

Features

- Extremely high volumetric efficiency
- Non-linear capacitance change
- Y5U characteristic is also fulfilled

Applications

- Blocking
- Coupling
- Decoupling
- Interference suppression

Terminations

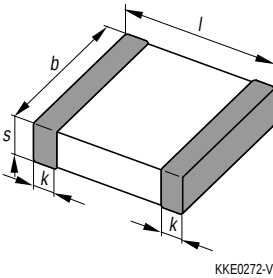
- For soldering:
 Sizes 0402 through 1210:
 silver/nickel/tin
 Sizes 1812, 2220:
 silver palladium
- For conductive adhesion:
 All sizes:
 silver palladium

Packing

- Blister and cardboard tape,
 for details refer to chapter
 “Taping and Packing”, page 111.
- Bulk case for sizes 0603, 0805
 and 1206, for details see page 114.

Maximum ratings

Climatic category
in accordance with IEC 68-1: 30/85/56



Dimensions (mm)

Size inch/mm	<i>l</i>	<i>b</i>	<i>s</i>	<i>k</i>
0402 /1005	1,0 ± 0,10	0,50 ± 0,05	0,5 ± 0,05	0,2
0603 /1608	1,6 ± 0,15*)	0,80 ± 0,10	0,8 ± 0,10	0,3
0805 /2012	2,0 ± 0,20	1,25 ± 0,15	1,3 max.	0,5
1206 /3216	3,2 ± 0,20	1,60 ± 0,15	1,3 max.	0,5
1210 /3225	3,2 ± 0,30	2,50 ± 0,30	1,3 max.	0,5
1812 /4532	4,5 ± 0,30	3,20 ± 0,30	1,3 max.	0,5
2220 /5750	5,7 ± 0,40	5,00 ± 0,40	1,3 max	0,5

*) For bulk cases: 1,6 ± 0,1
Tolerances in acc. with CECC 32101-801

Available capacitance tolerances

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

Standard tolerance in bold print

Rated voltage values

$V_R = 16 \text{ V}, 25 \text{ V}, 50 \text{ V}$



Product range

	Z5U (Y5U) / F characteristic													
Size ¹⁾ inch mm	0402 1005		0603 1608		0805 2012		1206 3216		1210 3225		1812 4532		2220 5750	
Type	B37922		B37932		B37942		B37873		B37951		B37954		B37957	
V _R (Vdc)	16	25	25	50	25	50	25	50		50		50		50
1,0 nF														
2,2 nF														
4,7 nF														
10 nF														
15 nF														
22 nF														
33 nF														
47 nF														
68 nF														
100 nF														
150 nF														
220 nF														
330 nF														
470 nF														
680 nF														
1,0 µF														
1,5 µF														
2,2 µF														
3,3 µF														
4,7 µF														

Chip thickness (s):

0,5 ± 0,1 mm

0,6 ± 0,1 mm

0,8 ± 0,1 mm

1,2 ± 0,1 mm

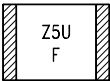
1) l × b (inch) / l × b (mm)

Ordering codes for Z5U (Y5U) / F characteristic, 16/25 Vdc, AgNiSn terminations

Size	0402/1005	0402/1005	0603/1608	0805/2012	1206/3216
V _R	16 V	25 V	25 V	25 V	25 V
C _R	Ordering code ¹⁾				
	B37922-	B37922-	B37932-	B37942-	B37873-
1,0 nF		-K0102-M60 ▲			
2,2 nF		-K0222-M60 ▲			
3,3 nF		-K0332-M60 ▲			
4,7 nF		-K0472-M60 ▲			
6,8 nF		-K0682-M60 ▲			
10 nF		-K0103-M60 ▲			
15 nF					
22 nF	-K9223-M60 ▲		-K0223-M60 ○		
33 nF			-K0333-M60 ○		
47 nF	-K9473-M60 ▲		-K0473-M60 ○	-K0473-M60 □	
68 nF			-K0683-M60 ○	-K0683-M60 □	
100 nF	-K9104-M60 ▲		-K0104-M60 ○	-K0104-M60 □	
150 nF				-K0154-M60 ○	-K0154-M60 ○
220 nF				-K0224-M62 ◆	-K0224-M60 ○
330 nF				-K0334-M62 ◆	-K0334-M60 ○
470 nF					-K0474-M62 ◆
680 nF					-K0684-M62 ◆
1,0 μF					-K0105-M62 ◆

Chip thickness: ▲: 0,5 ± 0,1 mm □: 0,6 ± 0,1 mm ○: 0,8 ± 0,1 mm ◆: 1,2 ± 0,1 mm

1) The tables contain the ordering codes for the standard capacitance tolerance:
M = ± 20%. Example: B37922-K9223-M60



Ordering codes for Z5U (Y5U) / F characteristic, 50 Vdc, AgNiSn terminations

Size	0603/1608	0805/2012	1206/3216	1210/3225	
C _R	Ordering code ¹⁾				
	B37932-	B37942-	B37873-	B37951-	
10 nF	-K5103-M60 □	-K5103-M60 □			
15 nF	-K5153-M60 ○	-K5153-M60 □			
22 nF	-K5223-M60 ○	-K5223-M60 □			
33 nF	-K5333-M60 ○	-K5333-M60 □			
47 nF	-K5473-M60 ○	-K5473-M60 □	-K5473-M60 ○		
68 nF		-K5683-M60 □	-K5683-M60 ○		
100 nF		-K5104-M60 ○	-K5104-M60 ○		
150 nF		-K5154-M62 ◆	-K5154-M60 ○		
220 nF			-K5224-M60 ○	-K5224-M62 ○	
330 nF			-K5334-M62 ◆	-K5334-M62 ○	
470 nF			-K5474-M62 ◆	-K5474-M62 ○	
680 nF				-K5684-M62 ◆	
1 μF				-K5105-M62 ◆	

Ordering codes for Z5U (Y5U) / F characteristic, 50 Vdc, AgPd terminations

Size	1812/4532	2220/5750	
C _R	Ordering code ¹⁾		
	B37954-	B37957-	
470 nF	-J5474-M62 ◆		
680 nF	-J5684-M62 ◆		
1 μF	-J5105-M62 ◆	-J5105-M62 ◆	
1,5 μF	-J5155-M62 ◆	-J5155-M62 ◆	
2,2 μF		-J5225-M62 ◆	
3,3 μF		-J5335-M62 ◆	
4,7 μF		-J5475-M62 ◆	

Chip thickness: □: 0,6 ± 0,1 mm ○: 0,8 ± 0,1 mm ◆: 1,2 ± 0,1 mm

1) The tables contain the ordering codes for the standard capacitance tolerance:
M = ± 20%. Example: B37932-K5103-M60

Ordering codes for chip capacitors, Z5U (Y5U) / F characteristic, 25 V/50 Vdc, AgNiSn terminations, bulk case packing

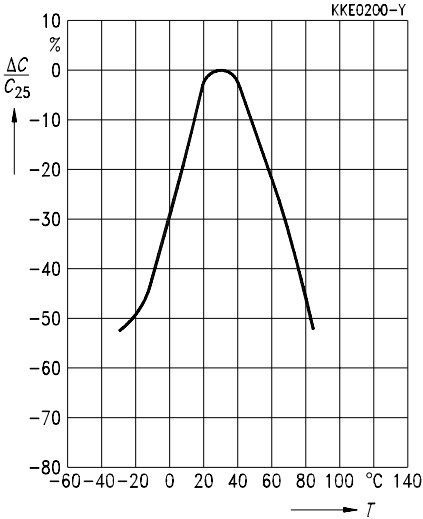
Size	0603	0603	0805	1206	
V _R	25 V	50 V	50 V	50 V	
C _R	Ordering code ¹⁾				
	B37932-	B37932-	B37942-	B37873-	
10 nF		-K5103-M01 ○	-K5103-M01 □		
15 nF		-K5153-M01 ○	-K5153-M01 □		
22 nF	-K0223-M01 ○	-K5223-M01 ○	-K5223-M01 □		
33 nF	-K0333-M01 ○	-K5333-M01 ○	-K5333-M01 □		
47 nF	-K0473-M01 ○	-K5473-M01 ○	-K5473-M01 □	-K5473-M01 □	
68 nF	-K0683-M01 ○		-K5683-M01 □	-K5683-M01 □	
100 nF	-K0104-M01 ○			-K5104-M01 □	
150 nF				-K5154-M01 □	

Chip thickness: □: 0,6 ± 0,1 mm ○: 0,8 ± 0,1 mm

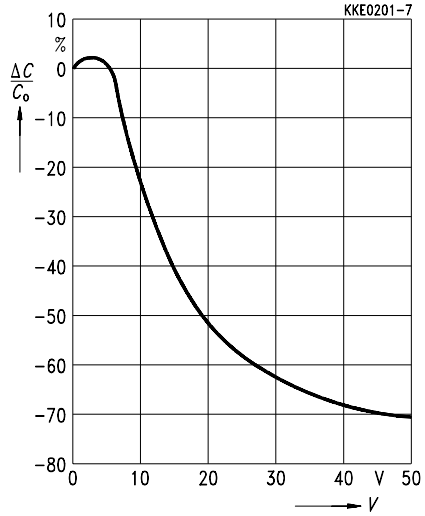
1) The tables contain the ordering codes for the standard capacitance tolerance:
M = ± 20%. Example: B37932-K0223-M01

Characteristics

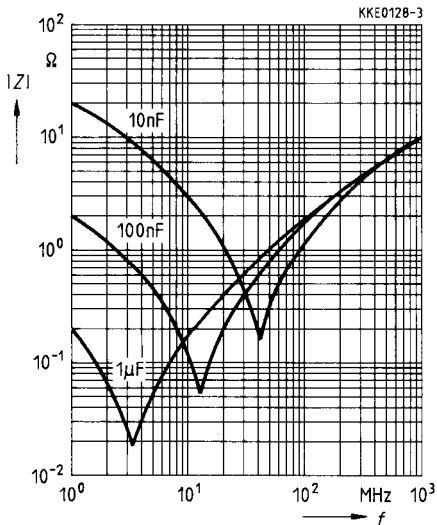
Capacitance change $\Delta C/C_{25}$ versus temperature T



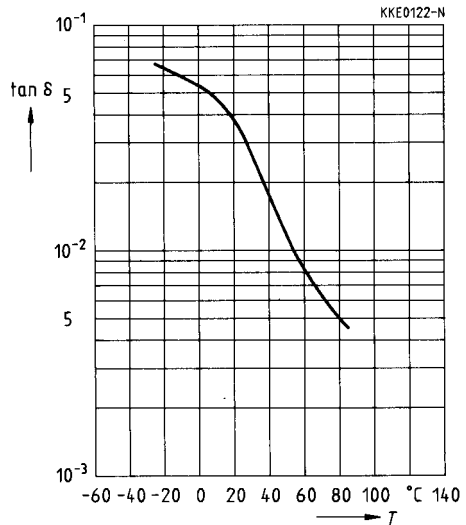
Capacitance change $\Delta C/C_0$ versus superimposed dc voltage V



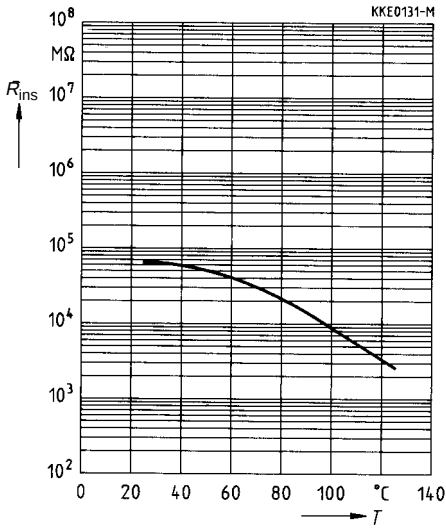
Impedance $|Z|$ versus frequency f



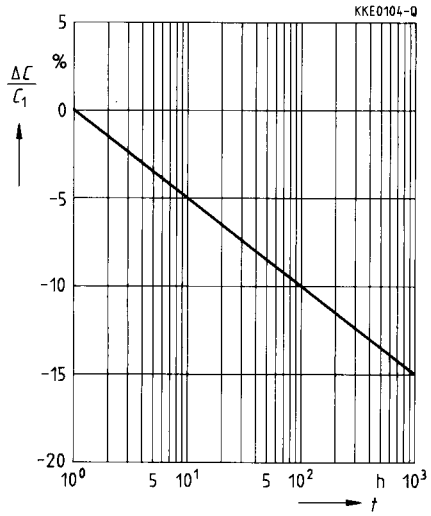
Dissipation factor $\tan \delta$ versus temperature T



Insulation resistance R_{ins} versus temperature T



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





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