.5	52.5
Lead diameter $d_1$ :	1.2	1.2

Dimensions in mm

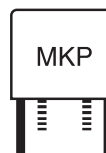


B32774H ... B32778H

MKP DC link – high density THB series

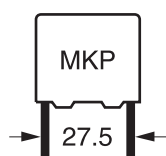
### Overview of available types

Lead spacing	27.5 mm						37.5 mm					
Type	B32774H						B32776H					
Page	6						8					
V <sub>R</sub> (V DC)	450	500	700	800	920	1100	450	500	700	800	920	1100
C <sub>R</sub> (μF)												
1.5												
1.8												
2.2												
2.7												
3.3												
3.9												
4.7												
5.6												
6.8												
8.2												
10												
12												
15												
18												
22												
27												
30												
33												
35												
39												
47												



### Overview of available types

Lead spacing	52.5 mm					
Type	B32778H					
Page	11					
$V_R$ (V DC)	450	500	700	800	920	1100
$C_R$ ( $\mu$ F)						
18						
22						
27						
30						
33						
35						
39						
47						
50						
56						
68						
75						
82						
90						
100						
120						



## B32774H

### MKP DC link – high density THB series

#### Ordering codes and packing units (lead spacing 27.5 mm)

$C_R^{1)}$ $\mu\text{F}$	Max. dimensions $w \times h \times l$ mm	Ordering code (composition see below)	$I_{\text{RMS,max}}^{2)}$ 70 °C 10 kHz A	$\text{ESR}_{\text{typ}}$ 70 °C 10 kHz m $\Omega$	$\text{ESL}_{\text{typ}}^{3)}$ 70 °C 10 kHz nH	$\tan \delta$ max. 1 kHz $10^{-3}$	$\tan \delta$ max. 10 kHz $10^{-3}$	Un- taped pcs./ MOQ
$V_{\text{R,85 °C}} = 450 \text{ V DC}, V_{\text{op,70 °C}} = 450 \text{ V DC}$								
3.3	11.0 × 19.0 × 31.5	B32774H4335+000	3.5	30.4	17.0	1.2	10.7	2352
3.9	11.0 × 21.0 × 31.5	B32774H4395+000	4.0	26.0	17.0	1.2	10.7	2352
4.7	11.0 × 21.0 × 31.5	B32774H4475K000	4.5	22.0	20.0	1.3	10.7	2352
5.6	13.5 × 23.0 × 31.5	B32774H4565+000	5.0	18.5	18.0	1.3	10.8	1932
6.8	13.5 × 23.0 × 31.5	B32774H4685K000	6.0	15.3	21.0	1.3	10.9	1932
8.2	15.0 × 24.5 × 31.5	B32774H4825K000	6.5	12.8	22.0	1.3	11.0	1680
10.0	18.0 × 27.5 × 31.5	B32774H4106+000	8.0	10.7	22.0	1.3	11.1	1428
12.0	18.0 × 27.5 × 31.5	B32774H4126K000	9.0	9.0	25.0	1.3	11.3	1428
$V_{\text{R,85 °C}} = 500 \text{ V DC}, V_{\text{op,70 °C}} = 575 \text{ V DC}$								
3.3	11.0 × 21.0 × 31.5	B32774H5335+000	4.0	25.1	19.0	1.0	8.7	2352
3.9	12.5 × 21.5 × 31.5	B32774H5395K000	4.5	21.3	20.0	1.0	8.7	2100
4.7	13.5 × 23.0 × 31.5	B32774H5475+000	5.5	17.8	20.0	1.0	8.7	1932
5.6	14.0 × 24.5 × 31.5	B32774H5565K000	6.0	15.1	22.0	1.1	8.8	1848
6.8	18.0 × 27.5 × 31.5	B32774H5685+000	7.5	12.5	22.0	1.1	8.9	1428
8.2	18.0 × 27.5 × 31.5	B32774H5825+000	8.0	10.5	25.0	1.1	9.0	1428
10.0	19.0 × 30.0 × 31.5	B32774H5106+000	9.5	10.5	27.0	1.1	9.2	896
$V_{\text{R,85 °C}} = 700 \text{ V DC}, V_{\text{op,70 °C}} = 800 \text{ V DC}$								
2.2	11.0 × 21.0 × 31.5	B32774H8225+000	3.5	33.7	18.0	1.0	7.7	2352
2.7	12.5 × 21.5 × 31.5	B32774H8275+000	4.0	26.9	18.0	1.0	7.6	2100
3.3	13.5 × 23.0 × 31.5	B32774H8335+000	5.0	22.2	19.0	1.0	7.6	1932
3.9	14.0 × 24.5 × 31.5	B32774H8395+000	5.5	18.8	21.0	1.0	7.7	1848
4.7	15.0 × 24.5 × 31.5	B32774H8475K000	6.2	15.7	23.0	1.0	7.7	1680
5.6	18.0 × 27.5 × 31.5	B32774H8565+000	7.5	13.3	22.0	1.0	7.8	1428
6.8	19.0 × 30.0 × 31.5	B32774H8685+000	8.5	11.1	25.0	1.0	7.9	896
8.2	21.0 × 31.0 × 31.5	B32774H8825+000	9.5	9.4	26.0	1.0	8.0	784

MOQ = Minimum Order Quantity, consisting of 4 packing units.  
Intermediate capacitance values are available on request.

#### Composition of ordering code

+ = Capacitance tolerance code:

J =  $\pm 5\%$

K =  $\pm 10\%$

Packing code:

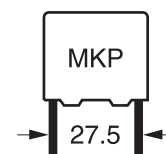
000 = untaped (lead length 6 – 1 mm)

Other lead lengths available upon request

1) Capacitance value measured at 1 kHz

2) Max ripple current  $I_{\text{RMS}}$  at 70 °C, 10 kHz for  $\Delta T \leq 20$  °C

3) Typical ESL value measured at resonance frequency (see specific graphs of Z versus frequency)


**Ordering codes and packing units (lead spacing 27.5 mm)**

$C_R^{1)}$	Max. dimensions $w \times h \times l$	Ordering code (composition see below)	$I_{RMS,max}^{2)}$ 70 °C 10 kHz A	$ESR_{typ}$ 70 °C 10 kHz mΩ	$ESL_{typ}^{3)}$ 70 °C 10 kHz nH	$\tan \delta$ max. 1 kHz $10^{-3}$	$\tan \delta$ max. 10 kHz $10^{-3}$	Un- taped pcs./ MOQ
$V_{R,85\text{ °C}} = 800\text{ V DC}, V_{op,70\text{ °C}} = 900\text{ V DC}$								
1.8	11.0 × 21.0 × 31.5	B32774H9185+000	3.5	36.0	18.0	0.8	6.8	2352
2.2	12.5 × 21.5 × 31.5	B32774H9225+000	4.0	29.4	19.0	0.8	6.8	2100
2.7	13.5 × 23.0 × 31.5	B32774H9275+000	4.5	24.1	20.0	0.9	6.8	1932
3.3	14.0 × 24.5 × 31.5	B32774H9335K000	5.5	19.9	22.0	0.9	6.8	1848
3.9	18.0 × 27.5 × 31.5	B32774H9395+000	6.5	16.9	22.0	0.9	6.9	1428
4.7	18.0 × 27.5 × 31.5	B32774H9475+000	7.3	14.1	23.0	0.9	6.9	1428
5.6	19.0 × 30.0 × 31.5	B32774H9565+000	8.2	12.0	25.0	0.9	7.0	896
6.8	21.0 × 31.0 × 31.5	B32774H9685+000	9.3	10.0	27.0	0.9	7.1	784
$V_{R,85\text{ °C}} = 920\text{ V DC}, V_{op,70\text{ °C}} = 1100\text{ V DC}$								
1.8	12.5 × 21.5 × 31.5	B32774H0185+000	4.0	32.4	19.0	0.8	6.1	2100
2.2	13.5 × 23.0 × 31.5	B32774H0225+000	4.5	26.6	20.2	0.8	6.1	1932
2.7	15.0 × 24.5 × 31.5	B32774H0275K000	5.5	21.8	21.0	0.8	6.2	1680
3.3	18.0 × 27.5 × 31.5	B32774H0335+000	7.0	18.0	22.0	0.8	6.2	1428
3.9	18.0 × 27.5 × 31.5	B32774H0395+000	7.5	15.4	24.0	0.8	6.2	1428
4.7	19.0 × 30.0 × 31.5	B32774H0475+000	8.0	12.9	26.0	0.8	6.3	896
5.6	21.0 × 31.0 × 31.5	B32774H0565+000	9.0	10.9	27.0	0.8	6.4	784
$V_{R,85\text{ °C}} = 1100\text{ V DC}, V_{op,70\text{ °C}} = 1300\text{ V DC}$								
1.5	13.5 × 23.0 × 31.5	B32774H1155+000	4.4	30.6	21.0	0.7	4.8	1932
1.8	14.0 × 24.5 × 31.5	B32774H1185K000	5.0	25.6	21.0	0.7	4.8	1848
2.2	18.0 × 27.5 × 31.5	B32774H1225+000	6.0	21.1	22.0	0.7	4.9	1428
2.7	18.0 × 27.5 × 31.5	B32774H1275+000	6.5	17.3	25.0	0.7	4.9	1428
3.3	19.0 × 30.0 × 31.5	B32774H1335+000	7.5	14.3	27.0	0.7	4.9	896
3.9	21.0 × 31.0 × 31.5	B32774H1395K000	8.0	12.3	29.0	0.7	5.0	784

MOQ = Minimum Order Quantity, consisting of 4 packing units.

Intermediate capacitance values are available on request.

**Composition of ordering code**

+ = Capacitance tolerance code:

J = ±5%

K = ±10%

Packing code:

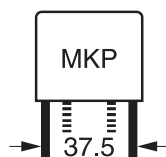
000 = untaped (lead length 6 – 1 mm)

Other lead lengths available upon request

1) Capacitance value measured at 1 kHz

2) Max ripple current  $I_{RMS}$  at 70 °C, 10 kHz for  $\Delta T \leq 20\text{ °C}$

3) Typical ESL value measured at resonance frequency (see specific graphs of Z versus frequency)



## B32776H

### MKP DC link – high density THB series

#### Ordering codes and packing units (lead spacing 37.5 mm)

$C_R^{1)}$ $\mu\text{F}$	Max. dimensions $w \times h \times l$ mm	$P_1$ mm	Ordering code (composition see below)	$I_{\text{RMS,max}}^{2)}$ 70 °C 10 kHz A	$\text{ESR}_{\text{typ}}$ 70 °C 10 kHz m $\Omega$	$\text{ESL}_{\text{typ}}^{3)}$ 70 °C 10 kHz nH	$\tan \delta$ max. 1 kHz $10^{-3}$	$\tan \delta$ max. 10 kHz $10^{-3}$	Un- taped pcs./ MOQ
$V_{\text{R,85 °C}} = 450 \text{ V DC}, V_{\text{op,70 °C}} = 450 \text{ V DC}$									
15.0	16.0 × 28.5 × 42.0	–	B32776H4156+000	8.0	13.7	20.0	2.3	21.5	800
18.0	18.0 × 32.5 × 42.0	–	B32776H4186+000	9.0	11.5	20.0	2.3	21.7	720
22.0	18.0 × 32.5 × 42.0	–	B32776H4226K000	10.0	9.7	23.0	2.4	21.9	720
27.0	20.0 × 39.5 × 42.0	10.2 <sup>*)</sup>	B32776H4276+000	13.0	7.6	11.0	2.3	21.5	640
30.0	20.0 × 39.5 × 42.0	10.2 <sup>*)</sup>	B32776H4306+000	14.0	7.0	11.0	2.3	21.3	640
33.0	28.0 × 37.0 × 42.0	10.2 <sup>*)</sup>	B32776H4336+000	15.5	6.3	10.0	2.3	21.6	440
35.0	28.0 × 37.0 × 42.0	10.2 <sup>*)</sup>	B32776H4356+000	16.5	6.0	10.0	2.3	21.4	440
39.0	28.0 × 42.5 × 42.0	10.2 <sup>*)</sup>	B32776H4396+000	17.5	5.4	11.0	2.4	21.8	440
47.0	28.0 × 42.5 × 42.0	10.2 <sup>*)</sup>	B32776H4476+000	19.5	4.5	13.0	2.4	22.0	440
$V_{\text{R,85 °C}} = 500 \text{ V DC}, V_{\text{op,70 °C}} = 575 \text{ V DC}$									
10.0	16.0 × 28.5 × 42.0	–	B32776H5106+000	7.0	16.9	19.0	1.9	17.3	800
12.0	16.0 × 28.5 × 42.0	–	B32776H5126K000	8.0	14.1	21.0	1.9	17.7	800
15.0	18.0 × 32.5 × 42.0	–	B32776H5156+000	9.0	11.4	22.0	1.9	17.9	720
18.0	20.0 × 39.5 × 42.0	10.2 <sup>*)</sup>	B32776H5186+000	11.5	9.3	10.0	1.9	17.2	640
22.0	20.0 × 39.5 × 42.0	10.2 <sup>*)</sup>	B32776H5226+000	12.5	7.7	12.0	1.9	17.6	640
27.0	28.0 × 37.0 × 42.0	10.2 <sup>*)</sup>	B32776H5276+000	15.0	6.3	11.0	1.9	17.7	440
30.0	28.0 × 42.5 × 42.0	10.2 <sup>*)</sup>	B32776H5306+000	16.5	5.7	12.0	1.9	17.8	440
33.0	28.0 × 42.5 × 42.0	10.2 <sup>*)</sup>	B32776H5336+000	18.0	5.2	13.0	1.9	17.9	440

MOQ = Minimum Order Quantity, consisting of 4 packing units.

Intermediate capacitance values are available on request.

\*) 2-pin version available on request

#### Composition of ordering code

+ = Capacitance tolerance code:

J =  $\pm 5\%$

K =  $\pm 10\%$

Packing code:

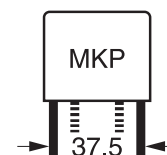
000 = untaped (lead length 6 – 1 mm)

Other lead lengths available upon request

1) Capacitance value measured at 1 kHz

2) Max ripple current  $I_{\text{RMS}}$  at 70 °C, 10 kHz for  $\Delta T \leq 20 \text{ °C}$

3) Typical ESL value measured at resonance frequency (see specific graphs of Z versus frequency)



**B32776H**

**MKP DC link – high density THB series**

**Ordering codes and packing units (lead spacing 37.5 mm)**

$C_R^{4)}$ $\mu\text{F}$	Max. dimensions $w \times h \times l$ mm	$P_1$ mm	Ordering code (composition see below)	$I_{\text{RMS,max}}^{5)}$ 70 °C 10 kHz A	$\text{ESR}_{\text{typ}}$ 70 °C 10 kHz mΩ	$\text{ESL}_{\text{typ}}^{6)}$ 70 °C 10 kHz nH	$\tan \delta$ max. 1 kHz $10^{-3}$	$\tan \delta$ max. 10 kHz $10^{-3}$	Un- taped pcs./ MOQ
$V_{\text{R,85 °C}} = 700 \text{ V DC}, V_{\text{op,70 °C}} = 800 \text{ V DC}$									
5.6	14.0 × 25.0 × 42.0	–	B32776H8565K000	5.5	26.1	17.0	1.7	15.2	1380
6.8	16.0 × 28.5 × 42.0	–	B32776H8685+000	6.0	21.5	18.0	1.7	15.3	800
8.2	16.0 × 28.5 × 42.0	–	B32776H8825+000	7.0	18.2	20.0	1.7	15.4	800
10.0	18.0 × 32.5 × 42.0	–	B32776H8106+000	8.0	14.6	20.0	1.7	15.5	720
12.0	18.0 × 32.5 × 42.0	–	B32776H8126K000	9.5	12.5	21.0	1.7	15.6	720
15.0	20.0 × 39.5 × 42.0	10.2*)	B32776H8156+000	12.0	9.9	11.0	1.7	15.4	640
18.0	28.0 × 37.0 × 42.0	10.2*)	B32776H8186+000	13.0	8.2	10.0	1.7	15.4	440
22.0	28.0 × 37.0 × 42.0	10.2*)	B32776H8226K000	15.5	6.9	11.0	1.7	15.5	440
27.0	28.0 × 42.5 × 42.0	10.2*)	B32776H8276K000	17.5	5.8	13.0	1.8	16.2	440
$V_{\text{R,85 °C}} = 800 \text{ V DC}, V_{\text{op,70 °C}} = 900 \text{ V DC}$									
3.3	12.0 × 22.0 × 42.0	–	B32776H9335K000	4.2	39.0	16.0	1.5	13.4	1620
3.9	14.0 × 25.0 × 42.0	–	B32776H9395+000	4.7	33.2	15.0	1.5	13.5	1380
4.7	14.0 × 25.0 × 42.0	–	B32776H9475+000	5.5	27.6	18.0	1.5	13.5	1380
5.6	16.0 × 28.5 × 42.0	–	B32776H9565+000	6.0	23.3	18.0	1.5	13.6	800
6.8	16.0 × 28.5 × 42.0	–	B32776H9685K000	6.5	19.3	20.0	1.5	13.7	800
8.2	18.0 × 32.5 × 42.0	–	B32776H9825+000	8.0	16.1	21.0	1.5	13.8	720
10.0	18.0 × 32.5 × 42.0	–	B32776H9106K000	9.0	13.3	24.0	1.5	13.9	720
12.0	20.0 × 39.5 × 42.0	10.2*)	B32776H9126+000	10.5	10.9	11.0	1.5	13.6	640
15.0	28.0 × 37.0 × 42.0	10.2*)	B32776H9156+000	12.5	8.7	10.0	1.5	13.7	440
18.0	28.0 × 42.5 × 42.0	10.2*)	B32776H9186+000	14.5	8.1	12.0	1.5	13.8	440

MOQ = Minimum Order Quantity, consisting of 4 packing units.

Intermediate capacitance values are available on request.

\*) 2-pin version available on request

**Composition of ordering code**

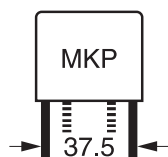
+ = Capacitance tolerance code:  
 J = ±5%  
 K = ±10%

Packing code:  
 000 = untaped (lead length 6 – 1 mm)  
 Other lead lengths available upon request

4) Capacitance value measured at 1 kHz

5) Max ripple current  $I_{\text{RMS}}$  at 70 °C, 10 kHz for  $\Delta T \leq 20 \text{ °C}$

6) Typical ESL value measured at resonance frequency (see specific graphs of Z versus frequency)



## B32776H

### MKP DC link – high density THB series

#### Ordering codes and packing units (lead spacing 37.5 mm)

$C_R^{7)}$ $\mu\text{F}$	Max. dimensions $w \times h \times l$ mm	$P_1$ mm	Ordering code (composition see below)	$I_{\text{RMS,max}}^{8)}$ 70 °C 10 kHz A	$\text{ESR}_{\text{typ}}$ 70 °C 10 kHz m $\Omega$	$\text{ESL}_{\text{typ}}^{9)}$ 70 °C 10 kHz nH	$\tan \delta$ max. 1 kHz $10^{-3}$	$\tan \delta$ max. 10 kHz $10^{-3}$	Un- taped pcs./ MOQ
$V_{\text{R,85 °C}} = 920 \text{ V DC}, V_{\text{op,70 °C}} = 1100 \text{ V DC}$									
2.7	12.0 × 22.0 × 42.0	—	B32776H0275K000	4.0	43.0	15.0	1.3	12.1	1620
3.3	14.0 × 25.0 × 42.0	—	B32776H0335+000	4.5	34.9	16.0	1.4	12.0	1380
3.9	14.0 × 25.0 × 42.0	—	B32776H0395K000	5.0	29.5	18.0	1.4	12.0	1380
4.7	16.0 × 28.5 × 42.0	—	B32776H0475+000	6.0	24.6	18.0	1.4	12.1	800
5.6	16.0 × 28.5 × 42.0	—	B32776H0565K000	6.5	20.8	20.0	1.4	12.1	800
6.8	18.0 × 32.5 × 42.0	—	B32776H0685+000	7.5	17.2	21.0	1.4	12.1	720
8.2	18.0 × 32.5 × 42.0	—	B32776H0825K000	8.5	14.4	24.0	1.4	12.7	720
10.0	20.0 × 39.5 × 42.0	10.2 <sup>*)</sup>	B32776H0106+000	10.0	11.8	11.0	1.4	12.3	640
12.0	28.0 × 37.0 × 42.0	10.2 <sup>*)</sup>	B32776H0126+000	12.0	10.0	10.0	1.4	12.3	440
15.0	28.0 × 42.5 × 42.0	10.2 <sup>*)</sup>	B32776H0156+000	14.5	7.8	12.0	1.4	12.2	440
$V_{\text{R,85 °C}} = 1100 \text{ V DC}, V_{\text{op,70 °C}} = 1300 \text{ V DC}$									
2.2	14.0 × 25.0 × 42.0	—	B32776H1225+000	4.0	42.2	16.0	1.1	9.7	1380
2.7	16.0 × 28.5 × 42.0	—	B32776H1275+000	5.0	34.5	17.0	1.1	9.7	800
3.3	16.0 × 28.5 × 42.0	—	B32776H1335+000	5.5	28.4	19.0	1.1	9.8	800
3.9	16.0 × 28.5 × 42.0	—	B32776H1395K000	6.0	24.0	21.0	1.1	9.8	800
4.7	18.0 × 32.5 × 42.0	—	B32776H1475+000	7.0	20.0	22.0	1.1	9.8	720
5.6	20.0 × 39.5 × 42.0	10.2 <sup>*)</sup>	B32776H1565+000	8.5	16.7	10.0	1.1	9.8	640
6.8	20.0 × 39.5 × 42.0	10.2 <sup>*)</sup>	B32776H1685+000	9.0	13.7	11.0	1.1	9.8	640
8.2	28.0 × 37.0 × 42.0	10.2 <sup>*)</sup>	B32776H1825+000	11.0	11.5	10.0	1.1	9.8	440
10.0	28.0 × 42.5 × 42.0	10.2 <sup>*)</sup>	B32776H1106+000	13.0	9.9	29.0	1.2	10.2	440

MOQ = Minimum Order Quantity, consisting of 4 packing units.

Intermediate capacitance values are available on request.

\*) 2-pin version available on request

#### Composition of ordering code

+ = Capacitance tolerance code:

J =  $\pm 5\%$

K =  $\pm 10\%$

Packing code:

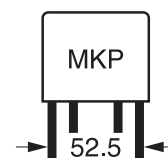
000 = untaped (lead length 6 – 1 mm)

Other lead lengths available upon request

7) Capacitance value measured at 1 kHz

8) Max ripple current  $I_{\text{RMS}}$  at 70 °C, 10 kHz for  $\Delta T \leq 20$  °C

9) Typical ESL value measured at resonance frequency (see specific graphs of Z versus frequency)


**Ordering codes and packing units (lead spacing 52.5 mm, P<sub>1</sub> = 20.3 mm)**

C <sub>R</sub> <sup>1)</sup> μF	Max. dimensions w × h × l mm	Ordering code (composition see below)	I <sub>RMS,max</sub> <sup>2)</sup> 70 °C 10 kHz A	ESR <sub>typ</sub> 70 °C 10 kHz mΩ	ESL <sub>typ</sub> <sup>3)</sup> 70 °C 10 kHz nH	tan δ max. 1 kHz 10 <sup>-3</sup>	tan δ max. 10 kHz 10 <sup>-3</sup>	Un- taped pcs./ MOQ
<b>V<sub>R,85 °C</sub> = 450 V DC, V<sub>op,70 °C</sub> = 450 V DC</b>								
75.0	30.0 × 45.0 × 57.5	B32778H4756+000	21.0	5.6	12.0	4.4	42.6	280
82.0	30.0 × 45.0 × 57.5	B32778H4826K000	22.0	5.2	13.0	4.4	42.7	280
90.0	35.0 × 50.0 × 57.5	B32778H4906+000	23.5	4.7	14.0	4.5	43.2	108
100.0	35.0 × 50.0 × 57.5	B32778H4107+000	26.0	4.3	14.0	4.5	43.6	108
120.0	38.0 × 57.5 × 57.5	B32778H4127+000	27.5	3.7	16.0	4.7	45.5	96
<b>V<sub>R,85 °C</sub> = 500 V DC, V<sub>op,70 °C</sub> = 575 V DC</b>								
50.0	30.0 × 45.0 × 57.5	B32778H5506+000	17.5	7.0	12.0	3.8	36.3	280
56.0	30.0 × 45.0 × 57.5	B32778H5566+000	18.5	6.3	13.0	3.8	36.5	280
68.0	35.0 × 50.0 × 57.5	B32778H5686+000	22.0	5.2	14.0	3.8	36.8	108
75.0	35.0 × 50.0 × 57.5	B32778H5756+000	24.0	4.8	15.0	3.8	36.9	108
82.0	38.0 × 57.5 × 57.5	B32778H5826+000	25.0	4.4	15.0	3.9	37.0	96
90.0	38.0 × 57.5 × 57.5	B32778H5906+000	27.0	4.0	16.0	3.9	37.3	96
<b>V<sub>R,85 °C</sub> = 700 V DC, V<sub>op,70 °C</sub> = 800 V DC</b>								
39.0	30.0 × 45.0 × 57.5	B32778H8396+000	17.5	7.8	13.0	3.3	31.2	280
47.0	30.0 × 45.0 × 57.5	B32778H8476K000	19.5	6.7	14.0	3.3	31.4	280
50.0	35.0 × 50.0 × 57.5	B32778H8506+000	20.5	6.0	14.0	3.3	31.6	108
56.0	35.0 × 50.0 × 57.5	B32778H8566+000	23.5	5.5	15.0	3.4	31.8	108
68.0	38.0 × 57.5 × 57.5	B32778H8686+000	25.0	4.6	16.0	3.4	32.2	96
75.0	38.0 × 57.5 × 57.5	B32778H8756K000	26.0	4.3	17.0	3.4	32.4	96
<b>V<sub>R,85 °C</sub> = 800 V DC, V<sub>op,70 °C</sub> = 900 V DC</b>								
35.0	30.0 × 45.0 × 57.5	B32778H9356+000	18.0	7.7	13.0	2.9	27.3	280
39.0	35.0 × 50.0 × 57.5	B32778H9396+000	19.0	7.0	13.0	3.0	28.0	108
47.0	35.0 × 50.0 × 57.5	B32778H9476K000	21.5	5.9	15.0	3.0	28.1	108
50.0	38.0 × 57.5 × 57.5	B32778H9506+000	23.0	5.5	16.0	3.0	28.2	96
56.0	38.0 × 57.5 × 57.5	B32778H9566+000	24.0	4.9	17.0	3.0	28.4	96

MOQ = Minimum Order Quantity, consisting of 4 packing units.

Intermediate capacitance values are available on request.

**Composition of ordering code**

+ = Capacitance tolerance code:

J = ±5%

K = ±10%

Packing code:

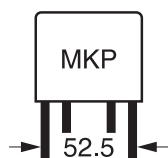
000 = untaped (lead length 6 – 1 mm)

Other lead lengths available upon request

1) Capacitance value measured at 1 kHz

2) Max ripple current I<sub>RMS</sub> at 70 °C, 10 kHz for ΔT ≤ 20 °C

3) Typical ESL value measured at resonance frequency (see specific graphs of Z versus frequency)



## B32778H

### MKP DC link – high density THB series

#### Ordering codes and packing units (lead spacing 52.5 mm, P<sub>1</sub> = 20.3 mm)

C <sub>R</sub> <sup>1)</sup>	Max. dimensions w × h × l	Ordering code (composition see below)	I <sub>RMS,max</sub> <sup>2)</sup> 70 °C 10 kHz A	ESR <sub>typ</sub> 70 °C 10 kHz mΩ	ESL <sub>typ</sub> <sup>3)</sup> 70 °C 10 kHz nH	tan δ max. 1 kHz 10 <sup>-3</sup>	tan δ max. 10 kHz 10 <sup>-3</sup>	Un- taped pcs./ MOQ
V <sub>R,85 °C</sub> = 920 V DC, V <sub>op,70 °C</sub> = 1100 V DC								
27.0	30.0 × 45.0 × 57.5	B32778H0276+000	16.0	8.9	13.0	2.6	24.5	280
30.0	30.0 × 45.0 × 57.5	B32778H0306K000	17.5	8.2	13.0	2.6	24.6	280
33.0	35.0 × 50.0 × 57.5	B32778H0336+000	18.5	7.4	14.0	2.7	25.0	108
35.0	35.0 × 50.0 × 57.5	B32778H0356+000	19.5	6.9	15.0	2.7	25.1	108
39.0	35.0 × 50.0 × 57.5	B32778H0396K000	21.5	6.5	15.0	2.7	25.1	108
47.0	38.0 × 57.5 × 57.5	B32778H0476+000	23.0	5.3	17.0	2.7	25.4	96
V <sub>R,85 °C</sub> = 1100 V DC, V <sub>op,70 °C</sub> = 1300 V DC								
18.0	30.0 × 45.0 × 57.5	B32778H1186+000	15.0	10.6	13.0	2.1	19.9	280
22.0	35.0 × 50.0 × 57.5	B32778H1226+000	17.0	8.8	14.0	2.1	20.1	108
27.0	35.0 × 50.0 × 57.5	B32778H1276K000	19.5	7.5	15.0	2.2	20.3	108
30.0	38.0 × 57.5 × 57.5	B32778H1306+000	21.0	6.8	16.0	2.3	20.9	96
33.0	38.0 × 57.5 × 57.5	B32778H1336K000	22.0	6.0	17.0	2.3	21.0	96

MOQ = Minimum Order Quantity, consisting of 4 packing units.

Intermediate capacitance values are available on request.

#### Composition of ordering code

+ = Capacitance tolerance code:

J = ±5%

K = ±10%

Packing code:

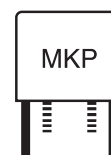
000 = untaped (lead length 6 – 1 mm)

Other lead lengths available upon request

1) Capacitance value measured at 1 kHz

2) Max ripple current I<sub>RMS</sub> at 70 °C, 10 kHz for ΔT ≤ 20 °C

3) Typical ESL value measured at resonance frequency (see specific graphs of Z versus frequency)



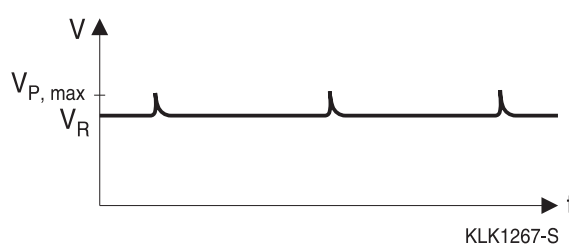
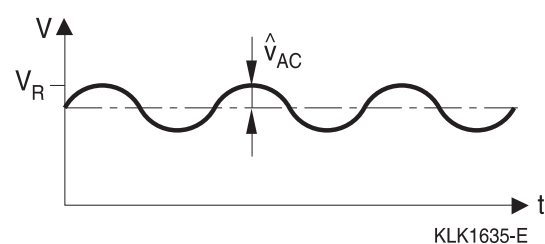
### Technical data

Reference standard: IEC 61071:2007 and AEC-Q200D. All data given at T = 20 °C, unless otherwise specified.

Rated temperature $T_R$	+85 °C					
Operating temperature range (case)	Max. operating temperature, $T_{op,max}$	+105 °C				
	Upper category temperature $T_{max}$	+105 °C				
	Lower category temperature $T_{min}$	-40 °C				
Insulation resistance $R_{ins}$ given as time constant $\tau = C_R \cdot R_{ins}$ , rel. humidity $\leq 65\%$ (minimum as-delivered values)	$\tau > 10\,000$ s (after 1 min.) For $V_R \geq 500$ V measured at 500 V For $V_R < 500$ V measured at $V_R$					
DC test voltage between terminals (10 s)	$1.5 \cdot V_R$					
Voltage test terminal to case (10 s)	2110 V AC, 50 Hz					
Pulse Handling Capability (V/ $\mu$ s)	$I_P$ (A) / C ( $\mu$ F)					
Reliability:	Failure rate $\lambda$	10 fit ( $\leq 1 \cdot 10^{-9}$ /h) at $0.5 \cdot V_R$ , 40 °C For conversion to other operating conditions and temperatures, refer to chapter "Quality, 2 Reliability".				
	Service life $t_{SL}$	50 000 h at $V_R$ and 85 °C				
Advanced biased humidity <sup>1)</sup> Limit values after test	1000 hours / 60 °C / 95% relative humidity with $V_{R,DC}$ Capacitance change $ \Delta C/C  \leq 5\%$ Dissipation factor change $\Delta \tan \delta \leq 200\%$ (at 10 kHz) Insulation resistance $R_{ins} \geq 100$ M $\Omega$					
$V_R$ (V DC)	450	500	700	800	920	1100
Continuous operation voltage $V_{op}$ (V DC) at 70 °C	450	575	800	900	1100	1300
Continuous operation voltage $V_{op}$ (V DC) at 85 °C	450	500	700	800	920	1100
For temperatures between 85 °C and 105 °C	1.33%/°C of $V_{op}$ derating compared to $V_{op}$ at 85 °C					

1) 1000 hours / 85 °C / 85 °C relative humidity with  $V_R$  available on request, based on special design.

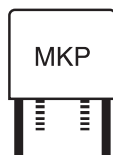
### Typical waveforms



Restrictions:

$V_R$ : Maximum operating peak voltage of either polarity but of a non-reversing waveform, for which the capacitor has been designed for continuous operation.

$$\hat{V}_{AC} \leq 0.2 \cdot V_R$$


**B32774H ... B32778H**
**MKP DC link – high density THB series**

Overvoltage	Maximum duration within one day	Observation
$1.1 \cdot V_R$	30% of on-load duration	System regulation
$1.15 \cdot V_R$	30 min.	System regulation
$1.2 \cdot V_R$	5 min.	System regulation
$1.3 \cdot V_R$	1 min.	System regulation

NOTE 1 An overvoltage equal to  $1.5 \cdot V_R$  for 30 ms is permitted 1000 times during the life of the capacitor.

The amplitudes of the overvoltages that may be tolerated without significant reduction in the life time of the capacitor depend on their duration, the number of application and the capacitor temperature.

In addition these values assume that the overvoltages may appear when the internal temperature of the capacitor is less than 0 °C but within the temperature category.

NOTE 2 The average applied voltage must not be higher than the specified voltage.

### Pulse handling capability

"dV/dt" represents the maximum permissible voltage change per unit of time for non-sinusoidal voltages, expressed in V/μs.

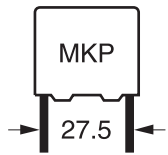
Note:

The values of dV/dt provided below must not be exceeded in order to avoid damaging the capacitor.

### dV/dt values

Lead spacing	27.5 mm						37.5 mm					
Type	B32774						B32776					
$V_R$ (V DC)	450	500	700	800	920	1100	450	500	700	800	920	1100
dV/dt in V/μs	30	35	40	50	75	100	21	22	22	35	54	73

Lead spacing	52.5 mm					
Type	B32778					
$V_R$ (V DC)	450	500	700	800	920	1100
dV/dt in V/μs	14	14	15	22	35	50



**B32774H**

**MKP DC link – high density THB series**

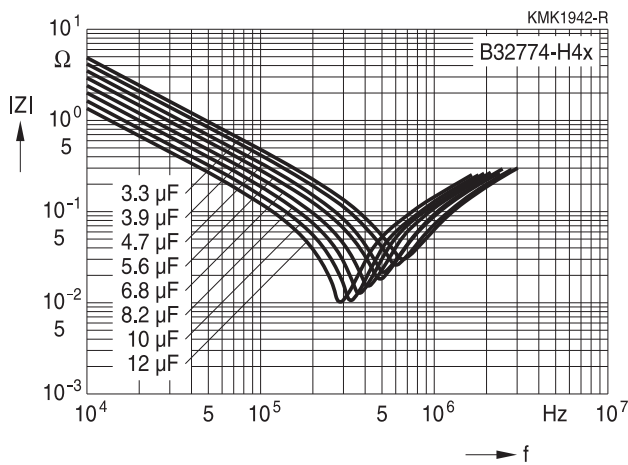
**Characteristics curves**

Additional technical information can be found under "Design support" on [www.epcos.com](http://www.epcos.com).

**Impedance Z versus frequency f**  
(typical values)

**Lead spacing 27.5 mm**

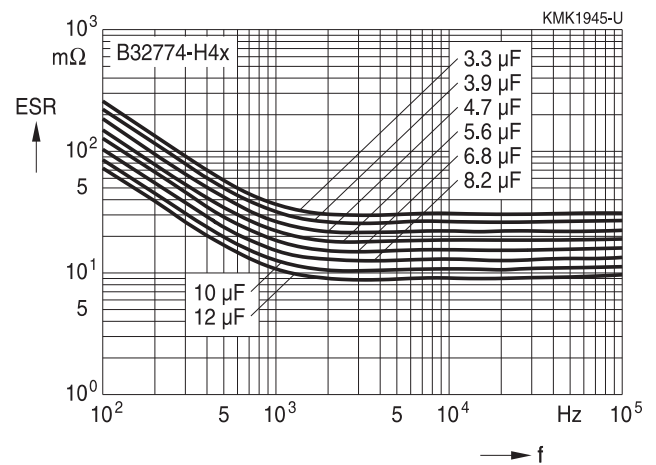
**450 V DC**



**ESR versus frequency f**  
(typical values)

**Lead spacing 27.5 mm**

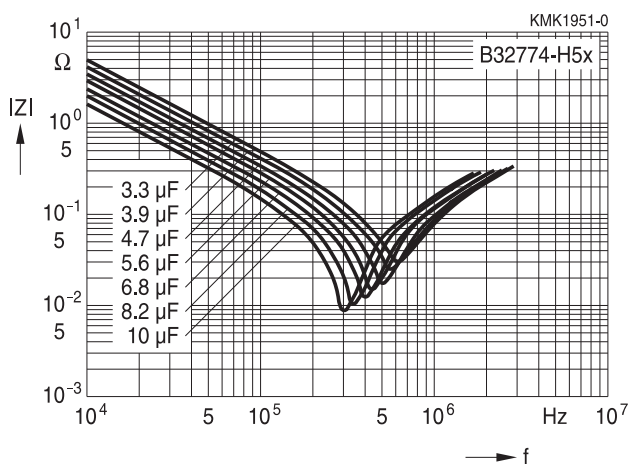
**450 V DC**



**Impedance Z versus frequency f**  
(typical values)

**Lead spacing 27.5 mm**

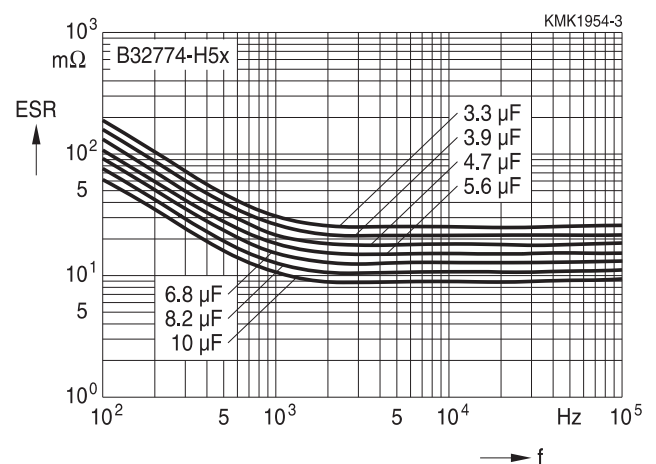
**500 V DC**

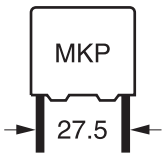


**ESR versus frequency f**  
(typical values)

**Lead spacing 27.5 mm**

**500 V DC**





**B32774H**

**MKP DC link – high density THB series**

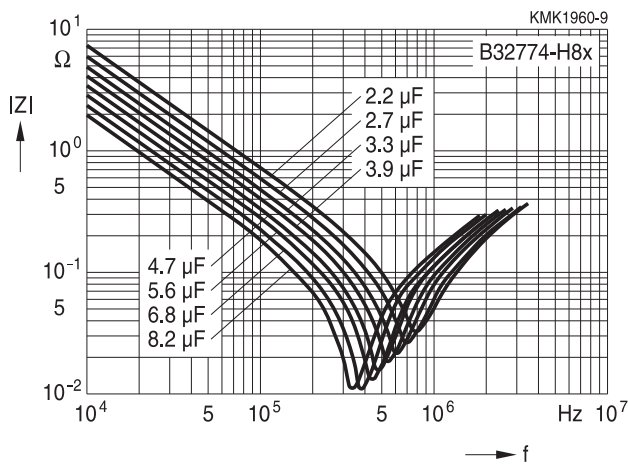
**Characteristics curves**

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**Impedance Z versus frequency f**  
(typical values)

**Lead spacing 27.5 mm**

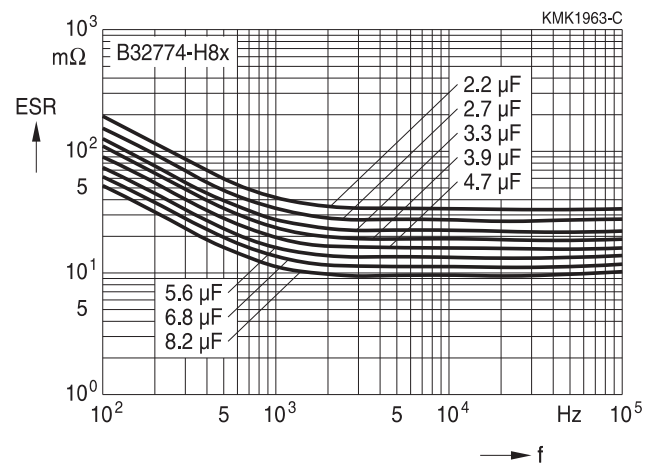
**700 V DC**



**ESR versus frequency f**  
(typical values)

**Lead spacing 27.5 mm**

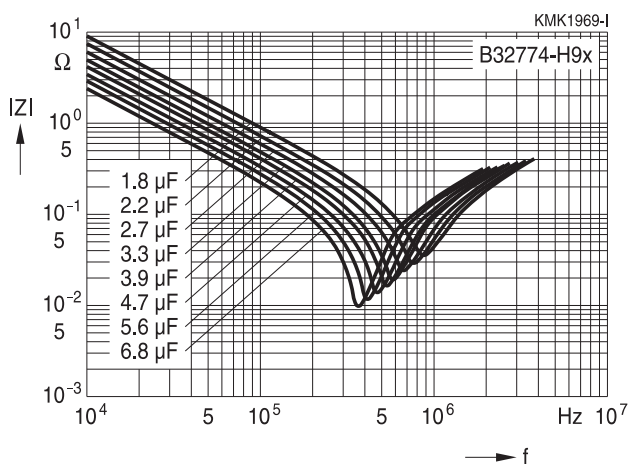
**700 V DC**



**Impedance Z versus frequency f**  
(typical values)

**Lead spacing 27.5 mm**

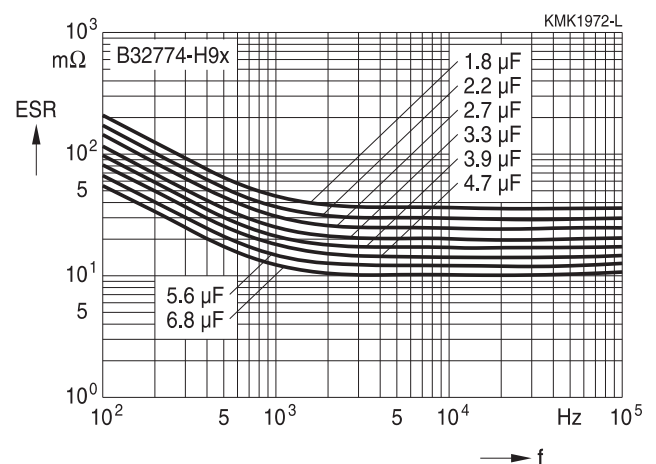
**800 V DC**



**ESR versus frequency f**  
(typical values)

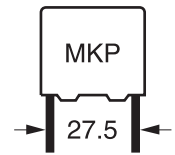
**Lead spacing 27.5 mm**

**800 V DC**



B32774H

MKP DC link – high density THB series



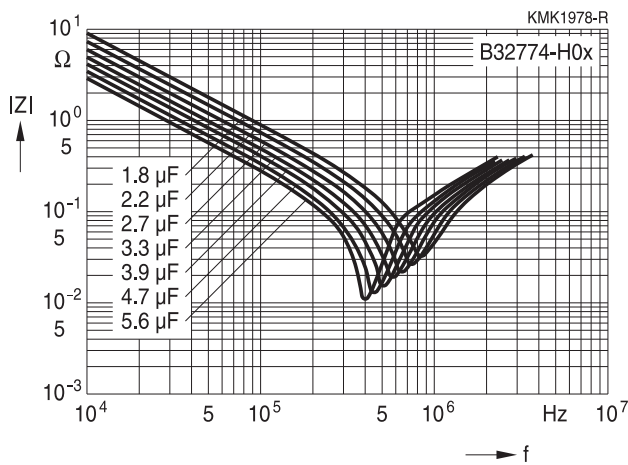
**Characteristics curves**

Additional technical information can be found under "Design support" on [www.epcos.com](http://www.epcos.com).

**Impedance Z versus frequency f**  
(typical values)

Lead spacing 27.5 mm

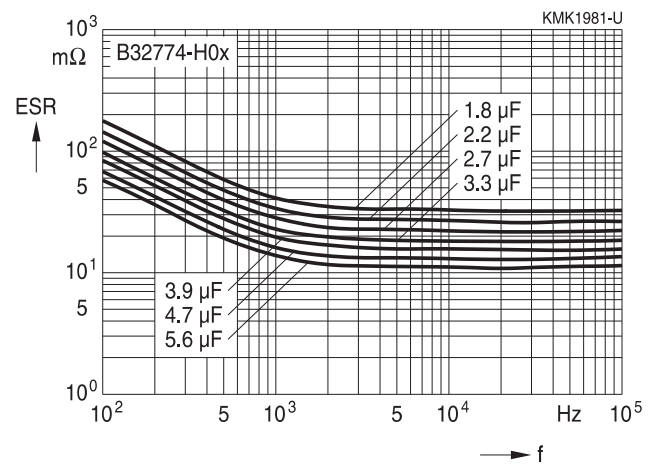
920 V DC



**ESR versus frequency f**  
(typical values)

Lead spacing 27.5 mm

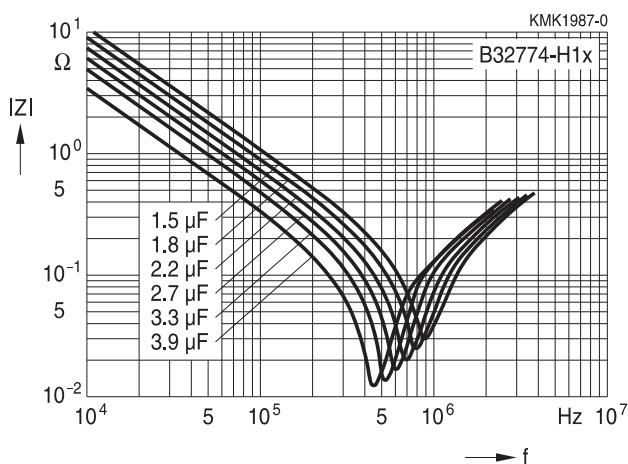
920 V DC



**Impedance Z versus frequency f**  
(typical values)

Lead spacing 27.5 mm

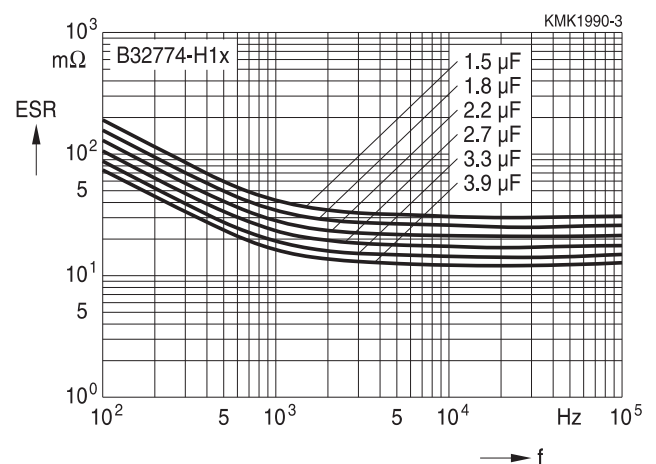
1100 V DC

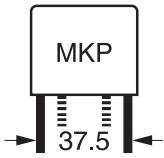


**ESR versus frequency f**  
(typical values)

Lead spacing 27.5 mm

1100 V DC





**B32776H**

**MKP DC link – high density THB series**

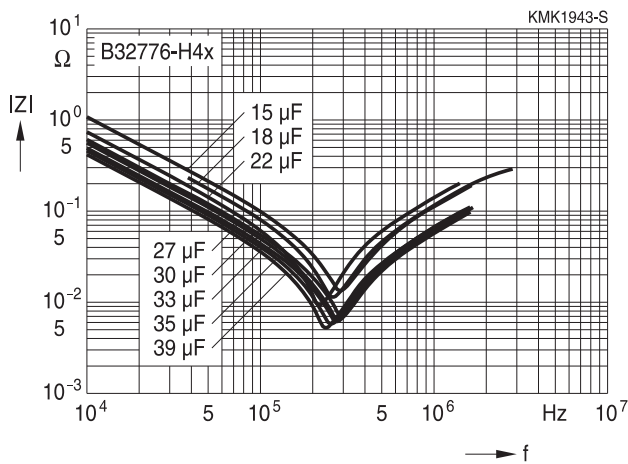
**Characteristics curves**

Additional technical information can be found under "Design support" on [www.epcos.com](http://www.epcos.com).

**Impedance Z versus frequency f**  
(typical values)

**Lead spacing 37.5 mm**

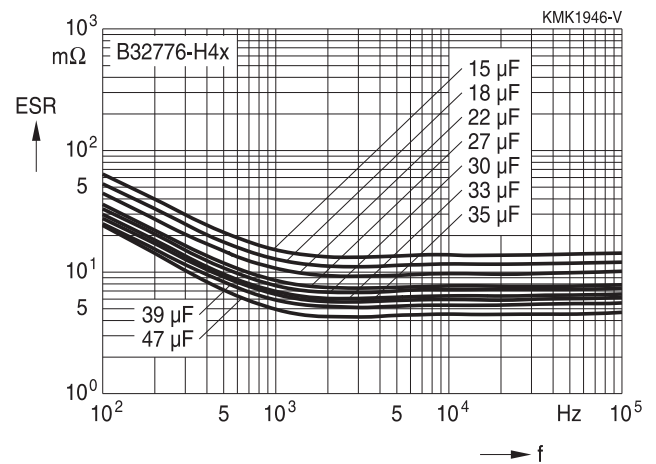
**450 V DC**



**ESR versus frequency f**  
(typical values)

**Lead spacing 37.5 mm**

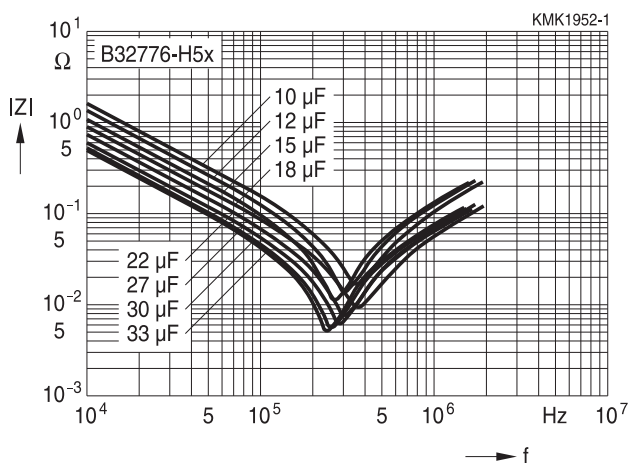
**450 V DC**



**Impedance Z versus frequency f**  
(typical values)

**Lead spacing 37.5 mm**

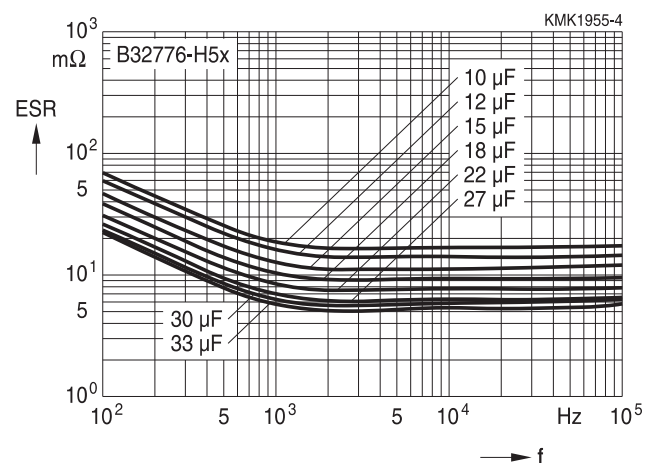
**500 V DC**

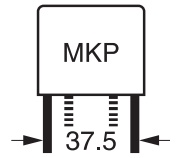


**ESR versus frequency f**  
(typical values)

**Lead spacing 37.5 mm**

**500 V DC**





**B32776H**

**MKP DC link – high density THB series**

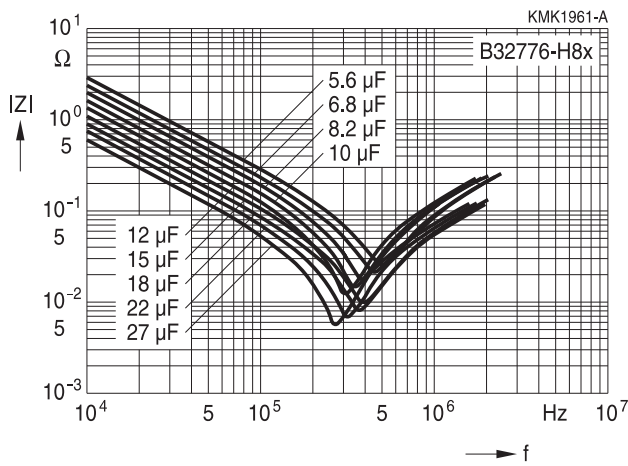
**Characteristics curves**

Additional technical information can be found under "Design support" on [www.epcos.com](http://www.epcos.com).

**Impedance Z versus frequency f**  
(typical values)

**Lead spacing 37.5 mm**

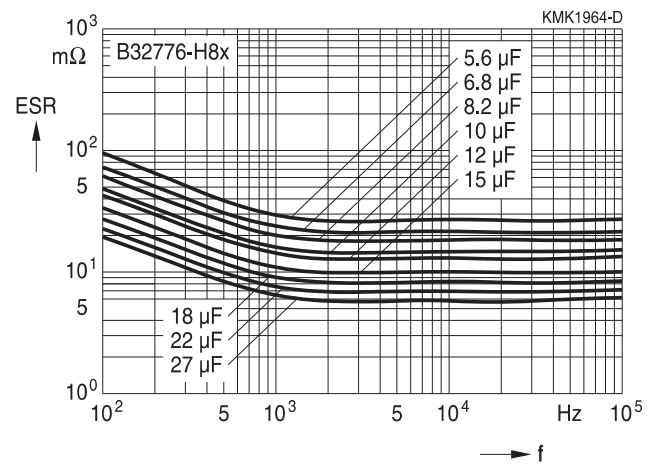
700 V DC



**ESR versus frequency f**  
(typical values)

**Lead spacing 37.5 mm**

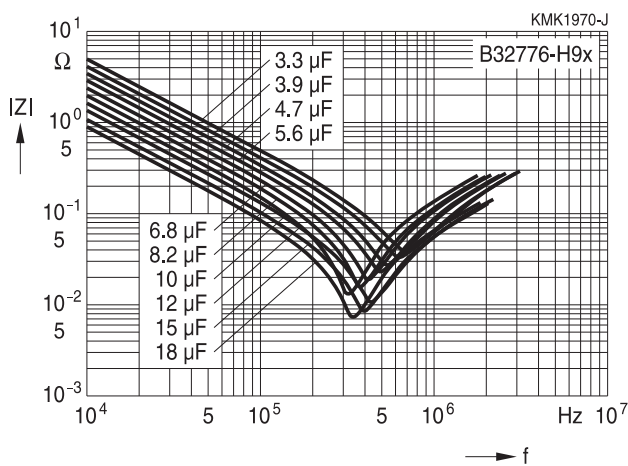
700 V DC



**Impedance Z versus frequency f**  
(typical values)

**Lead spacing 37.5 mm**

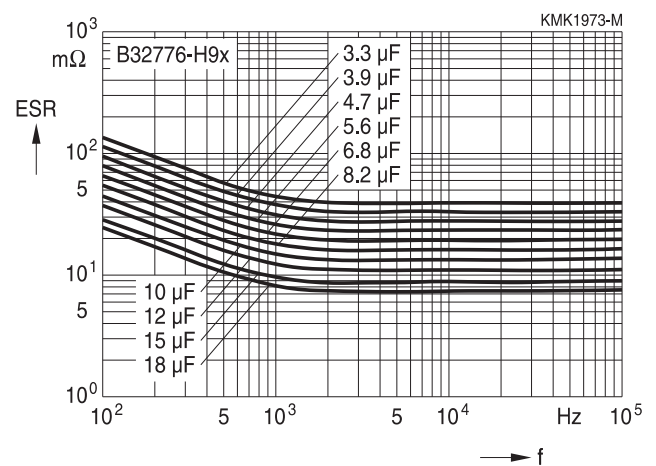
800 V DC

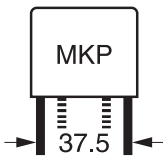


**ESR versus frequency f**  
(typical values)

**Lead spacing 37.5 mm**

800 V DC





## B32776H

### MKP DC link – high density THB series

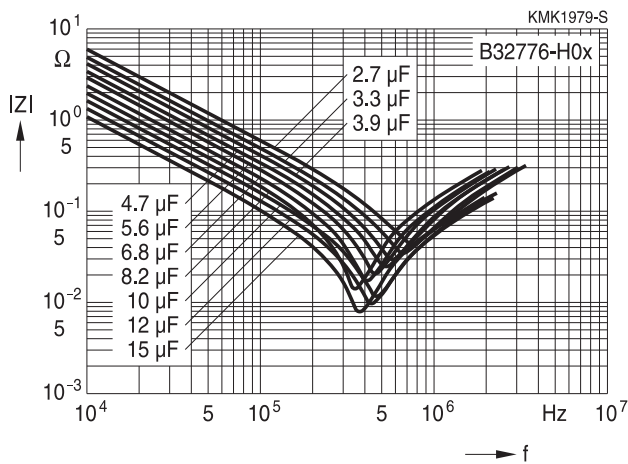
#### Characteristics curves

Additional technical information can be found under "Design support" on [www.epcos.com](http://www.epcos.com).

#### Impedance Z versus frequency f (typical values)

Lead spacing 37.5 mm

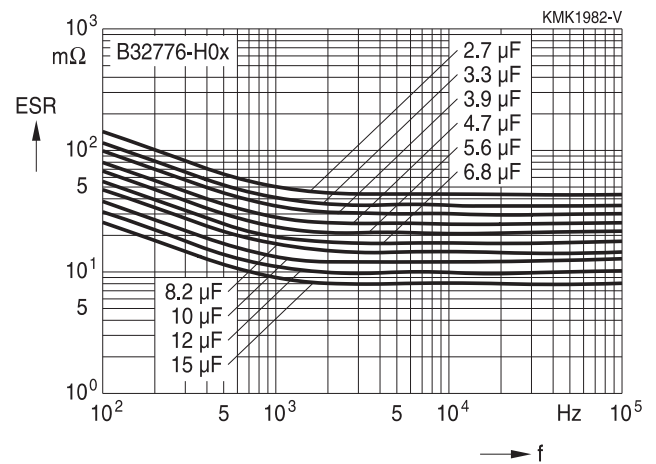
920 V DC



#### ESR versus frequency f (typical values)

Lead spacing 37.5 mm

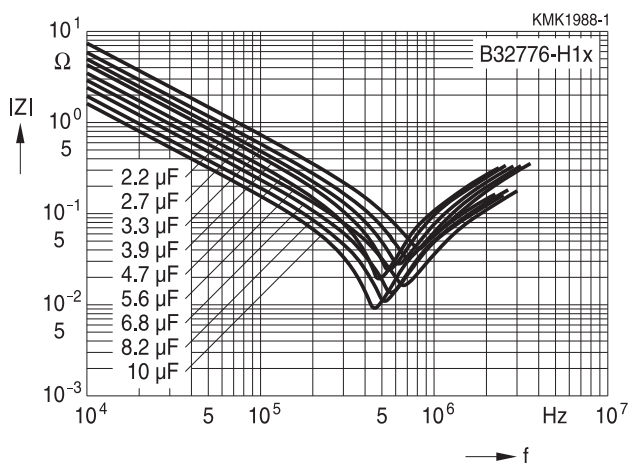
920 V DC



#### Impedance Z versus frequency f (typical values)

Lead spacing 37.5 mm

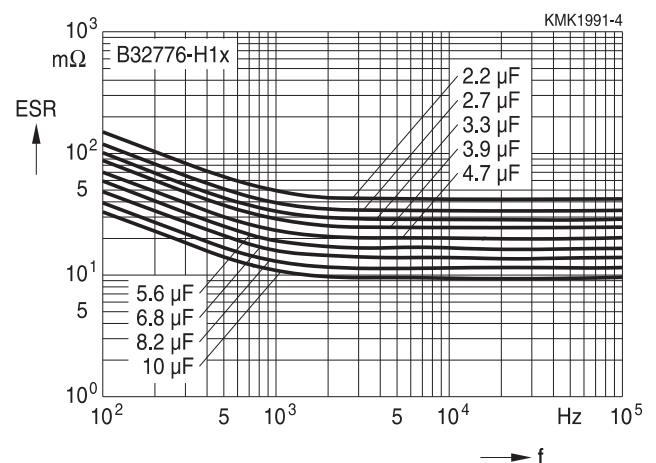
1100 V DC

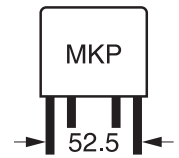


#### ESR versus frequency f (typical values)

Lead spacing 37.5 mm

1100 V DC





**B32778H**

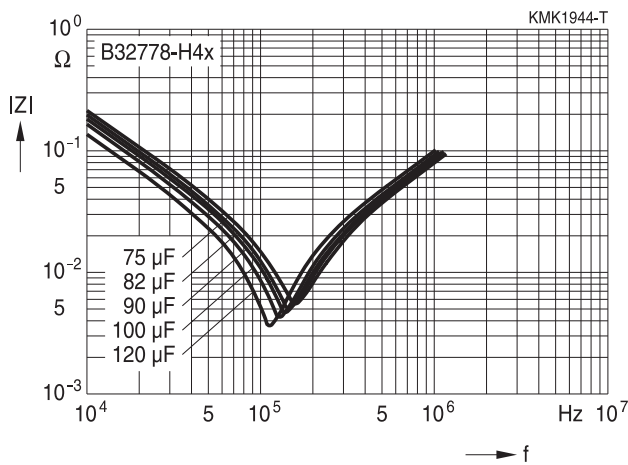
**MKP DC link – high density THB series**

**Characteristics curves**

Additional technical information can be found under "Design support" on [www.epcos.com](http://www.epcos.com).

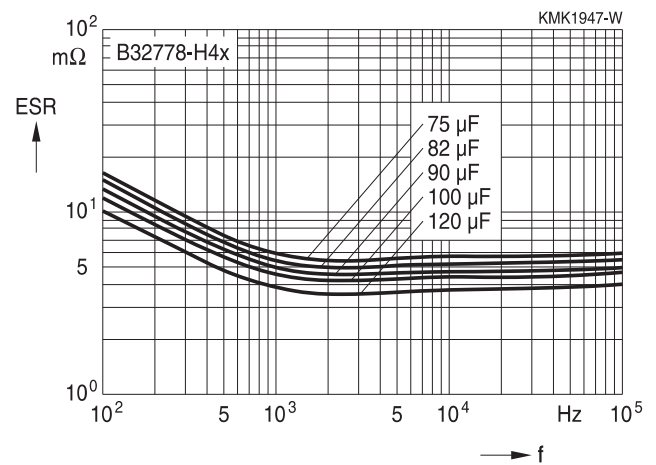
**Impedance Z versus frequency f**  
(typical values)

**Lead spacing 52.5 mm**  
450 V DC



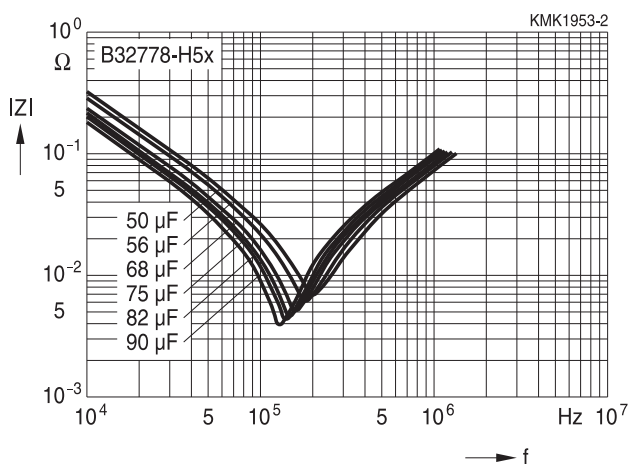
**ESR versus frequency f**  
(typical values)

**Lead spacing 52.5 mm**  
450 V DC



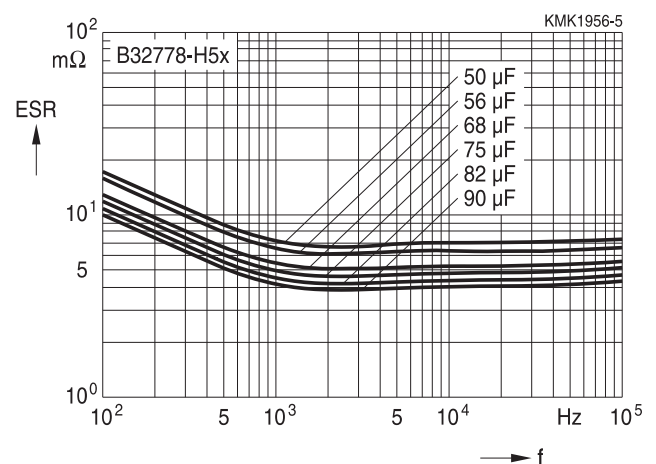
**Impedance Z versus frequency f**  
(typical values)

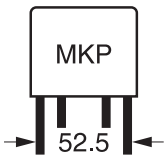
**Lead spacing 52.5 mm**  
500 V DC



**ESR versus frequency f**  
(typical values)

**Lead spacing 52.5 mm**  
500 V DC





**B32778H**

**MKP DC link – high density THB series**

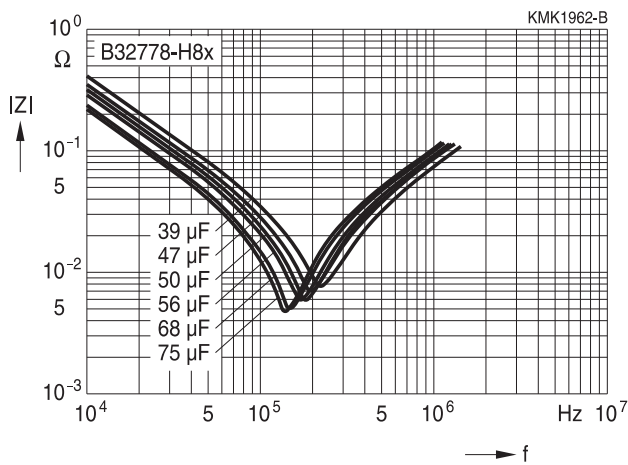
**Characteristics curves**

Additional technical information can be found under "Design support" on [www.epcos.com](http://www.epcos.com).

**Impedance Z versus frequency f**  
(typical values)

**Lead spacing 52.5 mm**

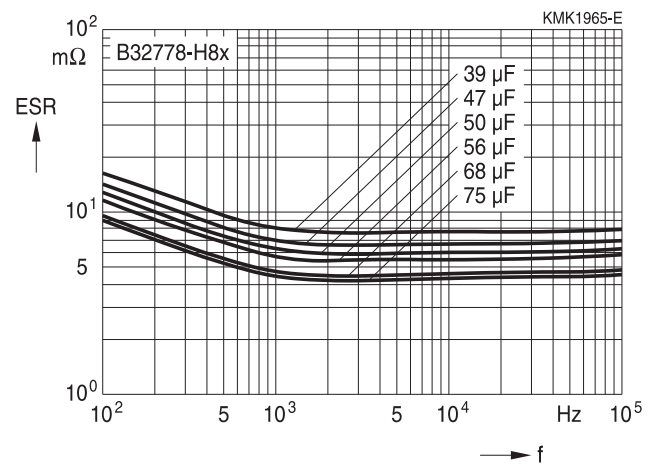
**700 V DC**



**ESR versus frequency f**  
(typical values)

**Lead spacing 52.5 mm**

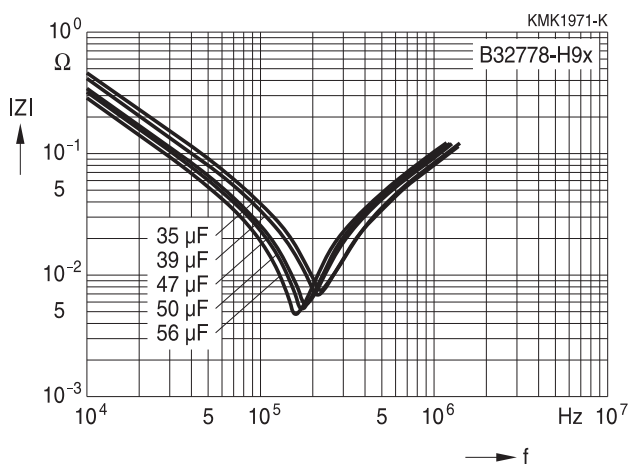
**700 V DC**



**Impedance Z versus frequency f**  
(typical values)

**Lead spacing 52.5 mm**

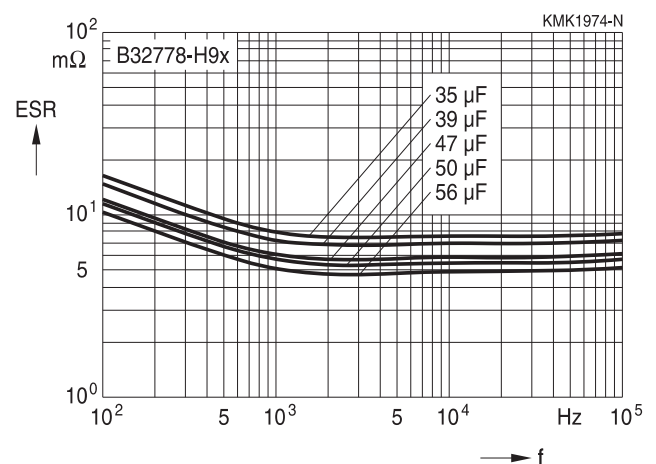
**800 V DC**

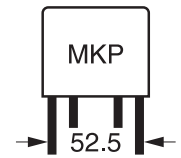


**ESR versus frequency f**  
(typical values)

**Lead spacing 52.5 mm**

**800 V DC**





**B32778H**

**MKP DC link – high density THB series**

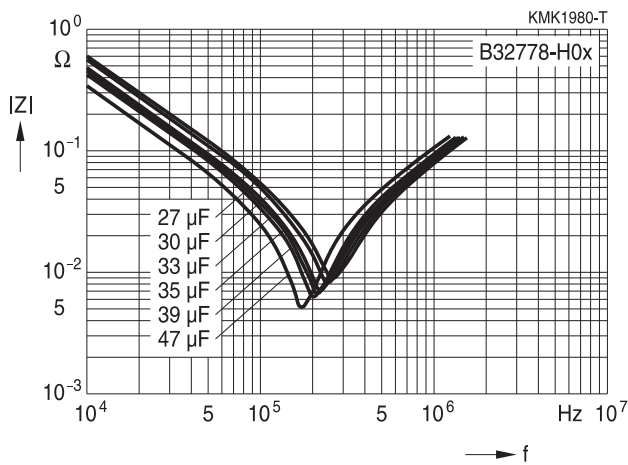
**Characteristics curves**

Additional technical information can be found under "Design support" on [www.epcos.com](http://www.epcos.com).

**Impedance Z versus frequency f**  
(typical values)

**Lead spacing 52.5 mm**

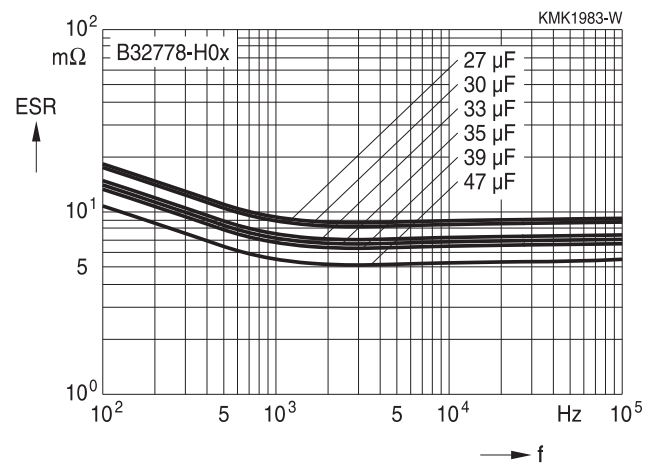
920 V DC



**ESR versus frequency f**  
(typical values)

**Lead spacing 52.5 mm**

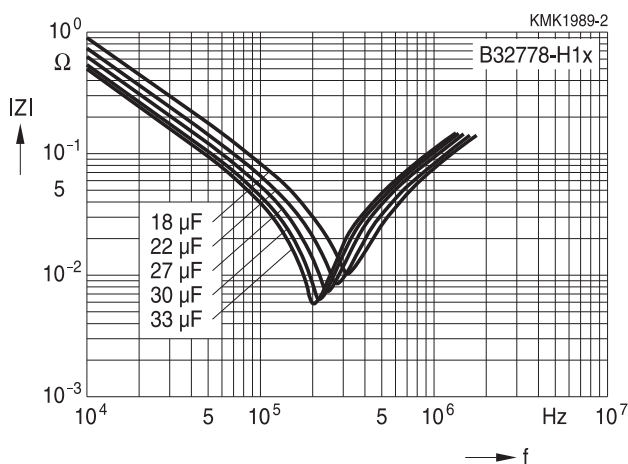
920 V DC



**Impedance Z versus frequency f**  
(typical values)

**Lead spacing 27.5 mm**

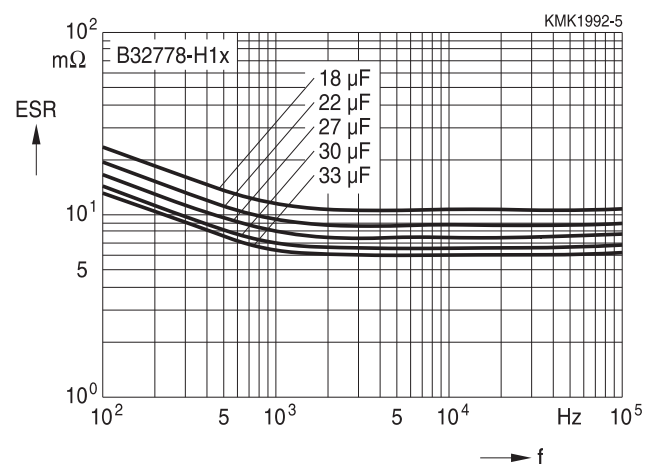
1100 V DC

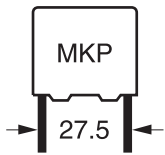


**ESR versus frequency f**  
(typical values)

**Lead spacing 27.5 mm**

1100 V DC





**B32774H**

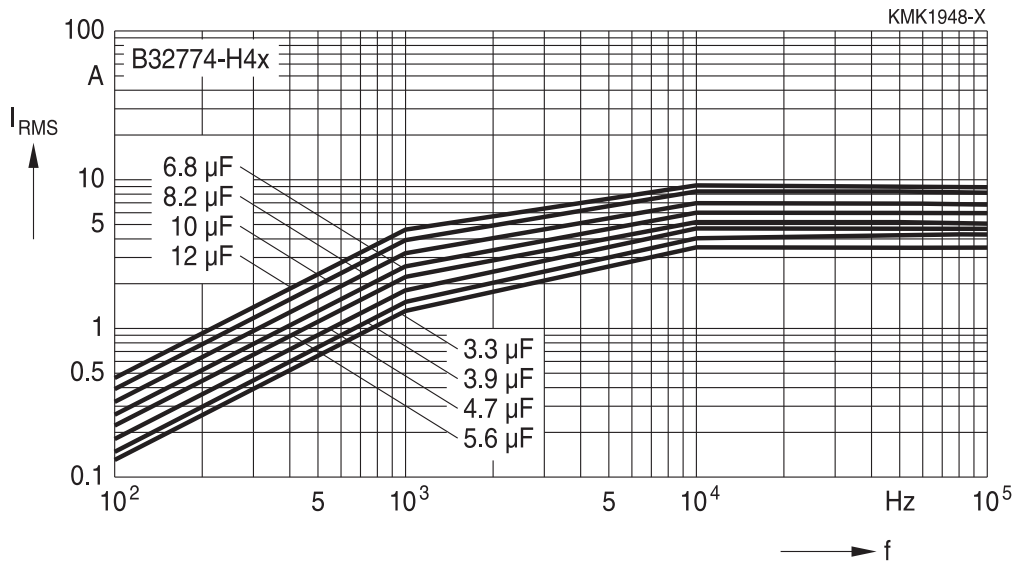
**MKP DC link – high density THB series**

**Characteristics curves**

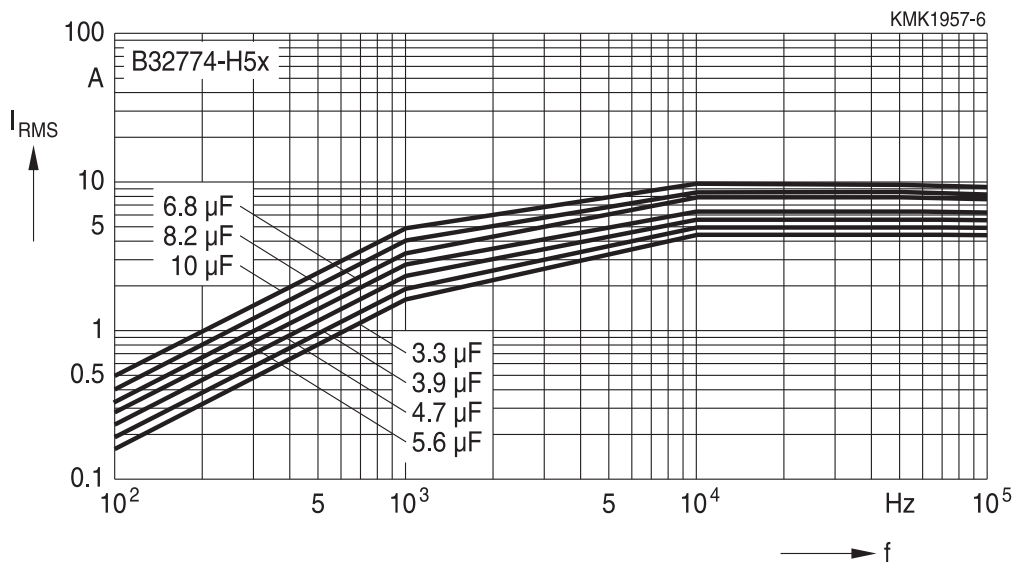
**Permissible current  $I_{RMS}$  versus frequency  $f$  at 70 °C**

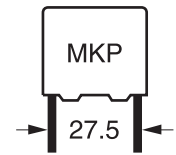
**Lead spacing 27.5 mm**

**450 V DC**



**500 V DC**





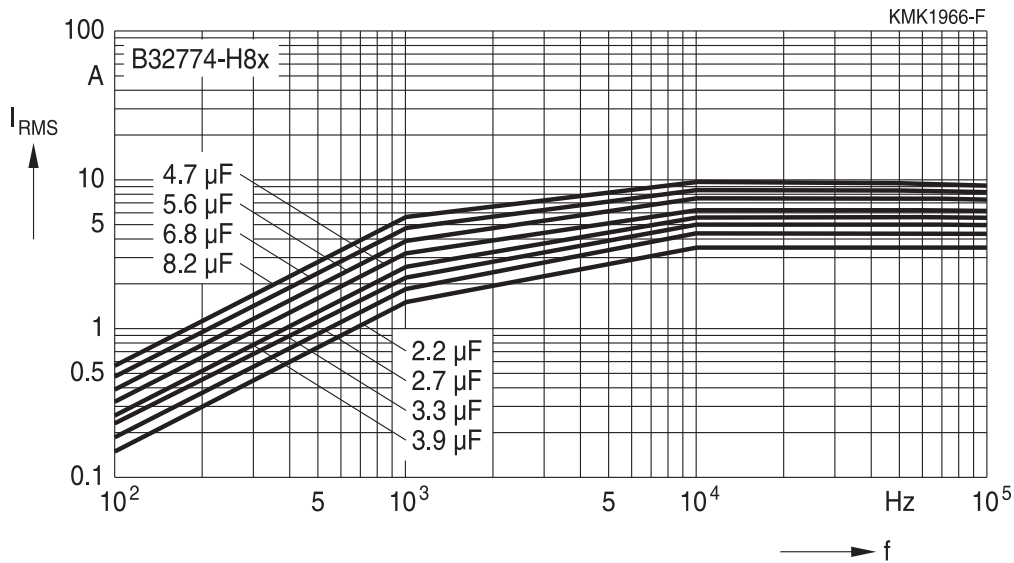
**B32774H**  
**MKP DC link – high density THB series**

**Characteristics curves**

**Permissible current  $I_{RMS}$  versus frequency  $f$  at 70 °C**

**Lead spacing 27.5 mm**

**700 V DC**



**800 V DC**

