



SPECIFICATION

- · Supplier : Samsung electro-mechanics
- Product : Multi-layer Ceramic Capacitor
- · Samsung P/N:
- CL31B106KOHNNWE

(Reference sheet)

- · Description :
- CAP, 10uF, 16V, ±10%, X7R, 1206

A. Samsung Part Number

		<u>CI</u>		<u>B</u> 3	<u>106</u> ④	<u>K</u> 5	<mark>0</mark> 6	<u>н</u> 7	<u>N</u> 8	<u>N</u> 9	<u>W</u> 10	<u>Е</u> Ш	
1	Series	Samsung Multi-layer Ceramic Capacitor											
2	Size	1206 (inch	code)		L:	3.20	±0.201	ım			W:	1.60 ±0.20m	n
3	Dielectric	X7R				8	Inner	elect	rode			Ni	
4	Capacitance	10 uF					Term	inatio	n			Cu	
5	Capacitance	±10 %					Platir	ıg				Sn 100%	(Pb Free)
	tolerance					9	Prod	uct				Normal	
6	Rated Voltage	16 V				10	Spec	ial				Industrial (N	etwork,etc)
1	Thickness	1.60 ±0.20mm				1	Pack	aging				Embossed 1	ype, 7" reel

B. Structure & Dimension



Samsung D/N	Dimension(mm)								
Samsung P/N	L	W	Т	BW					
CL31B106KOHNNWE	3.20 ±0.20	1.60 ±0.20	1.60 ±0.20	0.50 ± 0.30					

C. Samsung Reliablility Test and Judgement Condition

Tan δ (DF) 0.1 max. *A capacitor prior to measuring the capacitance is heat treated at 150 °C+0/-10 °C for 1 hour and maintained in ambient air for 24±2 hours. Insulation 10,000Mohm or 100Mohm×# ^E Rated Voltage 60~120 sec. Resistance Whichever is smaller Microscope (×10) Appearance No abnormal exterior appearance Microscope (×10) Withstanding No dielectric breakdown or mechanical breakdown 250% of the rated voltage Temperature X7R Characteristics (From-55°C to 125°C, Capacitance change should be within ±15%) Adhesive Strength No peeling shall be occur on the of 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 24545°C, 340.3sec. (preheating : 80~120°C for 10~30sec.) Resistance to Capacitance change : within ±7.5% Solder pot : 270±5°C, 10±1sec. Soldering Heat Tan δ, IR : initial spec. Amplitude : 1.5mm From 10Hz to 55Hz (return : 1min.) 2hours × 3 direction (x, y, z) Moisture Capacitance change : within ±12.5% Tan δ : 0.125 max IR : 500Mohm or 12.5Mohm × # ^E Whichever is smaller Mith 150% of the rated voltage 40±2°C, 90~95%RH, 500+12/-0hrs		Judgement	Test condition				
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Whichever is smaller Temperature Capacitance change : within ±7.5% 1 cycle condition Cycling Tan δ, IR : initial spec. Min. operating temperature → 25°C		IR : 1,000Mohm or 25Mohm × <i>µ</i> F					
CyclingTan δ , IR : initial spec.Min. operating temperature \rightarrow 25°C							
CyclingTan δ , IR : initial spec.Min. operating temperature \rightarrow 25°C	Temperature	Capacitance change : within ±7.5%	1 cycle condition				
	Cycling		-				
	-						
5 cycle test			5 cycle test				

X The reliability test condition can be replaced by the corresponding accelerated test condition.

D. Recommended Soldering method :

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

Product specifications included in the specifications are effective as of March 1, 2013. Please be advised that they are standard product specifications for reference only. We may change, modify or discontinue the product specifications without notice at any time. So, you need to approve the product specifications before placing an order. Should you have any question regarding the product specifications,

please contact our sales personnel or application engineers.

Disclaimer & Limitation of Use and Application

The products listed in this Specification sheet are **NOT** designed and manufactured for any use and applications set forth below.

Please note that any misuse of the products deviating from products specifications or information provided in this Spec sheet may cause serious property damages or personal injury. We will **NOT** be liable for any damages resulting from any misuse of the products, specifically including using the products for high reliability applications as listed below.

If you have any questions regarding this 'Limitation of Use and Application', you should first contact our sales personnel or application engineers.

- *①* Aerospace/Aviation equipment
- 2 Automotive or Transportation equipment (vehicles, trains, ships, etc)
- *③* Medical equipment
- ④ Military equipment
- 5 Disaster prevention/crime prevention equipment
- Ø Power plant control equipment
- ⑦ Atomic energy-related equipment
- Indersea equipment
- Itraffic signal equipment
- Data-processing equipment
- ① Electric heating apparatus, burning equipment
- ② Safety equipment
- 13 Any other applications with the same as or similar complexity or reliability to the applications