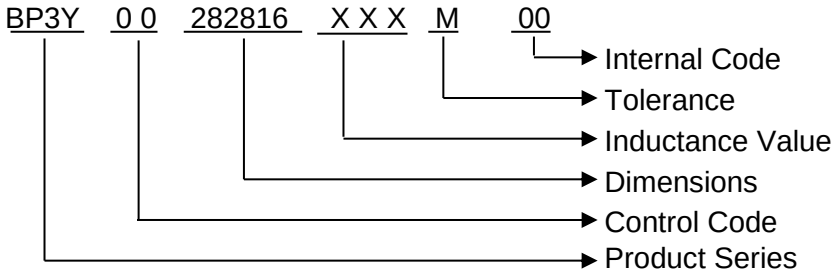
BP3Y00282816XXXM00 Series Specification

1 Scope:

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

2 Part Numbering:

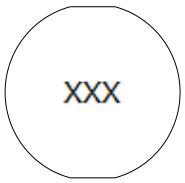


3 Rating:

Operating temperature range: −40°C～125°C (Including self - temperature rise)

Storage condition:-20℃~40℃ ；75%RH Max

4 Marking:



Marking color： White

Ex Marking：XXX

5 Material List:

NO	Part	Material
1	Copper Wire	EIAIW（200℃）
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℃)	20 to 30℃
Humidity	Ordinary Humidity(25 to 85% RH)	50 to 80 %RH

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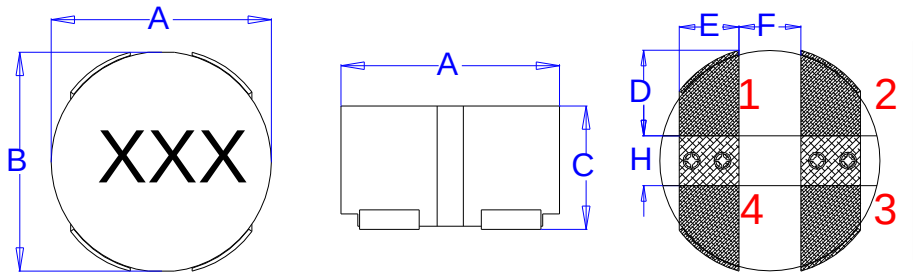
7 Configuration and Dimensions:

TOP VIEW SIDE VIEW BOTTOM VIEW



Product appearance

Part No.	A	B	C	D	E	F	H
BP3Y002828161R5M00	29.5max	29.5max	16.0Max	11.3±0.5	7.7±0.5	8.0ref	5.63ref
BP3Y002828163R3M00	29.5max	29.5max	16.0Max	11.3±0.5	7.7±0.5	8.0ref	5.63ref
BP3Y002828164R7M00	29.5max	29.5max	16.0Max	11.3±0.5	7.7±0.5	8.0ref	5.63ref
BP3Y002828166R0M00	29.5max	29.5max	16.0Max	11.3±0.5	7.7±0.5	8.0ref	5.63ref
BP3Y002828166R8M00	29.5max	29.5max	16.0Max	11.3±0.5	7.7±0.5	8.0ref	5.63ref
BP3Y002828168R2M00	29.5max	29.5max	16.0Max	11.3±0.5	7.7±0.5	8.0ref	5.63ref
BP3Y00282816100M00	29.5max	29.5max	16.0Max	11.3±0.5	7.7±0.5	8.0ref	5.63ref
BP3Y00282816150M00	29.5max	29.5max	16.0Max	11.3±0.5	7.7±0.5	8.0ref	5.63ref
BP3Y00282816220M00	29.5max	29.5max	16.0Max	11.3±0.5	7.7±0.5	8.0ref	5.63ref
BP3Y00282816330M00	29.5max	29.5max	16.0Max	11.3±0.5	7.7±0.5	8.0ref	5.63ref
BP3Y00282816470M00	29.5max	29.5max	16.0Max	11.3±0.5	7.7±0.5	8.0ref	5.63ref
BP3Y00282816680M00	29.5max	29.5max	16.0Max	11.3±0.5	7.7±0.5	8.0ref	5.63ref
BP3Y00282816820M00	29.5max	29.5max	16.0Max	11.3±0.5	7.7±0.5	8.0ref	5.63ref

8 Electrical Characteristics:

Part No.	Inductance (uH)	Test Freq.	Tolerance (±%)	Irms (A)Typ.	Isat (A)Typ.	RDC (mΩ)Max	Marking
BP3Y002828161R5M00	1.5	100kHz,1.0V	20	70	145	1.0	1R5
BP3Y002828163R3M00	3.3	100kHz,1.0V	20	58	125	1.5	3R3
BP3Y002828164R7M00	4.7	100kHz,1.0V	20	50	100	1.9	4R7
BP3Y002828166R0M00	6	100kHz,1.0V	20	50	60	2.0	6R0
BP3Y002828166R8M00	6.8	100kHz,1.0V	20	40	70	3.0	6R8
BP3Y002828168R2M00	8.2	100kHz,1.0V	20	40	85	4.0	8R2
BP3Y00282816100M00	10	100kHz,1.0V	20	37	62	5.5	100
BP3Y00282816150M00	15	100kHz,1.0V	20	32	55	7.5	150
BP3Y00282816220M00	22	100kHz,1.0V	20	25	46	11.5	220
BP3Y00282816330M00	33	100kHz,1.0V	20	20	44	16.0	330
BP3Y00282816470M00	47	100kHz,1.0V	20	18	35	24.0	470
BP3Y00282816680M00	68	100kHz,1.0V	20	17	26	23.0	680
BP3Y00282816820M00	82	100kHz,1.0V	20	16	18	28.0	820

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℃ temprature rise from 25℃ 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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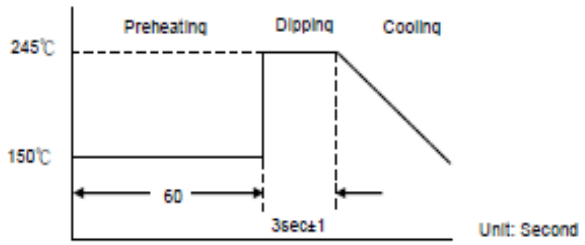
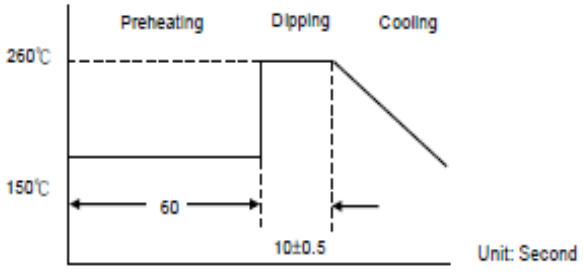
9 Reliability verification conditions

Item	Specification	Conditions
Solderability	More than 90% of the terminal electrode should be covered with solder.	
Solder Heat Resistance	Inductance within ±20% of initial value. No disconnection or short circuit. The appearance shall not break.	
Heat resistance	Inductance within ±20% of initial value. No disconnection or short circuit. The appearance shall not break.	After 1000 hours in 125±5℃ and 2 hour drying under normal condition.
Cold resistance	Inductance within ±20% of initial value. No disconnection or short circuit. The appearance shall not break.	After 1000 hours in -40±5℃ and 2 hour drying under normal condition.
Thermal shock	Inductance within ±20% of initial value. No disconnection or short circuit. The appearance shall not break.	After 100 cycles of following condition. Step / Temperature (℃) / Times (min.) 1 / -40±5℃ / 30 2 / Room Temperature / Within 3 3 / 125±5℃ / 30 4 / Room Temperature / Within 3
Humidity Resistance	Inductance within ±20% of initial value. No disconnection or short circuit. The appearance shall not break.	After 1000 hours in 40±2℃ and 90 to 95% humidity , and 2 hour drying under normal condition.
Vibration Test	Inductance within ±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.

10 Reflow Profile:

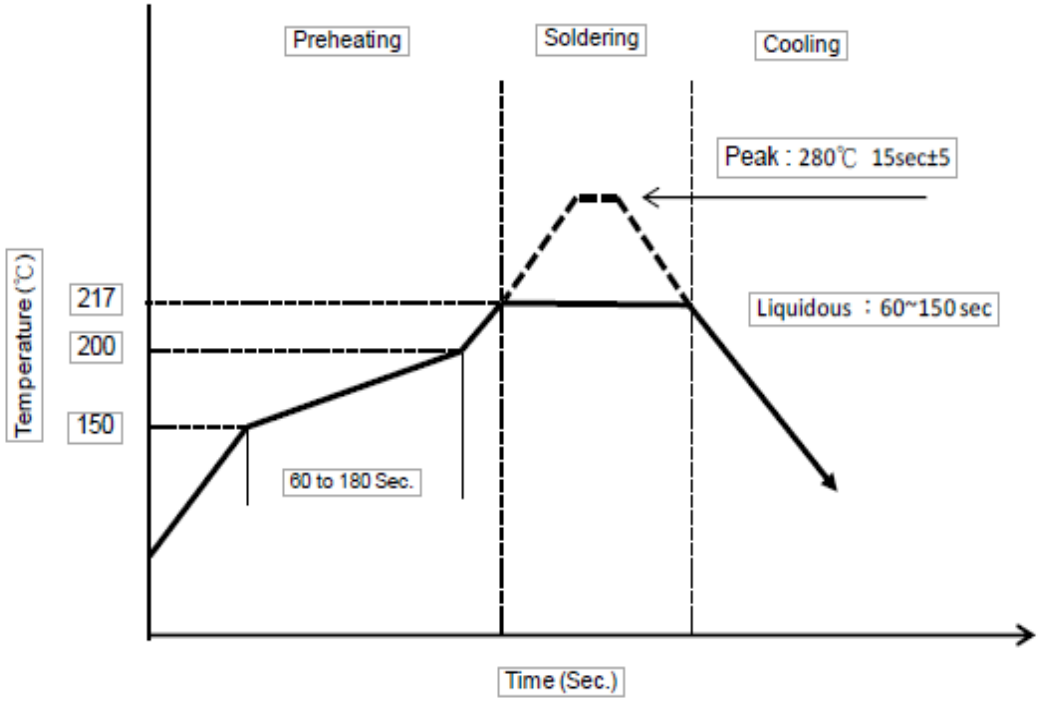
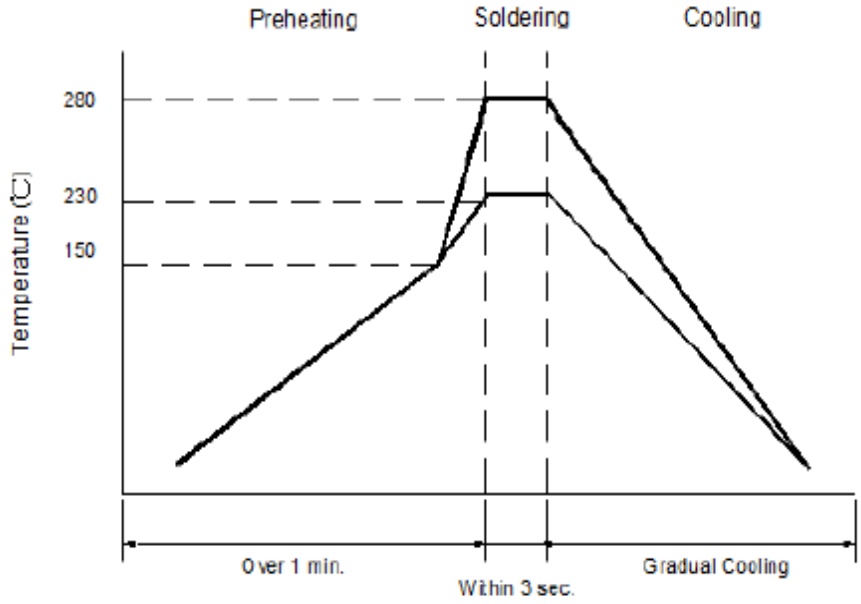


Figure 2. Hand Soldering



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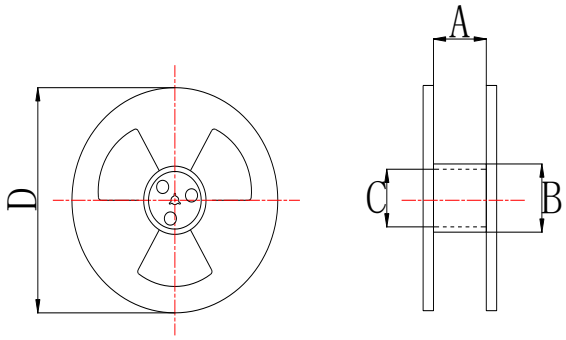
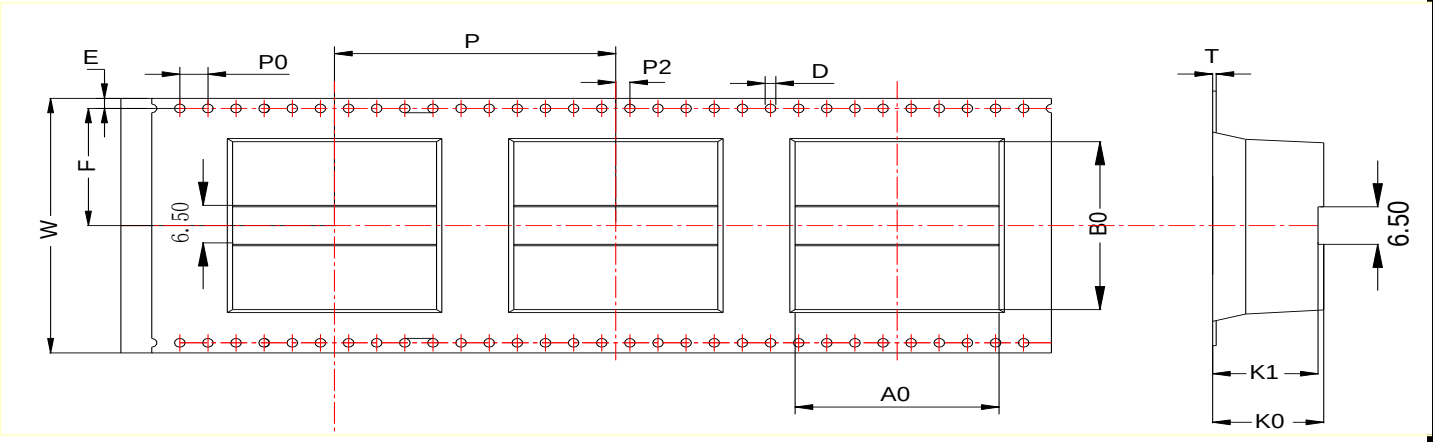
11 Packaging:

11.1 Reel Dimension



Type	A(mm)	B(mm)	C(mm)	D(mm)
13" x 44mm	44.5 ± 0.5	100 ± 2	13.5 ± 0.5	330

11.2 Tape Dimension



Series Name : BP3Y00282816 SERIES						Unit: mm
Ao(mm)	Bo(mm)	Ko(mm)	P(mm)	T(mm)	W(mm)	PCS/REEL
29.2±0.1	29.2±0.1	15.0±0.1	40.0±0.1	0.5±0.05	44.0±0.3	30

Packaging Quantity

Series Name : BP3Y00282816 SERIES						Unit: mm
Reel	Inner Carton			Outer Carton		
Quantity	Reel	Quantity	Size	Inner Carton	Quantity	Size
30pcs	1	30pcs	345×68×345	4	120pcs	368×368×310

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12 Graph :