SAMSUNG
SAMSUNG ELECTRO-MECHANICS

RoHS+Halogen Compliant
Ecoparts

SPECIFICATION

- **Supplier : Samsung electro-mechanics**
- **Product : Multi-layer Ceramic Capacitor**
- **Samsung P/N : CL10C2R5BB8NNNC**
- **Description : CAP, 2.5㎊, 50V, ±0.1㎊, C0G, 0603**

A. Samsung Part Number

CL	10	C	2R5	B	B	8	N	N	N	C
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪

① **Series**	Samsung Multi-layer Ceramic Capacitor		
② **Size**	0603 (inch code)	L: 1.6 ± 0.1 mm	W: 0.8 ± 0.1 mm
③ **Dielectric**	C0G	⑧ **Inner electrode**	Ni
④ **Capacitance**	2.5 ㎊	**Termination**	Cu
⑤ **Capacitance tolerance**	±0.1 ㎊	**Plating**	Sn 100% (Pb Free)
		⑨ **Product**	Normal
⑥ **Rated Voltage**	50 V	⑩ **Special**	Reserved for future use
⑦ **Thickness**	0.8 ± 0.1 mm	⑪ **Packaging**	Cardboard Type, 7" reel

B. Samsung Reliablility Test and Judgement condition

	Performance	**Test condition**
Capacitance	Within specified tolerance	1㎒±10% 0.5~5Vrms
Q	450 min	
Insulation Resistance	10,000Mohm or 500Mohm·㎌ Whichever is Smaller	Rated Voltage 60~120 sec.
Appearance	No abnormal exterior appearance	Microscope (×10)
Withstanding Voltage	No dielectric breakdown or mechanical breakdown	300% of the rated voltage
Temperature Characterisitcs	C0G (From -55℃ to 125℃, Capacitance change shoud be within ±30PPM/℃)	
Adhesive Strength of Termination	No peeling shall be occur on the terminal electrode	500g·F, for 10±1 sec.
Bending Strength	Capacitance change : within ±5% or ±0.5㎊ whichever is larger	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 Soldering heat	Capacitance change : within ±2.5% or ±0.25㎊ whichever is larger Tan δ, IR : initial spec.	Solder pot : 270±5℃, 10±1sec.

	Performance	Test condition
Vibration Test	Capacitance change : within ±2.5% or ±0.25㎊ whichever is larger Tan δ, IR : initial spec.	Amplitude : 1.5mm From 10㎐ to 55㎐ (return : 1min.) 2hours × 3 direction (x, y, z)
Moisture Resistance	Capacitance change : within ±7.5% or ±0.75㎊ whichever is larger Q : 108.33 min IR : 500Mohm or 25Mohm · ㎌ Whichever is Smaller	With rated voltage 40±2℃, 90~95%RH, 500+12/-0hrs
High Temperature Resistance	Capacitance change : within ±3% or ±0.3㎊ whichever is larger Q : 225 min IR : 1000Mohm or 50Mohm · ㎌ Whichever is Smaller	With 200% of the rated voltage Max. operating temperature 1000+48/-0hrs
Temperature Cycling	Capacitance change : within ±2.5% or ±0.25㎊ whichever is larger Tan δ, IR : initial spec.	1 cycle condition Min. operating temperature → 25℃ → Max. operating temperature → 25℃ 5 cycle test

C. Recommended Soldering method :

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

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