



SPECIFICATION

(Reference sheet)

- Supplier : Samsung electro-mechanics - Samsung P/N : CL21C080DBANNNC

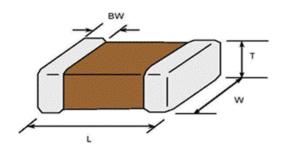
Product : Multi-layer Ceramic Capacitor
 Description : CAP, 8pF, 50V, ± 0.5pF, C0G, 0805

A. Samsung Part Number

<u>CL</u> <u>21</u> <u>C</u> <u>080</u> <u>D</u> <u>B</u> <u>A</u> <u>N</u> <u>N</u> <u>N</u> <u>C</u> ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪

1	Series	Samsung Multi-layer Ceramic Capacitor				
2	Size	0805 (inch code)	L: 2.00 ± 0.10 mm	W: 1.25 ± 0.10 mm		
3	Dielectric	C0G	Inner electrode	Ni		
4	Capacitance	8 pF	Termination	Cu		
⑤	Capacitance	± 0.5pF	Plating	Sn 100% (Pb Free)		
	tolerance		Product	Normal		
6	Rated Voltage	50 V	Special	Reserved for future use		
7	Thickness	0.65 ± 0.10 mm	Packaging	Cardboard Type, 7" reel		

B. Structure and dimension



Samsung P/N	Dimension(mm)				
(Lead Free)	L	W	Т	BW	
CL21C080DBANNNC	2.00 ± 0.10	1.25 ± 0.10	0.65 ± 0.10	0.50+0.20/-0.30	

C. Samsung Reliability Test and Judgement condition

Capacitance Within specified tolerance 1 Mb≥ ±10% / 0.5~5Vrms Q 560 min Insulation 10,000Mohm or 500Mohm×μF Rated Voltage 60~120 sec. Resistance Whichever is smaller Rated Voltage 60~120 sec. Appearance No abnormal exterior appearance Microscop (X10) Withstanding No dielectric breakdown or mechanical breakdown 300% of the rated voltage Voltage COG (From -55 ℃ to 125 ℃, Capacitance change should be within ±30PPM/℃) Adhesive Strength No peeling shall be occur on the terminal electrode 500g×F, for 10±1 sec. Bending Strength Capacitance change : with 1.0mm/sec. Bending to the limit (1mm) with 1.0mm/sec. Solderability More than 75% of terminal surface is to be soldered newly SnAg3.0Cu0.5 solder 245±5 ℃, 3±0.3sec. (preheating : 80~120 ℃ for 10~30sec.) Resistance to Capacitance change : within ±2.5% or ±0.25 pF whichever is larger Tan δ, IR : initial spec. Solder pot : 270±5 ℃, 10±1 sec. Witherian Table Applitable 4.5 min		10% / 0.5~5Vrms		
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Tan δ, IR : initial spec.	Solde	er pot : 270±5℃, 10±1sec.		
·	F whichever is larger			
Vibration Test				
Vibration Test Capacitance change : Amplitude : 1.5mm	Ampl	Amplitude : 1.5mm		
within ±2.5% or ±0.25pF whichever is larger From 10Hz to 55Hz (return : 1min.)	F whichever is larger From	10Hz to 55Hz (return : 1min.)		
Tan δ, IR : initial spec. 2hours ´3 direction (x, y, z)	2hou	rs ´ 3 direction (x, y, z)		
Moisture Capacitance change : With rated voltage	With	rated voltage		
Resistance within ±7.5% or ±0.75pF whichever is larger 40±2℃, 90~95%RH, 500+12/-0hrs	F whichever is larger 40±2	40±2℃, 90~95%RH, 500+12/-0hrs		
Q: 126.67 min				
IR : 500Mohm or 25Mohm × μF	r 25Mohm × μF			
Whichever is smaller	s smaller			
High Temperature Capacitance change : With 200% of the rated voltage	With	200% of the rated voltage		
Resistance within ±3% or ±0.3pF whichever is larger Max. operating temperature	hichever is larger Max.	Max. operating temperature		
Q: 280 min 1000+48/-0hrs	1000	+48/-0hrs		
IR : 1,000Mohm or 50Mohm × μF	or 50Mohm × μF			
Whichever is smaller	s smaller			
Temperature Capacitance change : 1 cycle condition	1 cyc	e condition		
Cycling within ±2.5% or ±0.25pF whichever is larger Min. operating temperature → 25°C	·			
Tan δ , IR: initial spec. \rightarrow Max. operating temperature \rightarrow 25 $^{\circ}$ C	ŭ			
5 cycle test	5 cvc	5 cycle test		

^{*} The reliability test condition can be replaced by the corresponding accelerated test condition.

D. Recommended Soldering method:

Reflow (Reflow Peak Temperature: 260+0/-5°C, 10sec. Max)



A Product specifications included in the specifications are effective as of March 1, 2013.

Please be advised that they are standard product specifications for reference only.

We may change, modify or discontinue the product specifications without notice at any time.

So, you need to approve the product specifications before placing an order.

Should you have any question regarding the product specifications,

please contact our sales personnel or application engineers.

- Disclaimer & Limitation of Use and Application -

The products listed in this Specification sheet are **NOT** designed and manufactured for any use and applications set forth below.

Please note that any misuse of the products deviating from products specifications or information provided in this Spec sheet may cause serious property damages or personal injury.

We will **NOT** be liable for any damages resulting from any misuse of the products, specifically including using the products for high reliability applications as listed below.

If you have any questions regarding this 'Limitation of Use and Application', you should first contact our sales personnel or application engineers.

- ① Aerospace/Aviation equipment
- ② Automotive or Transportation equipment (vehicles, trains, ships, etc)
- 3 Medical equipment
- Military equipment
- 5 Disaster prevention/crime prevention equipment
- Any other applications with the same as or similar complexity or reliability to the applications set forth above.