Features

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

Applications

- Blocking
- Coupling
- Decoupling
- Interference suppression

Terminations

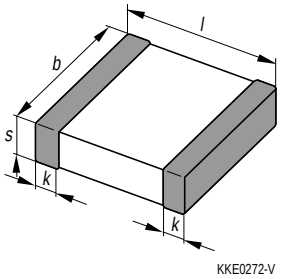
- For soldering:
  Sizes 0402 through 1210:
  silver/nickel/tin
  Sizes 1812, 2220:
  silver palladium
- For conductive adhesion:
  All sizes:
  silver palladium

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



KKE0272-V

Dimensions (mm)

Size **inch**/mm	*l*	*b*	*s*	*k*
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
$\Delta C_R/C_R$ = ± **20 %**	**M**

Standard tolerance in bold print

Rated voltage values

V_R = 16 V, 25 V, 50 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-**M**60

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-**M**60

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

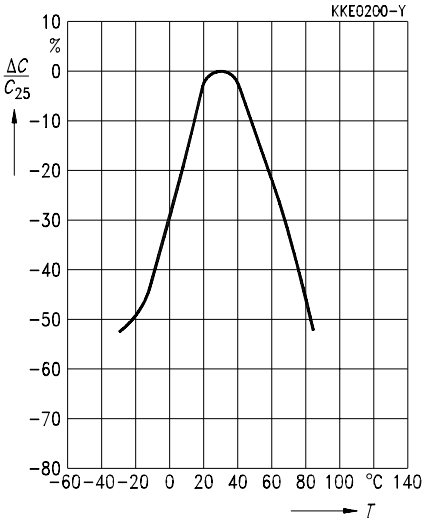
Size	0603	0603	0805	1206	
V_R	25 V	50 V	50 V	50 V	
C_R	Ordering code [1]				
	B37932-	B37932-	B37942-	B37873-	
10 nF		-K5103-M01 ❍	-K5103-M01 ❑		
15 nF		-K5153-M01 ❍	-K5153-M01 ❑		
22 nF	-K0223-M01 ❍	-K5223-M01 ❍	-K5223-M01 ❑		
33 nF	-K0333-M01 ❍	-K5333-M01 ❍	-K5333-M01 ❑		
47 nF	-K0473-M01 ❍	-K5473-M01 ❍	-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

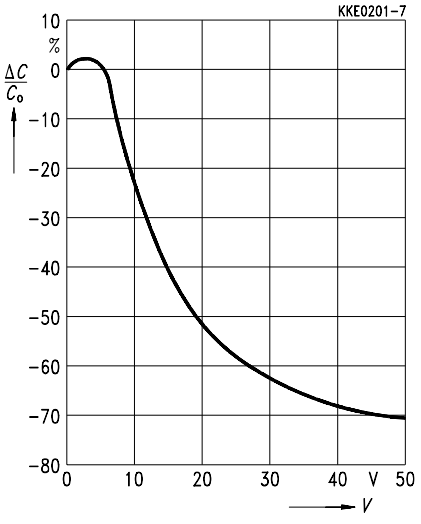
1) The tables contain the ordering codes for the standard capacitance tolerance: M = ± 20%. Example: B37932-K0223-**M**01

Characteristics

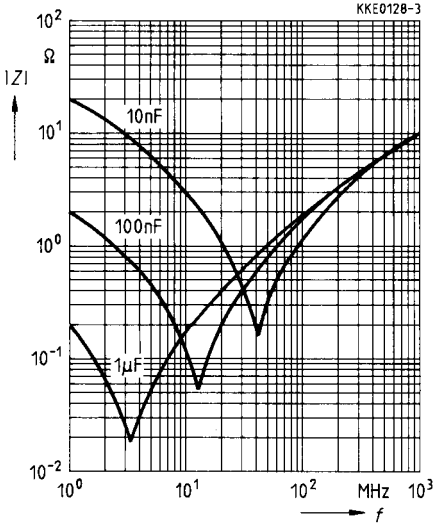
Capacitance change $\Delta C/C_{25}$ versus temperature T



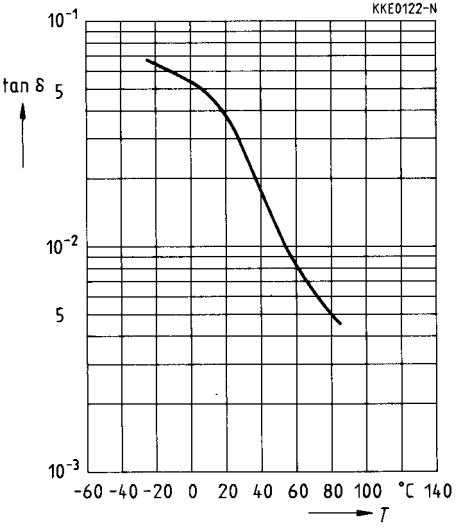
Capacitance change $\Delta C/C_0$ versus superimposed dc voltage V



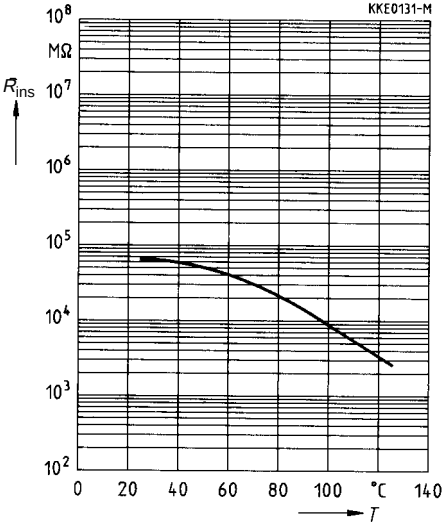
Impedance $|Z|$ versus frequency f



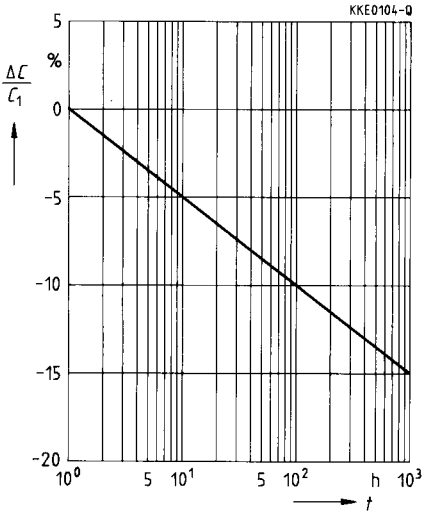
Dissipation factor tan δ versus temperature T



Insulation resistance R_{ins} versus temperature T



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



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