EMPI1007B-2R2M-C7 Specification

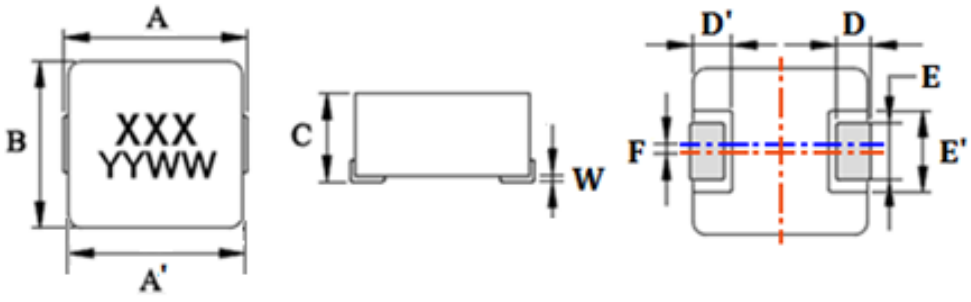
SMD Molding Type Power Inductor

耕興股份有限公司
SPORTON INTERNATIONAL INC.

APPLICATION

Tablet terminals, HDDs, SSDs, DVCs, DSCs, mobile display panels, portable game devices, Telecommunications, Consumer electronics, Compact power supply modules, other

1. Shapes and Dimensions



Marking

YYWW: The first two digits mean year, last two digits mean cycle.
Depends on real produce cycle.

Unit: mm

Type	A	A'	B	C	D	D'	E	E'	F	W
EMPI1007B	11.0±0.3	10.0±0.3	10.0±0.3	7.0±0.3.	2.2±0.5	2.6±0.1	3.0±0.5	5.0±0.1	0~+1.0	0~+0.2

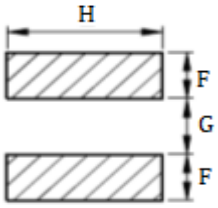
2. Ordering / Part Number Information

EMPI	1007	B	-	2R2	M	-	C7
(1)	(2)	(3)		(4)	(5)		(6)

(1) Product Group
(2) Dimension Code
(3) Type Code
(4) Inductance Code
(5) Inductance Tolerance
(6) Control Code

3. Recommended Soldering Condition

3-1. Recommended Land Pattern

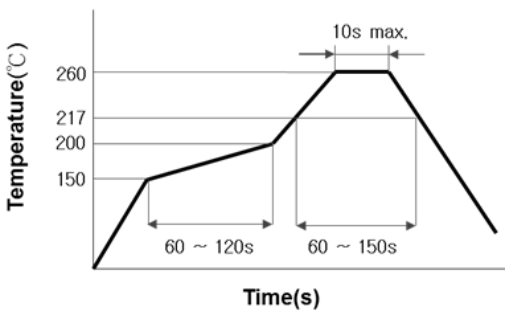


Unit : mm

Symbol	Dimension
F	3.55
G	5.40
H	3.50

The Recommended Land pattern is for reference only.
Please consult your manufacturing partners to ensure your company's PCB design guidelines are met

3-2. Recommended Soldering Profile



4. Electrical Characteristics

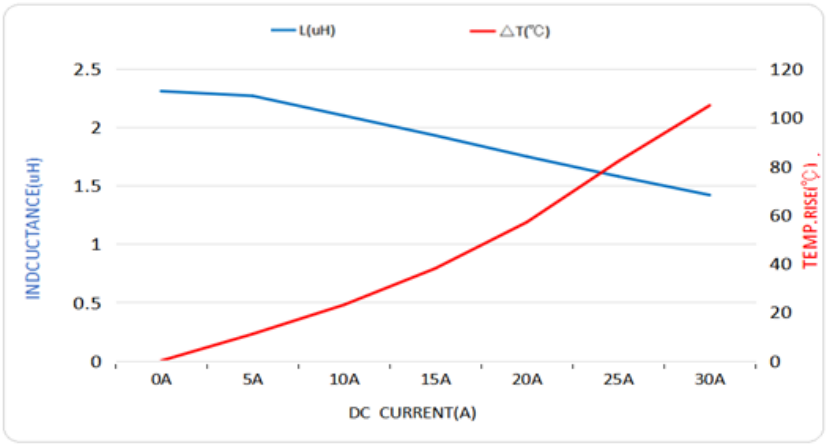
4-1. Electrical Specification

Part Number	Inductance (L) @100KHz, 1.0V	DC Resistance (R_{DC}) Max.	Saturation Current (I_{SAT}) Typ.	Temperature Rise Current (I_{RMS}) Typ.
EMPI1007B-2R2M-C7	2.20μH±20%	4.5mΩ	24A	15.0A

Note1: The saturation current is DC current value Inductance decrease down to 30%.
(Test by a short period of time to minimize the self-heating effect of the component.)
Note2: The temperature rise current value is the DC current value having temperature increase up to 40℃.

4-2. Typical Electrical Curve

EMPI1007B-2R2M-C7



4-3. Operating Temperature Range

-40℃ to +125℃(Including self - temperature rise)

4-4. Storage Temperature Range

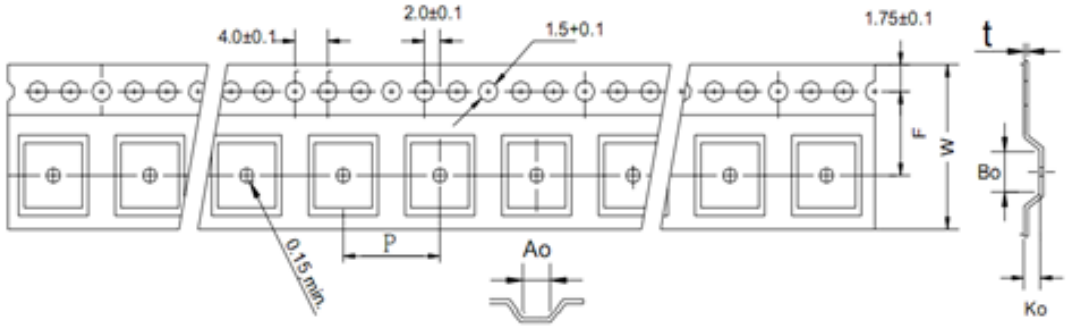
Store this product under the condition of 5℃ to 40℃, 20% to 70%RH and use within 6 months.

5. Packaging Information

5-1. Package Quantity

Standard Quantity for Packaging: 500pcs/Reel

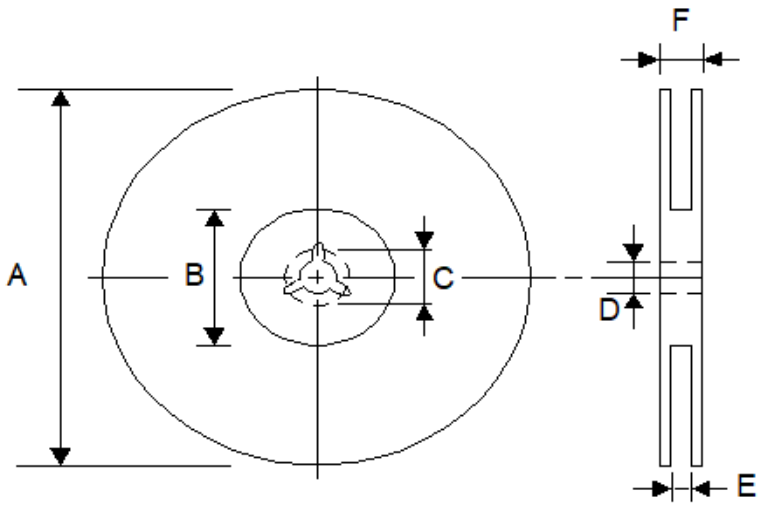
5-2. Tape Dimensions



Unit: mm

Type	A_0	B_0	K_0	F	P	t	W
EMPI1007B	10.3	11.3	7.5	11.5	16.0	0.4	24.0

5-3. Reel Dimensions



Unit: mm

Type	A	B	C	D	E	F
EMPI1007B	330	100	21±0.1	13±0.1	24±0.5	30±2.0

6. Reliability and Test Conditions

Test	Specifications	Test Conditions
Solder-ability	1.More than 90% of the terminal electrode should be covered with solder.	Solder temperature：245 ± 5℃ Soldering time：4 ± 1 sec
Resistance to soldering heat	1. Appearance : Cracking , chipping and any other defects harmful to the characteristics should not be allowed. 2.Samples shall satisfy electrical specification after test.	Solder temperature：260±5℃ Soldering time：10±1 sec
Temperature cycle	1. Appearance : Cracking , chipping and any other defects harmful to the characteristics should not be allowed. 2. Inductance change : within ±20%	Step1. 15±3 minutes at -40°C±2°C, Step2. 15±3 minutes at +85°C±2°C, Total 32 continuous cycles Measurement to be made after keeping at room temperature for 24±2 hours
Lift Test	1. Appearance : Cracking , chipping and any other defects harmful to the characteristics should not be allowed. 2. Inductance change : within ±20%	temperature：125 ± 2℃ Duration：96±12 hours. Measurement to be made after keeping at room temperature for 24±2 hours
Humidity	1. Appearance : Cracking , chipping and any other defects harmful to the characteristics should not be allowed. 2. Inductance change : within ±20%	Humidity：90%~95% R.H. Temperature：40℃±2°C Test duration：96±12 hours. Measurement to be made after keeping at room temperature for 24±2 hours

Note

1. Please make sure that your product is has been evaluated and confirmed against your specifications when our product is mounted to your product.
2. Do not knock nor drop.
3. All the items and parameters in this product specification have been prescribed on the premise that our product is used for the purpose, under the condition and in the environment agreed upon between you and us. You are requested not to use our product deviating from such agreement.
4. Please keep the distance between transformer/coil and other components (refer to the standard IEC 950)