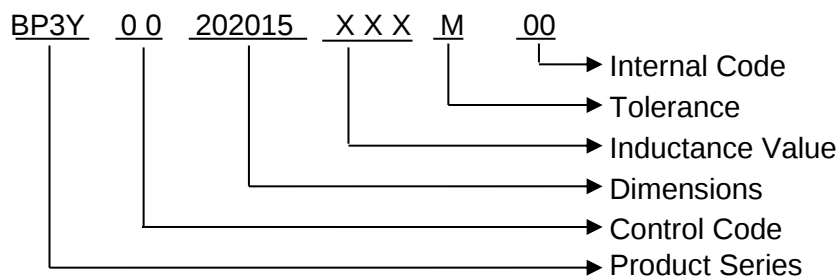


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1 Scope: This specification applies to large current and low RDC SMD power inductor.

2 Part Numbering:

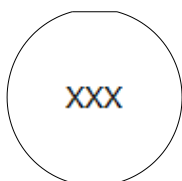


3 Rating:

Operating temperature range: $-40^{\circ}\text{C} \sim 125^{\circ}\text{C}$ (Including self - temperature rise)

Storage condition: $-20^{\circ}\text{C} \sim 40^{\circ}\text{C}$; 75%RH Max

4 Marking:



Marking color : White

Ex Marking : XXX

5 Material List:

NO	Part	Material
1	Copper Wire	EIAIW (200°C)
2	Core	Carbonyl iron powder
3	coating	Paint Gray (127# matte)
4	Solder	Sn96.5-Ag3.0-Cu0.5
5	Ink	PIC-1083B-白
6	EPOXY	M02-039-AU(6461HF)
7	Clip	C1100

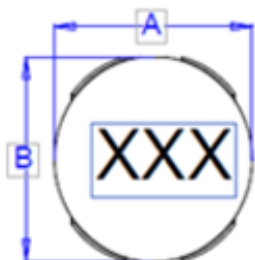
6 Standard Testing Condition

	Unless otherwise specified	In case of doubt
Temperature	Ordinary Temperature(15 to 35°C)	20 to 30°C
Humidity	Ordinary Humidity(25 to 85% RH)	50 to 80% RH

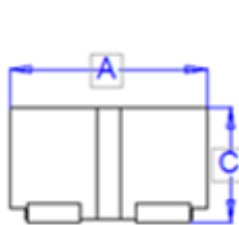
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7 Configuration and Dimensions:

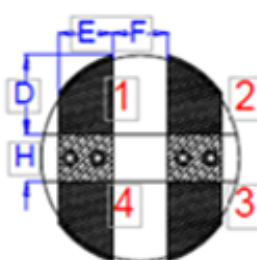
TOP VIEW



SIDE VIEW



BOTTOM VIEW



Product appearance



Part No.	A	B	C	D	E	F	H
BP3Y00202015R47M00	21.5max	21.5 max	15.2Max	7.7±0.5	5.5±0.5	6ref	4.6ref
BP3Y002020151R0M00	21.5 max	21.5 max	15.2Max	7.7±0.5	5.5±0.5	6ref	4.6ref
BP3Y002020151R5M00	21.5 max	21.5 max	15.2Max	7.7±0.5	5.5±0.5	6ref	4.6ref
BP3Y002020152R2M00	21.5 max	21.5 max	15.2Max	7.7±0.5	5.5±0.5	6ref	4.6ref
BP3Y002020153R3M00	21.5 max	21.5 max	15.2Max	7.7±0.5	5.5±0.5	6ref	4.6ref
BP3Y002020154R7M00	21.5 max	21.5 max	15.2Max	7.7±0.5	5.5±0.5	6ref	4.6ref
BP3Y002020155R6M00	21.5 max	21.5 max	15.2Max	7.7±0.5	5.5±0.5	6ref	4.6ref
BP3Y002020156R8M00	21.5 max	21.5 max	15.2Max	7.7±0.5	5.5±0.5	6ref	4.6ref
BP3Y002020158R2M00	21.5 max	21.5 max	15.2Max	7.7±0.5	5.5±0.5	6ref	4.6ref
BP3Y00202015100M00	21.5 max	21.5 max	15.2Max	7.7±0.5	5.5±0.5	6ref	4.6ref
BP3Y00202015220M00	21.5 max	21.5 max	15.2Max	7.7±0.5	5.5±0.5	6ref	4.6ref

8 Electrical Characteristics:

Part No.	Inductance (uH)	Test Freq.	Tolerance (±%)	Irms (A)Typ.	Isat (A)Typ.	RDC (mΩ)Max	Marking
BP3Y00202015R47M00	0.47	100kHz,1.0V	20	73	93	0.6	R47
BP3Y002020151R0M00	1.0	100kHz,1.0V	20	68	62	0.7	1R0
BP3Y002020151R5M00	1.5	100kHz,1.0V	20	58	50	1.0	1R5
BP3Y002020152R2M00	2.2	100kHz,1.0V	20	53	48	1.3	2R2
BP3Y002020153R3M00	3.3	100kHz,1.0V	20	47	33	1.6	3R3
BP3Y002020154R7M00	4.7	100kHz,1.0V	20	42	30	2.2	4R7
BP3Y002020155R6M00	5.6	100kHz,1.0V	20	40	28	3.00	5R6
BP3Y002020156R8M00	6.8	100kHz,1.0V	20	35	25	3.8	6R8
BP3Y002020158R2M00	8.2	100kHz,1.0V	20	30	23	4.3	8R2
BP3Y00202015100M00	10	100kHz,1.0V	20	26	20	4.8	100
BP3Y00202015220M00	22	100kHz,1.0V	20	18	11	9.0	220

Note:

- 1.Ambient + temperature rise range — 40°C~125°C(Including self - temperature rise)
- 2.Isat for Inductance drop 30% from its value without current.
- 3.Irms for a 40°C temprature rise from 25°C ambient.
- 4.The part temperature (ambient + temp rise) should not exceed 125°C under worst case operating conditions.
Circuit design125°C under worst case operating conditions. Component placement, PWB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

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9 Reliability verification conditions

Item	Specification	Conditions															
Solderability	More than 90% of the terminal electrode should be covered with solder.	Unit: Second															
Solder Heat Resistance	Inductance within $\pm 20\%$ of initial value. No disconnection or short circuit. The appearance shall not break.	Unit: Second															
Heat resistance	Inductance within $\pm 20\%$ of initial value. No disconnection or short circuit. The appearance shall not break.	After 1000 hours in $125 \pm 5^\circ\text{C}$ and 2 hour drying under normal condition.															
Cold resistance	Inductance within $\pm 20\%$ of initial value. No disconnection or short circuit. The appearance shall not break.	After 1000 hours in $-40 \pm 5^\circ\text{C}$ and 2 hour drying under normal condition.															
Thermal shock	Inductance within $\pm 20\%$ of initial value. No disconnection or short circuit. The appearance shall not break.	After 100 cycles of follow ing condition. <table border="1"> <thead> <tr> <th>Step</th><th>Temperature ($^\circ\text{C}$)</th><th>Times (min.)</th></tr> </thead> <tbody> <tr> <td>1</td><td>$-40 \pm 5^\circ\text{C}$</td><td>30</td></tr> <tr> <td>2</td><td>Room Temperature</td><td>Within 3</td></tr> <tr> <td>3</td><td>$125 \pm 5^\circ\text{C}$</td><td>30</td></tr> <tr> <td>4</td><td>Room Temperature</td><td>Within 3</td></tr> </tbody> </table>	Step	Temperature ($^\circ\text{C}$)	Times (min.)	1	$-40 \pm 5^\circ\text{C}$	30	2	Room Temperature	Within 3	3	$125 \pm 5^\circ\text{C}$	30	4	Room Temperature	Within 3
Step	Temperature ($^\circ\text{C}$)	Times (min.)															
1	$-40 \pm 5^\circ\text{C}$	30															
2	Room Temperature	Within 3															
3	$125 \pm 5^\circ\text{C}$	30															
4	Room Temperature	Within 3															
Humidity Resistance	Inductance within $\pm 20\%$ of initial value. No disconnection or short circuit. The appearance shall not break.	After 1000 hours in $40 \pm 2^\circ\text{C}$ and 90 to 95% humidity , and 2 hour drying under normal condition.															
Vibration Test	Inductance within $\pm 5\%$ of initial value and appearance shall not break.	After vibration for 1hour, In each of three orientations at sweep vibration (10~55~10Hz) with 1.52mm P-P Amplitudes.															

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10 Reflow Profile:

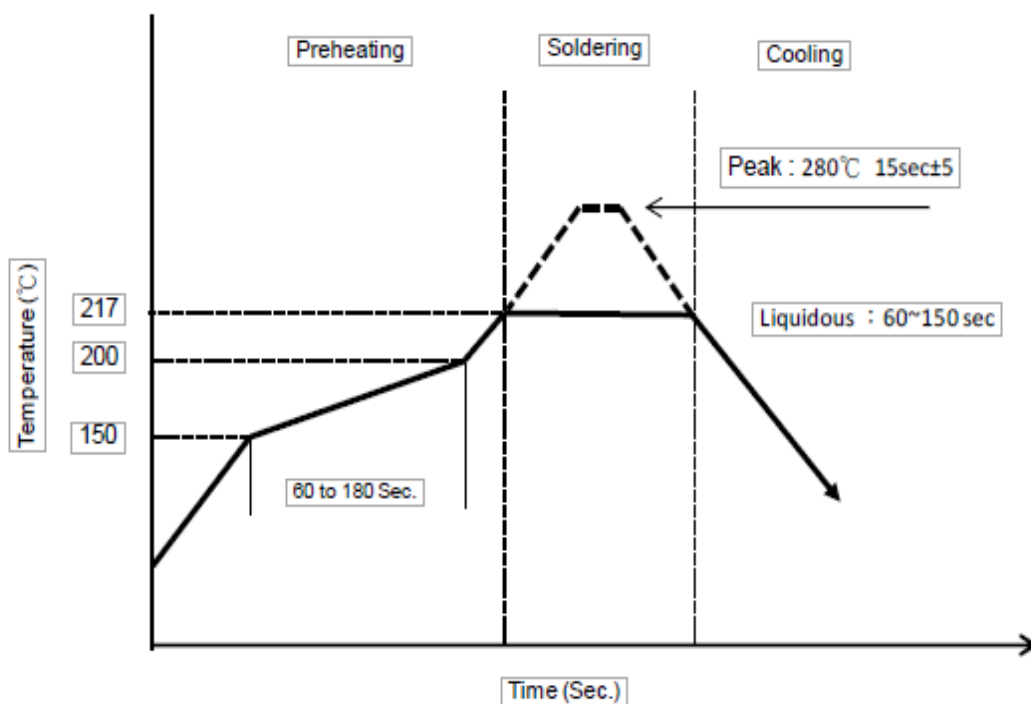
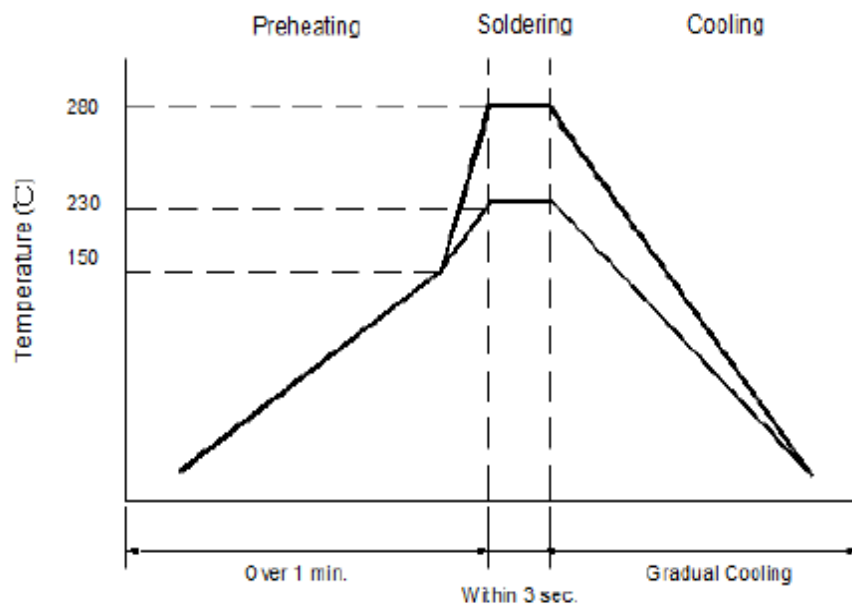


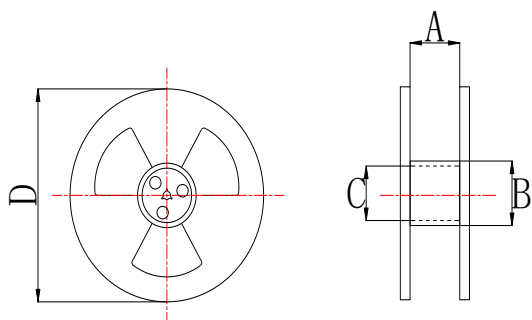
Figure 2. Hand Soldering



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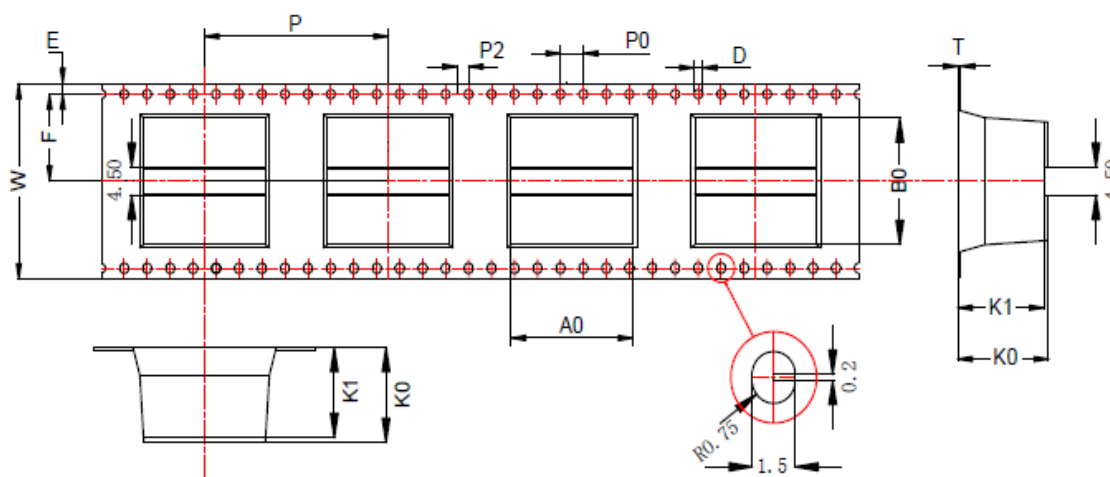
11 Packaging:

11.1 Reel Dimension



Type	A(mm)	B(mm)	C(mm)	D(mm)
13" x 32mm	32.0 ± 0.5	100 ± 2	13.5 ± 0.5	330

11.2 Tape Dimension



P/N	Ao(mm)	Bo(mm)	Ko(mm)	P(mm)	T(mm)	W(mm)	PCS/REEL
BP3Y00202015 SERIES	21.2 ± 0.1	20.8 ± 0.1	14.8 ± 0.1	32.0 ± 0.1	0.5 ± 0.05	32.0 ± 0.2	100

Packaging Quantity

Series Name : BP3Y00202015 SERIES						Unit: mm
Reel	Inner Carton			Outer Carton		
Quantity	Reel	Quantity	Size	Inner Carton	Quantity	Size
150pcs	2	300PCS	345×68×345	4	1200pcs	368×368×310

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12 Graph :

