

Leaded Capacitors, EIA Standard X7R

Features

- High volumetric efficiency
- Non-linear capacitance change
- High insulation resistance
- High pulse strength

Applications

- Blocking
- Coupling
- Decoupling
- Interference suppression

Terminals

- Parallel wire leads
iron-nickel, tinned
- Crimped leads
- Non-standard lead lengths on request

Marking

- Rated capacitance, tolerance, manufacturer's logo, ceramic material, voltage

Packing

Optionally

- Taped (reel or Ammo pack)
- Bulk

Maximum ratings

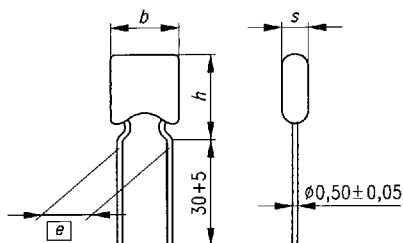
- Climatic category
in accordance with IEC 68-1: 55/125/56

Available capacitance tolerances

Tolerance	Symbol
$\Delta C_R / C_R = \pm 10\%$	K
$\Delta C_R / C_R = \pm 20\%$	M

Rated voltage values

$V_R = 50\text{ V}^{2)}$, 100 V



KKE0203-N

Dimensions (mm)

Lead spacing $\square e = 2,5^{+0,6}_{-0,1}$ mm

$h_{\max}$	5,5	6,5
$b_{\max}$	5,0	5,0
$s_{\max}$	2,5	2,5
Type	B37981-M	B37987-M

Lead spacing $\square e = 5,0^{+0,6}_{-0,1}$ mm

$h_{\max}$	5,5	6,5	9,0
$b_{\max}$	5,0	5,0	7,5
$s_{\max}$	2,5	2,5	2,5
Type	B37981-F	B37987-F	B37984-M

1) Standard tolerance

2) Also suitable for 63 V applications.

Ordering codes for capacitors with radial crimped leads, 50 Vdc

Lead spacing	2,5 mm		5,0 mm		
$h \times b \times s$ (mm)	$5,5 \times 5,0 \times 2,5$	$6,5 \times 5,0 \times 2,5$	$5,5 \times 5,0 \times 2,5$	$6,5 \times 5,0 \times 2,5$	$9,0 \times 7,5 \times 2,5$
C_R	Ordering code ¹⁾				
	B37981-	B37987-	B37981-	B37987-	B37984-
3,3 nF	-M5332-K51		-F5332-K51		
3,9 nF	-M5392-K51		-F5392-K51		
4,7 nF	-M5472-K51		-F5472-K51		
5,6 nF	-M5562-K51		-F5562-K51		
6,8 nF	-M5682-K51		-F5682-K51		
8,2 nF	-M5822-K51		-F5822-K51		
10 nF	-M5103-K51		-F5103-K51		
12 nF	-M5123-K51		-F5123-K51		
15 nF	-M5153-K51		-F5153-K51		
18 nF	-M5183-K51		-F5183-K51		
22 nF	-M5223-K51		-F5223-K51		
27 nF	-M5273-K51		-F5273-K51		
33 nF	-M5333-K51		-F5333-K51		
39 nF	-M5393-K51		-F5393-K51		
47 nF	-M5473-K51		-F5473-K51		
56 nF		-M5563-K51		-F5563-K51	
68 nF		-M5683-K51		-F5683-K51	
82 nF		-M5823-K51		-F5823-K51	
100 nF		-M5104-K51		-F5104-K51	
120 nF		-M5124-K51		-F5124-K51	
150 nF		-M5154-K51		-F5154-K51	
180 nF		-M5184-K51		-F5184-K51	
220 nF		-M5224-K51		-F5224-K51	
270 nF					-M5274-K51
330 nF					-M5334-K51
390 nF					-M5394-K51
470 nF					-M5474-K51
560 nF					-M5564-K51
680 nF					-M5684-K51
820 nF					-M5824-K51
1,0 μ F					-M5105-K51

1) The tables contain the ordering code for capacitors with radial crimped leads (EIA standard), $V_R = 50$ Vdc

– taped, reel packing

– with a capacitance tolerance of $\pm 10\%$

For other versions refer to "Delivery Modes and Ordering Code", page 114



Ordering codes for capacitors with radial crimped leads, 100 Vdc

Lead spacing	2,5 mm		5,0 mm	
$h \times b \times s$ (mm)	5,5 $\times$ 5,0 $\times$ 2,5	6,5 $\times$ 5,0 $\times$ 2,5	5,5 $\times$ 5,0 $\times$ 2,5	6,5 $\times$ 5,0 $\times$ 2,5
C_R	Ordering code ¹⁾			
	B37981-	B37987-	B37981-	B37987-
470 pF	-M1471-K51		-F1471-K51	
560 pF	-M1561-K51		-F1561-K51	
680 pF	-M1681-K51		-F1681-K51	
820 pF	-M1821-K51		-F1821-K51	
1,0 nF	-M1102-K51		-F1102-K51	
1,2 nF	-M1122-K51		-F1122-K51	
1,5 nF	-M1152-K51		-F1152-K51	
1,8 nF	-M1182-K51		-F1182-K51	
2,2 nF	-M1222-K51		-F1222-K51	
2,7 nF	-M1272-K51		-F1272-K51	
3,3 nF	-M1332-K51		-F1332-K51	
3,9 nF	-M1392-K51		-F1392-K51	
4,7 nF	-M1472-K51		-F1472-K51	
5,6 nF	-M1562-K51		-F1562-K51	
6,8 nF	-M1682-K51		-F1682-K51	
8,2 nF	-M1822-K51		-F1822-K51	
10 nF	-M1103-K51		-F1103-K51	
12 nF	-M1123-K51		-F1123-K51	
15 nF	-M1153-K51		-F1153-K51	
18 nF		-M1183-K51		-F1183-K51
22 nF		-M1223-K51		-F1223-K51
27 nF		-M1273-K51		-F1273-K51
33 nF		-M1333-K51		-F1333-K51
39 nF		-M1393-K51		-F1393-K51
47 nF		-M1473-K51		-F1473-K51
56 nF		-M1563-K51		-F1563-K51
68 nF		-M1683-K51		-F1683-K51
82 nF		-M1823-K51		-F1823-K51

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Ordering codes for capacitors with radial crimped leads, 100 Vdc

Lead spacing	2,5 mm		5,0 mm	
$h \times b \times s$ (mm)	5,5 × 5,0 × 2,5	6,5 × 5,0 × 2,5	5,5 × 5,0 × 2,5	6,5 × 5,0 × 2,5
C_R	Ordering code ¹⁾			
	B37981-	B37987-	B37981-	B37987-
100 nF		-M1104-K51		-F1104-K51
120 nF		-M1124-K51		-F1124-K51
150 nF		-M1154-K51		-F1154-K51

Characteristics:

Compare with standard chip capacitors.

1) The tables contain the ordering code for capacitors with radial crimped leads (EIA standard), $V_R = 100$ Vdc
 – taped, reel packing
 – with a capacitance tolerance of $\pm 10\%$
 For other versions refer to "Delivery Modes and Ordering Code", page 114

Features

- High volumetric efficiency
- Non-linear capacitance change
- High insulation resistance
- High pulse strength

Applications

- Blocking
- Coupling
- Decoupling
- Interference suppression

Terminals

- Parallel wire leads
iron-nickel, tinned
- Straight leads
- Non-standard lead lengths on request

Marking

Rated capacitance, tolerance, manufacturer's logo, ceramic material, voltage

Packing

Optionally

- Taped (reel or Ammo pack)
- Bulk

Maximum ratings

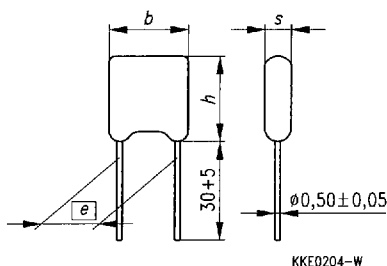
- Climatic category
in accordance with IEC 68-1: 55/125/56

Available capacitance tolerances

Tolerance	Symbol
$\Delta C_R / C_R = \pm 10\%$	K ¹⁾
$\Delta C_R / C_R = \pm 20\%$	M

Rated voltage values

$V_R = 50\text{ V}^{2)}$



Dimensions (mm)

Lead spacing $e = 2,5^{+0,6}_{-0,1}\text{ mm}$

	5,5	6,5
$h_{\max}$	5,5	6,5
$b_{\max}$	3,8	5,0
$s_{\max}$	2,5	2,5
Type	B37981-K	B37987-K

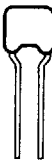
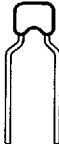
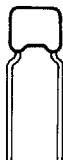
Lead spacing $e = 5,0^{+0,6}_{-0,1}\text{ mm}$

	5,5	6,5	9,0
$h_{\max}$	5,5	6,5	9,0
$b_{\max}$	3,8	5,0	7,5
$s_{\max}$	2,5	2,5	2,5
Type	B37981-D	B37987-D	B37984-K

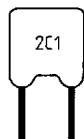
1) Standard tolerance

2) Also suitable for 63 V applications.

Ordering codes for capacitors with radial straight leads, 50 Vdc

Lead spacing	2,5 mm		5,0 mm		
					
$h \times b \times s$ (mm)	$5,5 \times 3,8 \times 2,5$	$6,5 \times 5,0 \times 2,5$	$5,5 \times 3,8 \times 2,5$	$6,5 \times 5,0 \times 2,5$	$9,0 \times 7,5 \times 2,5$
C_R	Ordering code ¹⁾				
	B37981-	B37987-	B37981-	B37987-	B37984-
3,3 nF	-K5332-K51		-D5332-K51		
3,9 nF	-K5392-K51		-D5392-K51		
4,7 nF	-K5472-K51		-D5472-K51		
5,6 nF	-K5562-K51		-D5562-K51		
6,8 nF	-K5682-K51		-D5682-K51		
8,2 nF	-K5822-K51		-D5822-K51		
10 nF	-K5103-K51		-D5103-K51		
12 nF	-K5123-K51		-D5123-K51		
15 nF	-K5153-K51		-D5153-K51		
18 nF	-K5183-K51		-D5183-K51		
22 nF	-K5223-K51		-D5223-K51		
27 nF	-K5273-K51		-D5273-K51		
33 nF	-K5333-K51		-D5333-K51		
39 nF	-K5393-K51		-D5393-K51		
47 nF	-K5473-K51		-D5473-K51		
56 nF		-K5563-K51		-D5563-K51	
68 nF		-K5683-K51		-D5683-K51	
82 nF		-K5823-K51		-D5823-K51	
100 nF		-K5104-K51		-D5104-K51	
120 nF		-K5124-K51		-D5124-K51	
150 nF		-K5154-K51		-D5154-K51	
180 nF		-K5184-K51		-D5184-K51	
220 nF		-K5224-K51		-D5224-K51	
270 nF					-K5274-K51
330 nF					-K5334-K51
390 nF					-K5394-K51
470 nF					-K5474-K51
560 nF					-K5564-K51

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Ordering codes for capacitors with radial straight leads, 50 Vdc

Lead spacing	2,5 mm		5,0 mm		
$h \times b \times s$ (mm)	5,5 × 3,8 × 2,5	6,5 × 5,0 × 2,5	5,5 × 3,8 × 2,5	6,5 × 5,0 × 2,5	9,0 × 7,5 × 2,5
C_R	Ordering code ¹⁾				
	B37981-	B37987-	B37981-	B37987-	B37984-
680 nF					-K5684-K51
820 nF					-K5824-K51
1,0 µF					-K5105-K51

- 1) The tables contain the ordering code for capacitors with radial straight leads (CECC standard), $V_R = 50$ Vdc
 – taped, reel packing
 – with a capacitance tolerance of $\pm 10\%$
 For other versions refer to "Delivery Modes and Ordering Code", page 115.