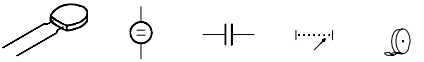
Ordering code system



B37979N 1 100 K 0 54

Packaging

51 ≙ cardboard tape, reel packing (360-mm reel)
54 ≙ Ammo packing (standard)
00 ≙ bulk

Internal coding

Capacitance tolerance

J ≙ ± 5 %
K ≙ ± 10 % (standard for C0G)
M ≙ ± 20 % (standard for X7R and Z5U (Y5U))

Capacitance, coded (example)
101 ≙ 10 · 10^1 pF = 100 pF
222 ≙ 22 · 10^2 pF = 2,2 nF
473 ≙ 47 · 10^3 pF = 47 nF

Rated voltage

Rated voltage [VDC]	50	100
Code	5	1

Type and size			
With radial leads EIA standard	Temperature characteristic C0G	X7R	Z5U (Y5U)
Lead spacing 2,5 mm			
5,5 × 5,0 × 2,5	B37979N	B37981M	B37982N
6,5 × 5,0 × 2,5	B37986N	B37987M	B37988N
Lead spacing 5,0 mm			
5,5 × 5,0 × 2,5	B37979G	B37981F	B37982G
6,5 × 5,0 × 2,5	B37986G	B37987F	B37988G
9,0 × 7,5 × 2,5	—	B37984M	B37985N

Features

- Good thermal stability
- High insulation resistance
- Low dissipation factor
- Low inductance

Applications

- Resonant circuits
- Filter circuits
- Timing elements
- Coupling and filtering, particularly in RF circuits

Termination

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

Marking

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

Delivery mode

- Cardboard tape in Ammo packing (standard)
- Cardboard tape on 360-mm reel or bulk on request

Electrical data

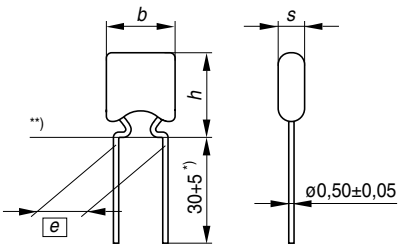
Temperature characteristic		C0G	
Climatic category (IEC 60068-1)		55/125/56	
Standard		EIA	
Dielectric		Class 1	
Rated voltage	V_R	50, 100	VDC
Test voltage	V_{test}	$2{,}5 \cdot V_R$/5 s	VDC
Capacitance range / E series	C_R	10 pF … 10 nF (E12)	
Temperature coefficient		$0 \pm 30 \cdot 10^{-6}$/K	
Dissipation factor (limit value)	tan δ	$< 1{,}0 \cdot 10^{-3}$	
Insulation resistance[1)] at + 25 °C	R_{ins}	$> 10^5$	MΩ
Insulation resistance[1)] at +125 °C	R_{ins}	$> 10^4$	MΩ
Time constant[1)] at + 25 °C	τ	> 1000	s
Time constant[1)] at +125 °C	τ	> 100	s
Operating temperature range	T_{op}	−55 … +125	°C
Ageing		none	

1) For C_R > 10 nF the time constant $\tau = C \cdot R_{ins}$ is given.

Capacitance tolerances

Code letter	J	K (standard)
Tolerance	±5%	±10%

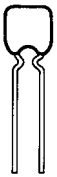
Dimensional drawing

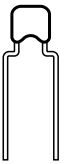
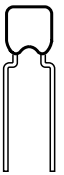


*) Lead length for bulk packaging
**) Seating plane in acc. with IEC 600717

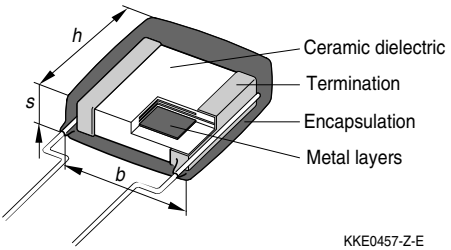
KKE0456-R-E

Dimensions (mm)

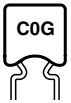
	Lead spacing e = 2,5 +0,6/−0,1 mm	
Type	B37979N	B37986N
		
h_{max}	5,5	6,5
b_{max}	5,0	5,0
s_{max}	2,5	2,5

	Lead spacing e = 5,0 +0,6/−0,1 mm	
Type	B37979G	B37986G
		
h_{max}	5,5	6,5
b_{max}	5,0	5,0
s_{max}	2,5	2,5

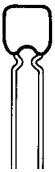
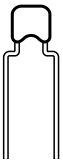
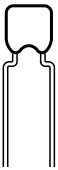
Termination



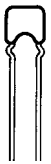
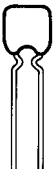
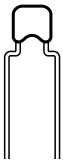
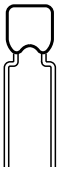
KKE0457-Z-E

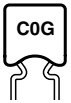


Product range leaded capacitors

	C0G							
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	
Type	B37979N		B37986N		B37979G		B37986G	
V_R (VDC) / C_R	50	100	50	100	50	100	50	100
10 pF								
12 pF								
15 pF								
18 pF								
22 pF								
27 pF								
33 pF								
39 pF								
47 pF								
56 pF								
68 pF								
82 pF								
100 pF								
120 pF								
150 pF								
180 pF								
220 pF								
270 pF								
330 pF								
390 pF								
470 pF								
560 pF								
680 pF								
820 pF								

Product range leaded capacitors

	C0G							
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	
Type	B37979N		B37986N		B37979G		B37986G	
V_R (VDC) / C_R	50	100	50	100	50	100	50	100
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			■				■	



Ordering codes and packing for C0G, 50 VDC, lead spacing 2,5 mm

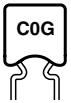
C_R	Ordering code[1)]	Ammo packing ** ≙ 54 pcs	Reel packing ** ≙ 51 pcs/reel	Bulk ** ≙ 00 pcs
B37979, 50 VDC, 5,5 × 5,0 × 2,5 mm				
100 pF	B37979N5101K0**	2500	2500	2000
120 pF	B37979N5121K0**	2500	2500	2000
150 pF	B37979N5151K0**	2500	2500	2000
180 pF	B37979N5181K0**	2500	2500	2000
220 pF	B37979N5221K0**	2500	2500	2000
270 pF	B37979N5271K0**	2500	2500	2000
330 pF	B37979N5331K0**	2500	2500	2000
390 pF	B37979N5391K0**	2500	2500	2000
470 pF	B37979N5471K0**	2500	2500	2000
560 pF	B37979N5561K0**	2500	2500	2000
680 pF	B37979N5681K0**	2500	2500	2000
820 pF	B37979N5821K0**	2500	2500	2000
1,0 nF	B37979N5102K0**	2500	2500	2000
1,2 nF	B37979N5122K0**	2500	2500	2000
1,5 nF	B37979N5152K0**	2500	2500	2000
1,8 nF	B37979N5182K0**	2500	2500	2000
2,2 nF	B37979N5222K0**	2500	2500	2000
B37986, 50 VDC, 6,5 × 5,0 × 2,5 mm				
2,7 nF	B37986N5272K0**	2500	2500	2000
3,3 nF	B37986N5332K0**	2500	2500	2000
3,9 nF	B37986N5392K0**	2500	2500	2000
4,7 nF	B37986N5472K0**	2500	2500	2000
5,6 nF	B37986N5562K0**	2500	2500	2000
6,8 nF	B37986N5682K0**	2500	2500	2000
8,2 nF	B37986N5822K0**	2500	2500	2000
10 nF	B37986N5103K0**	2500	2500	2000

1) The table contains the ordering codes for the standard capacitance tolerance.
For other available capacitance tolerances see page 154.

Ordering codes and packing for C0G, 50 VDC, lead spacing 5,0 mm

C_R	Ordering code[1)]	Ammo packing ** ≙ 54 pcs	Reel packing ** ≙ 51 pcs/reel	Bulk ** ≙ 00 pcs
B37979, 50 VDC, 5,5 × 5,0 × 2,5 mm				
100 pF	B37979G5101K0**	2500	2500	2000
120 pF	B37979G5121K0**	2500	2500	2000
150 pF	B37979G5151K0**	2500	2500	2000
180 pF	B37979G5181K0**	2500	2500	2000
220 pF	B37979G5221K0**	2500	2500	2000
270 pF	B37979G5271K0**	2500	2500	2000
330 pF	B37979G5331K0**	2500	2500	2000
390 pF	B37979G5391K0**	2500	2500	2000
470 pF	B37979G5471K0**	2500	2500	2000
560 pF	B37979G5561K0**	2500	2500	2000
680 pF	B37979G5681K0**	2500	2500	2000
820 pF	B37979G5821K0**	2500	2500	2000
1,0 nF	B37979G5102K0**	2500	2500	2000
1,2 nF	B37979G5122K0**	2500	2500	2000
1,5 nF	B37979G5152K0**	2500	2500	2000
1,8 nF	B37979G5182K0**	2500	2500	2000
2,2 nF	B37979G5222K0**	2500	2500	2000
B37986, 50 VDC, 6,5 × 5,0 × 2,5 mm				
2,7 nF	B37986G5272K0**	2500	2500	2000
3,3 nF	B37986G5332K0**	2500	2500	2000
3,9 nF	B37986G5392K0**	2500	2500	2000
4,7 nF	B37986G5472K0**	2500	2500	2000
5,6 nF	B37986G5562K0**	2500	2500	2000
6,8 nF	B37986G5682K0**	2500	2500	2000
8,2 nF	B37986G5822K0**	2500	2500	2000
10 nF	B37986G5103K0**	2500	2500	2000

1) The table contains the ordering codes for the standard capacitance tolerance.
For other available capacitance tolerances see page 154.



Ordering codes and packing for C0G, 100 VDC, lead spacing 2,5 mm

C_R	Ordering code[1)]	Ammo packing ** ≙ 54 pcs	Reel packing ** ≙ 51 pcs/reel	Bulk ** ≙ 00 pcs
B37979, 100 VDC, 5,5 × 5,0 × 2,5 mm				
10 pF	B37979N1100K0**	2500	2500	2000
12 pF	B37979N1120K0**	2500	2500	2000
15 pF	B37979N1150K0**	2500	2500	2000
18 pF	B37979N1180K0**	2500	2500	2000
22 pF	B37979N1220K0**	2500	2500	2000
27 pF	B37979N1270K0**	2500	2500	2000
33 pF	B37979N1330K0**	2500	2500	2000
39 pF	B37979N1390K0**	2500	2500	2000
47 pF	B37979N1470K0**	2500	2500	2000
56 pF	B37979N1560K0**	2500	2500	2000
68 pF	B37979N1680K0**	2500	2500	2000
82 pF	B37979N1820K0**	2500	2500	2000
100 pF	B37979N1101K0**	2500	2500	2000
120 pF	B37979N1121K0**	2500	2500	2000
150 pF	B37979N1151K0**	2500	2500	2000
180 pF	B37979N1181K0**	2500	2500	2000
220 pF	B37979N1221K0**	2500	2500	2000
270 pF	B37979N1271K0**	2500	2500	2000
330 pF	B37979N1331K0**	2500	2500	2000
390 pF	B37979N1391K0**	2500	2500	2000
470 pF	B37979N1471K0**	2500	2500	2000
560 pF	B37979N1561K0**	2500	2500	2000
680 pF	B37979N1681K0**	2500	2500	2000
820 pF	B37979N1821K0**	2500	2500	2000
1,0 nF	B37979N1102K0**	2500	2500	2000
B37986, 100 VDC, 6,5 × 5,0 × 2,5 mm				
1,2 nF	B37986N1122K0**	2500	2500	2000
1,5 nF	B37986N1152K0**	2500	2500	2000
1,8 nF	B37986N1182K0**	2500	2500	2000
2,2 nF	B37986N1222K0**	2500	2500	2000

1) The table contains the ordering codes for the standard capacitance tolerance.
For other available capacitance tolerances see page 154.

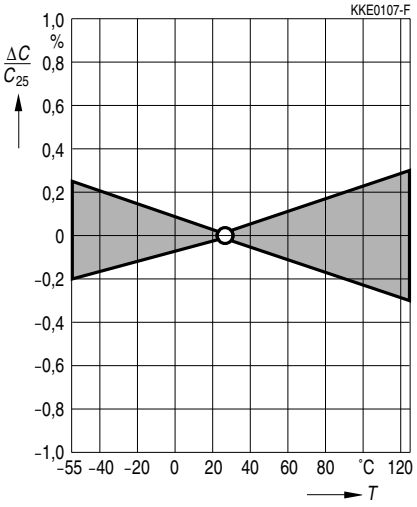
Ordering codes and packing for C0G, 100 VDC, lead spacing 5,0 mm

C_R	Ordering code[1)]	Ammo packing ** ≙ 54 pcs	Reel packing ** ≙ 51 pcs/reel	Bulk ** ≙ 00 pcs
B37979, 100 VDC, 5,5 × 5,0 × 2,5 mm				
10 pF	B37979G1100K0**	2500	2500	2000
12 pF	B37979G1120K0**	2500	2500	2000
15 pF	B37979G1150K0**	2500	2500	2000
18 pF	B37979G1180K0**	2500	2500	2000
22 pF	B37979G1220K0**	2500	2500	2000
27 pF	B37979G1270K0**	2500	2500	2000
33 pF	B37979G1330K0**	2500	2500	2000
39 pF	B37979G1390K0**	2500	2500	2000
47 pF	B37979G1470K0**	2500	2500	2000
56 pF	B37979G1560K0**	2500	2500	2000
68 pF	B37979G1680K0**	2500	2500	2000
82 pF	B37979G1820K0**	2500	2500	2000
100 pF	B37979G1101K0**	2500	2500	2000
120 pF	B37979G1121K0**	2500	2500	2000
150 pF	B37979G1151K0**	2500	2500	2000
180 pF	B37979G1181K0**	2500	2500	2000
220 pF	B37979G1221K0**	2500	2500	2000
270 pF	B37979G1271K0**	2500	2500	2000
330 pF	B37979G1331K0**	2500	2500	2000
390 pF	B37979G1391K0**	2500	2500	2000
470 pF	B37979G1471K0**	2500	2500	2000
560 pF	B37979G1561K0**	2500	2500	2000
680 pF	B37979G1681K0**	2500	2500	2000
820 pF	B37979G1821K0**	2500	2500	2000
1,0 nF	B37979G1102K0**	2500	2500	2000
B37986, 100 VDC, 6,5 × 5,0 × 2,5 mm				
1,2 nF	B37986G1122K0**	2500	2500	2000
1,5 nF	B37986G1152K0**	2500	2500	2000
1,8 nF	B37986G1182K0**	2500	2500	2000
2,2 nF	B37986G1222K0**	2500	2500	2000

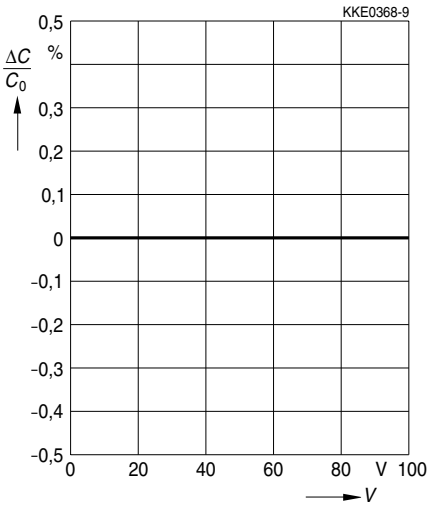
1) The table contains the ordering codes for the standard capacitance tolerance.
For other available capacitance tolerances see page 154.

Typical characteristics

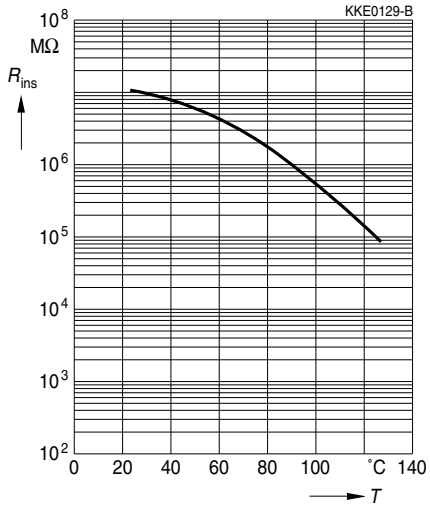
Capacitance change $\Delta C/C_{25}$ versus temperature T (tolerance range ▭)



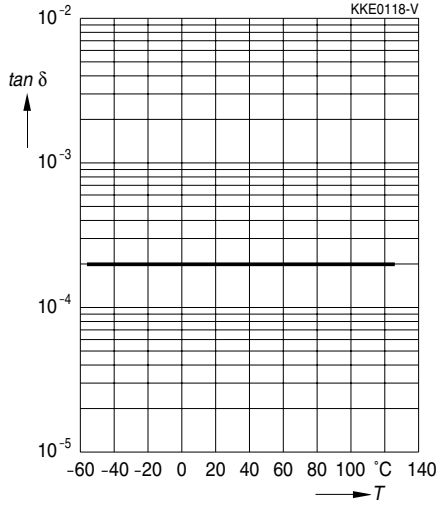
Capacitance change $\Delta C/C_0$ versus superimposed DC voltage V



Insulation resistance R_{ins} versus temperature T

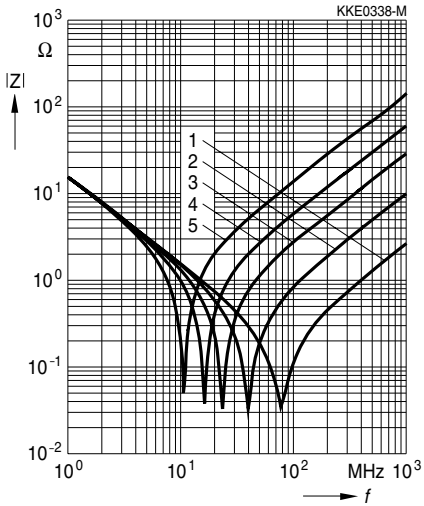


Dissipation factor tan δ versus temperature T

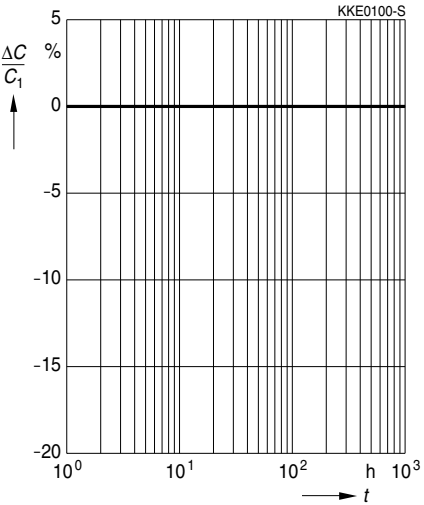


Typical characteristics

Impedance $|Z|$ versus frequency f



Capacitance change $\Delta C/C_1$ versus time t



1: Chip
2: 1,5 mm lead length
3: 5,0 mm lead length
4: 10,0 mm lead length
5: 20,0 mm lead length

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