SPECIFICATION

(Reference sheet)

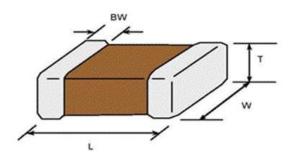
- · Supplier : Samsung electro-mechanics
- · Product : Multi-layer Ceramic Capacitor

- · Samsung P/N : · Description :
- CL10C080CB8NCNC CAP, 8pF, 50V, ± 0.25pF, C0G, 0603

A. Samsung Part Number

			<u>CL</u> ①	<u>10</u> ②	<u>C</u> 3	<u>080</u> ④	<u>C</u> 5	<u>B</u> 6	<mark>8</mark> 7	<u>N</u> 8	<mark>C</mark> 9	<u>N</u> 10	<u>С</u> 11		
1	Series	Samsung N	/lulti-lay	er Ce	erami	c Capa	acitor								
2	Size	0603	(inch cc	de)		L:	1.60	± 0.10	mm			W:	0.80 ± 0.10 ı	mm	
3	Dielectric	C0G					8	Inner	elect	rode			Ni		
4	Capacitance	8	рF					Term	inatio	n			Cu		
5	Capacitance	± 0.25	pF					Platir	ng				Sn 100%	(Pb Free)	
	tolerance						9	Prod	uct				High-Q		
6	Rated Voltage	50 \	V				10	Spec	ial				Reserved fo	r future use	
\bigcirc	Thickness	0.80 ± 0.10	mm				1	Pack	aging				Cardboard T	ype, 7" reel	

B. Structure and dimension



Samsung P/N	Dimension(mm)								
(Lead Free)	L	W	Т	BW					
CL10C080CB8NCNC	1.60 ± 0.10	0.80 ± 0.10	0.80 ± 0.10	0.30 ± 0.20					





C. Samsung Reliability Test and Judgement condition

Q Insulation 10 Insulation 10 Resistance W Appearance No Withstanding No Voltage me Temperature CO Characteristics (Fill Adhesive Strength No of Termination ter Bending Strength Ca witt Solderability Mo is Solderability Mo Tamperature Ca Ca witt Ta Ta	ithin specified tolerance 560 min 0,000Mohm or 500Mohm×µF //hichever is smaller o abnormal exterior appearance o dielectric breakdown or echanical breakdown OG rom -55℃ to 125℃, Capacitance change sh o peeling shall be occur on the rminal electrode apacitance change : thin ±5% or ±0.5pF whichever is larger	1Mb±10% 0.5~5Vrms Rated Voltage 60~120 sec. Microscope ('10) 300% of the rated voltage 300% of the rated voltage 500g×F, for 10±1 sec. Bending to the limit (1mm) 1000 sec.
Insulation 10 Resistance W Appearance No Withstanding No Voltage me Temperature CC Characteristics (Fither the second	0,000Mohm or 500Mohm×µF /hichever is smaller b abnormal exterior appearance b dielectric breakdown or echanical breakdown OG rom -55℃ to 125℃, Capacitance change sh b peeling shall be occur on the rminal electrode apacitance change : thin ±5% or ±0.5pF whichever is larger	Microscope (´10) 300% of the rated voltage nould be within ±30PPM/℃) 500g×F, for 10±1 sec.
Resistance W Appearance No Withstanding No Voltage me Temperature CO Characteristics (Fit Adhesive Strength No of Termination ter Bending Strength Ca With Solderability Mo Resistance to Ca Soldering heat with	/hichever is smaller b abnormal exterior appearance b dielectric breakdown or echanical breakdown DG rom -55°C to 125°C, Capacitance change sh b peeling shall be occur on the rminal electrode apacitance change : thin ±5% or ±0.5 _P F whichever is larger	Microscope (´10) 300% of the rated voltage nould be within ±30PPM/℃) 500g×F, for 10±1 sec.
Appearance No Withstanding No Voltage me Temperature CC Characteristics (Fill) Adhesive Strength No of Termination ter Bending Strength Ca witi Solderability Mo Resistance to Ca Soldering heat witi	o abnormal exterior appearance o dielectric breakdown or echanical breakdown OG rom -55℃ to 125℃, Capacitance change sh o peeling shall be occur on the rminal electrode apacitance change : thin ±5% or ±0.5pF whichever is larger	300% of the rated voltage nould be within ±30PPM/℃) 500g×F, for 10±1 sec.
Withstanding No Voltage me Temperature CC Characteristics (Fither the second secon	o dielectric breakdown or echanical breakdown DG rom -55℃ to 125℃, Capacitance change sh o peeling shall be occur on the rminal electrode apacitance change : thin ±5% or ±0.5pF whichever is larger	300% of the rated voltage nould be within ±30PPM/℃) 500g×F, for 10±1 sec.
Voltage me Temperature CC Characteristics (Fi Adhesive Strength No of Termination ter Bending Strength Ca wit Solderability Resistance to Ca Soldering heat wit	echanical breakdown OG rom -55°C to 125°C, Capacitance change sh o peeling shall be occur on the rminal electrode apacitance change : thin ±5% or ±0.5 _p F whichever is larger	nould be within ±30PPM/℃) 500g×F, for 10±1 sec.
Temperature CC Characteristics (Fill Adhesive Strength Notice of Termination ter Bending Strength Call With Solderability Resistance to Call Soldering heat With	DG rom -55℃ to 125℃, Capacitance change sh o peeling shall be occur on the rminal electrode apacitance change : thin ±5% or ±0.5pF whichever is larger	500g×F, for 10±1 sec.
Characteristics (Find the second strength of Termination terminatintermination t	rom -55°C to 125°C, Capacitance change shot peeling shall be occur on the rminal electrode apacitance change : thin \pm 5% or \pm 0.5°F whichever is larger	500g×F, for 10±1 sec.
Adhesive Strength of Termination Not ter Bending Strength Ca with Solderability Mot is Resistance to Ca with Soldering heat With	p peeling shall be occur on the rminal electrode apacitance change : thin ±5% or ±0.5 _p F whichever is larger	500g×F, for 10±1 sec.
of Termination ter Bending Strength Ca wit Solderability Moderability Resistance to Ca Soldering heat wit	rminal electrode apacitance change : thin ±5% or ±0.5pF whichever is larger	
Bending Strength Ca with with Solderability Model Resistance to Ca Soldering heat with Ta	apacitance change : thin $\pm 5\%$ or $\pm 0.5_{\text{p}}$ F whichever is larger	Bending to the limit (1mm)
with Solderability Model Solderability Model Resistance to Categories Soldering heat with Tate Tate	thin $\pm 5\%$ or ± 0.5 pF whichever is larger	Bending to the limit (1mm)
Solderability Mo is Resistance to Ca Soldering heat with Ta		
Resistance to Ca Soldering heat with Ta		with 1.0mm/sec.
Resistance to Ca Soldering heat with Ta	ore than 75% of terminal surface	SnAg3.0Cu0.5 solder
Soldering heat with Ta	to be soldered newly	245±5℃, 3±0.3sec.
Soldering heat with Ta		(preheating : 80~120 ℃ for 10~30sec.)
Та	apacitance change :	Solder pot : 270±5°C, 10±1sec.
	thin ±2.5% or ±0.25pF whichever is larger	
Vibration Test Ca	an δ, IR : initial spec.	
	apacitance change :	Amplitude : 1.5mm
wit	thin ±2.5% or ±0.25pF whichever is larger	From 10Hz to 55Hz (return : 1min.)
Та	an δ, IR : initial spec.	2hours ´ 3 direction (x, y, z)
Moisture Ca	apacitance change :	With rated voltage
Resistance wit	thin ±7.5% or ±0.75pF whichever is larger	40±2℃, 90~95%RH, 500+12/-0hrs
Q	: 126.67 min	
IR	: 500Mohm or 25Mohm × μF	
	Whichever is smaller	
High Temperature Ca	apacitance change :	With 200% of the rated voltage
Resistance wit	thin $\pm 3\%$ or $\pm 0.3 \text{pF}$ whichever is larger	Max. operating temperature
Q	: 280 min	1000+48/-0hrs
IR	: 1,000Mohm or 50Mohm × μF	
	Whichever is smaller	
Temperature Ca	apacitance change :	1 cycle condition
Cycling wit	thin $\pm 2.5\%$ or ± 0.25 pF whichever is larger	Min. operating temperature \rightarrow 25 °C
Та	an δ, IR : initial spec.	→ Max. operating temperature → 25° C

* 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)

A 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