



SPECIFICATION

• Supplier : Samsung electro-mechanics • Samsung P/N : CL32C182JGHNNNF

• Product : Multi-layer Ceramic Capacitor • Description : CAP, 1.8 nF, 500V, ±5%, C0G, 1210

A. Samsung Part Number

<u>CL</u> <u>32</u> <u>C</u> <u>182</u> <u>J</u> <u>G</u> <u>H</u> <u>N</u> <u>N</u> <u>N</u> <u>F</u> ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪

1	Series	Samsung Multi-layer Ceramic Capacitor							
2	Size	1210 (inch co	ode) L: 3.2	± 0.3	mm	W:	2.5	± 0.2	mm
3	Dielectric	C0G	8	Inner ele	ectrode		Ni		
4	Capacitance	1.8 nF		Termina	tion		Cu		
(5)	Capacitance	±5 %		Plating			Sn 10	00%	(Pb Free)
	tolerance		9	Product			Norm	al	
6	Rated Voltage	500 V	10	Special			Rese	rved for	future use
7	Thickness	1.6 ± 0.2	mm (1)	Packagi	ng		Embo	ssed T	ype,13"reel(8,000ea)

B. Samsung Reliability Test and Judgement condition

	Performance	Test condition					
Capacitance	Within specified tolerance	1tlb±10% 0.5~5Vrms					
Q	1000 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	150% of the rated voltage					
Voltage	mechanical breakdown						
Temperature	COG						
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 ±5%	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 ℃ for 10~30sec.)					
Resistance to	Capacitance change: within ±2.5%	Solder pot : 270±5℃, 10±1sec.					
Soldering heat	Tan δ, IR : initial spec.						

	Performance	Test condition					
Vibration Test	Capacitance change: within ±2.5%	Amplitude : 1.5mm					
	Tan δ, IR : initial spec.	From 10Hz to 55Hz (return : 1min.)					
		2hours × 3 direction (x, y, z)					
Moisture	Capacitance change: within ±7.5%	With rated voltage					
Resistance	Q: 200 min	40±2℃, 90~95%RH, 500 +12/-0 hour					
	IR : More than 25MΩ·μF						
High Temperature	Capacitance change: within ±3%	With 150% of the rated voltage					
Resistance	Q: 350 min	Max. operating temperature					
	IR : More than 50MΩ·μF	1000+48/-0 hour					
Temperature	Capacitance change: within ±2.5%	1 cycle condition					
Cycling	Tan δ, IR : initial spec.	Min. operating temperature $ ightarrow$ 25 $^{\circ}$ C					
		$ ightarrow$ Max. operating temperature $ ightarrow$ 25 $^{\circ}$ 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.