

SPECIFICATION

- Supplier : Samsung electro-mechanics
- Product : Multi-layer Ceramic Capacitor

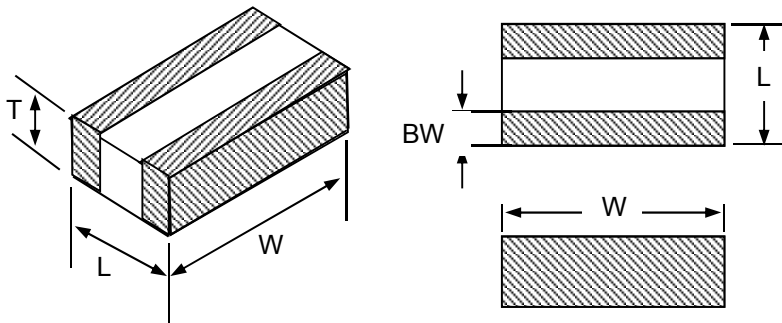
- Samsung P/N : [CLL6A435MR4NLNC](#)
- Description : [CAP, 4.3 \$\mu\$ F, 4V, \$\pm\$ 20%, X5R](#)

A. Samsung Part Number

CL L6 A 435 M R 4 N L N C
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪

① Series	Samsung Multi-layer Ceramic Capacitor			
② Size	0610 (mm code)	L: 0.6 \pm 0.05 mm	W: 1.0 \pm 0.05 mm	
③ Dielectric	X5R	⑧ Inner electrode	Ni	
④ Capacitance	4.3 μ F	Termination	Cu	
⑤ Capacitance tolerance	\pm 20 %	Plating	Sn 100% (Pb Free)	
⑥ Rated Voltage	4 V	⑨ Product	LICC	
⑦ Thickness	0.4 \pm 0.05 mm	⑩ Special	Reserved for future use	
		⑪ Packaging	Cardboard Type, 7" reel	

B. Structure and Dimensions



Samsung P/N (Lead Free)	Dimension(mm)			
	L	W	T	BW
CLL6A435MR4NLNC	0.60 \pm 0.05	1.0 \pm 0.05	0.4 \pm 0.05	0.18 \pm 0.08

C. Samsung Reliability Test and Judgement condition

	Performance	Test condition
Capacitance	Within specified tolerance	1kHz±10% 0.5±0.1Vrms
Tan δ (DF)	0.125 max.	
Insulation Resistance	More than 50MΩ·μF	Rated Voltage 60~120 sec.
Appearance	No abnormal exterior appearance	Visual inspection
Withstanding Voltage	No dielectric breakdown or mechanical breakdown	250% of the rated voltage
Temperature Characteristics	X5R (From -55℃ to 85℃, Capacitance change should be within ±15%)	
Adhesive Strength of Termination	No peeling shall be occur on the terminal electrode	500g·F, for 10±1 sec.
Bending Strength	Capacitance change : within ±12.5%	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 ±7.5% Tan δ, IR : initial spec.	Solder pot : 270±5℃, 10±1sec.
Vibration Test	Capacitance change : within ±5% Tan δ, IR : initial spec.	Amplitude : 1.5mm From 10Hz to 55Hz (return : 1min.) 2hours × 3 direction (x, y, z)
Moisture Resistance	Capacitance change : within ±12.5% Tan δ : 0.25 max IR : More than 3.5MΩ·μF	With rated voltage 40±2℃, 90~95%RH, 500+12/-0hrs
High Temperature Resistance	Capacitance change : within ±12.5% Tan δ : 0.25 max IR : More than 7MΩ·μF	With 100% of the rated voltage Max. operating temperature 1000+48/-0hrs
Temperature Cycling	Capacitance change : within ±12.5% Tan δ, IR : initial spec.	1 cycle condition Min. operating temperature → 25℃ → Max. operating temperature → 25℃ 5 cycle test

D. Recommended Soldering method :

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

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