SAMSUNG ELECTRO-MECHANICS

SPECIFICATION

· **Supplier : Samsung electro-mechanics**
· **Product : Multi-layer Chip Beads (CIM Series)**
· **Samsung P/N : CIM 21 U 600 NE**
· **Description : Bead, 2012, 60Ω±25%, 900mA**
· CIM Series : display high impedance because it is composed of a multilayered internal conductor and has excellent attenuation characteristics for wide band frequencies.

※ **Application : High Frequency EMI prevention application to computers,VCR's,TVs and Cell Phone.**

A. Samsung Part Number

CI	M	21	U	600	N	E
①	②	③	④	⑤	⑥	⑦

① **Series**	Samsung Multi-layer **Chip Bead**
② **Type**	M : Multi-Layer Type B : Mono-Layer Type
③ **Dimension**	0805 (inch code) L : 2.0±0.2 mm W : 1.25±0.2 mm T : 0.9±0.2 mm
④ **Material Code**	P,U : Broad impedance, especially suppresses noise in the 10~200㎒ range
	J : Suppresses noise in the 100~300㎒ range
	K : Suppresses noise in the 200㎒ above
	N : Suppresses noise in the 200~500㎒ range
⑤ **Nominal impedance**	100 : 10Ω 110 : 11Ω 260 : 26Ω 300 : 30Ω 121 : 120Ω
⑥ **Thickness Option**	N : Standard A : Thinner than standard B : Thicker than standard
⑦ **Packaging Style**	C : Paper tape 7" reel E : Embossed tape 7" reel

B. Samsung Reliablility Test and Judgement condition

	Judgement	Test condition
Impedance	Within specified tolerance (60Ω±25%)	Equipment : E4991A, @100±1㎒, Osc Level : 30mV
Rated Current	Self temperature rise shall be limited to 20℃ max. Max. 900 mA	Equipment : Source meter(2430),Pyrometer
DC Resistance	Max. 0.08 Ω	Equipment : 4338B
Appearance	No abnormal exterior appearance	Microscope (×10)
Adhesive Strength of Termination	No peeling shall be occur on the terminal electrode	500g·F, for 10±1 sec.
Bending Strength	Appearance : No damage DC Resistance : Satisfy DCR Spec.	Bending to the limit (2mm) with 0.5mm/sec. Substrate Thick. : 0.8mm
Solderability	The electrode shall be at least 95% covered with new solder coating	Solder : SnAg3.0Cu0.5 Solder Temp. : 250±5℃ Immersion Time : 4±1 sec. (Pre-Heating : 150~180℃ for 2~3 min.)
Resistance to Soldering heat	Inductance change : within ±30% More than 70% of terminal surface is to be soldered newly No mechanical damage	Pre-Heating : 150~180℃, 2~3 min. Flux : RMA Type Solder : Sn-3.0Ag-0.5Cu Solder Temp. : 260±5℃ Immersion Time : 10±0.05sec.

	Judgement	Test condition
Vibration Test	Inductance change : within ±30% No mechanical damage	Amplitude : 1.5mm From 10㎐ to 55㎐ (return : 1min.) 2hours × 3 direction (x, y, z)
Humidity	Inductance change : within ±30% No mechanical damage	40±2℃, 90~95%RH, 500±5hrs Then measured after exposure in the room condition for 2~3hours
Temperature Cycling	Inductance change : within ±30% No mechanical damage	1 cycle condition -55±3℃ for 30±3min. → 25℃ for 2~3min. → +125±3℃ for 30±3 min. → 25℃ for 2~3 min. ※ 5 cycle test
Heat Life Test	Inductance change : within ±30% No mechanical damage	Temp. : 125±2℃ Applying Current : Rated Current Time : 500±5 hours Then measured after exposure in the room condition for 2~3hours
Cold Resistance	Inductance change : within ±30% No mechanical damage	Temp. : -55±2℃ Time : 500±5 hours Then measured after exposure in the room condition for 1~2 hours

C. Recommended Soldering method :

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

* For the more detail Specification, Please refer to the Samsung Multi-Layer Chip Inductor catalogue.