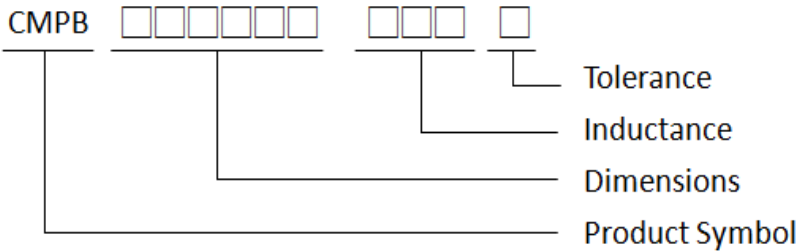


Multilayer power inductors / CMPB Series

Product Identification



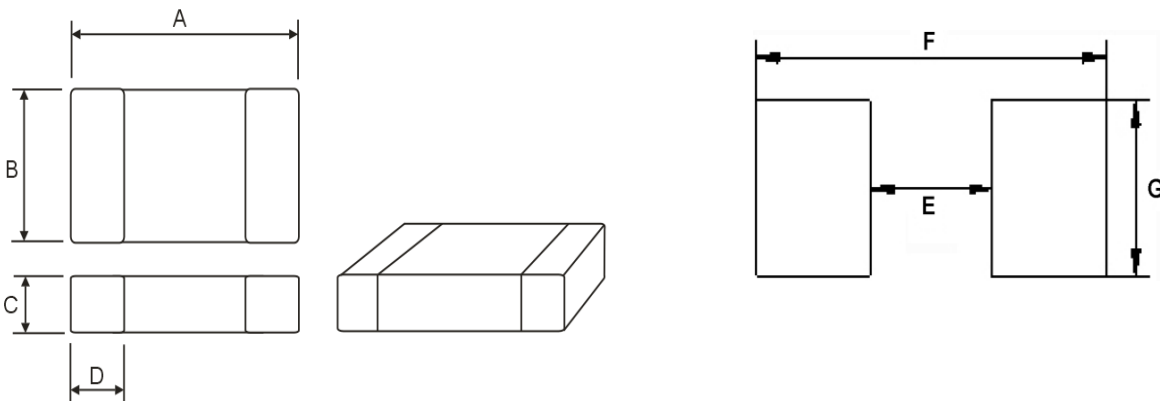
Rating

Operating Temperature : - 5 5 °C ~ 1 2 5 °C (Including self - temperature rise)

Storage Temperature : - 5 5 °C ~ 1 2 5 °C (after PCB)

- 5 °C ~ 4 0 °C, Humidity 4 0 % ~ 7 0 % (before PCB)

Shape and Dimension

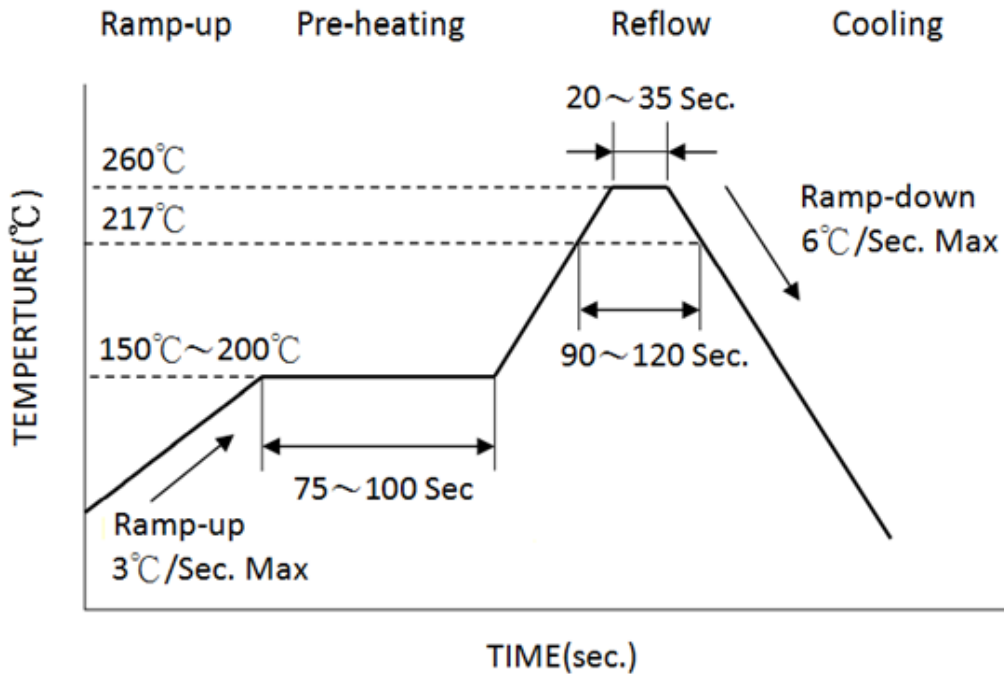


Dimensions in mm

TYPE	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)	F(mm)	G(mm)
CMPB160808	1.6 ± 0.15	0.8 ± 0.15	0.8 ± 0.15	0.3 ± 0.2	0.7-0.8	1.8-2.0	0.6-0.8
CMPB201205	2.0 ± 0.20	1.25 ± 0.20	0.55 Max.	0.5 ± 0.3	0.8-1.2	2.3-2.9	1.0-1.4
CMPB201210	2.0 ± 0.20	1.25 ± 0.20	1.0 Max.	0.5 ± 0.3	0.8-1.2	2.3-2.9	1.0-1.4
CMPB201610	2.0 ± 0.20	1.6 ± 0.20	1.0 Max.	0.5 ± 0.3	0.8-1.2	2.1-2.7	1.6-2.0
CMPB252010	2.5 ± 0.20	2.0 ± 0.20	1.0 Max.	0.6 ± 0.2	1.3-1.9	2.7-3.5	2.0-2.6
CMPB252012	2.5 ± 0.20	2.0 ± 0.20	1.2 Max.	0.6 ± 0.2	1.3-1.9	2.7-3.5	2.0-2.6

Multilayer power inductors / CMPB Series

Recommended Reflow Soldering



Multilayer power inductors / CMPB Series

Electrical Characteristics (CMPB160808 TYPE)

Part No.	INDUCTANCE (μ H)	Test frequency	RDC (Ω) \pm 30%	Isat (mA) Max	Irms (mA) Max	Tolerance
CMPB160808T-R47□	0.47	3MHz,200mV	0.15	400	1100	20,30
CMPB160808T-1R0□	1.0	3MHz,200mV	0.20	200	950	20,30
CMPB160808T-2R2□	2.2	3MHz,200mV	0.30	150	750	20,30

Electrical Characteristics (CMPB201205 TYPE)

Part No.	INDUCTANCE (μ H)	Test frequency	RDC (Ω) \pm 30%	Isat (mA) Max	Irms (mA) Max	Tolerance
CMPB201205T-R47□	0.47	3MHz,200mV	0.11	900	1200	20,30
CMPB201205T-1R0□	1.0	3MHz,200mV	0.16	300	900	20,30
CMPB201205T-1R5□	1.5	3MHz,200mV	0.18	250	800	20,30
CMPB201205T-2R2□	2.2	3MHz,200mV	0.29	200	600	20,30
CMPB201205T-3R3□	4.7	3MHz,200mV	0.5	100	700	20,30

Electrical Characteristics (CMPB201210 TYPE)

Part No.	INDUCTANCE (μ H)	Test frequency	RDC (Ω) \pm 30%	Isat (mA) Max	Irms (mA) Max	Tolerance
CMPB201210T-R47□	0.47	3MHz,200mV	0.09	1100	1300	20,30
CMPB201210T-1R0□	1.0	3MHz,200mV	0.12	650	1200	20,30
CMPB201210T-1R5□	1.5	3MHz,200mV	0.15	450	1100	20,30
CMPB201210T-2R2□	2.2	3MHz,200mV	0.19	400	1100	20,30
CMPB201210T-3R3□	3.3	3MHz,200mV	0.24	300	800	20,30
CMPB201210T-4R7□	4.7	3MHz,200mV	0.26	200	700	20,30

Electrical Characteristics (CMPB201610 TYPE)

Part No.	INDUCTANCE (μ H)	Test frequency	RDC (Ω) \pm 25%	Isat (mA) Max	Irms (mA) Max	Tolerance
CMPB201610T-R47□	0.47	3MHz,200mV	0.06	1200	1600	20,30
CMPB201610T-1R0□	1.0	3MHz,200mV	0.085	850	1300	20,30
CMPB201610T-1R5□	1.5	3MHz,200mV	0.11	600	1200	20,30
CMPB201610T-2R2□	2.2	3MHz,200mV	0.11	400	1200	20,30
CMPB201610T-3R3□	3.3	3MHz,200mV	0.12	350	850	20,30
CMPB201610T-4R7□	4.7	3MHz,200mV	0.14	200	1100	20,30

Electrical Characteristics (CMPB252010 TYPE)

Part No.	INDUCTANCE (μ H)	Test frequency	RDC (Ω) \pm 25%	Isat (mA) Max	Irms (mA) Max	Tolerance
CMPB252010T-R47□	0.47	3MHz,200mV	0.040	1500	1800	20,30
CMPB252010T-1R0□	1.0	3MHz,200mV	0.055	900	1500	20,30
CMPB252010T-1R5□	1.5	3MHz,200mV	0.07 \pm 30%	800	1400	20,30
CMPB252010T-2R2□	2.2	3MHz,200mV	0.08	500	1300	20,30
CMPB252010T-3R3□	3.3	3MHz,200mV	0.100	400	1200	20,30
CMPB252010T-4R7□	4.7	3MHz,200mV	0.110	300	1100	20,30

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Electrical Characteristics (CMPB252012 TYPE)

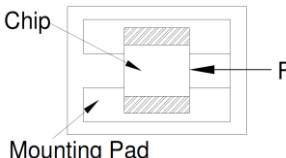
Part No.	INDUCTANCE (uH)	Test frequency	RDC (Ω) \pm 30%	Isat (mA) Max	Irms (mA) Max	Tolerance
CMPB252012T-R47□	0.47	3MHz,200mV	0.04	1500	1800	20,30
CMPB252012T-1R0□	1	3MHz,200mV	0.05	950	1600	20,30
CMPB252012T-1R5□	1.5	3MHz,200mV	0.07	900	1400	20,30
CMPB252012T-2R2□	2.2	3MHz,200mV	0.10	700	1200	20,30
CMPB252012T-3R3□	3.3	3MHz,200mV	0.12	500	1100	20,30
CMPB252012T-4R7□	4.7	3MHz,200mV	0.14	350	1000	20,30
CMPB252012T-6R8□	6.8	3MHz,200mV	0.16	250	900	20,30

NOTE:

1. Tolerance M= \pm 20% / Y= \pm 25% / T= \pm 30%
2. Operating temperature range : - 55°C ~ 125°C
3. Isat for Inductance drop 30% from its value without current.
4. Irms for a 40°C temperature rise from 25°C ambient with current.

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☑.Reliability and Test Conditions(可靠性測試條件)

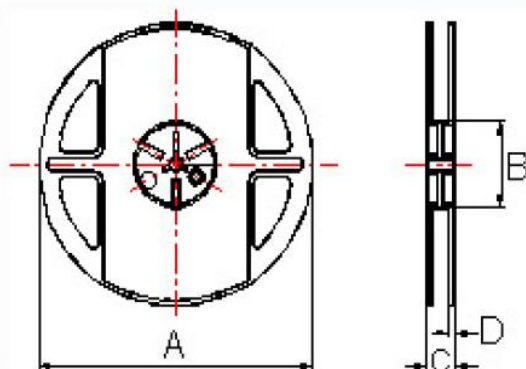
Item	Specification	Test Method
Flexure Strength	The forces applied on the right conditions must not damage the terminal electrode and the ferrite	Test device shall be soldered on the substrate Substrate Dimension: 100x40x1.6mm Deflection: 2.0mm Keeping Time: 30sec
Vibration		Test device shall be soldered on the substrate Oscillation Frequency: 10 to 55 to 10Hz for 1min Amplitude: 1.5mm Time: 2hrs for each axis (X, Y & Z), total 6hrs
Resistance to Soldering Heat	Appearance: No damage More than 75% of the terminal electrode should be covered with solder. Impedance : within $\pm 20\%$ of initial value	Pre-heating: 150°C, 1min Solder Composition: Sn/Ag3.0/Cu0.5(Pb-Free) Solder Temperature: 260 \pm 5°C Immersion Time: 10 \pm 1sec
Solder ability	The electrodes shall be at least 95% covered with new solder coating	Pre-heating: 150°C, 1min Solder Composition: Sn/Ag3.0/Cu0.5(Pb-Free) Solder Temperature: 245 \pm 5°C (Pb-Free) Immersion Time: 4 \pm 1sec
Terminal Strength Test	No split termination 	Test device shall be soldered on the substrate, then apply a force in the direction of the arrow. Force : 5N Keeping Time: 10 \pm 1sec

1-2.Environmental Performance

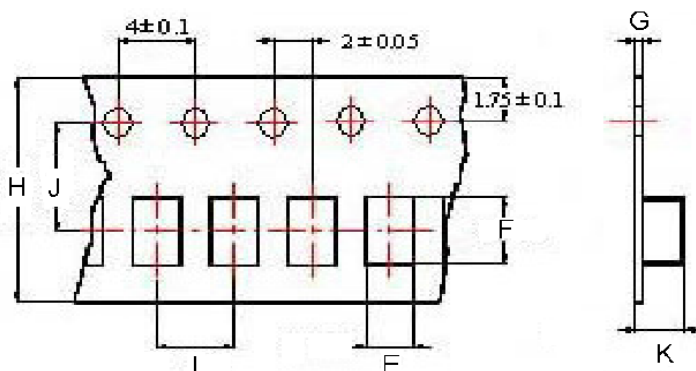
Item	Specification	Test Method															
Temperature Cycle	Appearance: No damage Impedance: within $\pm 30\%$ of initial value	One cycle: <table border="1"> <thead> <tr> <th>Step</th> <th>Temperature (°C)</th> <th>Time (min)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-55\pm3</td> <td>30</td> </tr> <tr> <td>2</td> <td>25\pm2</td> <td>3</td> </tr> <tr> <td>3</td> <td>125\pm3</td> <td>30</td> </tr> <tr> <td>4</td> <td>25\pm2</td> <td>3</td> </tr> </tbody> </table>	Step	Temperature (°C)	Time (min)	1	-55 \pm 3	30	2	25 \pm 2	3	3	125 \pm 3	30	4	25 \pm 2	3
Step		Temperature (°C)	Time (min)														
1		-55 \pm 3	30														
2		25 \pm 2	3														
3	125 \pm 3	30															
4	25 \pm 2	3															
Humidity Resistance	Temperature: 40 \pm 2°C Relative Humidity: 90 ~ 95% / Time: 1000hrs Measured after exposure in the room condition for 24hrs																
High Temperature Resistance	Temperature: 125 \pm 3°C / Relative Humidity: 0% Applied Current: Rated Current /Time: 1000hrs Measured after exposure in the room condition for 24hrs																
Low Temperature Resistance	Temperature: -55 \pm 3°C Relative Humidity: 0% / Time: 1000hrs Measured after exposure in the room condition for 24hrs																

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▣.Packing Specifications



TYPE	Reel Dimension(mm)			
	A	B	C	D
CMPB160808	178	60	12	1.5
CMPB201205	178	60	12	1.5
CMPB201210	178	60	12	1.5
CMPB201610	178	60	12	1.5
CMPB252010	178	60	12	1.5
CMPB252012	178	60	12	1.5



TYPE	Packaging Quantity	Tape Dimension(mm)						
	Pcs / Reel	E	F	G	H	I	J	K
CMPB160808	4000	1.05	1.08	0.95	8	4	3.5	-
CMPB201205	4000	1.42	2.25	0.22	8	4	3.5	0.8
CMPB201210	3000	1.45	2.25	0.22	8	4	3.5	1.04
CMPB201610	3000	1.8	2.2	0.22	8	4	3.5	1.15
CMPB252010	3000	2.25	2.88	0.25	8	4	3.5	1.35
CMPB252012	3000	2.25	2.88	0.25	8	4	3.5	1.35