

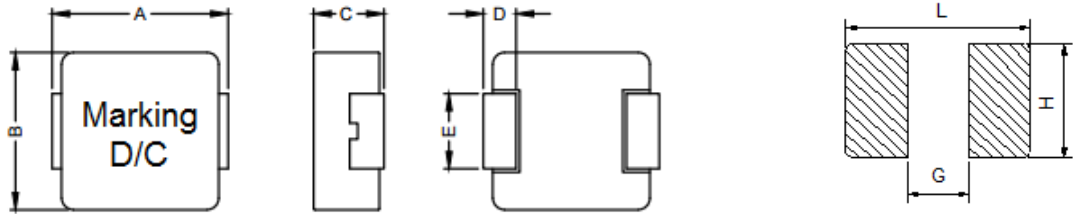
**1. Part No. Expression:**

**PIC 1 2 0 6 HP 3 3 0 MF - □□**

(a)            (b)   (c)   (d)   (e)(f)   (g)

- a) Series Code                      e) Tolerance Code
- b) Dimension Code                f) RoHS Compliant Code
- c) Type Code                        g) Internal Controlled Number
- d) Inductance Code

**2. Configuration & Dimensions : (Unit: mm)**



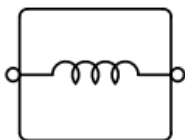
Recommended PCB Pattern

Eg. Marking: 330 (Inductance Value)  
YYWW

Unit: mm

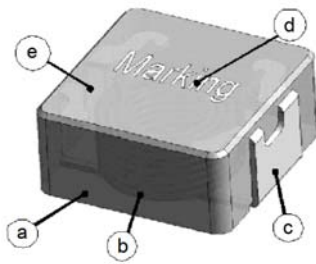
A	B	C	D	E	G	H	L
13.5 ± 0.5	12.5 ± 0.3	5.7 ± 0.3	2.3 ± 0.3	4.7 ± 0.3	8.0	5.0	14.2

**3. Schematic**



NOTE: Specifications subject to change without notice. Please check our website for latest information.

## 4. Material List



- a) Core
- b) Wire
- c) Terminal
- d) Ink
- e) Paint

## 5. General Specification

- a) Operating Temperature: - 40°C to +125°C (Including self-temperature rise)
- b) Storage Temperature: - 40°C to +125°C (on board)
- c) Humidity Range: 85 ± 2%
- d) Heat Rated Current (Irms) will cause the coil temperature rise approximately  $\Delta t$  of 40°C
- e) Saturated Current (Isat) will cause L0 to drop approximately 30%
- f) Part Temperature (Ambient +Temp.Rise): Should not exceed 125°C under worst case operating conditions
- g) Storage Condition (component in its packaging)
  - i) Temperature: -10 to 40°C
  - ii) Humidity: 50 - 60% RH

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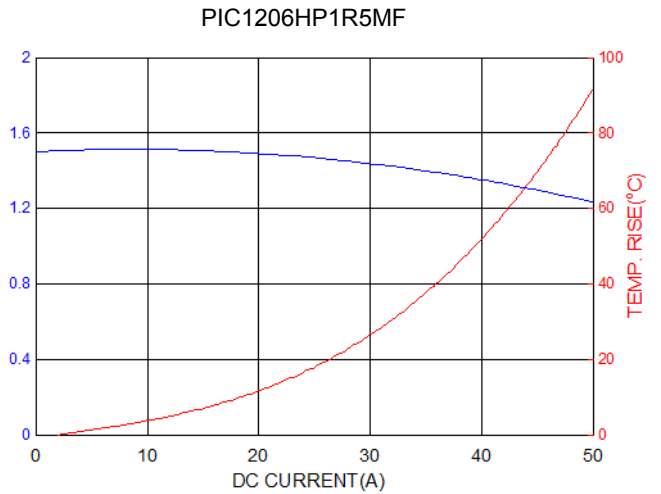
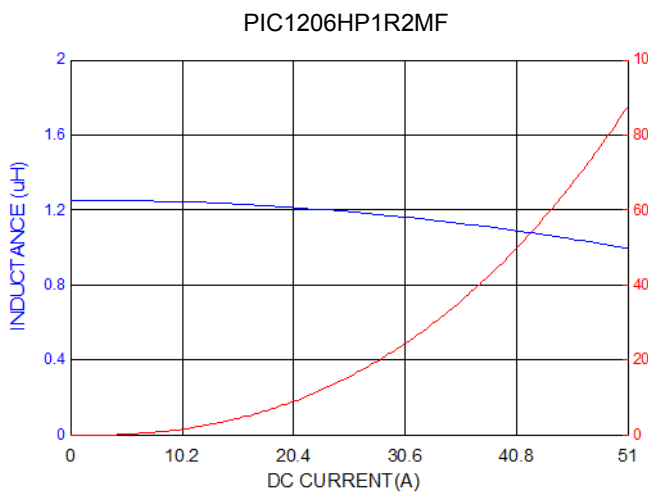
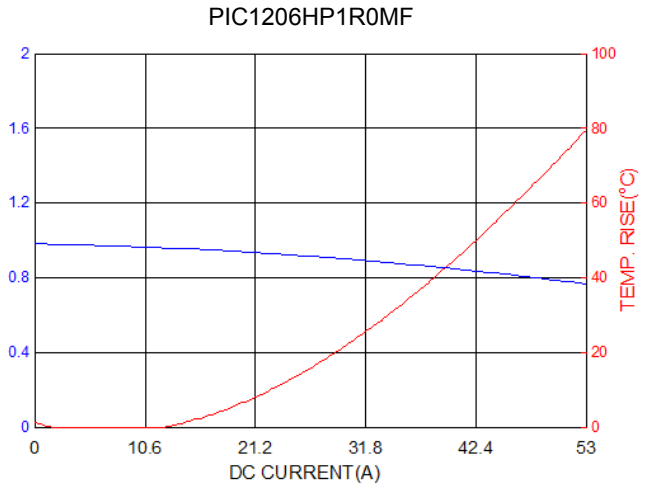
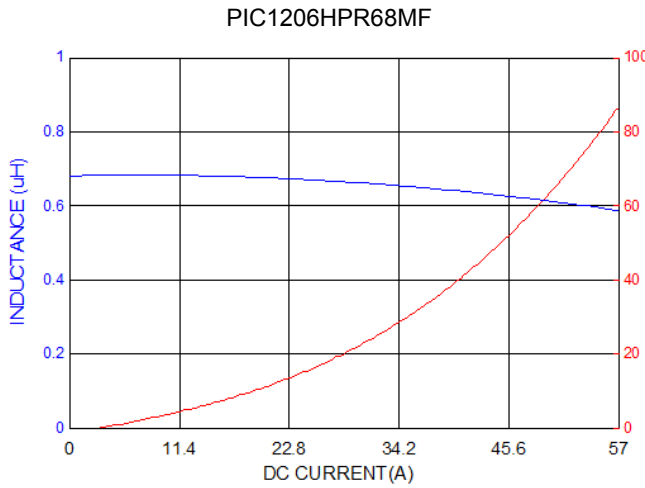
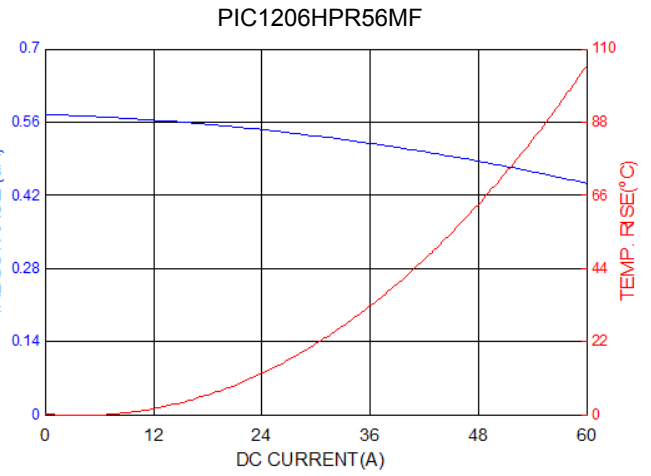
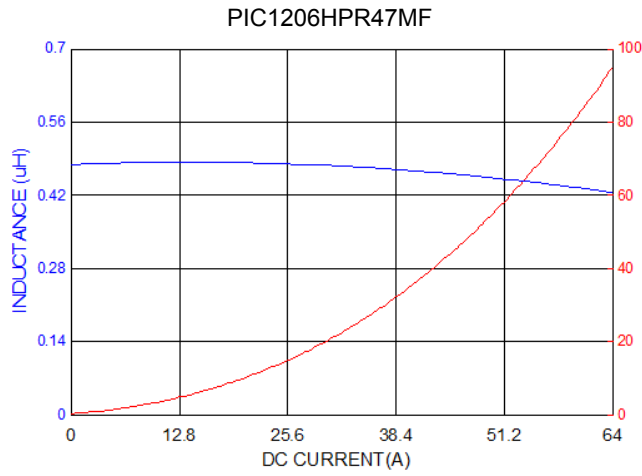
## 6. Electrical Characteristics

Part No.	Inductance L0( $\mu$ H) $\pm$ 20% @ 0A	Test Frequency (Hz)	DCR (m $\Omega$ ) Typ. @25°C	DCR (m $\Omega$ ) Max. @25°C	Isat (A) Typ.	Irms (A) Typ.
PIC1206HPR47MF	0.47	1V/100K	0.92	1.3	60	38
PIC1206HPR56MF	0.56	1V/100K	1.15	1.5	56	35
PIC1206HPR68MF	0.68	1V/100K	1.33	1.7	53	33
PIC1206HP1R0MF	1.00	1V/100K	1.8	2.4	45	29
PIC1206HP1R2MF	1.20	1V/100K	2.1	2.8	44	28
PIC1206HP1R5MF	1.50	1V/100K	2.7	3.2	43	26
PIC1206HP2R2MF	2.20	1V/100K	4.0	4.7	34	21
PIC1206HP2R7MF	2.70	1V/100K	4.6	5.4	31	19
PIC1206HP3R3MF	3.30	1V/100K	5.8	7.1	28	17
PIC1206HP4R7MF	4.70	1V/100K	9.5	11.5	25	16
PIC1206HP5R6MF	5.60	1V/100K	10.8	12.6	22	15.5
PIC1206HP6R8MF	6.80	1V/100K	12	13.8	19	15
PIC1206HP8R2MF	8.20	1V/100K	13.6	16	17	11
PIC1206HP100MF	10.0	1V/100K	18	20.7	15.5	11
PIC1206HP120MF	12.0	1V/100K	20	23	13.5	9.5
PIC1206HP150MF	15.0	1V/100K	25	29	13	9.0
PIC1206HP180MF	18.0	1V/100K	30	35	12	8.5
PIC1206HP220MF	22.0	1V/100K	34	39.5	11	8.0
PIC1206HP270MF	27.0	1V/100K	49	56	9.0	7.0
PIC1206HP330MF	33.0	1V/100K	65	75	8.0	6.0
PIC1206HP470MF	47.0	1V/100K	80	90	7.0	5.5
PIC1206HP560MF	56.0	1V/100K	101	118	6.5	5.3
PIC1206HP680MF	68.0	1V/100K	120	140	6.0	5.0
PIC1206HP820MF	82.0	1V/100K	138	161	5.5	4.5
PIC1206HP101MF	100	1V/100K	180	200	5.0	4.0
PIC1206HP121MF	120	1V/100K	210	235	4.5	3.5
PIC1206HP151MF	150	1V/100K	300	350	4.0	3.0

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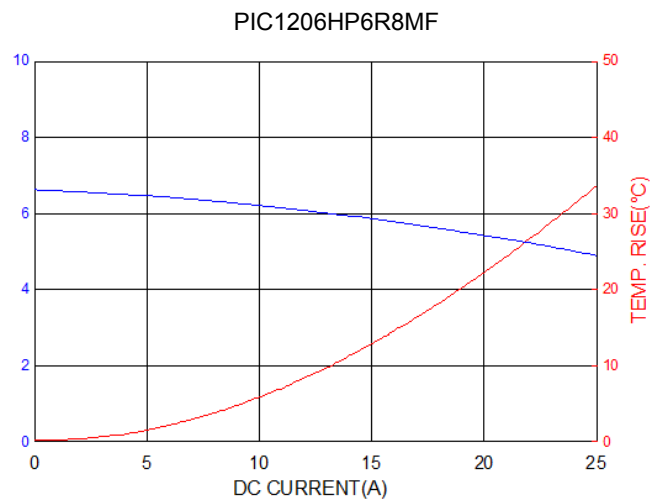
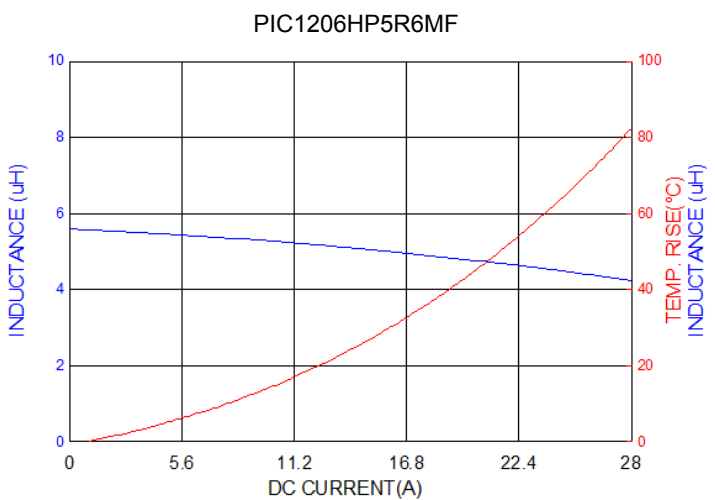
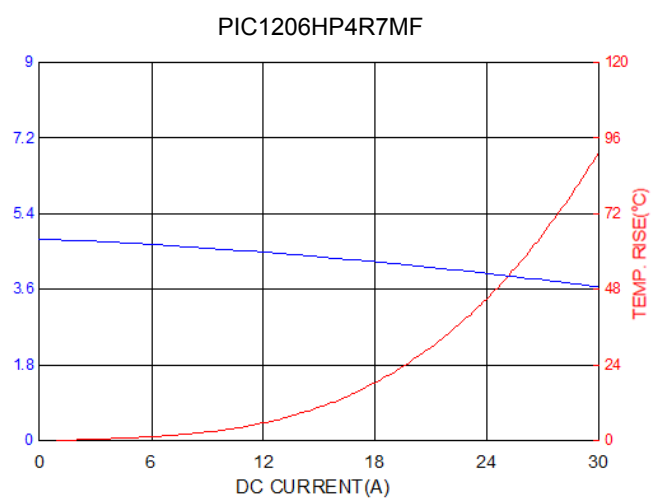
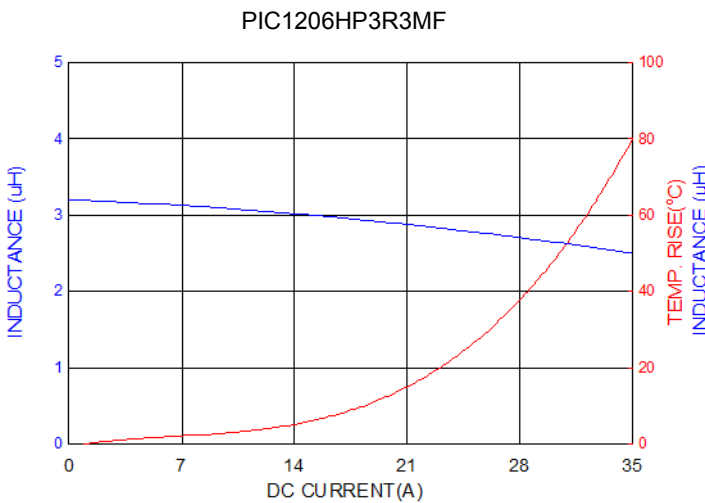
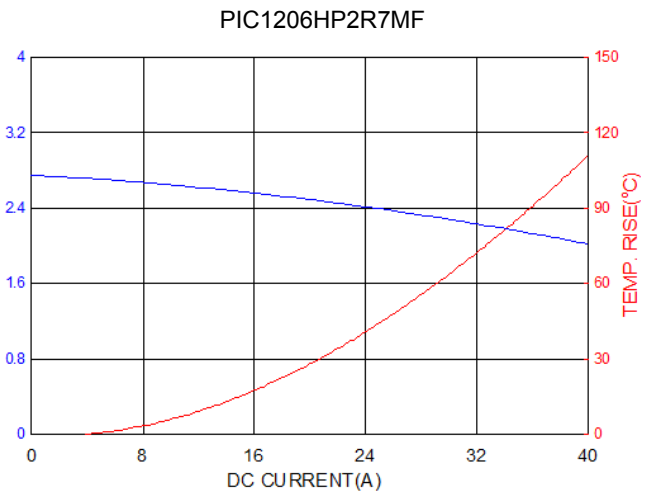
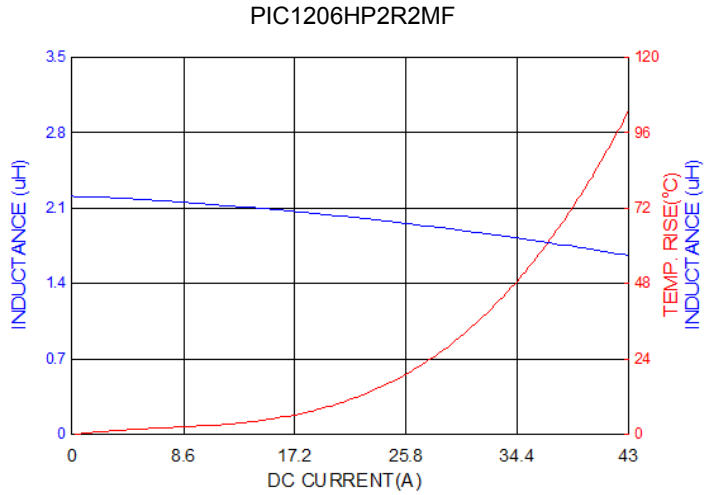


7. Characteristics Curves



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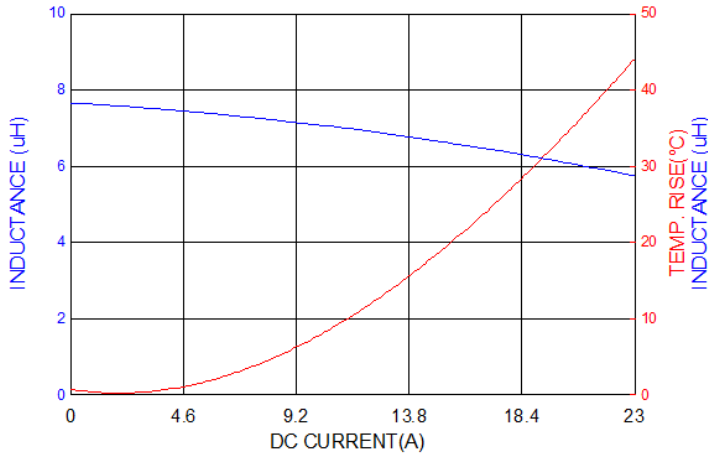




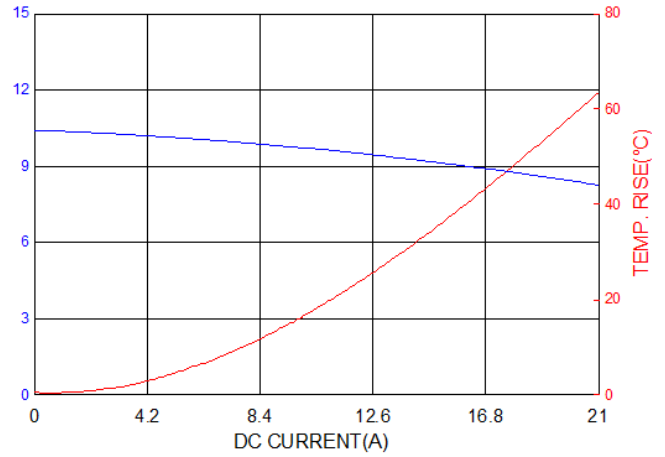
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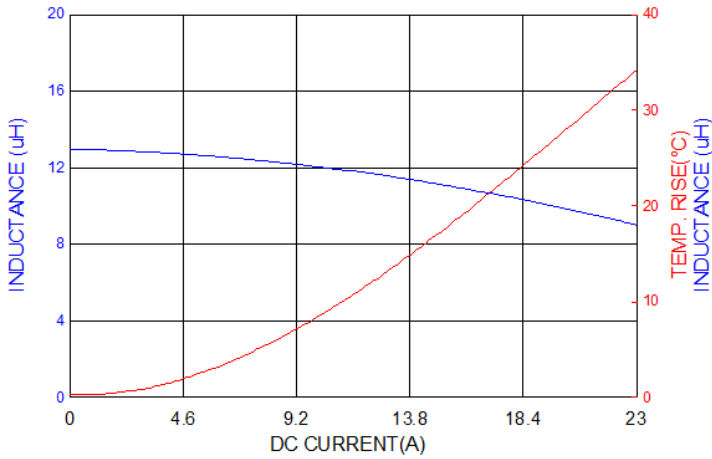
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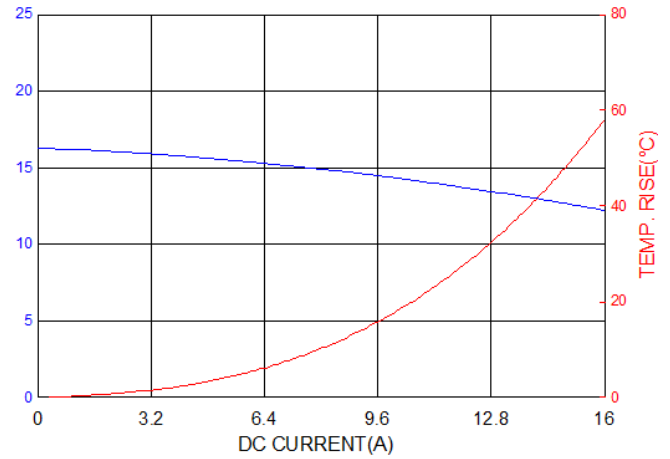
PIC1206HP100MF



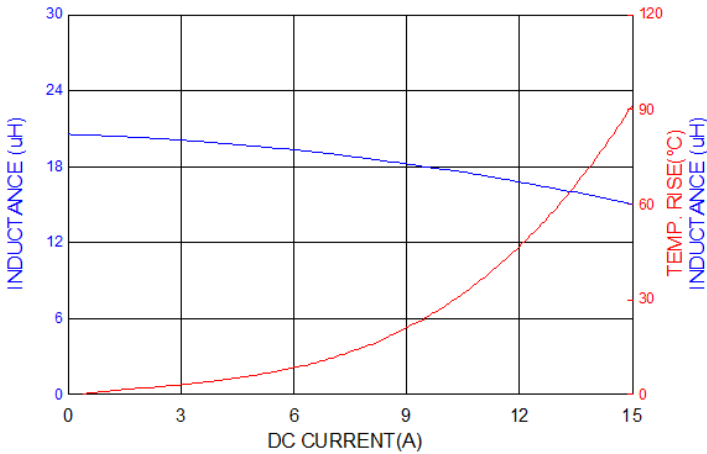
PIC1206HP120MF



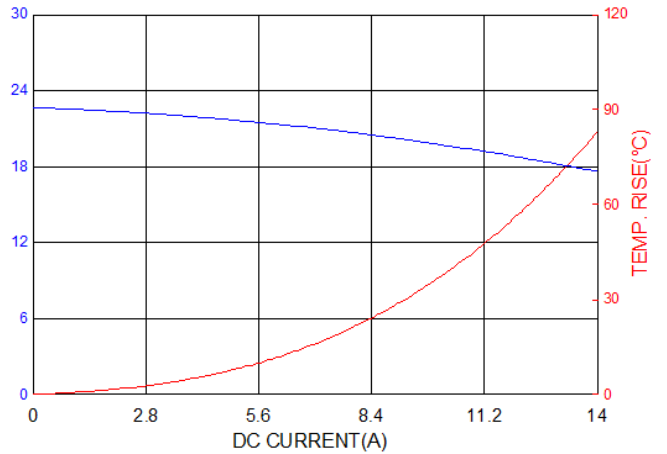
PIC1206HP150MF



PIC1206HP180MF



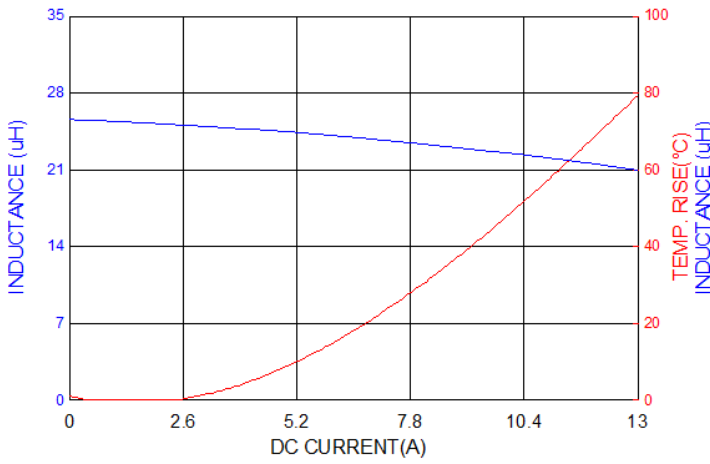
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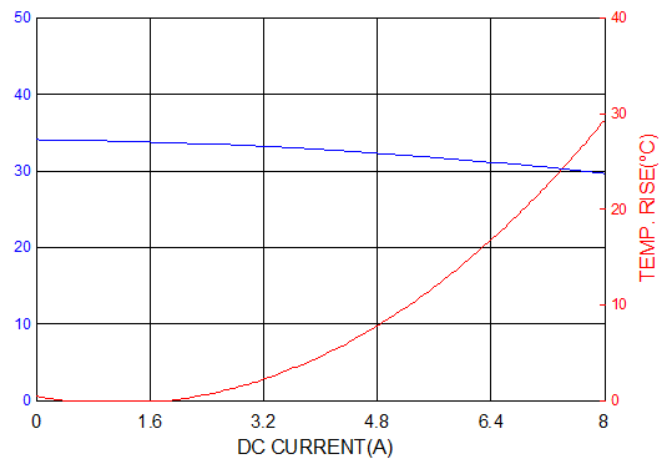
NOTE: Specifications subject to change without notice. Please check our website for latest information.



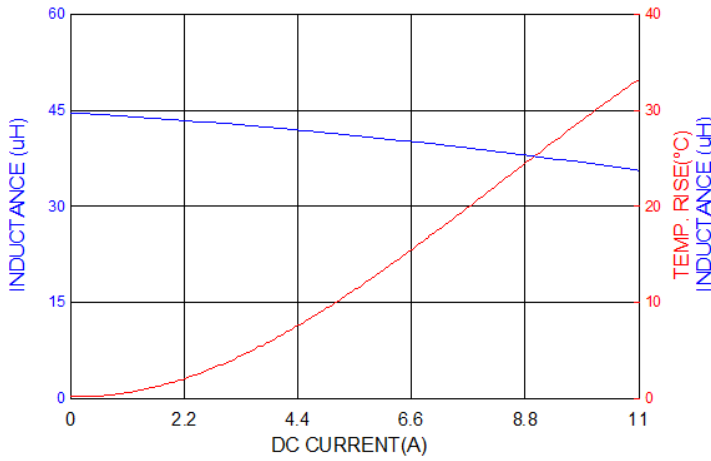
PIC1206HP270MF



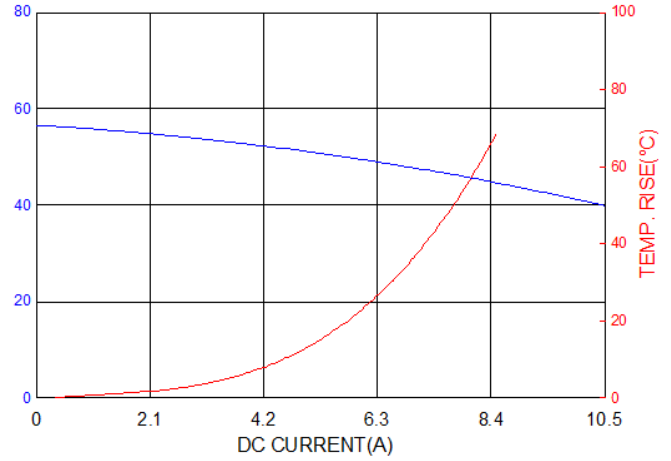
PIC1206HP330MF



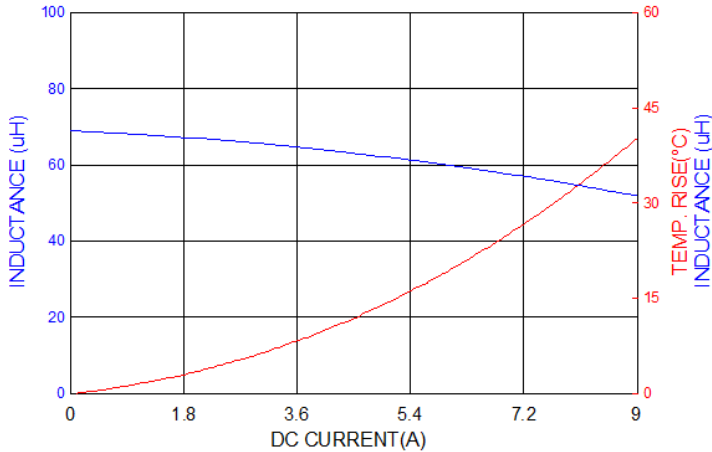
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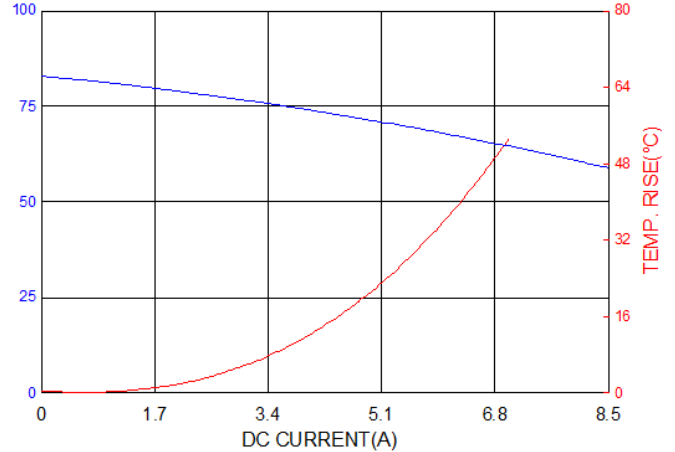
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PIC1206HP680MF



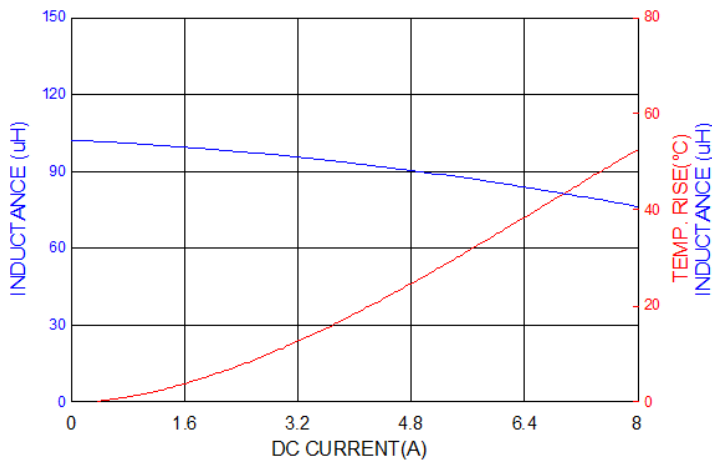
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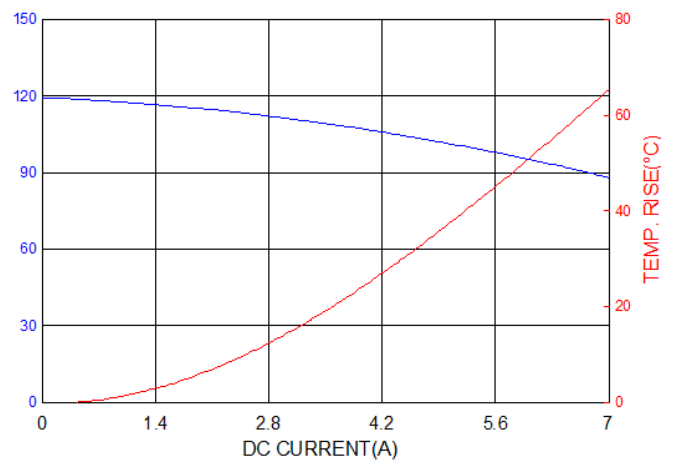
NOTE: Specifications subject to change without notice. Please check our website for latest information.



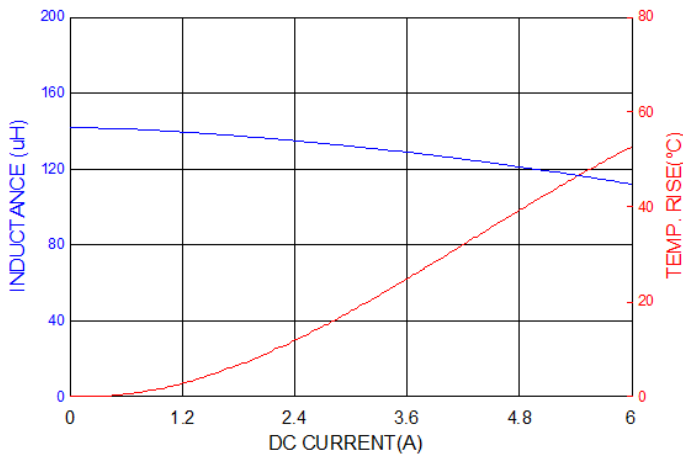
PIC1206HP101MF



PIC1206HP121MF



PIC1206HP151MF



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**8. Soldering**

Mildly activated rosin fluxes are preferred. The minimum amount of solder can lead to damage from the stresses caused by the difference in coefficients of expansion between solder, chip and substrate. Our terminations are suitable for re-flow soldering systems. If hand soldering cannot be avoided, the preferred technique is the utilization of hot air soldering tools.

**8-1 Solder Re-flow:**

Recommended temperature profiles for re-flow soldering in Figure 1.

**8-2 Soldering Iron (Figure 2):**

Products attachment with soldering iron is discouraged due to the inherent process control limitations. In the event that a soldering iron must be employed the following precautions are recommended.

Note :

- a) Preheat circuit and products to 150°C.
- b) 355°C tip temperature (Max.)
- c) Never contact the ceramic with the iron tip
- d) 1.0mm tip diameter (Max.)
- e) Use a 20 watt soldering iron with tip diameter of 1.0mm
- f) Limit soldering time to 4~5 secs.

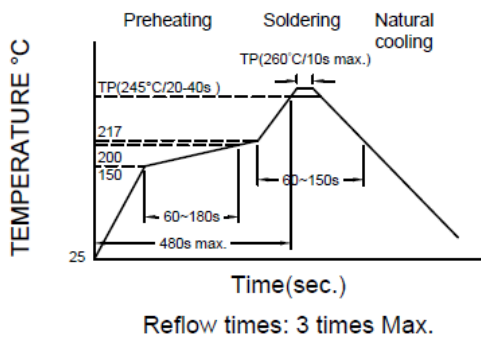


Fig.1

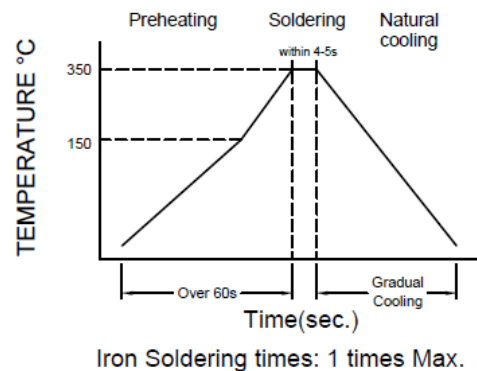


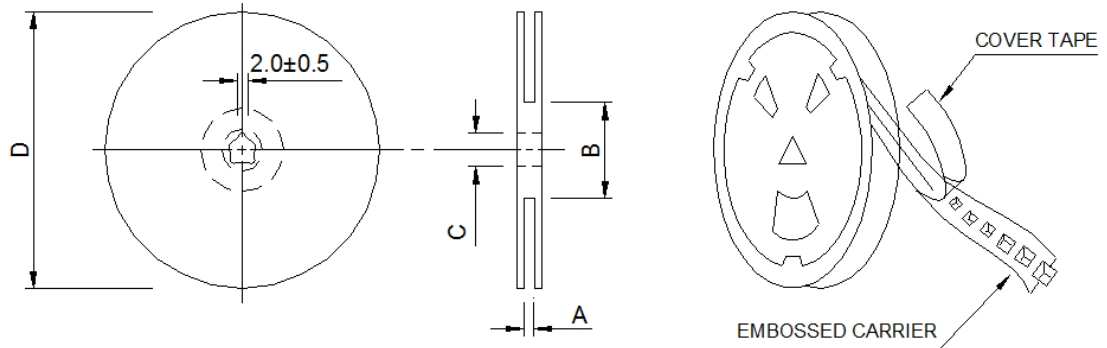
Fig.2

NOTE: Specifications subject to change without notice. Please check our website for latest information.



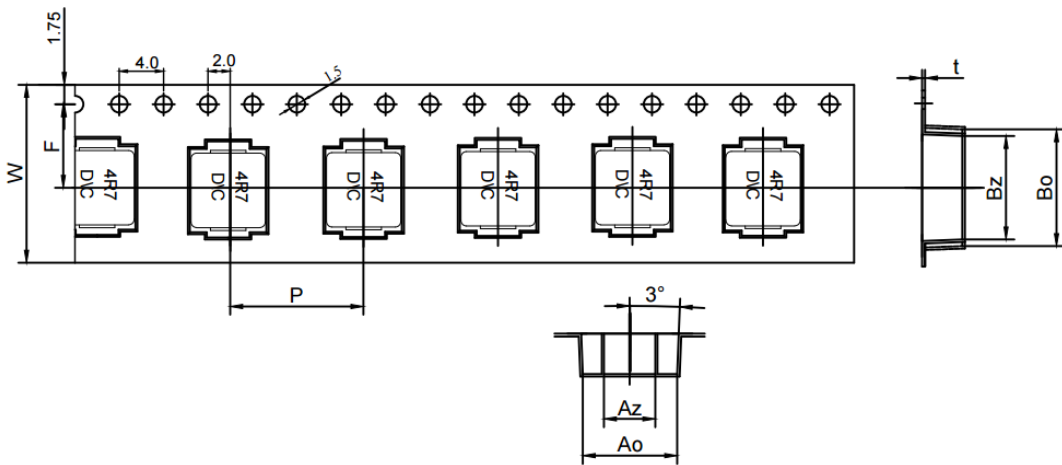
9. Packaging Information

9-1. Reel Dimension



Type	A (mm)	B (mm)	C (mm)	D (mm)
13" x 24mm	24.4 + 2/-0	100 ± 2.0	13 + 0.5/-0.2	330

9-2. Tape Dimension



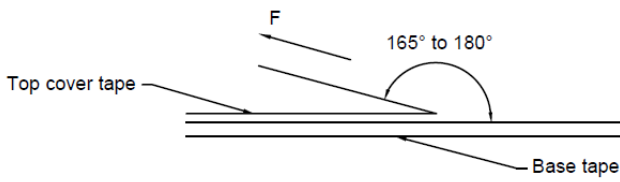
Series	Bo(mm)	Bz(mm)	Ao(mm)	Az(mm)	Ko(mm)	P(mm)	W(mm)	F(mm)	t(mm)
PIC1206	14.1±0.1	13.0±0.1	12.9±0.1	7.0±0.1	6.5±0.1	16.0±0.1	24±0.3	11.5±0.1	0.35±0.05

9-3. Packaging Quantity

Size	PIC1206
Chip/ Reel	500
Inner Box	1000
Carton	4000

NOTE: Specifications subject to change without notice. Please check our website for latest information.

## 9-4. Tearing Off Force



The force for tearing off cover tape is 10 to 130 grams in the arrow direction under the following conditions.

Room Temp (°C)	Room Humidity (%)	Room atm (hPa)	Tearing Speed (mm/min)
5 - 35	45 - 85	860 - 1060	300

### Application Notice:

#### 1. Storage Conditions:

To maintain the solderability of terminal electrodes:

- a) Recommended products should be used within 12 months from the time of delivery.
- b) The packaging material should be kept where no chlorine or sulfur exists in the air.

#### 2. Transportation:

- a) Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
- b) Vacuum pick up is strongly recommended for individual components.
- c) Bulk handling should ensure that abrasion and mechanical shock are minimized.

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