



SPECIFICATION

- Supplier : Samsung electro-mechanics
- Product : Multi-layer Ceramic Capacitor
- Samsung P/N : CL21CR82CBANNNC
- Description : CAP, 0.82pF, 50V, ±0.25pF, C0G, 080§

A. Samsung Part Number

			<u>CL</u> ①	<u>21</u> ②	<u>C</u> 3	<u>R82</u> ④	<u>C</u> 5	<u>B</u> 6	<mark>≜</mark> ⑦	<u>N</u> 8	<u>N</u> 9	<u>N</u> 10	<u>C</u> 11		
1	Series	Samsung Multi-layer Ceramic Capacitor													
2	Size	0805 (i	inch co	ode)		L:	2.0	± 0.1		mm		W:	1.25	± 0.1	mm
3	Dielectric	C0G					8	Inne	r ele	ctroc	le		Ni		
4	Capacitance	0.82 p	ьF					Term	ninat	ion			Cu		
5	Capacitance	±0.25 p	ьF					Plati	ng				Sn 10	0%	(Pb Free)
	tolerance						9	Prod	uct				Norma	al	
6	Rated Voltage	50 V	/				10	Spec	ial				Reser	ved for	future use
\bigcirc	Thickness	0.65 ±	: 0.1	mm			1	Pack	agir	ng			Cardb	oard T	ype,7"reel(4,000ea)

B. Samsung Reliability Test and Judgement condition

	Performance	Test condition						
Capacitance	Within specified tolerance	1₩±10% 0.5~5Vrms						
Q	416.4 min							
Insulation	More than 500Mohm⋅ <i>μ</i> F	Rated Voltage 60~120 sec.						
Resistance								
Appearance	No abnormal exterior appearance	Visual inspection						
Withstanding	No dielectric breakdown or	300% of the rated voltage						
Voltage	mechanical breakdown							
Temperature	C0G							
Characteristics	(From -55℃ to 125℃, Capacitance change should be within ±30PPM/℃)							
Adhesive Strength	No peeling shall be occur on the	500g·F, for 10±1 sec.						
of Termination	terminal electrode							
Bending Strength	Capacitance change : within ±0.5pF	Bending to the limit (1mm)						
		with 1.0mm/sec.						
Solderability	More than 75% of terminal surface	SnAg3.0Cu0.5 solder						
	is to be soldered newly	245±5℃, 3±0.3sec.						
		(preheating : 80~120 $^{\circ}$ C for 10~30sec.)						
Resistance to	Capacitance change : within $\pm 0.25 \text{ pF}$	Solder pot : 270±5℃, 10±1sec.						
Soldering heat	Tan δ, IR : initial spec.							

	Performance	Test condition					
Vibration Test	Capacitance change : within ±0.25pF	Amplitude : 1.5mm					
	Tan δ, IR : initial spec.	From 10H₂ to 55H₂ (return : 1min.)					
		2hours \times 3 direction (x, y, z)					
Moisture	Capacitance change : within ±0.75pF	With rated voltage					
Resistance	Q : 102.73 min	40±2℃, 90~95%RH, 500 +12/-0 hour					
	IR : More than 25MΩ· <i>μ</i> F						
High Temperature	Capacitance change : within ±0.3pF	With 200% of the rated voltage					
Resistance	Q : 277.05 min	Max. operating temperature					
	IR : More than 50MΩ· <i>μ</i> F	1000+48/-0 hour					
Temperature	Capacitance change : within ±0.25pF	1 cycle condition					
Cycling	Tan δ, IR : initial spec.	Min. operating temperature \rightarrow 25 °C					
		\rightarrow Max. operating temperature \rightarrow 25 °C					
		5 cycles test					

C. Recommended Soldering method :

Reflow (Reflow Peak Temperature : 260+0/-5 $^\circ\!\mathrm{C}$, 10sec. Max)

* For the more detail Specification, Please refer to the Samsung MLCC catalogue.