



**Metallized Polyester Film Capacitors (MKT and MFT)**

**B 32 520**

**Plastic Case**

**... B 32 529**

**Standard applications**

**Construction**

- Dielectric: polyethylene terephthalate (polyester)
- Stacked-film technology for lead spacing 5 and 7,5 mm as well as for 10 and 15 mm (63 ... 400 Vdc)
- Wound capacitor technology for lead spacing 10 mm (630 Vdc), for lead spacing 15 mm (250 ... 630 Vdc), for lead spacing 22,5 and 27,5 mm
- Plastic case (UL 94 V-0)
- Epoxy resin sealing

**Features**

- High pulse strength
- High contact reliability

**Terminals**

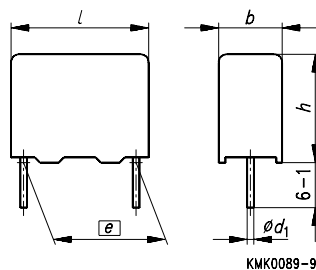
- Parallel wire leads, tinned
- Also available with  $(3,2 \pm 0,3)$  mm lead length
- Special lead lengths available upon request

**Marking**

Manufacturer's logo,  
 lot number, style and type (T5xx) for lead spacing  $\geq 10$  mm,  
 type (coded) for lead spacing 5 mm ( $B32529 \pm 1$ ),  
 rated capacitance (coded),  
 capacitance tolerance (code letter),  
 rated dc voltage,  
 date of manufacture (coded)

**Delivery mode**

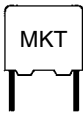
Bulk (untaped)  
 Taped (Ammo pack or reel)  
 For notes on taping, refer to chapter "Taping and packing", page 274.



Dimensions in mm

Lead spacing $e \pm 0,4$	Diameter $d_1$	Type
5,0	0,5	B 32 529
7,5	0,5	B 32 520
10,0	0,5 <sup>1)</sup> /0,6	B 32 521
15,0	0,8	B 32 522
22,5	0,8	B 32 523
27,5	0,8	B 32 524

1) 0,5 mm for capacitor width  $b = 4$  mm



B 32 520 ...

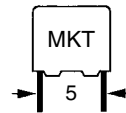
B 32 529

Overview of available types

Lead spacing	5 mm	7,5 mm	10 mm	15 mm	22,5 mm	27,5 mm
Type	B 32 529	B 32 520	B 32 521	B 32 522	B 32 523	B 32 524
Page	17	21	23	25	27	28
1,0 nF						
1,5 nF						
2,2 nF						
3,3 nF						
4,7 nF						
6,8 nF						
10 nF						
15 nF						
22 nF						
33 nF						
47 nF						
68 nF						
0,10 μF						
0,15 μF						
0,22 μF						
0,33 μF						
0,47 μF						
0,68 μF						
1,0 μF						
1,5 μF						
2,2 μF						
3,3 μF						
4,7 μF						
6,8 μF						
10 μF						
15 μF						
22 μF						
33 μF						
Note	Stacked-film technology			Stacked-film/ Wound capacitor technology	Wound capacitor technology	



B 32 529



Ordering codes and packing units, lead spacing 5 mm

$V_R$ ( $V_{rms}$ , $f \leq 60$ Hz)	$C_R$	Maximum dimensions $b \times h \times l$ (mm)	Ordering code <sup>1)</sup>	Packing units (pcs)		
				Ammo pack	Reel	Untaped
50 Vdc (32 Vac)	0,33 $\mu$ F	3,0 × 6,5 × 7,2	B32529-C5334-+***	2700	2400	2000
	0,47 $\mu$ F	3,5 × 8,0 × 7,2	B32529-C5474-+***	2300	2000	2000
	0,68 $\mu$ F	4,5 × 9,5 × 7,3	B32529-C5684-+***	1800	1500	1500
	1,0 $\mu$ F	4,5 × 9,5 × 7,3	B32529-C5105-+***	1800	1500	1500
	1,5 $\mu$ F	6,0 × 10,5 × 7,5	B32529-C5155-+***	1300	1100	1000
	2,2 $\mu$ F	7,8 × 13,0 × 7,8	B32529-D5225-+***	1000	800	1000
	3,3 $\mu$ F	7,8 × 13,0 × 7,8	B32529-D5335-+***	1000	800	1000
63 Vdc (40 Vac)	1,0 nF	2,5 × 6,5 × 7,2	B32529-C102-+***	3200	2800	2000
	1,5 nF	2,5 × 6,5 × 7,2	B32529-C152-+***	3200	2800	2000
	2,2 nF	2,5 × 6,5 × 7,2	B32529-C222-+***	3200	2800	2000
	3,3 nF	2,5 × 6,5 × 7,2	B32529-C332-+***	3200	2800	2000
	4,7 nF	2,5 × 6,5 × 7,2	B32529-C472-+***	3200	2800	2000
	6,8 nF	2,5 × 6,5 × 7,2	B32529-C682-+***	3200	2800	2000
	10 nF	2,5 × 6,5 × 7,2	B32529-C103-+***	3200	2800	2000
	15 nF	2,5 × 6,5 × 7,2	B32529-C153-+***	3200	2800	2000
	22 nF	2,5 × 6,5 × 7,2	B32529-C223-+***	3200	2800	2000
	33 nF	2,5 × 6,5 × 7,2	B32529-C333-+***	3200	2800	2000
	47 nF	2,5 × 6,5 × 7,2	B32529-C473-+***	3200	2800	2000
	68 nF	2,5 × 6,5 × 7,2	B32529-C683-+***	3200	2800	2000
	0,10 $\mu$ F	2,5 × 6,5 × 7,2	B32529-C104-+***	3200	2800	2000
	0,15 $\mu$ F	2,5 × 6,5 × 7,2	B32529-C154-+***	3200	2800	2000
	0,22 $\mu$ F	2,5 × 6,5 × 7,2	B32529-C224-+***	3200	2800	2000
	0,33 $\mu$ F	3,0 × 6,5 × 7,2	B32529-C334-+***	2700	2400	2000
	0,47 $\mu$ F	3,5 × 8,0 × 7,2	B32529-C474-+***	2300	2000	2000
	0,68 $\mu$ F	4,5 × 9,5 × 7,3	B32529-C684-+***	1800	1500	1500
	1,0 $\mu$ F	4,5 × 9,5 × 7,3	B32529-C105-+***	1800	1500	1500
	1,5 $\mu$ F	6,0 × 10,5 × 7,5	B32529-C155-+***	1300	1100	1000
2,2 $\mu$ F	7,8 × 13,0 × 7,8	B32529-D225-+***	1000	800	1000	

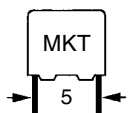
Capacitance tolerance:  $\pm 20\% \hat{=} M, \pm 10\% \hat{=} K, \pm 5\% \hat{=} J$

1) + Code letter for capacitance tolerance

\*\*\* Code number for packing: Ammo pack = 289, reel = 189

The ordering code for untaped components ends after the tolerance code letter.

For capacitors with 3,2 mm lead length, append code number "3" to the tolerance code, e.g.: B32529-C5334-K3



B 32 529

Ordering codes and packing units, lead spacing 5 mm

$V_R$ ( $V_{rms}$ , $f \leq 60$ Hz)	$C_R$	Maximum dimensions $b \times h \times l$ (mm)	Ordering code <sup>1)</sup>	Packing units (pcs)		
				Ammo pack	Reel	Untaped
100 Vdc (63 Vac)	1,0 nF	2,5 × 6,5 × 7,2	B32529-C1102-+***	3200	2800	2000
	1,5 nF	2,5 × 6,5 × 7,2	B32529-C1152-+***	3200	2800	2000
	2,2 nF	2,5 × 6,5 × 7,2	B32529-C1222-+***	3200	2800	2000
	3,3 nF	2,5 × 6,5 × 7,2	B32529-C1332-+***	3200	2800	2000
	4,7 nF	2,5 × 6,5 × 7,2	B32529-C1472-+***	3200	2800	2000
	6,8 nF	2,5 × 6,5 × 7,2	B32529-C1682-+***	3200	2800	2000
	10 nF	2,5 × 6,5 × 7,2	B32529-C1103-+***	3200	2800	2000
	15 nF	2,5 × 6,5 × 7,2	B32529-C1153-+***	3200	2800	2000
	22 nF	2,5 × 6,5 × 7,2	B32529-C1223-+***	3200	2800	2000
	33 nF	2,5 × 6,5 × 7,2	B32529-C1333-+***	3200	2800	2000
	47 nF	2,5 × 6,5 × 7,2	B32529-C1473-+***	3200	2800	2000
	68 nF	2,5 × 6,5 × 7,2	B32529-C1683-+***	3200	2800	2000
	0,10 $\mu$ F	2,5 × 6,5 × 7,2	B32529-C1104-+***	3200	2800	2000
	0,15 $\mu$ F	3,0 × 6,5 × 7,2	B32529-C1154-+***	2700	2400	2000
	0,22 $\mu$ F	3,5 × 8,0 × 7,2	B32529-C1224-+***	2300	2000	2000
	0,33 $\mu$ F	3,5 × 8,0 × 7,2	B32529-C1334-+***	2300	2000	2000
0,47 $\mu$ F	4,5 × 9,5 × 7,3	B32529-C1474-+***	1800	1500	1500	
0,68 $\mu$ F	6,0 × 10,5 × 7,5	B32529-C1684-+***	1300	1100	1000	
1,0 $\mu$ F	7,8 × 13,0 × 7,8	B32529-D1105-+***	1000	800	1000	

Capacitance tolerance:  $\pm 20\% \hat{=} M, \pm 10\% \hat{=} K, \pm 5\% \hat{=} J$

1) + Code letter for capacitance tolerance

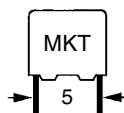
\*\*\* Code number for packing: Ammo pack = 289, reel = 189

The ordering code for untaped components ends after the tolerance code letter.

For capacitors with 3,2 mm lead length, append code number "3" to the tolerance code, e.g.: B32529-C1102-K3



B 32 529



Ordering codes and packing units, lead spacing 5 mm

$V_R$ ( $V_{rms}$ , $f \leq 60$ Hz)	$C_R$	Maximum dimensions $b \times h \times l$ (mm)	Ordering code <sup>1)</sup>	Packing units (pcs)		
				Ammo pack	Reel	Untaped
250 Vdc (160 Vac)	1,0 nF	2,5 × 6,5 × 7,2	B32529-C3102-+***	3200	2800	2000
	1,5 nF	2,5 × 6,5 × 7,2	B32529-C3152-+***	3200	2800	2000
	2,2 nF	2,5 × 6,5 × 7,2	B32529-C3222-+***	3200	2800	2000
	3,3 nF	2,5 × 6,5 × 7,2	B32529-C3332-+***	3200	2800	2000
	4,7 nF	2,5 × 6,5 × 7,2	B32529-C3472-+***	3200	2800	2000
	6,8 nF	2,5 × 6,5 × 7,2	B32529-C3682-+***	3200	2800	2000
	10 nF	2,5 × 6,5 × 7,2	B32529-C3103-+***	3200	2800	2000
	15 nF	2,5 × 6,5 × 7,2	B32529-C3153-+***	3200	2800	2000
	22 nF	2,5 × 6,5 × 7,2	B32529-C3223-+***	3200	2800	2000
	33 nF	3,0 × 6,5 × 7,2	B32529-C3333-+***	2700	2400	2000
	47 nF	3,5 × 8,0 × 7,2	B32529-C3473-+***	2300	2000	2000
	68 nF	4,5 × 9,5 × 7,3	B32529-C3683-+***	1800	1500	1500
	0,10 μF	4,5 × 9,5 × 7,3	B32529-C3104-+***	1800	1500	1500
	0,15 μF	5,0 × 10,0 × 7,5	B32529-C3154-+***	1600	1400	1500
	0,22 μF	7,8 × 13,0 × 7,8	B32529-D3224-+***	1000	800	1000
	0,33 μF	7,8 × 13,0 × 7,8	B32529-C3334-+***	1000	800	1000
0,47 μF	7,8 × 13,0 × 7,8	B32529-C3474-+***	1000	800	1000	

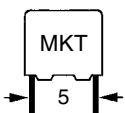
Capacitance tolerance: ±20 % ≙ M, ±10 % ≙ K, ±5 % ≙ J

1) + Code letter for capacitance tolerance

\*\*\* Code number for packing: Ammo pack = 289, reel = 189

The ordering code for untaped components ends after the tolerance code letter.

For capacitors with 3,2 mm lead length, append code number "3" to the tolerance code, e.g.: B32529-C3102-K3



B 32 529

Ordering codes and packing units, lead spacing 5 mm

$V_R$ ( $V_{rms}$ , $f \leq 60$ Hz)	$C_R$	Maximum dimensions $b \times h \times l$ (mm)	Ordering code <sup>1)</sup>	Packing units (pcs)		
				Ammo pack	Reel	Untaped
400 Vdc (200 Vac)	1,0 nF	2,5 × 6,5 × 7,2	B32529-C6102-+***	3200	2800	2000
	1,5 nF	2,5 × 6,5 × 7,2	B32529-C6152-+***	3200	2800	2000
	2,2 nF	2,5 × 6,5 × 7,2	B32529-C6222-+***	3200	2800	2000
	3,3 nF	2,5 × 6,5 × 7,2	B32529-C6332-+***	3200	2800	2000
	4,7 nF	2,5 × 6,5 × 7,2	B32529-C6472-+***	3200	2800	2000
	6,8 nF	2,5 × 6,5 × 7,2	B32529-C6682-+***	3200	2800	2000
	10 nF	3,0 × 6,5 × 7,2	B32529-C6103-+***	2700	2400	2000
	15 nF	3,5 × 8,0 × 7,2	B32529-C6153-+***	2300	2000	2000
	22 nF	4,5 × 9,5 × 7,3	B32529-B6223-+***	1800	1500	1500
	33 nF	5,0 × 10,0 × 7,5	B32529-B6333-+***	1600	1400	1500
	47 nF	6,0 × 10,5 × 7,5	B32529-B6473-+***	1300	1100	1000
630 Vdc (400 Vac)	68 nF	7,8 × 13,0 × 7,8	B32529-D6683-+***	1000	800	1000
	0,10 μF	7,8 × 13,0 × 7,8	B32529-D6104-+***	1000	800	1000
	1,0 nF	2,5 × 6,5 × 7,2	B32529-C8102-+***	3200	2800	2000
	1,5 nF	2,5 × 6,5 × 7,2	B32529-C8152-+***	3200	2800	2000
	2,2 nF	2,5 × 6,5 × 7,2	B32529-C8222-+***	3200	2800	2000
	3,3 nF	3,5 × 8,0 × 7,2	B32529-C8332-+***	2300	2000	2000
	4,7 nF	3,5 × 8,0 × 7,2	B32529-C8472-+***	2300	2000	2000
	6,8 nF	3,5 × 8,0 × 7,2	B32529-C8682-+***	2300	2000	2000
	10 nF	5,0 × 10,0 × 7,5	B32529-C8103-+***	1600	1400	1500

Capacitance tolerance: ±20 % ≙ M, ±10 % ≙ K, ±5 % ≙ J

1) + Code letter for capacitance tolerance

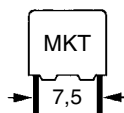
\*\*\* Code number for packing: Ammo pack = 289, reel = 189

The ordering code for untaped components ends after the tolerance code letter.

For capacitors with 3,2 mm lead length, append code number "3" to the tolerance code, e.g.: B32529-C6102-K3



B 32 520



Ordering codes and packing units, lead spacing 7,5 mm

$V_R$ ( $V_{rms}$ , $f \leq 60$ Hz)	$C_R$	Maximum dimensions $b \times h \times l$ (mm)	Ordering code <sup>1)</sup>	Packing units (pcs)		
				Ammo pack	Reel	Untaped
63 Vdc (40 Vac)	68 nF	2,5 × 7,0 × 10,0	B32520-C683-+***	3200	2800	2500
	0,10 μF	2,5 × 7,0 × 10,0	B32520-C104-+***	3200	2800	2500
	0,15 μF	2,5 × 7,0 × 10,0	B32520-C154-+***	3200	2800	2500
	0,22 μF	2,5 × 7,0 × 10,0	B32520-C224-+***	3200	2800	2500
	0,33 μF	2,5 × 7,0 × 10,0	B32520-C334-+***	3200	2800	2500
	0,47 μF	3,0 × 8,0 × 10,0	B32520-C474-+***	2600	2400	2000
	0,68 μF	4,0 × 8,5 × 10,0	B32520-C684-+***	2000	1800	1500
	1,0 μF	5,0 × 10,5 × 10,0	B32520-C105-+***	1600	1400	1000
	1,5 μF	5,0 × 10,5 × 10,0	B32520-C155-+***	1600	1400	1000
	2,2 μF	6,0 × 12,0 × 10,3	B32520-C225-+***	1300	1100	750
100 Vdc (63 Vac)	47 nF	2,5 × 7,0 × 10,0	B32520-C1473-+***	3200	2800	2500
	68 nF	2,5 × 7,0 × 10,0	B32520-C1683-+***	3200	2800	2500
	0,10 μF	2,5 × 7,0 × 10,0	B32520-C1104-+***	3200	2800	2500
	0,15 μF	3,0 × 8,0 × 10,0	B32520-C1154-+***	2600	2400	2000
	0,22 μF	3,0 × 8,0 × 10,0	B32520-C1224-+***	2600	2400	2000
	0,33 μF	4,0 × 8,5 × 10,0	B32520-C1334-+***	2000	1800	1500
	0,47 μF	5,0 × 10,5 × 10,0	B32520-C1474-+***	1600	1400	1000
	0,68 μF	6,0 × 12,0 × 10,3	B32520-C1684-+***	1300	1100	750
	1,0 μF	6,0 × 12,0 × 10,3	B32520-C1105-+***	1300	1100	750
	250 Vdc (160 Vac)	15 nF	2,5 × 7,0 × 10,0	B32520-C3153-+***	3200	2800
22 nF		2,5 × 7,0 × 10,0	B32520-C3223-+***	3200	2800	2500
33 nF		2,5 × 7,0 × 10,0	B32520-C3333-+***	3200	2800	2500
47 nF		2,5 × 7,0 × 10,0	B32520-C3473-+***	3200	2800	2500
68 nF		3,0 × 8,0 × 10,0	B32520-C3683-+***	2600	2400	2000
0,10 μF		4,0 × 8,5 × 10,0	B32520-C3104-+***	2000	1800	1500
0,15 μF		5,0 × 10,5 × 10,0	B32520-C3154-+***	1600	1400	1000

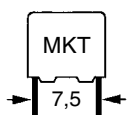
Capacitance tolerance: ±20 % ≙ M, ±10 % ≙ K, ±5 % ≙ J

1) + Code letter for capacitance tolerance

\*\*\* Code number for packing: Ammo pack = 289, reel = 189

The ordering code for untaped components ends after the tolerance code letter.

For capacitors with 3,2 mm lead length, append code number "3" to the tolerance code, e.g.: B32520-C683-K3



B 32 520

**Ordering codes and packing units, lead spacing 7,5 mm**

$V_R$ ( $V_{rms}$ , $f \leq 60$ Hz)	$C_R$	Maximum dimensions $b \times h \times l$ (mm)	Ordering code <sup>1)</sup>	Packing units (pcs)		
				Ammo pack	Reel	Untaped
400 Vdc (200 Vac)	1,0 nF	2,5 × 7,0 × 10,0	B32520-C6102-+***	3200	2800	2500
	1,5 nF	2,5 × 7,0 × 10,0	B32520-C6152-+***	3200	2800	2500
	2,2 nF	2,5 × 7,0 × 10,0	B32520-C6222-+***	3200	2800	2500
	3,3 nF	2,5 × 7,0 × 10,0	B32520-C6332-+***	3200	2800	2500
	4,7 nF	2,5 × 7,0 × 10,0	B32520-C6472-+***	3200	2800	2500
	6,8 nF	2,5 × 7,0 × 10,0	B32520-C6682-+***	3200	2800	2500
	10 nF	2,5 × 7,0 × 10,0	B32520-C6103-+***	3200	2800	2500
	15 nF	3,0 × 8,0 × 10,0	B32520-C6153-+***	2600	2400	2000
	22 nF	4,0 × 8,5 × 10,0	B32520-C6223-+***	2000	1800	1500
	33 nF	5,0 × 10,5 × 10,0	B32520-C6333-+***	1600	1400	1000
	47 nF	5,0 × 10,5 × 10,0	B32520-C6473-+***	1600	1400	1000
	68 nF	6,0 × 12,0 × 10,3	B32520-C6683-+***	1300	1100	750

Capacitance tolerance:  $\pm 20\% \hat{=} M, \pm 10\% \hat{=} K, \pm 5\% \hat{=} J$

1) + Code letter for capacitance tolerance

\*\*\* Code number for packing: Ammo pack = 289, reel = 189

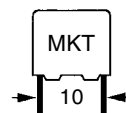
The ordering code for untaped components ends after the tolerance code letter.

For capacitors with 3,2 mm lead length, append code number "3" to the tolerance code, e.g.: B32520-C6102-K3





B 32 521



Ordering codes and packing units, lead spacing 10 mm

$V_R$ ( $V_{rms}$ , $f \leq 60$ Hz)	$C_R$	Maximum dimensions $b \times h \times l$ (mm)	Ordering code <sup>1)</sup>	Packing units (pcs)		
				Ammo pack	Reel	Untaped
63 Vdc (40 Vac)	0,47 $\mu$ F	4,0 $\times$ 7,0 $\times$ 13,0	B32521-C474-+***	1000	1700	1000
	0,68 $\mu$ F	4,0 $\times$ 7,0 $\times$ 13,0	B32521-C684-+***	1000	1700	1000
	1,0 $\mu$ F	4,0 $\times$ 9,0 $\times$ 13,0	B32521-C105-+***	1000	1700	1000
	1,5 $\mu$ F	5,0 $\times$ 11,0 $\times$ 13,0	B32521-C155-+***	830	1300	1000
	2,2 $\mu$ F	5,0 $\times$ 11,0 $\times$ 13,0	B32521-C225-+***	830	1300	1000
	3,3 $\mu$ F	6,0 $\times$ 12,0 $\times$ 13,0	B32521-C335-+***	680	1100	1000
100 Vdc (63 Vac)	0,10 $\mu$ F	4,0 $\times$ 7,0 $\times$ 13,0	B32521-C1104-+***	1000	1700	1000
	0,15 $\mu$ F	4,0 $\times$ 7,0 $\times$ 13,0	B32521-C1154-+***	1000	1700	1000
	0,22 $\mu$ F	4,0 $\times$ 7,0 $\times$ 13,0	B32521-C1224-+***	1000	1700	1000
	0,33 $\mu$ F	4,0 $\times$ 7,0 $\times$ 13,0	B32521-C1334-+***	1000	1700	1000
	0,47 $\mu$ F	4,0 $\times$ 9,0 $\times$ 13,0	B32521-C1474-+***	1000	1700	1000
	0,68 $\mu$ F	5,0 $\times$ 11,0 $\times$ 13,0	B32521-C1684-+***	830	1300	1000
	1,0 $\mu$ F	6,0 $\times$ 12,0 $\times$ 13,0	B32521-C1105-+***	680	1100	1000
250 Vdc (160 Vac)	33 nF	4,0 $\times$ 7,0 $\times$ 13,0	B32521-C3333-+***	1000	1700	1000
	47 nF	4,0 $\times$ 7,0 $\times$ 13,0	B32521-C3473-+***	1000	1700	1000
	68 nF	4,0 $\times$ 7,0 $\times$ 13,0	B32521-C3683-+***	1000	1700	1000
	0,10 $\mu$ F	4,0 $\times$ 7,0 $\times$ 13,0	B32521-C3104-+***	1000	1700	1000
	0,15 $\mu$ F	4,0 $\times$ 9,0 $\times$ 13,0	B32521-C3154-+***	1000	1700	1000
	0,22 $\mu$ F	5,0 $\times$ 11,0 $\times$ 13,0	B32521-C3224-+***	830	1300	1000
	0,33 $\mu$ F	5,0 $\times$ 11,0 $\times$ 13,0	B32521-C3334-+***	830	1300	1000
	0,47 $\mu$ F	6,0 $\times$ 12,0 $\times$ 13,0	B32521-C3474-+***	680	1100	1000
	400 Vdc (200 Vac)	10 nF	4,0 $\times$ 7,0 $\times$ 13,0	B32521-C6103-+***	1000	1700
15 nF		4,0 $\times$ 7,0 $\times$ 13,0	B32521-C6153-+***	1000	1700	1000
22 nF		4,0 $\times$ 7,0 $\times$ 13,0	B32521-C6223-+***	1000	1700	1000
33 nF		4,0 $\times$ 9,0 $\times$ 13,0	B32521-C6333-+***	1000	1700	1000
47 nF		5,0 $\times$ 11,0 $\times$ 13,0	B32521-C6473-+***	830	1300	1000
68 nF		5,0 $\times$ 11,0 $\times$ 13,0	B32521-C6683-+***	830	1300	1000
0,10 $\mu$ F		6,0 $\times$ 12,0 $\times$ 13,0	B32521-C6104-+***	680	1100	1000

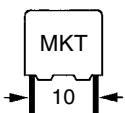
Capacitance tolerance:  $\pm 20\% \hat{=}$  M,  $\pm 10\% \hat{=}$  K,  $\pm 5\% \hat{=}$  J

1) + Code letter for capacitance tolerance

\*\*\* Code number for packing: Ammo pack = 289, reel = 189

The ordering code for untaped components ends after the tolerance code letter.

For capacitors with 3,2 mm lead length, append code number "3" to the tolerance code, e.g.: B32521-C474-K3



B 32 521

**Ordering codes and packing units, lead spacing 10 mm**

$V_R$ ( $V_{rms}$ , $f \leq 60$ Hz)	$C_R$	Maximum dimensions $b \times h \times l$ (mm)	Ordering code <sup>1)</sup>	Packing units (pcs)		
				Ammo pack	Reel	Untaped
630 Vdc (200 Vac)	6,8 nF <sup>2)</sup>	4,0 × 9,0 × 13,0	B32521-N8682-+***	1000	1700	1000
	10 nF <sup>2)</sup>	4,0 × 9,0 × 13,0	B32521-N8103-+***	1000	1700	1000
	15 nF <sup>2)</sup>	5,0 × 11,0 × 13,0	B32521-N8153-+***	830	1300	1000
	22 nF <sup>2)</sup>	5,0 × 11,0 × 13,0	B32521-N8223-+***	830	1300	1000
	33 nF <sup>2)</sup>	6,0 × 12,0 × 13,0	B32521-N8333-+***	680	1100	1000

Capacitance tolerance:  $\pm 20\% \hat{=} M, \pm 10\% \hat{=} K, \pm 5\% \hat{=} J$

1) + Code letter for capacitance tolerance

\*\*\* Code number for packing: Ammo pack = 289, reel = 189

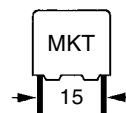
The ordering code for untaped components ends after the tolerance code letter.

For capacitors with 3,2 mm lead length, append code number "3" to the tolerance code, e.g.: B32521-N8682-K3

2) Wound capacitor technology



B 32 522



Ordering codes and packing units, lead spacing 15 mm

$V_R$ ( $V_{rms}$ , $f \leq 60$ Hz)	$C_R$	Maximum dimensions $b \times h \times l$ (mm)	Ordering code <sup>1)</sup>	Packing units (pcs)		
				Ammo pack	Reel	Untaped
63 Vdc (40 Vac)	0,68 $\mu$ F	5,0 $\times$ 10,5 $\times$ 18,0	B32522-C684-+***	1170	1300	1000
	1,0 $\mu$ F	5,0 $\times$ 10,5 $\times$ 18,0	B32522-C105-+***	1170	1300	1000
	1,5 $\mu$ F	5,0 $\times$ 10,5 $\times$ 18,0	B32522-C155-+***	1170	1300	1000
	2,2 $\mu$ F	5,0 $\times$ 10,5 $\times$ 18,0	B32522-C225-+***	1170	1300	1000
	3,3 $\mu$ F	6,0 $\times$ 11,0 $\times$ 18,0	B32522-C335-+***	960	1100	1000
	4,7 $\mu$ F	7,0 $\times$ 12,5 $\times$ 18,0	B32522-C475-+***	830	900	1000
	6,8 $\mu$ F	8,5 $\times$ 14,5 $\times$ 18,0	B32522-C685-+***	680	700	500
10 $\mu$ F	9,0 $\times$ 17,5 $\times$ 18,0	B32522-C106-+***	640	700	500	
100 Vdc (63 Vac)	0,33 $\mu$ F	5,0 $\times$ 10,5 $\times$ 18,0	B32522-C1334-+***	1170	1300	1000
	0,47 $\mu$ F	5,0 $\times$ 10,5 $\times$ 18,0	B32522-C1474-+***	1170	1300	1000
	0,68 $\mu$ F	5,0 $\times$ 10,5 $\times$ 18,0	B32522-C1684-+***	1170	1300	1000
	1,0 $\mu$ F	5,0 $\times$ 10,5 $\times$ 18,0	B32522-C1105-+***	1170	1300	1000
	1,5 $\mu$ F	6,0 $\times$ 11,0 $\times$ 18,0	B32522-C1155-+***	960	1100	1000
	2,2 $\mu$ F	7,0 $\times$ 12,5 $\times$ 18,0	B32522-C1225-+***	830	900	1000
	3,3 $\mu$ F	8,5 $\times$ 14,5 $\times$ 18,0	B32522-C1335-+***	680	700	500
4,7 $\mu$ F	9,0 $\times$ 17,5 $\times$ 18,0	B32522-C1475-+***	640	700	500	
250 Vdc (160 Vac)	0,10 $\mu$ F	5,0 $\times$ 10,5 $\times$ 18,0	B32522-C3104-+***	1170	1300	1000
	0,15 $\mu$ F	5,0 $\times$ 10,5 $\times$ 18,0	B32522-C3154-+***	1170	1300	1000
	0,22 $\mu$ F	5,0 $\times$ 10,5 $\times$ 18,0	B32522-C3224-+***	1170	1300	1000
	0,33 $\mu$ F	5,0 $\times$ 10,5 $\times$ 18,0	B32522-C3334-+***	1170	1300	1000
	0,47 $\mu$ F	6,0 $\times$ 11,0 $\times$ 18,0	B32522-C3474-+***	960	1100	1000
	0,68 $\mu$ F	7,0 $\times$ 12,5 $\times$ 18,0	B32522-C3684-+***	830	900	1000
	1,0 $\mu$ F	8,5 $\times$ 14,5 $\times$ 18,0	B32522-C3105-+***	680	700	500
	1,0 $\mu$ F <sup>2)</sup>	8,5 $\times$ 14,5 $\times$ 18,0	B32522-N3105-+***	680	700	500
	1,5 $\mu$ F	9,0 $\times$ 17,5 $\times$ 18,0	B32522-C3155-+***	640	700	500
	1,5 $\mu$ F <sup>2)</sup>	9,0 $\times$ 17,5 $\times$ 18,0	B32522-N3155-+***	640	700	500

Capacitance tolerance:  $\pm 20\% \hat{=} M, \pm 10\% \hat{=} K, \pm 5\% \hat{=} J$

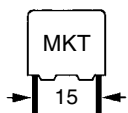
1) + Code letter for capacitance tolerance

\*\*\* Code number for packing: Ammo pack = 289, reel = 189

The ordering code for untaped components ends after the tolerance code letter.

For capacitors with 3,2 mm lead length, append code number "3" to the tolerance code, e.g.: B32522-C684-K3

2) Wound capacitor technology



B 32 522

Ordering codes and packing units, lead spacing 15 mm

$V_R$ ( $V_{rms}$ , $f \leq 60$ Hz)	$C_R$	Maximum dimensions $b \times h \times l$ (mm)	Ordering code <sup>1)</sup>	Packing units (pcs)		
				Ammo pack	Reel	Untaped
400 Vdc (200 Vac)	47 nF	5,0 × 10,5 × 18,0	B32522-C6473-+***	1170	1300	1000
	68 nF	5,0 × 10,5 × 18,0	B32522-C6683-+***	1170	1300	1000
	0,10 $\mu$ F	5,0 × 10,5 × 18,0	B32522-C6104-+***	1170	1300	1000
	0,10 $\mu$ F <sup>2)</sup>	5,0 × 10,5 × 18,0	B32522-N6104-+***	1170	1300	1000
	0,15 $\mu$ F	6,0 × 11,0 × 18,0	B32522-C6154-+***	960	1100	1000
	0,15 $\mu$ F <sup>2)</sup>	5,0 × 10,5 × 18,0	B32522-N6154-+***	1170	1300	1000
	0,22 $\mu$ F	7,0 × 12,5 × 18,0	B32522-C6224-+***	830	900	1000
	0,22 $\mu$ F <sup>2)</sup>	6,0 × 11,0 × 18,0	B32522-N6224-+***	960	1100	1000
	0,33 $\mu$ F	8,5 × 14,5 × 18,0	B32522-C6334-+***	680	700	500
	0,33 $\mu$ F <sup>2)</sup>	8,5 × 14,5 × 18,0	B32522-N6334-+***	680	700	500
	0,47 $\mu$ F <sup>2)</sup>	8,5 × 14,5 × 18,0	B32522-N6474-+***	680	700	500
0,68 $\mu$ F <sup>2)</sup>	9,0 × 17,5 × 18,0	B32522-N6684-+***	640	700	500	
630 Vdc (200 Vac)	33 nF <sup>2)</sup>	5,0 × 10,5 × 18,0	B32522-Q8333-+***	1170	1300	1000
	47 nF <sup>2)</sup>	5,0 × 10,5 × 18,0	B32522-Q8473-+***	1170	1300	1000
	68 nF <sup>2)</sup>	6,0 × 11,0 × 18,0	B32522-Q8683-+***	960	1100	1000
	0,10 $\mu$ F <sup>2)</sup>	7,0 × 12,5 × 18,0	B32522-Q8104-+***	830	900	1000
	0,15 $\mu$ F <sup>2)</sup>	8,5 × 14,5 × 18,0	B32522-Q8154-+***	680	700	500
	0,22 $\mu$ F <sup>2)</sup>	9,0 × 17,5 × 18,0	B32522-Q8224-+***	640	700	500

Capacitance tolerance:  $\pm 20\% \hat{=} M, \pm 10\% \hat{=} K, \pm 5\% \hat{=} J$

1) + Code letter for capacitance tolerance

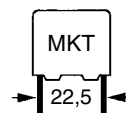
\*\*\* Code number for packing: Ammo pack = 289, reel = 189

For capacitors with 3,2 mm lead length, append code number "3" to the tolerance code, e.g.: B32522-C6473-K3

2) Wound capacitor technology



B 32 523



**Ordering codes and packing units, lead spacing 22,5 mm**

$V_R$ ( $V_{rms}$ , $f \leq 60$ Hz)	$C_R$	Maximum dimensions $b \times h \times l$ (mm)	Ordering code <sup>1)</sup>	Packing units (pcs)		
				Ammo pack	Reel	Untaped
63 Vdc (40 Vac)	3,3 $\mu$ F	6,0 $\times$ 15,0 $\times$ 26,5	B32523-Q335-+***	680	700	720
	4,7 $\mu$ F	7,0 $\times$ 16,0 $\times$ 26,5	B32523-Q475-+***	580	600	630
	6,8 $\mu$ F	8,5 $\times$ 16,5 $\times$ 26,5	B32523-Q685-+***	480	500	510
	10 $\mu$ F	10,5 $\times$ 18,5 $\times$ 26,5	B32523-Q106-+***	390	400	540
100 Vdc (63 Vac)	1,5 $\mu$ F	6,0 $\times$ 15,0 $\times$ 26,5	B32523-Q1155-+***	680	700	720
	2,2 $\mu$ F	6,0 $\times$ 15,0 $\times$ 26,5	B32523-Q1225-+***	680	700	720
	3,3 $\mu$ F	6,0 $\times$ 15,0 $\times$ 26,5	B32523-Q1335-+***	680	700	720
	4,7 $\mu$ F	7,0 $\times$ 16,0 $\times$ 26,5	B32523-Q1475-+***	580	600	630
	6,8 $\mu$ F	8,5 $\times$ 16,5 $\times$ 26,5	B32523-Q1685-+***	480	500	510
250 Vdc (160 Vac)	0,47 $\mu$ F	6,0 $\times$ 15,0 $\times$ 26,5	B32523-Q3474-+***	680	700	720
	0,68 $\mu$ F	6,0 $\times$ 15,0 $\times$ 26,5	B32523-Q3684-+***	680	700	720
	1,0 $\mu$ F	6,0 $\times$ 15,0 $\times$ 26,5	B32523-Q3105-+***	680	700	720
	1,5 $\mu$ F	7,0 $\times$ 16,0 $\times$ 26,5	B32523-Q3155-+***	580	600	630
	2,2 $\mu$ F	10,5 $\times$ 16,5 $\times$ 26,5	B32523-Q3225-+***	390	400	540
	3,3 $\mu$ F	11,0 $\times$ 20,5 $\times$ 26,5	B32523-Q3335-+***	370	350	510
400 Vdc (200 Vac)	0,22 $\mu$ F	6,0 $\times$ 15,0 $\times$ 26,5	B32523-Q6224-+***	680	700	720
	0,33 $\mu$ F	6,0 $\times$ 15,0 $\times$ 26,5	B32523-Q6334-+***	680	700	720
	0,47 $\mu$ F	7,0 $\times$ 16,0 $\times$ 26,5	B32523-Q6474-+***	580	600	630
	0,68 $\mu$ F	8,5 $\times$ 16,5 $\times$ 26,5	B32523-Q6684-+***	480	500	510
	1,0 $\mu$ F	10,5 $\times$ 16,5 $\times$ 26,5	B32523-Q6105-+***	390	400	540
630 Vdc (200 Vac)	0,10 $\mu$ F	6,0 $\times$ 15,0 $\times$ 26,5	B32523-Q8104-+***	680	700	720
	0,15 $\mu$ F	6,0 $\times$ 15,0 $\times$ 26,5	B32523-Q8154-+***	680	700	720
	0,22 $\mu$ F	7,0 $\times$ 16,0 $\times$ 26,5	B32523-Q8224-+***	580	600	630
	0,33 $\mu$ F	10,5 $\times$ 16,5 $\times$ 26,5	B32523-Q8334-+***	390	400	540
	0,47 $\mu$ F	10,5 $\times$ 20,5 $\times$ 26,5	B32523-Q8474-+***	390	400	540

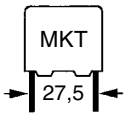
Capacitance tolerance:  $\pm 20\% \hat{=} M, \pm 10\% \hat{=} K, \pm 5\% \hat{=} J$

1) + Code letter for capacitance tolerance

\*\*\* Code number for packing: Ammo pack = 289, reel = 189

The ordering code for untaped components ends after the tolerance code letter.

For capacitors with 3,2 mm lead length, append code number "3" to the tolerance code, e.g.: B32523-Q685-K3



B 32 524

**Ordering codes and packing units, lead spacing 27,5 mm**

$V_R$ ( $V_{rms}$ , $f \leq 60$ Hz)	$C_R$	Maximum dimensions $b \times h \times l$ (mm)	Ordering code <sup>1)</sup>	Packing units (pcs)		
				Ammo pack	Reel	Untaped
100 Vdc (63 Vac)	4,7 $\mu$ F	11,0 $\times$ 21,0 $\times$ 31,5	B32524-Q1475-+***	–	350	320
	6,8 $\mu$ F	11,0 $\times$ 21,0 $\times$ 31,5	B32524-Q1685-+***	–	350	320
	10 $\mu$ F	11,0 $\times$ 21,0 $\times$ 31,5	B32524-Q1106-+***	–	350	320
	15 $\mu$ F	12,5 $\times$ 21,5 $\times$ 31,5	B32524-Q1156-+***	–	300	280
	22 $\mu$ F	14,0 $\times$ 24,5 $\times$ 31,5	B32524-Q1226-+***	–	250	260
	33 $\mu$ F	18,0 $\times$ 27,5 $\times$ 31,5	B32524-Q1336-+***	–	–	200
250 Vdc (160 Vac)	1,5 $\mu$ F	11,0 $\times$ 21,0 $\times$ 31,5	B32524-Q3155-+***	–	350	320
	2,2 $\mu$ F	11,0 $\times$ 21,0 $\times$ 31,5	B32524-Q3225-+***	–	350	320
	3,3 $\mu$ F	11,0 $\times$ 21,0 $\times$ 31,5	B32524-Q3335-+***	–	350	320
	4,7 $\mu$ F	11,0 $\times$ 21,0 $\times$ 31,5	B32524-Q3475-+***	–	350	320
	6,8 $\mu$ F	14,0 $\times$ 24,5 $\times$ 31,5	B32524-Q3685-+***	–	250	260
	10 $\mu$ F	18,0 $\times$ 27,5 $\times$ 31,5	B32524-Q3106-+***	–	–	200
400 Vdc (200 Vac)	1,0 $\mu$ F	11,0 $\times$ 21,0 $\times$ 31,5	B32524-Q6105-+***	–	350	320
	1,5 $\mu$ F	11,0 $\times$ 21,0 $\times$ 31,5	B32524-Q6155-+***	–	350	320
	2,2 $\mu$ F	12,5 $\times$ 21,5 $\times$ 31,5	B32524-Q6225-+***	–	300	280
	3,3 $\mu$ F	15,0 $\times$ 24,5 $\times$ 31,5	B32524-Q6335-+***	–	–	240
	4,7 $\mu$ F	18,0 $\times$ 27,5 $\times$ 31,5	B32524-Q6475-+***	–	–	200
630 Vdc (220 Vac)	0,33 $\mu$ F	11,0 $\times$ 21,0 $\times$ 31,5	B32524-Q8334-+***	–	350	320
	0,47 $\mu$ F	11,0 $\times$ 21,0 $\times$ 31,5	B32524-Q8474-+***	–	350	320
	0,68 $\mu$ F	11,0 $\times$ 21,0 $\times$ 31,5	B32524-Q8684-+***	–	350	320
	1,0 $\mu$ F	14,0 $\times$ 24,5 $\times$ 31,5	B32524-Q8105-+***	–	250	260
	1,5 $\mu$ F	18,0 $\times$ 27,5 $\times$ 31,5	B32524-Q8155-+***	–	–	200

Capacitance tolerance:  $\pm 20\% \hat{=} M, \pm 10\% \hat{=} K, \pm 5\% \hat{=} J$

1) + Code letter for capacitance tolerance

\*\*\* Code number for packing: Ammo pack = 289, reel = 189

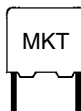
The ordering code for untaped components ends after the tolerance code letter.

For capacitors with 3,2 mm lead length, append code number "3" to the tolerance code, e.g.: B32524-Q1685-K3



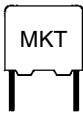
B 32 520

... B 32 529



**Technical data**

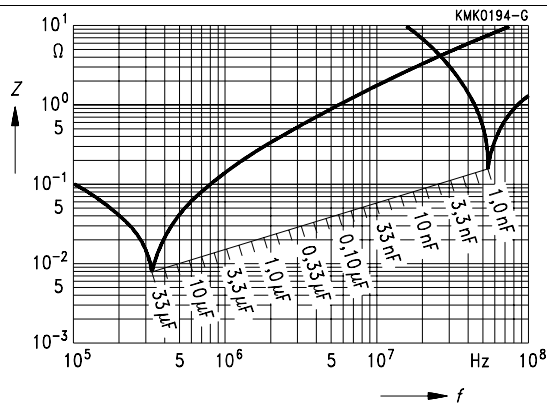
Climatic category in accordance with IEC 60068-1	55/100/56			
Lower category temperature $T_{min}$	- 55 °C			
Upper category temperature $T_{max}$	+ 100 °C (+ 125 °C for 1000 h and $V_C = 0,5 \cdot V_R$ )			
Damp heat test	56 days/40 °C/93% relative humidity			
Limit values after damp heat test	Capacitance change $ \Delta C/C $	$\leq 5 \%$		
	Dissipation factor change $\Delta \tan \delta$	$\leq 5 \cdot 10^{-3}$ (at 1 kHz)		
	Insulation resistance $R_{is}$	$\geq 50 \%$ of minimum		
	or time constant $\tau = C_R \cdot R_{is}$	as-delivered values		
Reliability:				
Reference conditions	0,5 · $V_R$ ; 40 °C			
Failure rate	$1 \cdot 10^{-9}/h = 1$ fit			
	For a conversion table for other operating conditions and temperatures, refer to chapter "Quality assurance", page 327.			
Service life	200 000 h			
Failure criteria:				
Total failure	Short circuit or open circuit			
Failure due to variation of parameters	Capacitance change $ \Delta C/C $	$> 10 \%$		
	Dissipation factor $\tan \delta$	$> 2 \cdot$ upper limit value		
	Insulation resistance $R_{is}$	$< 150 \text{ M}\Omega$ ( $C_R \leq 0,33 \text{ }\mu\text{F}$ )		
	or time constant $\tau = C_R \cdot R_{is}$	$< 50 \text{ s}$ ( $C_R > 0,33 \text{ }\mu\text{F}$ )		
DC test voltage	$1,4 \cdot V_R, 2 \text{ s}$			
Category voltage $V_C$	$T \leq 85 \text{ }^\circ\text{C}$	$V_C = 1,0 \cdot V_R$	$V_{C,rms} = 1,0 \cdot V_{rms}$	
Operation with dc voltage or ac voltage $V_{rms}$ up to 60 Hz	$T \leq 100 \text{ }^\circ\text{C}$	$V_C = 0,8 \cdot V_R$	$V_{C,rms} = 0,8 \cdot V_{rms}$	
Operating voltage for short operating periods	$T \leq 85 \text{ }^\circ\text{C}$	$V = 1,25 \cdot V_C, \text{ max. } 2000 \text{ h}$	$V = 1,0 \cdot V_{C,rms}, \text{ max. } 2000 \text{ h}$	
	$T \leq 100 \text{ }^\circ\text{C}$	$V = 1,25 \cdot V_C, \text{ max. } 2000 \text{ h}$	$V = 1,0 \cdot V_{C,rms}, \text{ max. } 2000 \text{ h}$	
	$T \leq 125 \text{ }^\circ\text{C}$	$V = 0,5 \cdot V_R, \text{ max. } 1000 \text{ h}$	$V = 0,5 \cdot V_{rms}, \text{ max. } 1000 \text{ h}$	
Dissipation factor $\tan \delta$ (in $10^{-3}$ ) at 20 °C (upper limit values)		$C_R \leq 0,1 \text{ }\mu\text{F}$	$0,1 \text{ }\mu\text{F} < C_R \leq 1 \text{ }\mu\text{F}$	$C_R > 1 \text{ }\mu\text{F}$
	at 1 kHz	8	10	10
	10 kHz	15	20	—
	100 kHz	30	—	—
Insulation resistance $R_{is}$ or time constant $\tau = C_R \cdot R_{is}$ at 20 °C, rel. humidity $\leq 65 \%$ (minimum as-delivered values)	$V_R$	$C_R \leq 0,33 \text{ }\mu\text{F}$	$C_R > 0,33 \text{ }\mu\text{F}$	
	$\leq 100 \text{ Vdc}$	3750 M $\Omega$	1250 s	
	$\geq 250 \text{ Vdc}$	7500 M $\Omega$	2500 s	



B 32 529 ...

B 32 529

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



### Pulse handling capability

Maximum permissible voltage change per unit of time for non-sinusoidal voltages (pulse, sawtooth)

$V_R$	Max. rate of voltage rise $V_{pp}/\tau$ in V/ $\mu$ s (for $V_{pp} = V_R$ )					
	Lead spacing					
	5 mm	7,5 mm	10 mm <sup>1)</sup>	15 mm <sup>1)</sup>	22,5 mm <sup>1)</sup>	27,5 mm <sup>1)</sup>
50 Vdc	200	–	–	–	–	–
63 Vdc	250	120	50	30	(3)	–
100 Vdc	300	150	75	50	(4)	(3)
250 Vdc	400	200	150	100 (10)	(6)	(4,5)
400 Vdc	600	275	175	125 (20)	(10)	(7,5)
630 Vdc	800	–	(20)	(25)	(15)	(12)

For  $V_{pp} < V_R$ , the permissible voltage rise rate value  $V_{pp}/\tau$  may be multiplied by the factor  $V_R/V_{pp}$ . Also refer to the calculation example in chapter "General technical information", page 302.

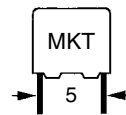
$V_R$	Pulse characteristic $k_0$ in V <sup>2</sup> / $\mu$ s (for $V_{pp} \leq V_R$ )					
	Lead spacing					
	5 mm	7,5 mm	10 mm <sup>1)</sup>	15 mm <sup>1)</sup>	22,5 mm <sup>1)</sup>	27,5 mm <sup>1)</sup>
50 Vdc	20 000	–	–	–	–	–
63 Vdc	30 000	15 000	6 300	3 800	(375)	–
100 Vdc	60 000	30 000	15 000	10 000	(750)	(600)
250 Vdc	200 000	100 000	75 000	50 000 (5 000)	(3 000)	(2 250)
400 Vdc	500 000	220 000	140 000	100 000 (15 000)	(8 000)	(6 000)
630 Vdc	1 000 000	–	(25 000)	(30 000)	(18 000)	(15 000)

1) Values in brackets apply to wound capacitors





B 32 529

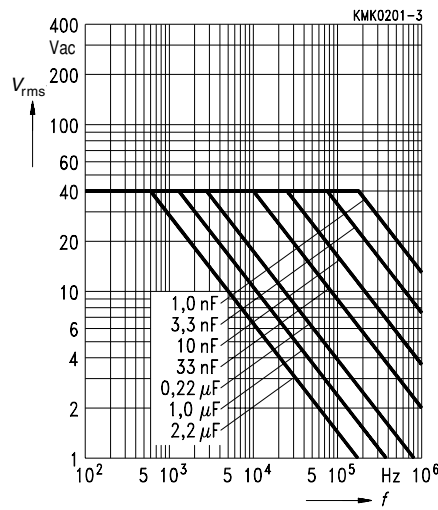
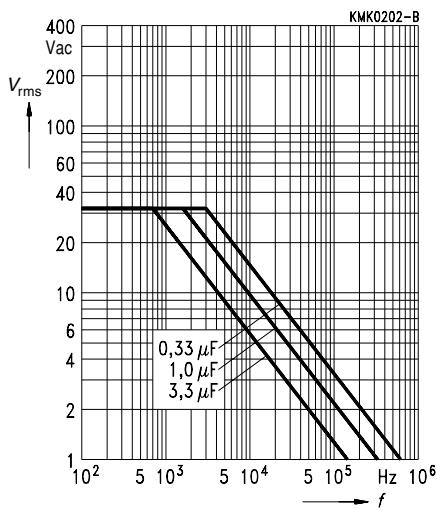


Permissible ac voltage  $V_{rms}$  versus frequency  $f$

Lead spacing 5 mm

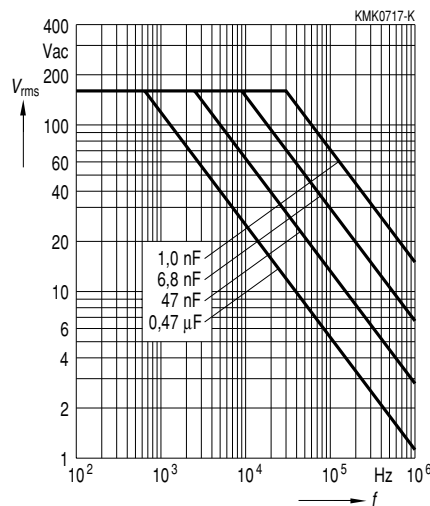
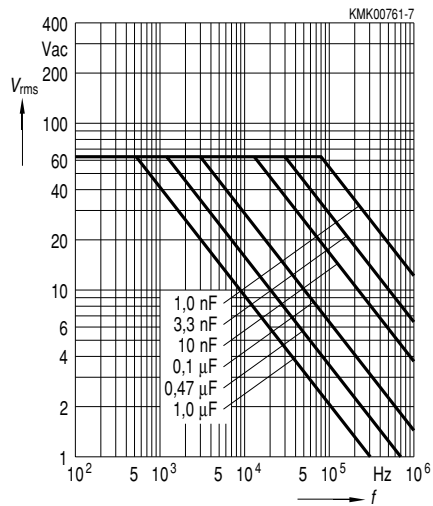
50 Vdc/ 32 Vac

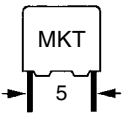
63 Vdc/ 40 Vac



100 Vdc/ 63 Vac

250 Vdc/ 160 Vac



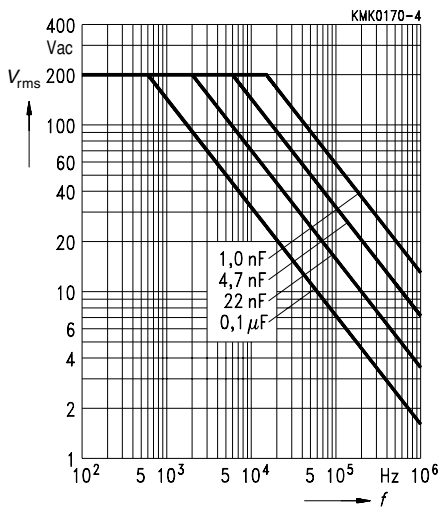


B 32 529

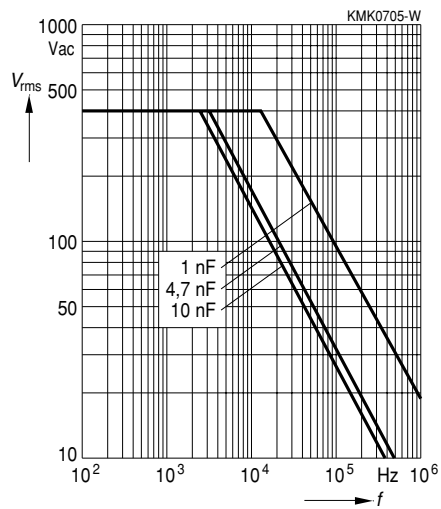
Permissible ac voltage  $V_{rms}$  versus frequency  $f$

Lead spacing 5 mm

400 Vdc/ 200 Vac

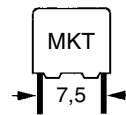


630 Vdc/ 400 Vac





B 32 520

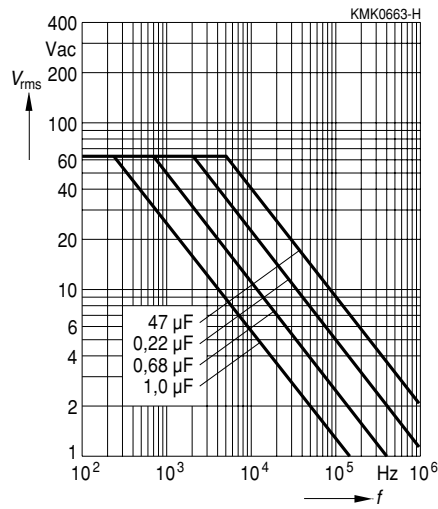
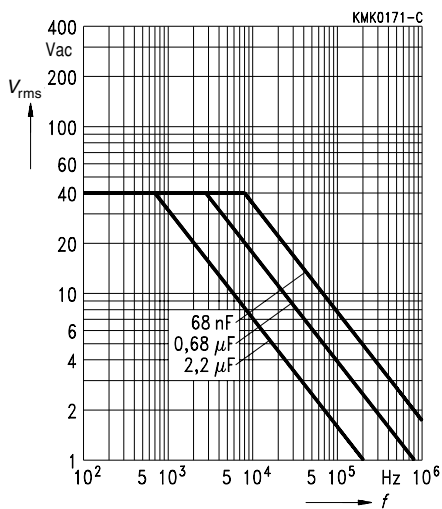


Permissible ac voltage  $V_{rms}$  versus frequency  $f$

Lead spacing 7,5 mm

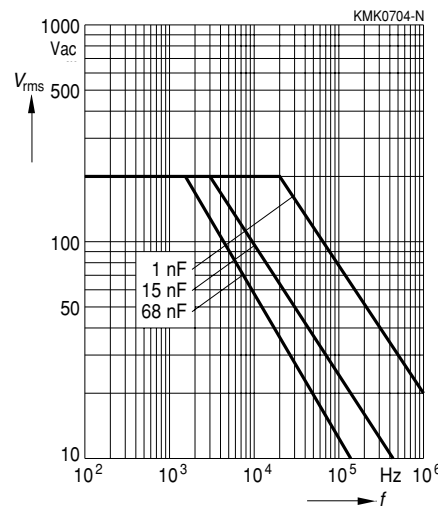
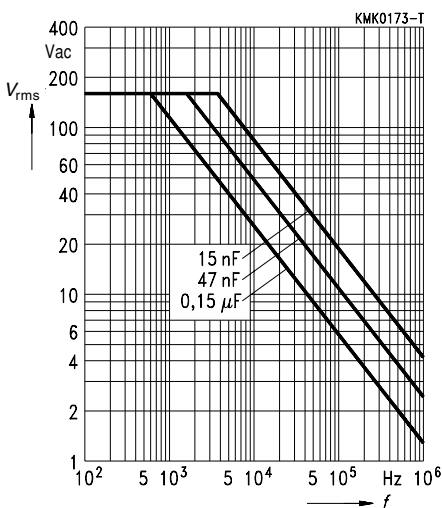
63 Vdc/ 40 Vac

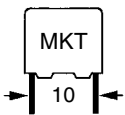
100 Vdc/ 63 Vac



250 Vdc/ 160 Vac

400 Vdc/ 200 Vac





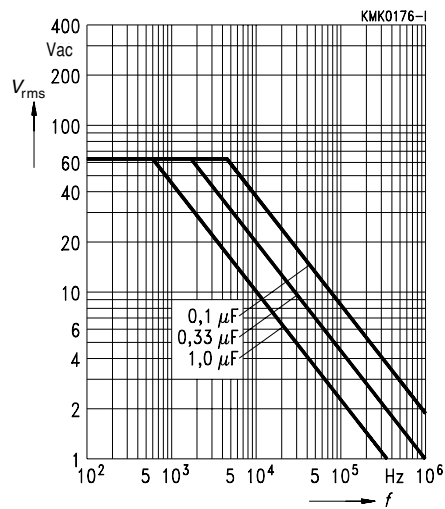
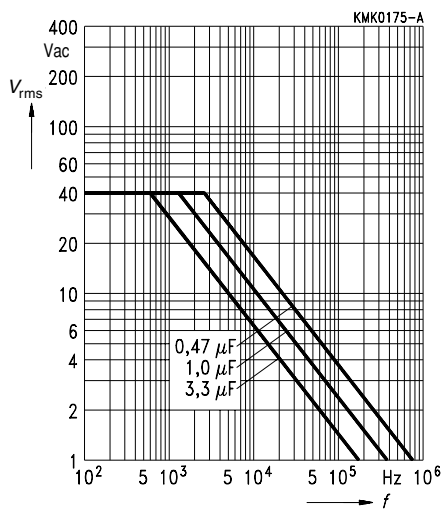
B 32 521

Permissible ac voltage  $V_{rms}$  versus frequency  $f$

Lead spacing 10 mm

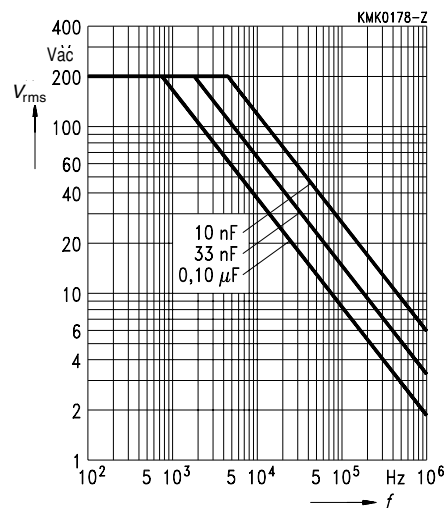
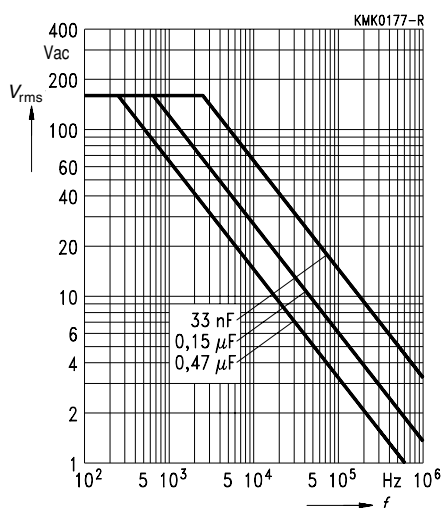
63 Vdc/ 40 Vac

100 Vdc/ 63 Vac



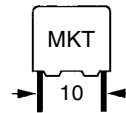
250 Vdc/ 160 Vac

400 Vdc/ 200 Vac





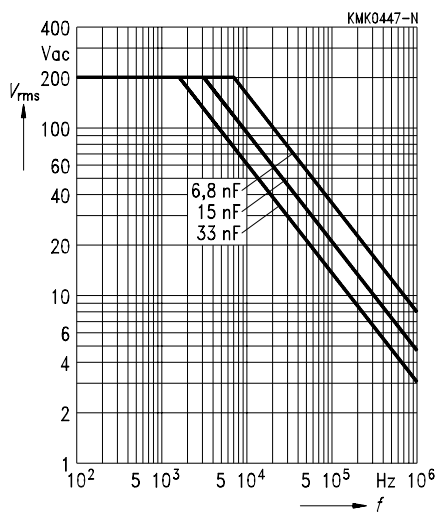
B 32 521

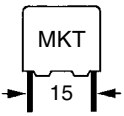


Permissible ac voltage  $V_{rms}$  versus frequency  $f$

Lead spacing 10 mm

630 Vdc/ 200 Vac



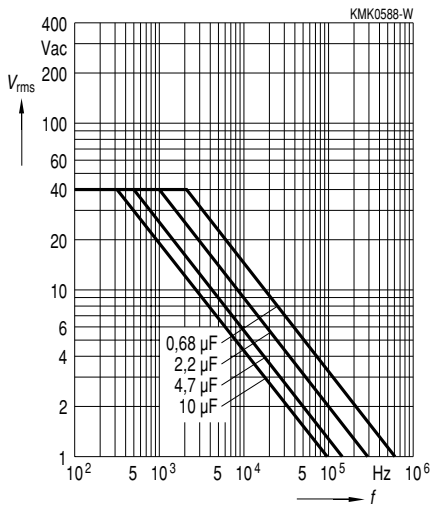


B 32 522

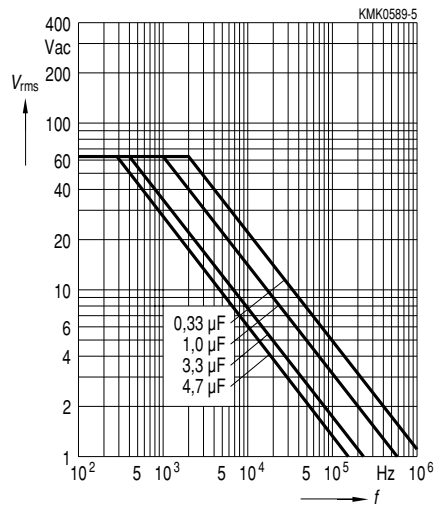
Permissible ac voltage  $V_{rms}$  versus frequency  $f$

Lead spacing 15 mm

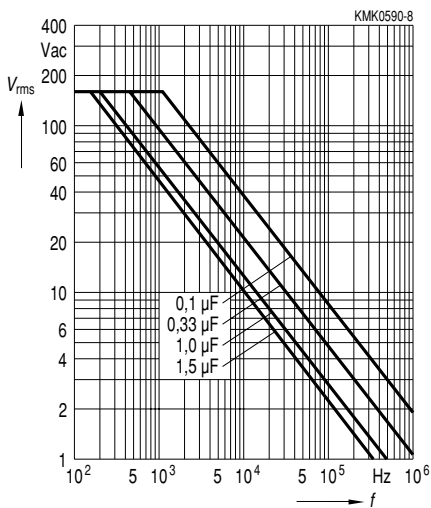
63 Vdc/ 40 Vac



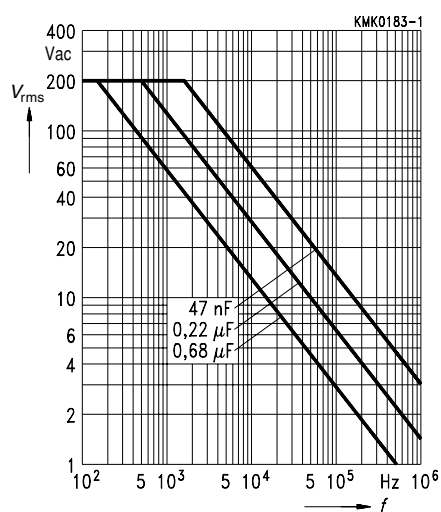
100 Vdc/ 63 Vac



250 Vdc/ 160 Vac

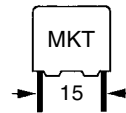


400 Vdc/ 200 Vac





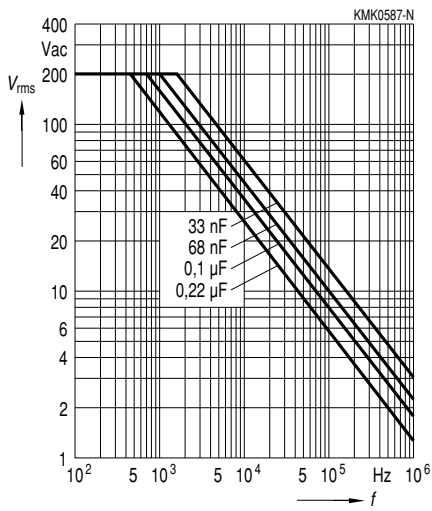
B 32 522

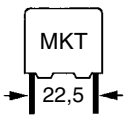


Permissible ac voltage  $V_{rms}$  versus frequency  $f$

Lead spacing 15 mm

630 Vdc/ 200 Vac



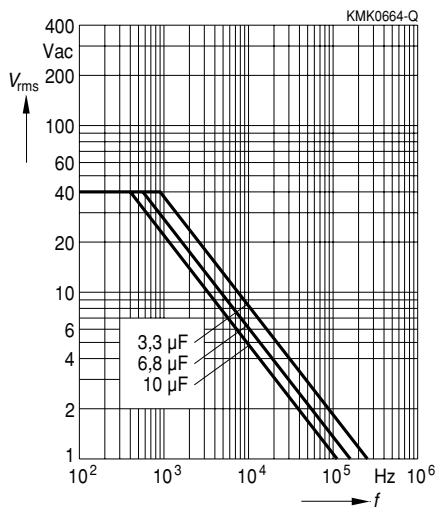


B 32 523

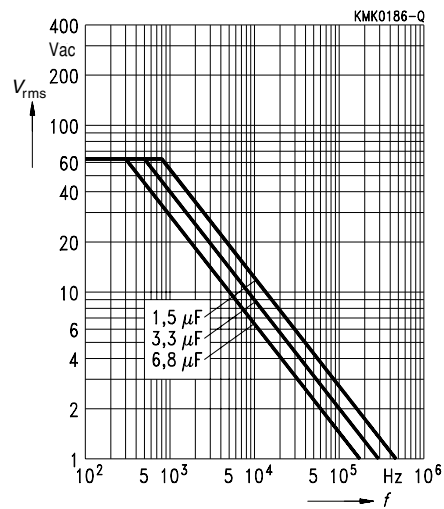
Permissible ac voltage  $V_{rms}$  versus frequency  $f$

Lead spacing 22,5 mm

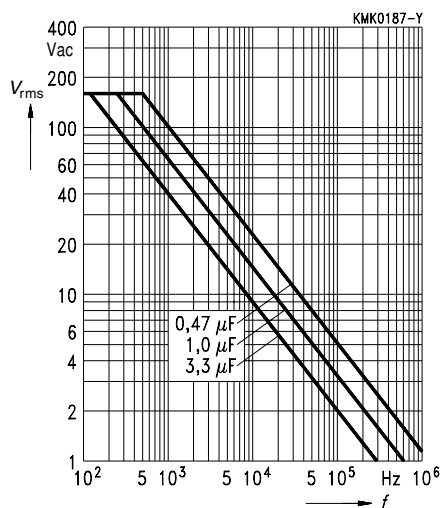
63 Vdc/ 40 Vac



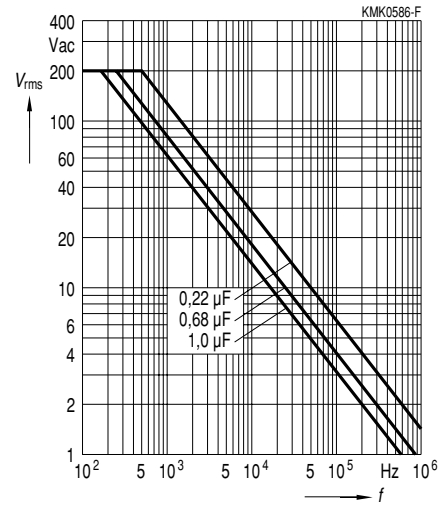
100 Vdc/ 63 Vac



250 Vdc/ 160 Vac



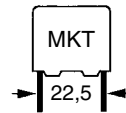
400 Vdc/ 200 Vac







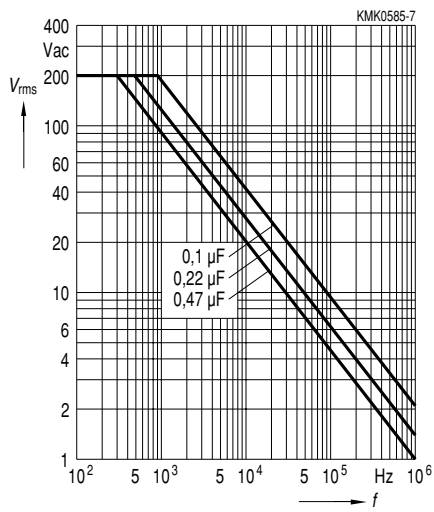
B 32 523

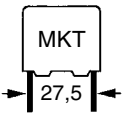


Permissible ac voltage  $V_{rms}$  versus frequency  $f$

Lead spacing 22,5 mm

630 Vdc/ 200 Vac



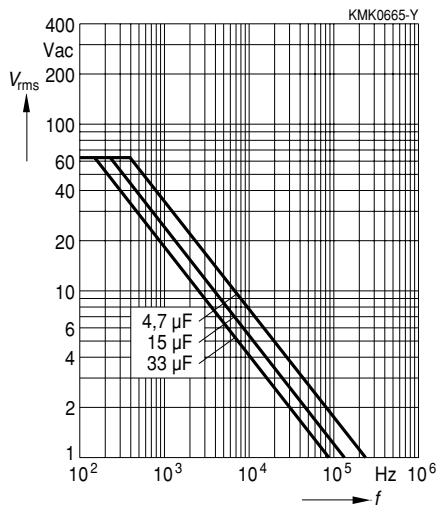


B 32 524

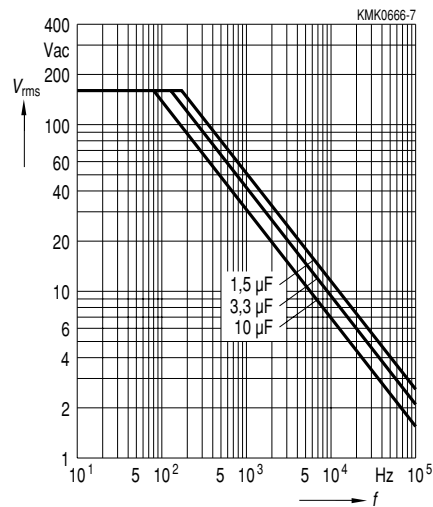
Permissible ac voltage  $V_{rms}$  versus frequency  $f$

Lead spacing 27,5 mm

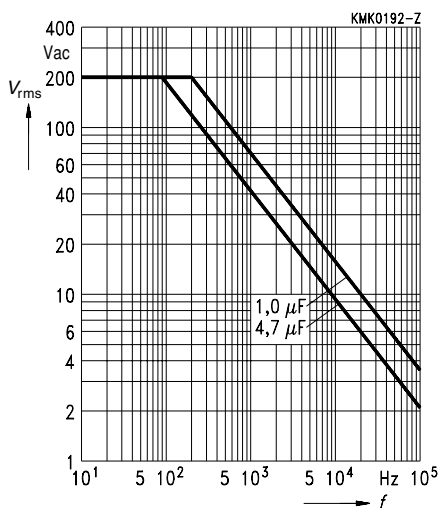
100 Vdc/ 63 Vac



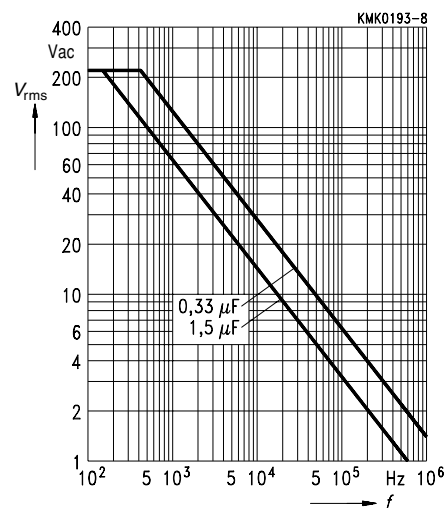
250 Vdc/ 160 Vac



400 Vdc/ 200 Vac



630 Vdc/ 220 Vac



**Herausgegeben von EPCOS AG**

**Marketing Kommunikation, Postfach 80 17 09, 81617 München, DEUTSCHLAND**

© EPCOS AG 2000. Alle Rechte vorbehalten. Vervielfältigung, Veröffentlichung, Verbreitung und Verwertung dieser Broschüre und ihres Inhalts ohne ausdrückliche Genehmigung der EPCOS AG nicht gestattet.

Mit den Angaben in dieser Broschüre werden die Bauelemente spezifiziert, keine Eigenschaften zugesichert. Bestellungen unterliegen den vom ZVEI empfohlenen Allgemeinen Lieferbedingungen für Erzeugnisse und Leistungen der Elektroindustrie, soweit nichts anderes vereinbart wird.

Diese Broschüre ersetzt die vorige Ausgabe.

Fragen über Technik, Preise und Liefermöglichkeiten richten Sie bitte an den Ihnen nächstgelegenen Vertrieb der EPCOS AG oder an unsere Vertriebsgesellschaften im Ausland.

Bauelemente können aufgrund technischer Erfordernisse Gefahrstoffe enthalten. Auskünfte darüber bitten wir unter Angabe des betreffenden Typs ebenfalls über die zuständige Vertriebsgesellschaft einzuholen.

**Published by EPCOS AG**

**Marketing Communications, P.O. Box 80 17 09, 81617 Munich, GERMANY**

© EPCOS AG 2000. All Rights Reserved. Reproduction, publication and dissemination of this brochure and the information contained therein without EPCOS' prior express consent is prohibited.

The information contained in this brochure describes the type of component and shall not be considered as guaranteed characteristics. Purchase orders are subject to the General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry recommended by the ZVEI (German Electrical and Electronic Manufacturers' Association), unless otherwise agreed.

This brochure replaces the previous edition.

For questions on technology, prices and delivery please contact the Sales Offices of EPCOS AG or the international Representatives.

Due to technical requirements components may contain dangerous substances. For information on the type in question please also contact one of our Sales Offices.