



Siemens Matsushita Components

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Multilayer Ceramic Capacitor Arrays

MLCC-Arrays (Size 1206)

C0G(NP0)/X7R/Y5V

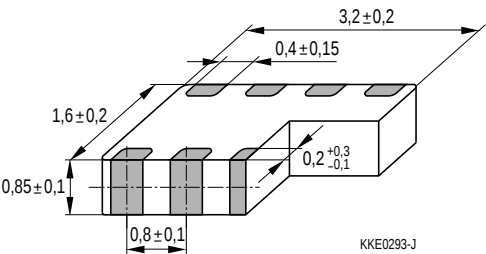
Data Book Supplement

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Features

- 4 single capacitors case size 0603 are combined in one 1206 package
- Very well- known case size 1206
- Suitable for the reflow soldering process



	C0G (NP0)	X7R	Y5V
Electrical characteristics			
Dielectric	Class 1	Class 2	Class 2
Rated voltage V_R Vdc	50	16/25/50	16/25
Climatic category (IEC 68- 1)	55/125/56	55/125/56	30/085/56
Temperature range	– 55 °C ... + 125 °C	– 55 °C ... + 125 °C	– 30 °C ... + 85 °C
Available capacitance values C_R E series	10 pF ... 470 pF E3	470 pF ... 0,1 µF E3	0,1 µF; 1 µF
Capacitance tolerance	± 10 %	± 20 %	+ 80 % / – 20 %
Temperature coefficient (tolerance)	0±30·10 ⁻⁶ /K	–	–
Max. rel. capacitance change $\Delta C/C$	–	± 15 %	– 82% ... + 22 %
Voltage test	2,5 · V_R /5 s		
Dissipation factor $\tan \delta$ (limit value)			< 125 ·10 ⁻³
Insulation resistance ¹⁾ at 20 °C	≥ 10 ⁴ MΩ –	≥ 10 ⁴ MΩ –	≥ 10 ⁴ MΩ –
Time constant τ ¹⁾ at 20 °C	> 500 s	> 500 s	> 500 s
Solderability (IEC 68–2–58)			
Wetting of pads > 95%	215 °C, 3 sec		
Resistance to soldering heat	260 °C, 10 sec		

1) Whichever is lower.



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Product range

Temp. charact.	C0G (NP0)		X7R			Y5V	
Type	B37871		B37872			B37873	
V _R (Vdc)		50	16	25	50	16	25
	Chip thickness 0,85 ± 0,1 mm						
10, 0 pF							
22,0 pF							
47,0 pF							
100, pF							
220 pF							
470 pF							
1,0 nF							
2,2 nF							
4,7 nF							
10 nF							
22 nF							
47 nF							
100 nF							
1,0 µF							



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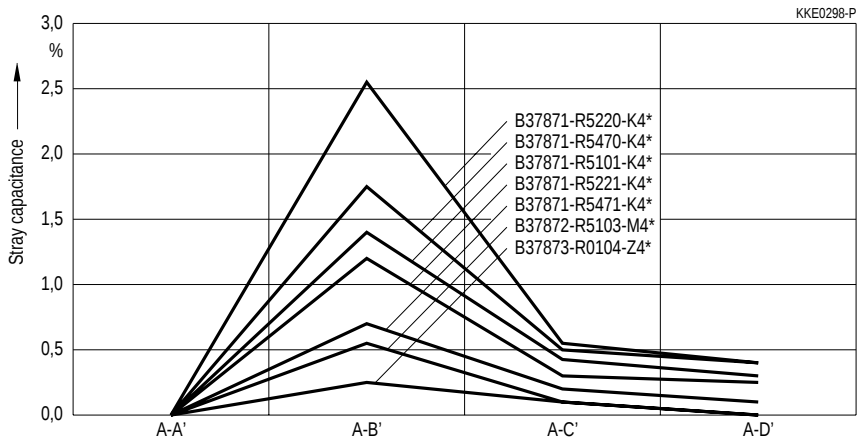
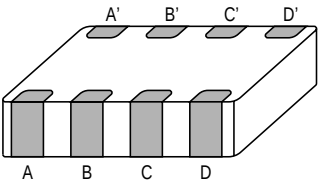
Ordering codes

Temp. charac.	V_R (Vdc)	C_R	Ordering code	Packing units	Taping
C0G (NP0)	50	10 pF	B37871- R5100- K41	4 000	Cardboard
		22 pF	B37871- R5220- K41	4 000	Cardboard
		47 pF	B37871- R5470- K41	4 000	Cardboard
		100 pF	B37871- R5101- K41	4 000	Cardboard
		220 pF	B37871- R5221- K41	4 000	Cardboard
		470 pF	B37871- R5471- K41	4 000	Cardboard
X7R	16	100 nF	B37872- R9104- M41	4 000	Cardboard
	25	22 nF	B37872- R0223- M41	4 000	Cardboard
		47 nF	B37872- R0473- M41	4 000	Cardboard
	50	470 pF	B37872- R5471- M41	4 000	Cardboard
		1,0 nF	B37872- R5102- M41	4 000	Cardboard
		2,2 nF	B37872- R5222- M41	4 000	Cardboard
		4,7 nF	B37872- R5472- M41	4 000	Cardboard
		10 nF	B37872- R5103- M41	4 000	Cardboard
		22 nF	B37872- R5223- M41	4 000	Cardboard
		47 nF	B37872- R5473- M41	4 000	Cardboard
Y5V	16	1,0 μ F	B37873- R9105- Z41	4 000	Cardboard
	25	100 nF	B37873- R0104- Z41	4 000	Cardboard

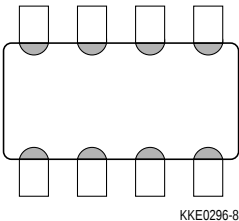
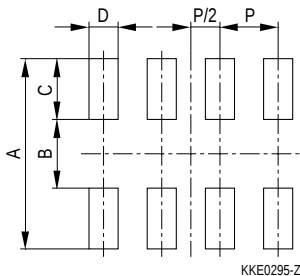
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Crosstalk

(Stray Capacitance)



Geometry of solder pads



Dimensions in mm

A	B	C	D	P
$2,8 \pm 0,1$	$1,0 \pm 0,1$	$0,9 \pm 0,1$	$0,4 \pm 0,05$	$0,8 \pm 0,1$

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Ordering code system



B37871-

R

5

101-

K

4

1

Packaging
1 = cardboard tape, reel dia. 180 mm (7 ")
2 = blister tape, reel dia. 180 mm (7 ")
3 = cardboard tape, reel dia. 330 mm (13 ")
4 = blister tape, reel dia. 330 mm (13 ")

4 = 4 Cap array

Capacitance tolerance
(tolerance code in acc. with IEC 62)

C0G(NP0)	X7R	Y5V
K = ± 10 %	M = ± 20 %	Z = + 80 % - 20 %

Capacitance, coded	100 = 10 pF	472 = 4,7 nF	104 = 100 nF
	101 = 100 pF	103 = 10 nF	105 = 1 μF
	102 = 1 nF	473 = 47 nF	

Rated voltage	Rated voltage [Vdc]	16	25	50
	Code	9	0	5

R = Array

Type and size			
Chip size (inch / mm)	Temperature characteristics C0G(NP0)		
		X7R	Y5V
1206 / 3216	B37871	B37872	B37873

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