

Multilayer Leaded Capacitors, EIA Standard X7R/B Characteristic

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	Last 2 digits of ordering code
Tape & reel	-51
AMMO pack	-54
Bulk	-00

Standard packing in bold print

Maximum ratings

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

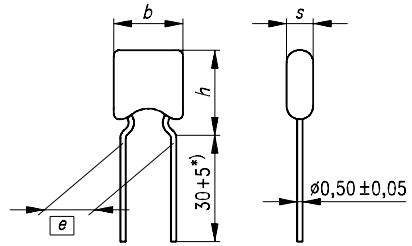
Available capacitance tolerances

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

Standard tolerance in bold print

Rated voltage values

$V_R = 50\text{ V}, 100\text{ V}$



*) Lead length for bulk packaging

KKE0286-1

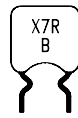
Dimensions (mm)

Lead spacing $[e] = 2,5 \pm 0,1$ mm

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

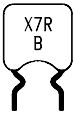
Lead spacing $[e] = 5,0 \pm 0,1$ mm

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


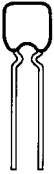
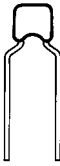

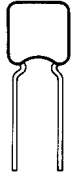


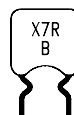
Product range

	X7R/B characteristic									
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		9,0 × 7,5 × 2,5	
Type	B37981-M		B37987-M		B37981-F		B37987-F		B37984-M	
V_R (Vdc)	50	100	50	100	50	100	50	100	50	
470 pF										
560 pF										
680 pF										
820 pF										
1,0 nF										
1,2 nF										
1,5 nF										
1,8 nF										
2,2 nF										
2,7 nF										
3,3 nF										
3,9 nF										
4,7 nF										
5,6 nF										
6,8 nF										
8,2 nF										
10 nF										
12 nF										
15 nF										
18 nF										
22 nF										



Product range

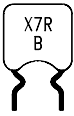
	X7R/B characteristic									
Lead spacing	2,5 mm					5,0 mm				
										
$h \times b \times s$ (mm)	5,5 × 5,0 × 2,5		6,5 × 5,0 × 2,5		5,5 × 5,0 × 2,5		6,5 × 5,0 × 2,5		9,0 × 7,5 × 2,5	
Type	B37981-M		B37987-M		B37981-F		B37987-F		B37984-M	
V_R (Vdc)	50	100	50	100	50	100	50	100	50	
27 nF	■			■	■			■		
33 nF	■			■	■			■		
39 nF	■			■	■			■		
47 nF	■			■	■			■		
56 nF			■	■			■	■		
68 nF			■	■			■	■		
82 nF			■	■			■	■		
100 nF			■	■			■	■		
120 nF			■	■			■	■		
150 nF			■	■			■	■		
180 nF			■				■			
220 nF			■				■			
270 nF									■	
330 nF									■	
390 nF									■	
470 nF									■	
560 nF									■	
680 nF									■	
820 nF									■	
1,0 μF									■	



Ordering codes for X7R/B characteristic, 50 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	9,0 × 7,5 × 2,5
C_R	Ordering code ¹⁾				
	B37981-	B37987-	B37981-	B37987-	B37984-
3,3 nF	-M5332-M54		-F5332-M54		
3,9 nF	-M5392-M54		-F5392-M54		
4,7 nF	-M5472-M54		-F5472-M54		
5,6 nF	-M5562-M54		-F5562-M54		
6,8 nF	-M5682-M54		-F5682-M54		
8,2 nF	-M5822-M54		-F5822-M54		
10 nF	-M5103-M54		-F5103-M54		
12 nF	-M5123-M54		-F5123-M54		
15 nF	-M5153-M54		-F5153-M54		
18 nF	-M5183-M54		-F5183-M54		
22 nF	-M5223-M54		-F5223-M54		
27 nF	-M5273-M54		-F5273-M54		
33 nF	-M5333-M54		-F5333-M54		
39 nF	-M5393-M54		-F5393-M54		
47 nF	-M5473-M54		-F5473-M54		
56 nF		-M5563-M54		-F5563-M54	
68 nF		-M5683-M54		-F5683-M54	
82 nF		-M5823-M54		-F5823-M54	
100 nF		-M5104-M54		-F5104-M54	
120 nF		-M5124-M54		-F5124-M54	
150 nF		-M5154-M54		-F5154-M54	
180 nF		-M5184-M54		-F5184-M54	
220 nF		-M5224-M54		-F5224-M54	
270 nF					-M5274-M54
330 nF					-M5334-M54
390 nF					-M5394-M54
470 nF					-M5474-M54
560 nF					-M5564-M54
680 nF					-M5684-M54
820 nF					-M5824-M54
1,0 μ F					-M5105-M54

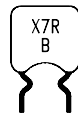
1) The tables contain the ordering codes for
 – standard capacitance tolerance: M = ± 20 %. Example: B37981-M5332-M54. Other available capacitance tolerances: see p. 66
 – standard packing: 54 = AMMO pack. Example: B37981-M5332-M54. Other packing modes: see page 66



Ordering codes for X7R/B characteristic, 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-
470 pF	-M1471-M54		-F1471-M54	
560 pF	-M1561-M54		-F1561-M54	
680 pF	-M1681-M54		-F1681-M54	
820 pF	-M1821-M54		-F1821-M54	
1,0 nF	-M1102-M54		-F1102-M54	
1,2 nF	-M1122-M54		-F1122-M54	
1,5 nF	-M1152-M54		-F1152-M54	
1,8 nF	-M1182-M54		-F1182-M54	
2,2 nF	-M1222-M54		-F1222-M54	
2,7 nF	-M1272-M54		-F1272-M54	
3,3 nF	-M1332-M54		-F1332-M54	
3,9 nF	-M1392-M54		-F1392-M54	
4,7 nF	-M1472-M54		-F1472-M54	
5,6 nF	-M1562-M54		-F1562-M54	
6,8 nF	-M1682-M54		-F1682-M54	
8,2 nF	-M1822-M54		-F1822-M54	
10 nF	-M1103-M54		-F1103-M54	
12 nF	-M1123-M54		-F1123-M54	
15 nF	-M1153-M54		-F1153-M54	
18 nF		-M1183-M54		-F1183-M54
22 nF		-M1223-M54		-F1223-M54
27 nF		-M1273-M54		-F1273-M54
33 nF		-M1333-M54		-F1333-M54
39 nF		-M1393-M54		-F1393-M54
47 nF		-M1473-M54		-F1473-M54
56 nF		-M1563-M54		-F1563-M54
68 nF		-M1683-M54		-F1683-M54
82 nF		-M1823-M54		-F1823-M54

1) The tables contain the ordering codes for
 – standard capacitance tolerance: M = ± 20 %. Example: B37981-M1471-M54.
 Other available capacitance tolerances: see page 66
 – standard packing: 54 = AMMO pack. Example: B37981-M1471-M54.
 Other packing modes: see page 66



Ordering codes for X7R/B characteristic, 100 Vdc (cont'd)

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-M54		-F1104-M54
120 nF		-M1124-M54		-F1124-M54
150 nF		-M1154-M54		-F1154-M54

1) The tables contain the ordering codes for
 – standard capacitance tolerance: M = ± 20 %. Example: B37987-M1104-M54.
 – Other available capacitance tolerances: see page 66
 – standard packing: 54 = AMMO pack. Example: B37987-M1104-M54.
 – Other packing modes: see page 66