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Samsung Electro-Mechanics America, Inc.
CL31F104MBCNNNC

For any questions, you can email us directly:
sales@integrated-circuit.com

SAMSUNG ELECTRO-MECHANICS

RoHS+Halogen Compliant ecoparts

SPECIFICATION

- **Supplier : Samsung electro-mechanics**
- **Product : Multi-layer Ceramic Capacitor**
- **Samsung P/N : CL31F104MBCNNNC**
- **Descriptiont : CAP, 100㎌, ±20%, 50V, Y5V, 1206**

A. Samsung Part Number

CL	31	F	104	M	B	C	N	N	N	C
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪

①	**Series**	Samsung Multi-layer Ceramic Capacitor			
②	**Size**	1206 (inch code)	L: 3.2 ± 0.15 mm	W: 1.6 ± 0.15 mm	
③	**Dielectric**	Y5V	⑧	**Inner electrode**	Ni
④	**Capacitance**	100 ㎌		**Termination**	Cu
⑤	**Capacitance tolerance**	±20 %		**Plating**	Sn 100% (Pb Free)
			⑨	**Product**	Normal
⑥	**Rated Voltage**	50 V	⑩	**Special**	Reserved for future use
⑦	**Thickness**	0.85 ± 0.15 mm	⑪	**Packaging**	Cardboard Type, 7" reel

B. Samsung Reliablility Test and Judgement condition

	Performance	Test condition	
Capacitance	Within specified tolerance	1㎑±10%	1.0±0.2Vrms
Tan δ (DF)	0.05 max.		
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	250% of the rated voltage	
Temperature Characterisitcs	Y5V (From -30℃ to 85℃, Capacitance change shoud be within -82~+22%)		
Adhesive Strength of Termination	No peeling shall be occur on the terminal electrode	500g·F, for 10±1 sec.	
Bending Strength	Capacitance change : within ±30%	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 ±20% Tan δ, IR : initial spec.	Solder pot : 270±5℃, 10±1sec.	

	Performance	Test condition
Vibration Test	Capacitance change : within ±20% 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 ±30% Tan δ : 0.09 max IR : 500Mohm or 25Mohm · ㎌ Whichever is Smaller	With rated voltage 40±2℃, 90~95%RH, 500+12/-0hrs
High Temperature Resistance	Capacitance change : within ±30% Tan δ : 0.09 max IR : 1000Mohm or 50Mohm · ㎌ Whichever is Smaller	With 200% of the rated voltage Max. operating temperature 1000+48/-0hrs
Temperature Cycling	Capacitance change : within ±20% 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.