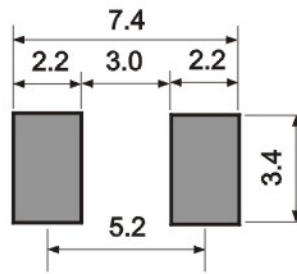
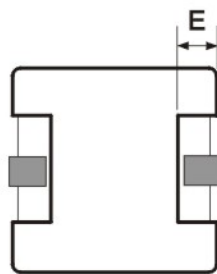
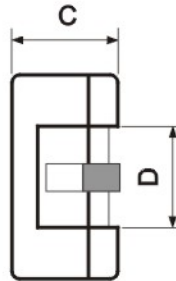
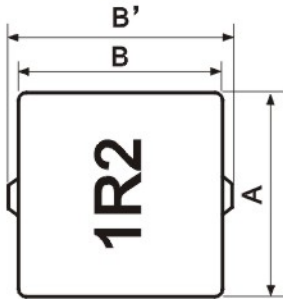




# Shielded SMD Power Inductor SP60□□-L Series

## I. Configuration & Dimensions : (m/m)



(PCB Pattern)

### ■ Features

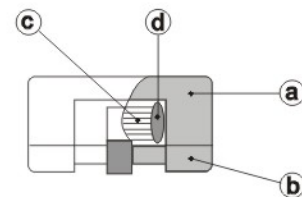
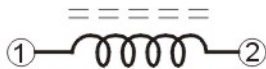
- Using the latest state of the art fine rectangular magnet wire construction
- Super low resistance, ultra high current rating
- Lead free construction

### ■ Applications

- Excellent for power line DC-DC conversion applications used in hard disk, notebook computers and other electronic equipment

Series	A	B	B'	C	D (typ.)	E (typ.)
SP6035-L	6.60 ±0.3	6.60 ±0.3	7.00 ±0.3	3.50 ±0.3	3.20	1.50
SP6045-L	6.60 ±0.3	6.60 ±0.3	7.00 ±0.3	4.50 ±0.3	3.20	1.50

## II. Schematic Diagram :



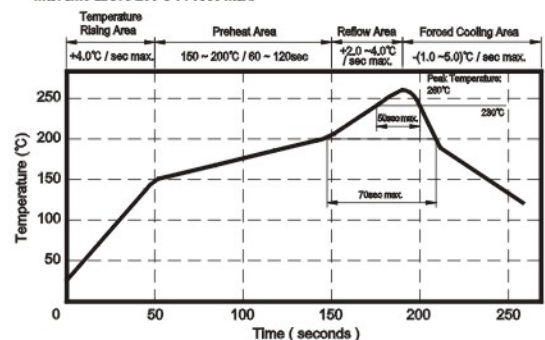
## III. Materials :

- Core : Iron ER core
- Core : Iron I core
- Wire : Ultra-fine rectangular Enamelled copper wire
- Adhesive : Epoxy resin
- Remark : Products comply with RoHS' requirements





















## IV. General Specification :








- Storage temp. : -55°C --- +125°C
- Operating temp. : -55°C --- +125°C  
(Temp. rise included)
- Resistance to solder heat : 260°C, 10 secs.

Peak Temp : 260°C max.  
Max time above 230°C : 50sec max.  
Max time above 200°C : 70sec max.

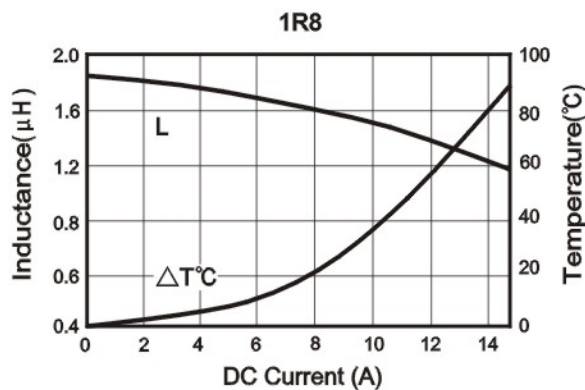
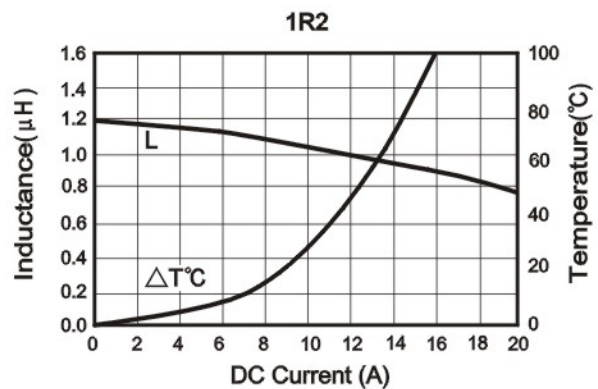
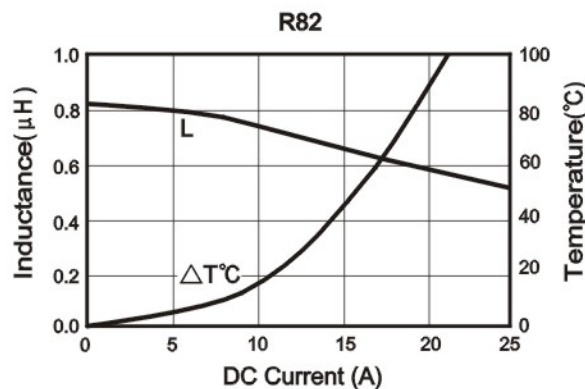
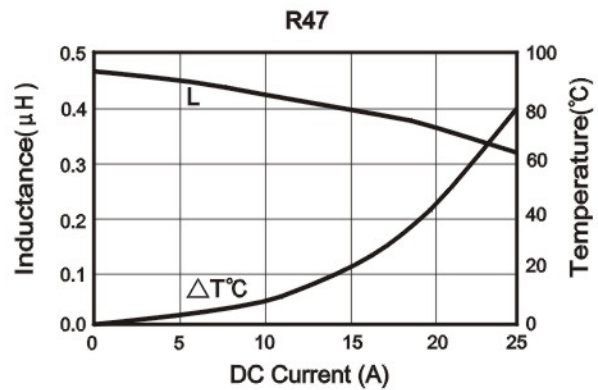
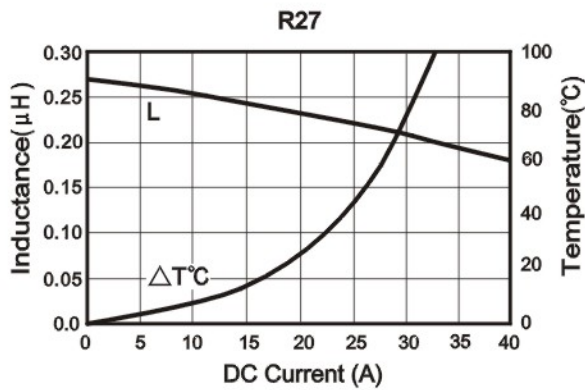


## V. Electrical Characteristics : - SP6035-L Series

DWG No.	Inductance L ( $\mu$ H )	Isat ( A )	Irms ( A )	RDC(m $\Omega$ )	
				max.	typ.
SP6035 R27YL  -   	0.270 $\pm$ 30%	30.0	22.0	2.90	2.20
R47YL  -   	0.470 $\pm$ 25%	20.0	18.0	3.80	2.90
R82YL  -   	0.820 $\pm$ 25%	15.0	13.0	6.80	5.20
1R2YL  -   	1.200 $\pm$ 25%	12.0	10.5	10.40	8.00
1R8YL  -   	1.800 $\pm$ 25%	10.0	9.5	12.20	9.40

- 1).  : Packaging information ...  : Bulk  : Taping reel
- 2). "-": Reference Code
- 3). Measured Freq. of inductance is 100KHz / 1V
- 4). Irms base on Temp. rise 40°C typ.
- 5). Isat base on inductance drop 25% typ. of L value at 20°C

### @ Performance Graphs

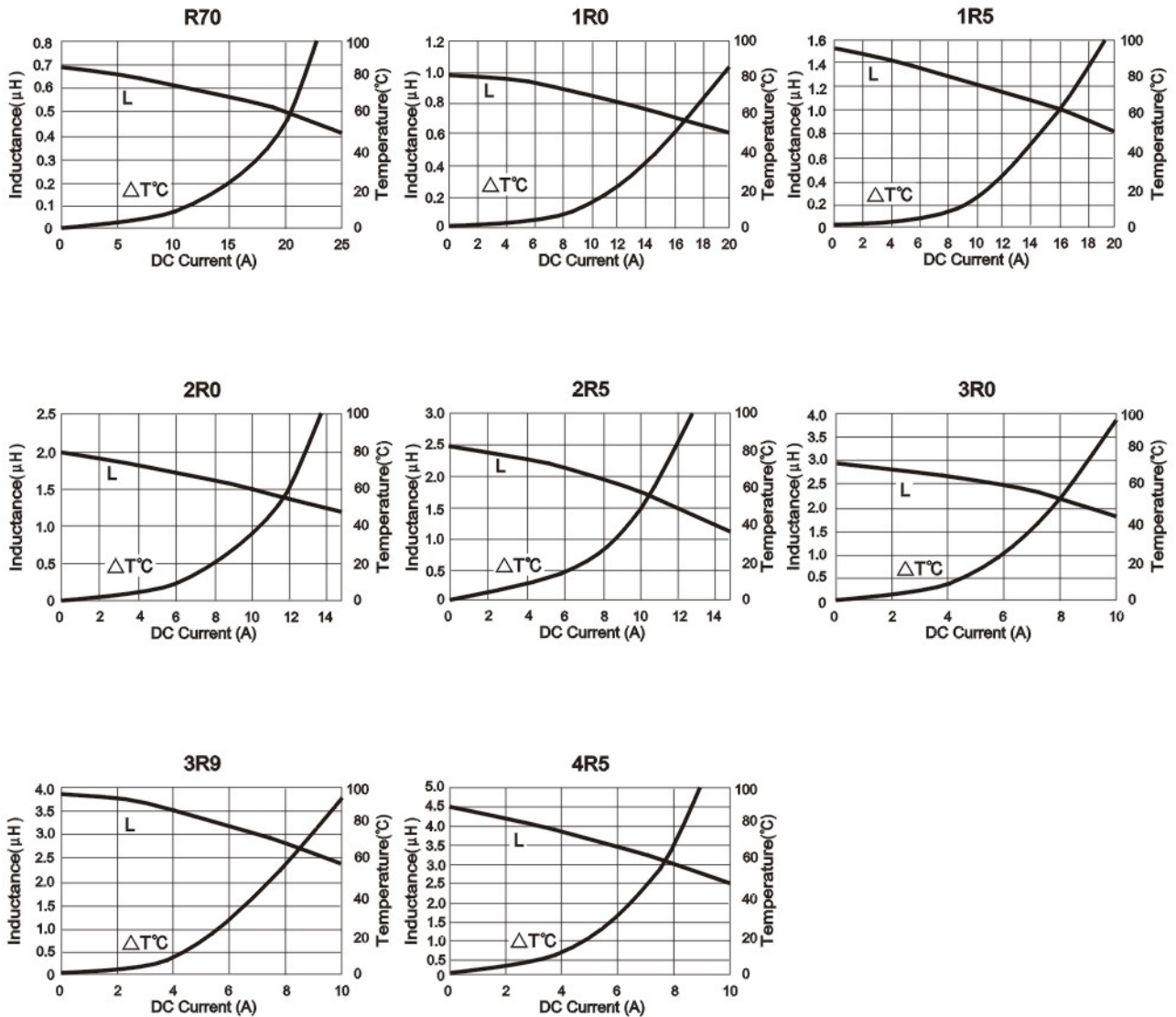


• SP6045-L Series

DWG No.	Inductance ( $\mu\text{H}$ )	Isat (A)	Irms (A)	RDC( $\text{m}\Omega$ )	
				max.	typ.
SP6045 R70YL□-□□□□	$0.70 \pm 25\%$	15.00	16.00	4.80	3.70
1R0YL□-□□□□	$1.00 \pm 25\%$	12.00	13.00	6.00	4.60
1R5YL□-□□□□	$1.50 \pm 25\%$	10.00	11.00	6.90	5.30
2R0YL□-□□□□	$2.00 \pm 25\%$	8.00	9.00	10.70	8.20
2R5YL□-□□□□	$2.50 \pm 25\%$	7.00	8.40	11.80	9.10
3R0YL□-□□□□	$3.00 \pm 25\%$	6.30	6.60	17.30	13.30
3R9YL□-□□□□	$3.90 \pm 25\%$	6.00	6.20	19.10	14.70
4R5YL□-□□□□	$4.50 \pm 25\%$	5.40	5.80	20.80	16.00

- 1). □ : Packaging information --- ▣ : Bulk ▢ : Taping reel
- 2). "-□□□" : Reference Code
- 3). Measured Freq. of inductance is 100KHz / 1V
- 4). Irms base on Temp. Rise 40°C typ.
- 5). Isat base on inductance drop 25% typ. of L value at 20°C

@ Performance Graphs

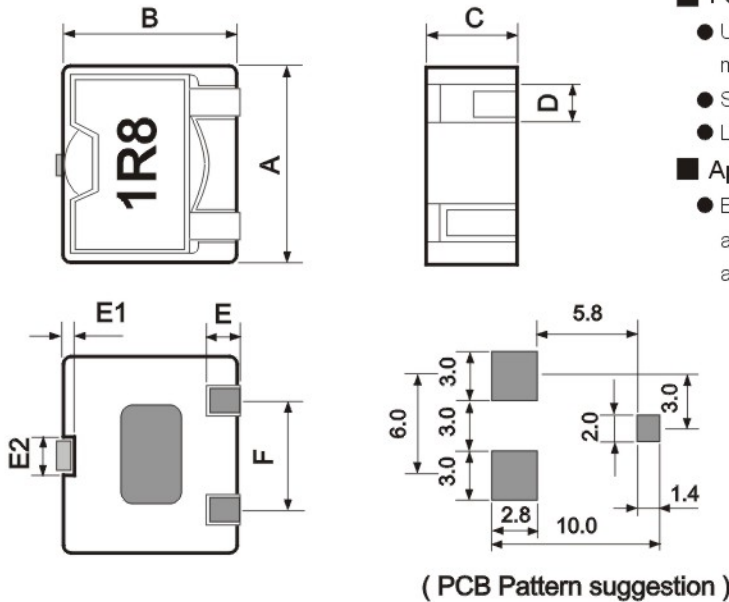




# Shielded SMD Power Inductor

## SP1045-□/SP1055-□ Series

### I. Configuration & Dimensions : (m/m)



#### ■ Features

- Using the latest state of the art fine rectangular magnet wire construction
- Super low resistance, ultra high current rating
- Lead free construction

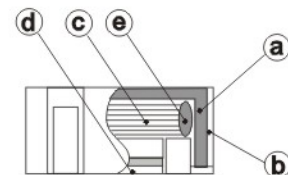
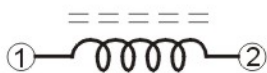
#### ■ Applications

- Excellent for power line DC-DC conversion applications used in hard disk, notebook computers and other electronic equipment

Type	Style	Color
L	□ □ □	Black
2	□ □ □	White
3	• □ □ □	White

Series	A	B	C	D (typ.)	E (typ.)	E1 (typ.)	E2 (typ.)	F (typ.)
SP1045-L	11.0 $\pm$ 0.3	9.35 $\pm$ 0.3	4.50 $\pm$ 0.3	2.10	2.00	1.00	1.50	6.00
SP1045-2	11.0 $\pm$ 0.3	9.35 $\pm$ 0.3	4.50 $\pm$ 0.3	2.10	2.00	1.00	1.50	6.00
SP1055-L	11.0 $\pm$ 0.3	9.35 $\pm$ 0.3	5.50 $\pm$ 0.3	2.10	2.00	1.00	1.50	6.00
SP1055-2	11.0 $\pm$ 0.3	9.35 $\pm$ 0.3	5.50 $\pm$ 0.3	2.10	2.00	1.00	1.50	6.00
SP1055-3	11.0 $\pm$ 0.3	9.35 $\pm$ 0.3	5.50 $\pm$ 0.3	2.10	2.00	1.00	1.50	6.00

### II. Schematic Diagram :



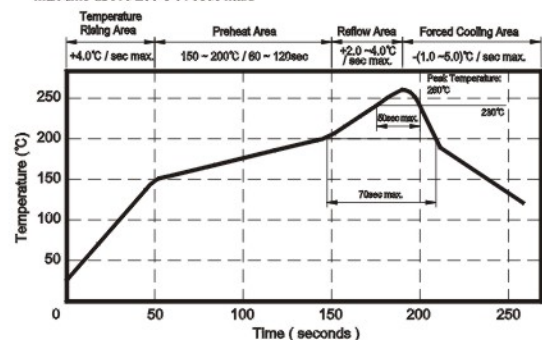
### III. Materials :

- Core : Ferrite ER core
- Base : UL 94V-0
- Wire : Ultra-fine rectangular Enamelled copper wire
- Clip : Cu/Ni/Sn
- Adhesive : Epoxy resin
- Remark : Products comply with RoHS' requirements





















### IV. General Specification :








- Storage temp. : -55°C --- +135°C
- Operating temp. : -55°C --- +135°C  
(Temp. rise included)
- Resistance to solder heat : 260°C, 10 secs.

Peak Temp : 260°C max.  
Max time above 230°C : 50sec max.  
Max time above 200°C : 70sec max.

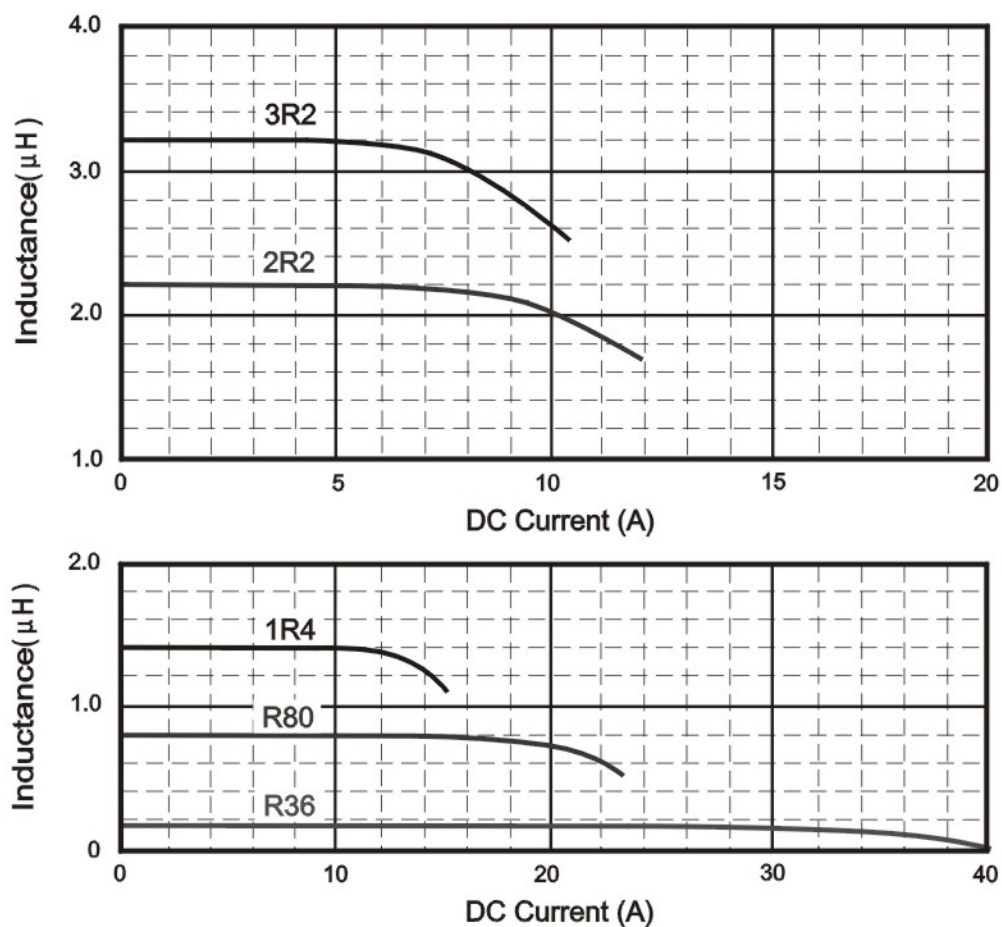


## V. Electrical Characteristics : - SP1045-L Series

DWG No.	Inductance L ( $\mu$ H)	Isat (A)	I <sub>rms</sub> (A)	RDC(m $\Omega$ )	
				max.	typ.
SP1045 R36YL  -   	0.36 $\pm$ 30%	26.0	23.0	1.7	1.3
R80ML  -   	0.80 $\pm$ 20%	17.0	15.0	3.9	3.0
1R4ML  -   	1.40 $\pm$ 20%	14.0	13.0	4.4	3.4
2R2ML  -   	2.20 $\pm$ 20%	10.0	9.5	8.7	6.7
3R2ML  -   	3.20 $\pm$ 20%	8.0	8.0	10.4	8.0

- 1).  : Packaging information ... : Bulk  : Taping reel
- 2). "-": Reference Code
- 3). Measured Freq. of inductance is 100KHz / 1V
- 4). I<sub>rms</sub> base on Temp. rise 40°C max.
- 5). Isat base on inductance drop 25% typ. of L value at 20°C

### @ Inductance VS. DC Superposition Characteristics

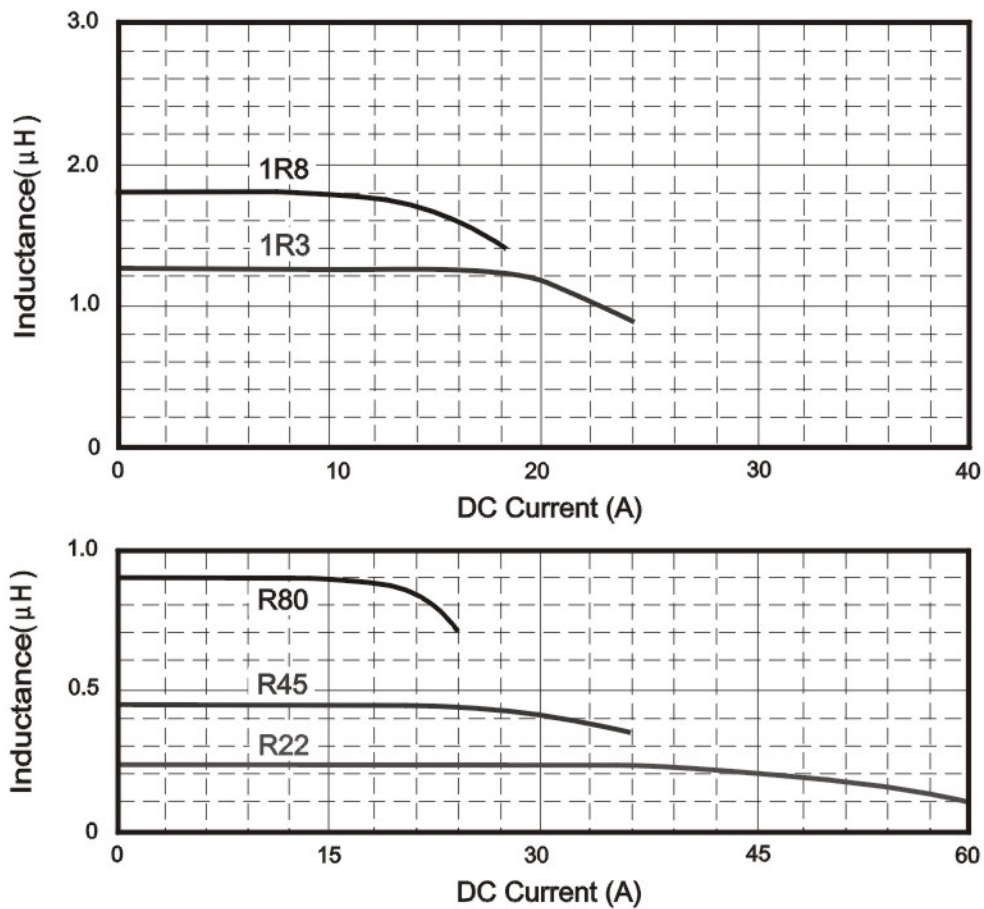


• SP1045-2 Series

DWG No.	Inductance L ( $\mu$ H )	Isat ( A )	Irms ( A )	RDC(m $\Omega$ )	
				max.	typ.
SP1045 R22Y2□-□□□□	0.22 $\pm$ 30%	40.0	23.0	1.7	1.3
R45M2□-□□□□	0.45 $\pm$ 20%	25.0	15.0	3.9	3.0
R80M2□-□□□□	0.80 $\pm$ 20%	20.0	13.0	4.4	3.4
1R3M2□-□□□□	1.30 $\pm$ 20%	15.0	9.5	8.7	6.7
1R8M2□-□□□□	1.80 $\pm$ 20%	13.0	8.0	10.4	8.0

- 1). □ : Packaging information ... [A] : Bulk [B] : Taping reel
- 2). "-□□□" : Reference Code
- 3). Measured Freq. of inductance is 100KHz / 1V
- 4). Irms base on Temp. rise 40°C max.
- 5). Isat base on inductance drop 25% typ. of L value at 20°C

@ Inductance VS. DC Superposition Characteristics

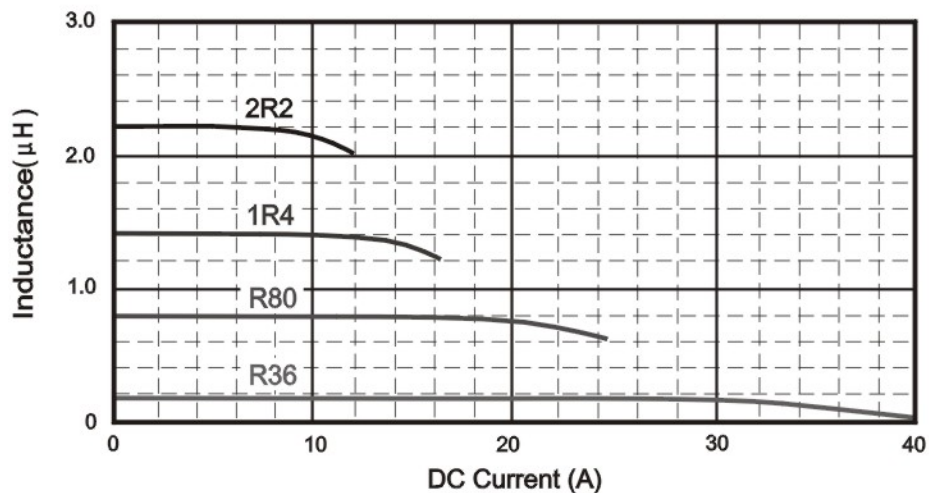
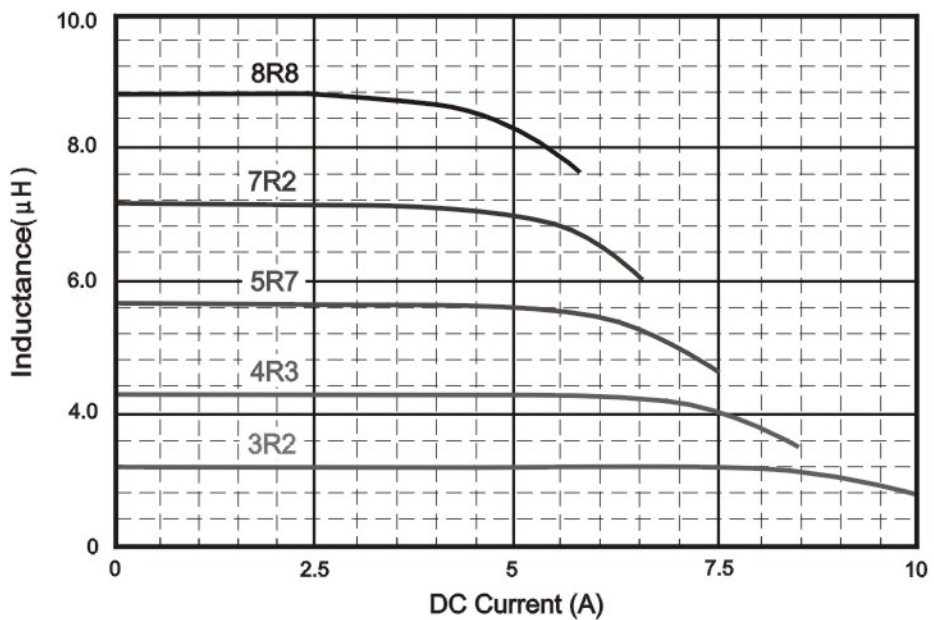


• SP1055-L Series

DWG No.	Inductance ( $\mu$ H)	Isat (A)	I <sub>rms</sub> (A)	RDC(m $\Omega$ )	
				max.	typ.
SP1055 R36YL □-□□□	0.36 $\pm$ 30%	26.0	28.0	1.7	1.3
R80ML □-□□□	0.80 $\pm$ 20%	18.0	20.0	2.5	1.9
1R4ML □-□□□	1.40 $\pm$ 20%	14.0	16.0	3.2	2.4
2R2ML □-□□□	2.20 $\pm$ 20%	10.0	12.0	5.8	4.7
3R2ML □-□□□	3.20 $\pm$ 20%	9.0	11.0	7.2	5.6
4R3ML □-□□□	4.30 $\pm$ 20%	8.0	10.0	8.5	6.5
5R7ML □-□□□	5.70 $\pm$ 20%	7.0	7.6	13.2	10.7
7R2ML □-□□□	7.20 $\pm$ 20%	6.2	7.0	15.5	11.9
8R8ML □-□□□	8.80 $\pm$ 20%	5.6	6.0	17.2	13.2

- 1). □ : Packaging information \*\*A : Bulk B : Taping reel
- 2). "-□□□" : Reference Code
- 3). Masured Freq. of inductance is 100KHz / 1V
- 4). I<sub>rms</sub> base on Temp. rise 40°C max.
- 5). Isat base on inductance drop 25% typ. of L value at 20°C

@ Inductance VS. DC Superposition Characteristics

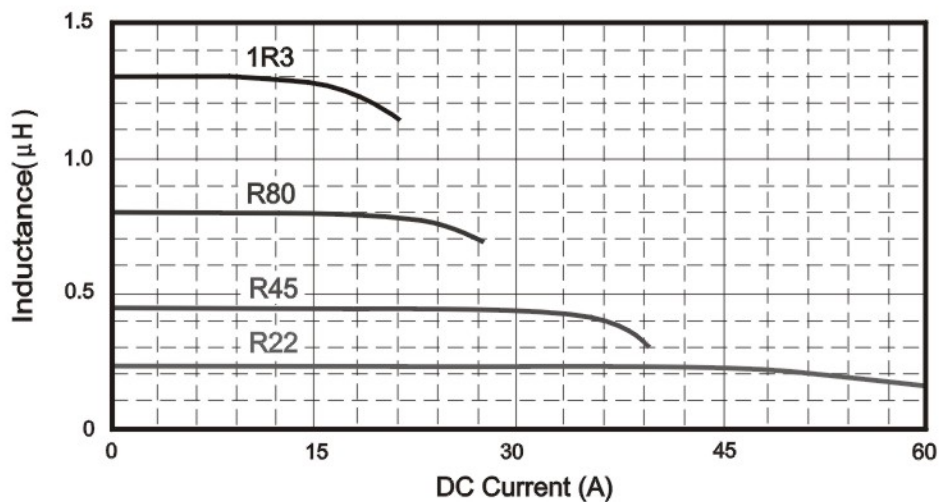
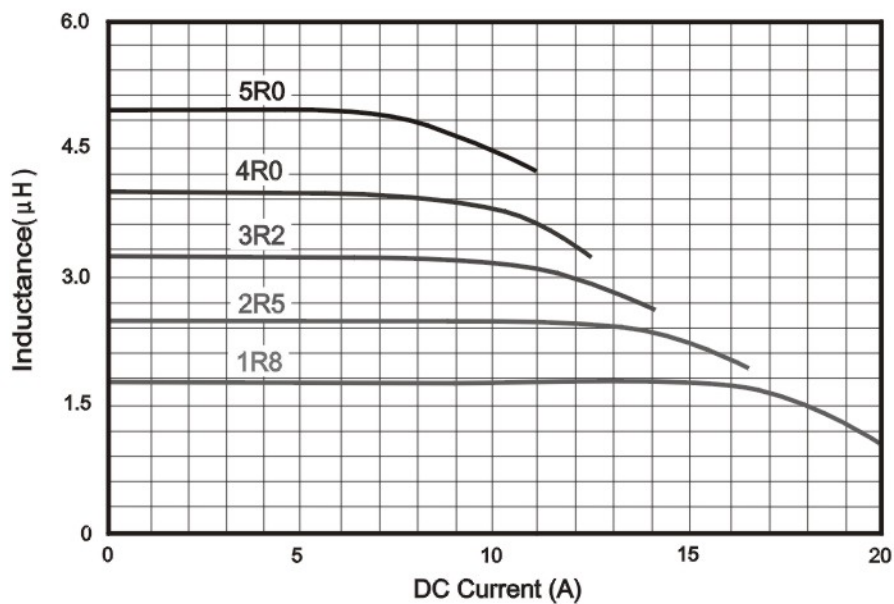


• SP1055-2 Series

DWG No.	Inductance L (μH)	Isat (A)	I <sub>rms</sub> (A)	RDC(mΩ)	
				max.	typ.
SP1055 R22Y2□-□□□	0.22±30%	42.0	25.0	1.7	1.3
R45M2□-□□□	0.45±20%	30.0	20.0	2.5	1.9
R80M2□-□□□	0.80±20%	22.0	16.0	3.2	2.4
1R3M2□-□□□	1.30±20%	18.0	12.0	5.8	4.7
1R8M2□-□□□	1.80±20%	16.0	10.0	7.2	5.6
2R5M2□-□□□	2.50±20%	13.5	8.5	8.5	6.5
3R2M2□-□□□	3.20±20%	11.5	7.2	13.2	10.7
4R0M2□-□□□	4.00±20%	10.0	6.2	15.5	11.9
5R0M2□-□□□	5.00±20%	8.6	5.8	17.2	13.2

- 1). □ : Packaging information --- [A] : Bulk [B] : Taping reel
- 2). "-□□□" : Reference Code
- 3). Measured Freq. of inductance is 100KHz / 1V
- 4). I<sub>rms</sub> base on Temp. rise 40°C max.
- 5). Isat base on inductance drop 25% typ. of L value at 20°C

@ Inductance VS. DC Superposition Characteristics



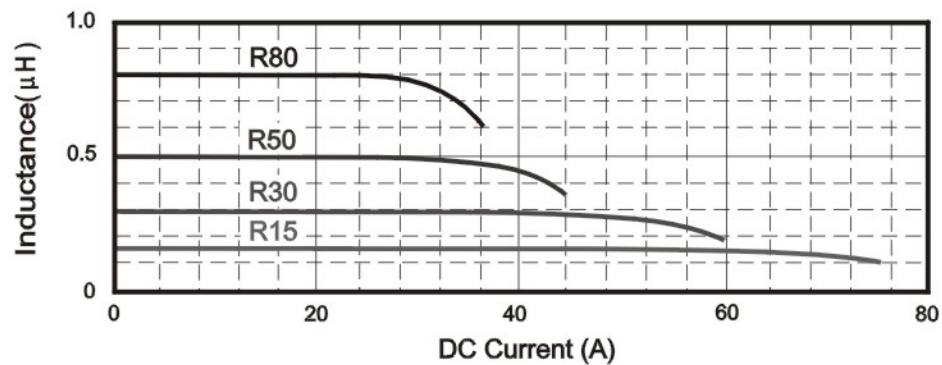
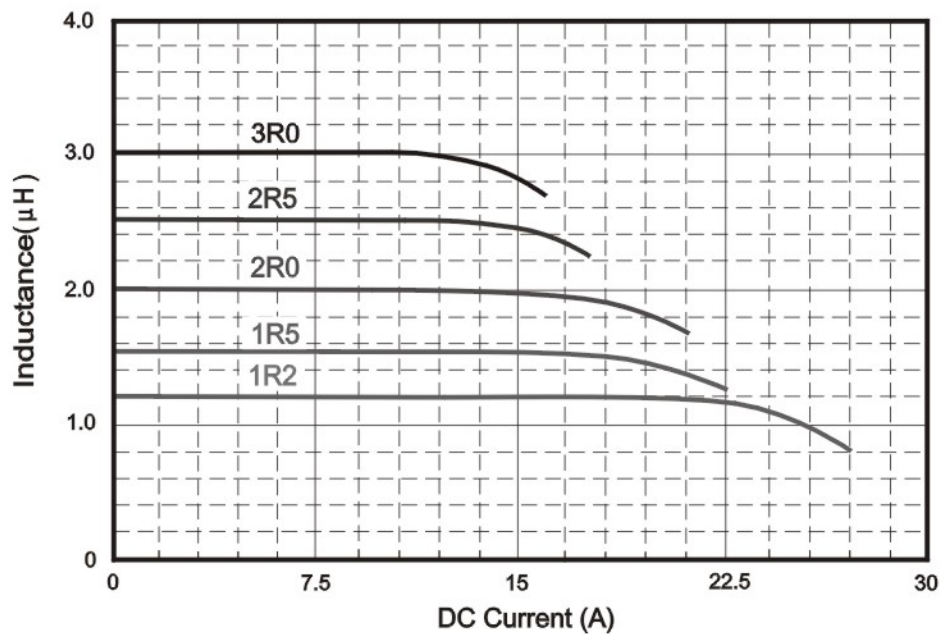


• SP1055-3 Series

DWG No.	Inductance L (μH)	I <sub>pk</sub> (A) max.	I <sub>sat</sub> (A)	I <sub>rms</sub> (A)	RDC(mΩ)	
					max.	typ.
SP1055 R15Y3□-□□□	0.15±30%	62.0	38.0	24.0	1.7	1.3
R30M3□-□□□	0.30±20%	42.0	32.0	20.0	2.5	1.9
R50M3□-□□□	0.50±20%	32.0	25.0	16.0	3.2	2.4
R80M3□-□□□	0.80±20%	25.0	18.0	11.0	5.8	4.7
1R2M3□-□□□	1.20±20%	20.0	16.0	10.0	7.2	5.6
1R5M3□-□□□	1.50±20%	17.0	14.0	9.0	8.5	6.5
2R0M3□-□□□	2.00±20%	14.0	11.0	7.6	13.2	10.7
2R5M3□-□□□	2.50±20%	12.0	9.5	6.8	15.5	11.9
3R0M3□-□□□	3.00±20%	10.5	8.2	6.0	17.2	13.2

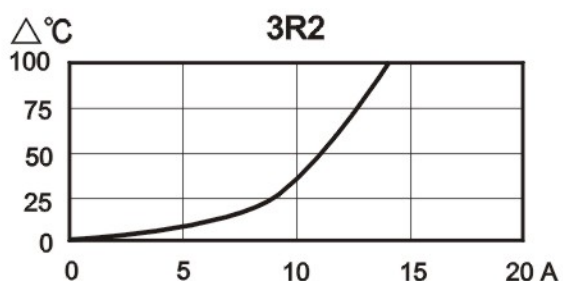
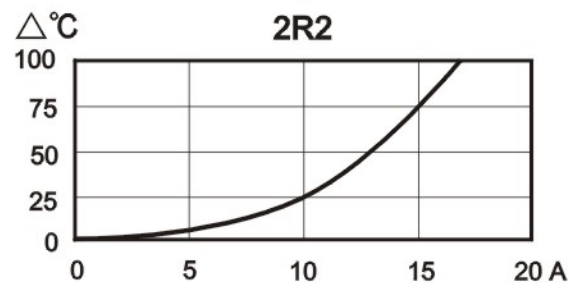
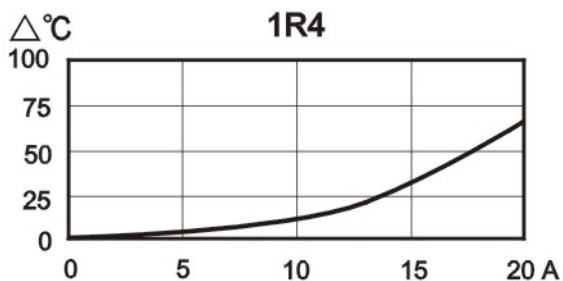
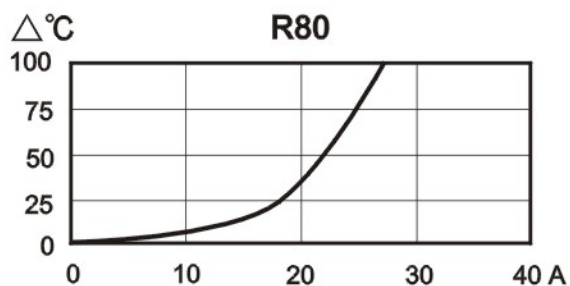
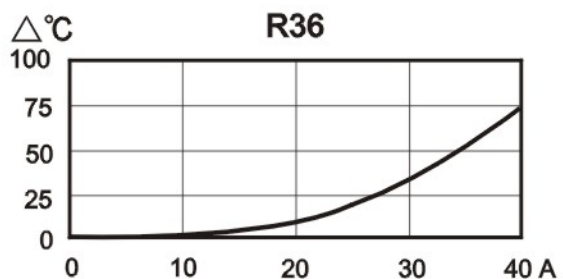
- 1). □ : Packaging information ---[A] : Bulk [B] : Taping reel
- 2). "-□□□": Reference Code
- 3). Measured Freq. of inductance is 100KHz /1 V
- 4). I<sub>rms</sub> base on Temp. rise 40°C max.
- 5). I<sub>sat</sub> base on inductance drop 10% typ. of L value at 20°C
- 6). I<sub>pk</sub> base on inductance drop 25% typ. of L value at 20°C

@ Inductance VS. DC Superposition Characteristics

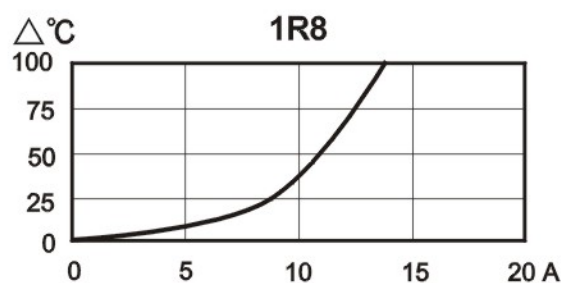
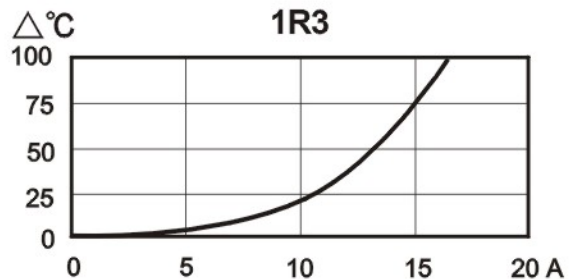
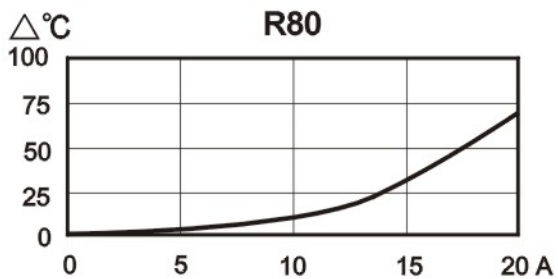
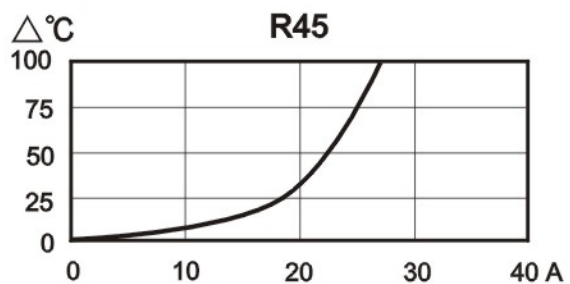
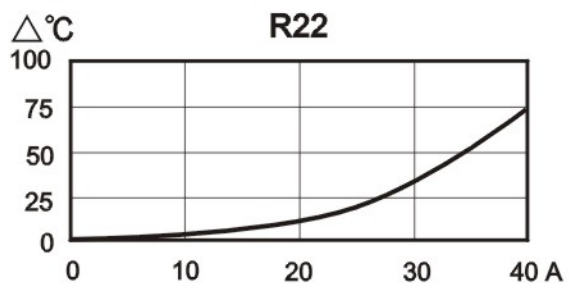


S  
P

VI. DC Current VS. Temperature Rise :  • SP1045-L Series

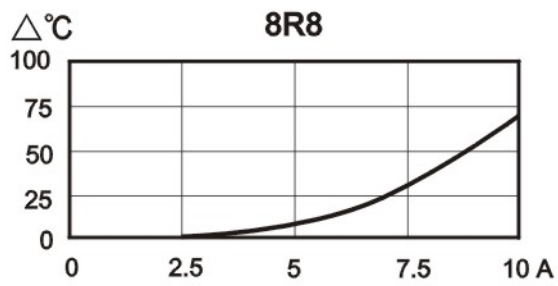
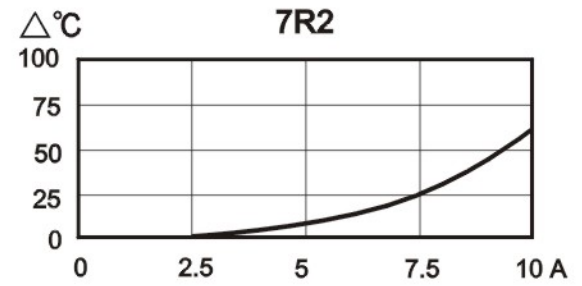
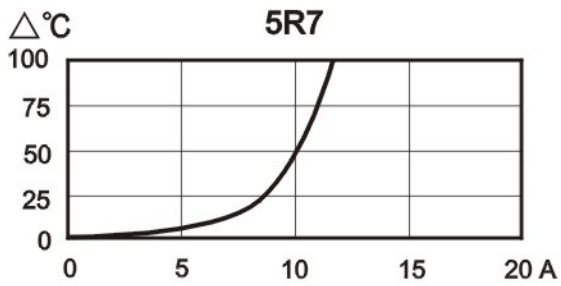
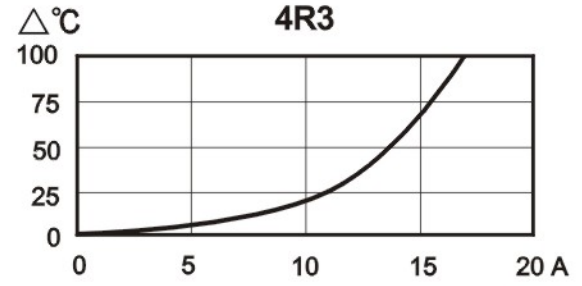
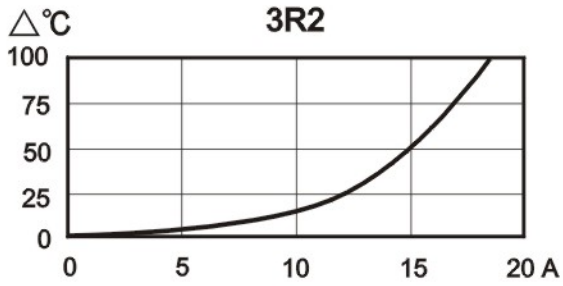
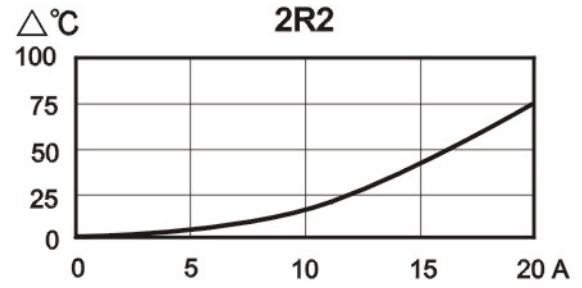
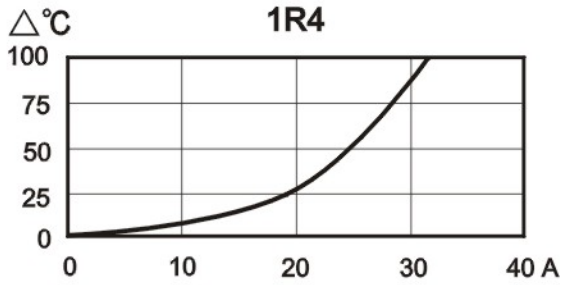
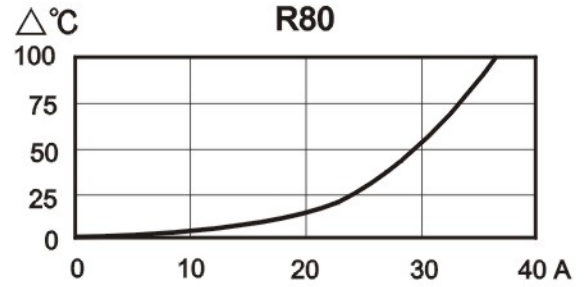
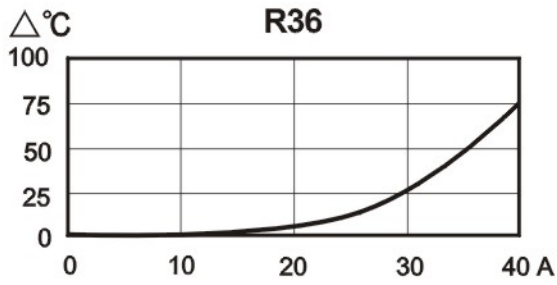


• SP1045-2 Series

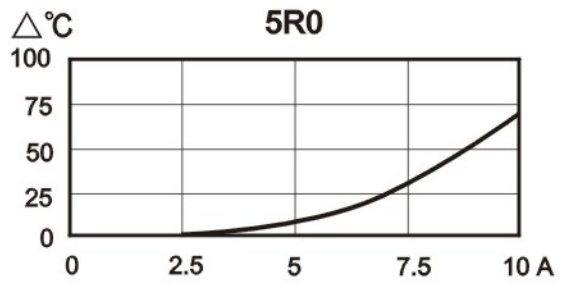
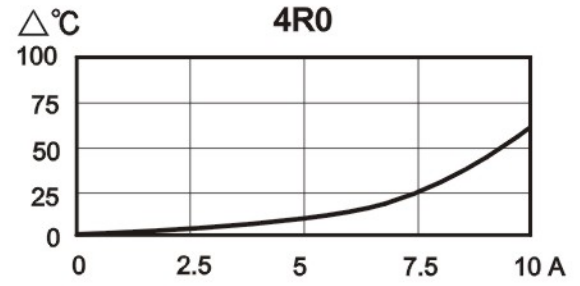
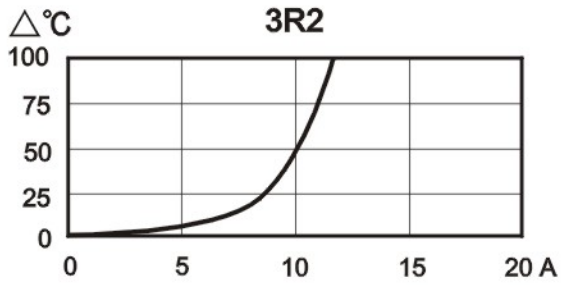
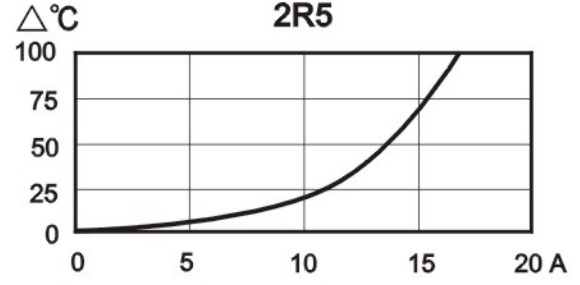
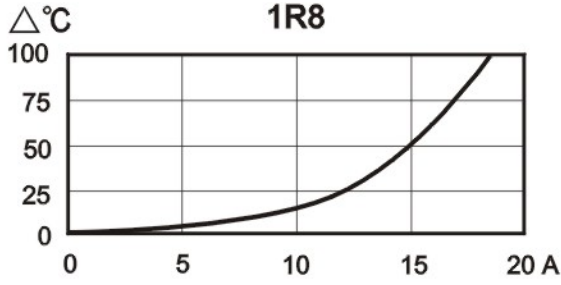
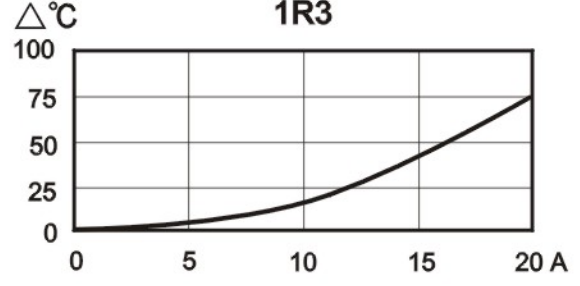
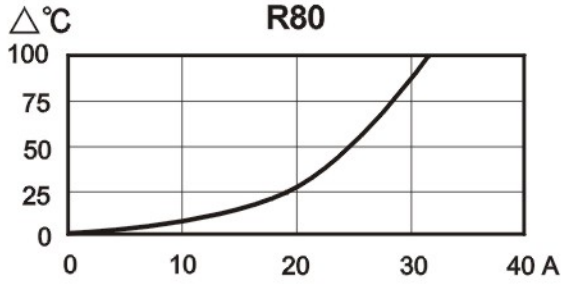
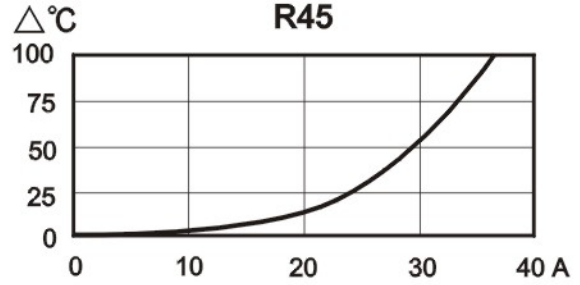
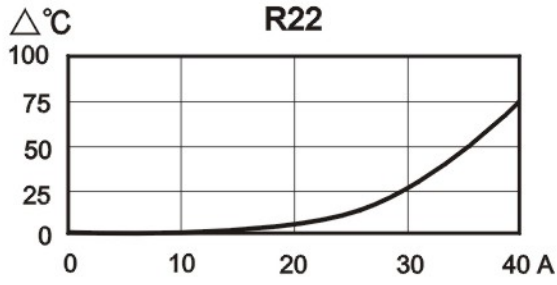


S  
P

• SP1055-L Series

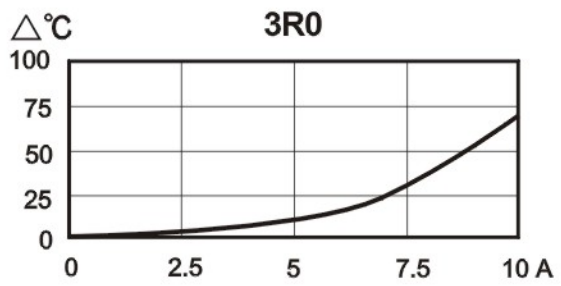
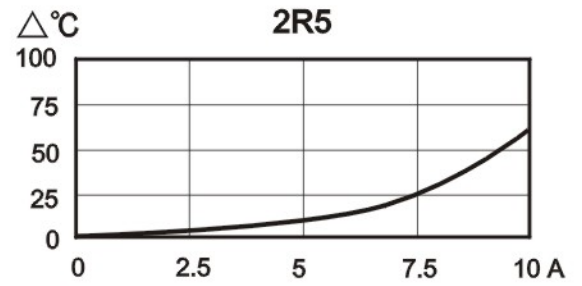
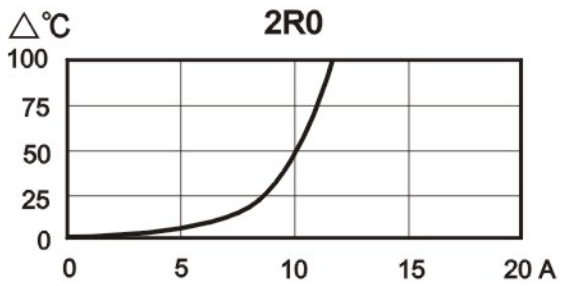
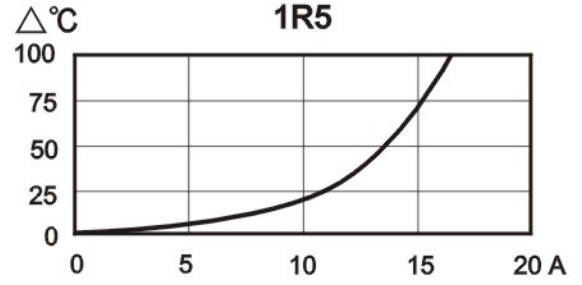
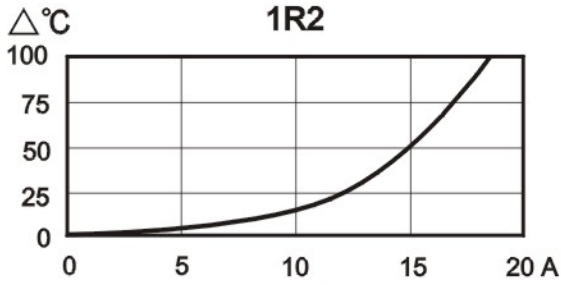
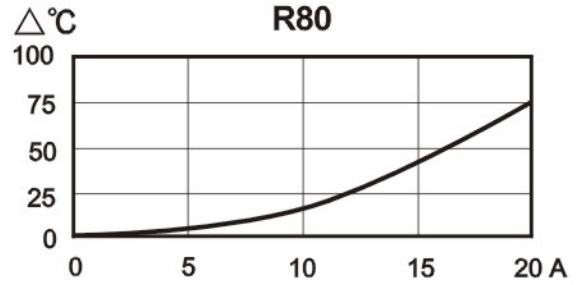
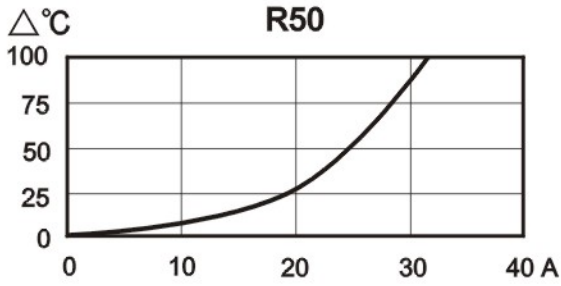
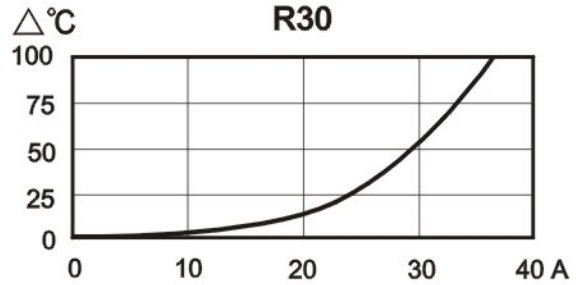
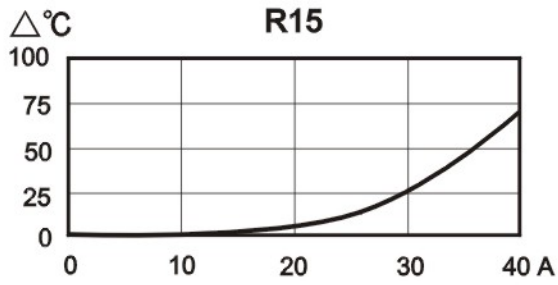


• SP1055-2 Series



SP

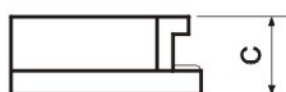
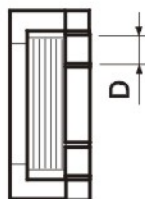
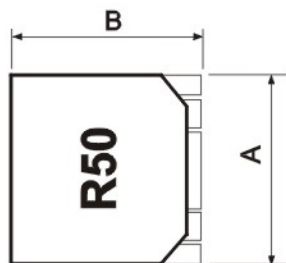
• SP1055-3 Series



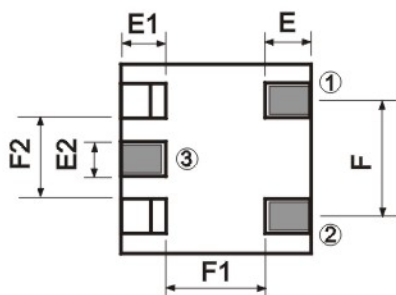


# Shielded SMD Power Inductor SP120□-L Series

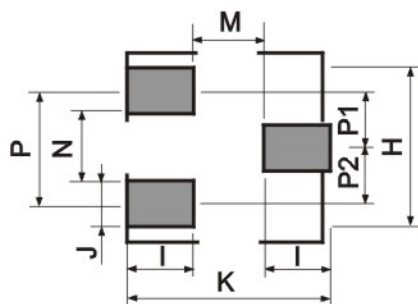
## I. Configuration & Dimensions : (m/m)



C : SP1204 : 4.00 max. m/m  
 SP1205 :  
 R30~1R0 : 5.00 max. m/m  
 1R8~7R2 : 5.60 max. m/m  
 SP1206 : 5.70±0.30 m/m



■ : Clip ③ For mounting fixed



(PCB Pattern)

### ■ Features

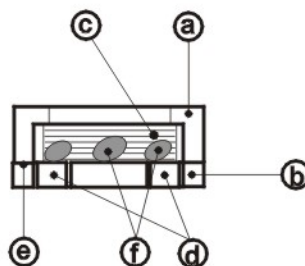
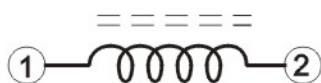
- Using the latest state of the art fine rectangular magnet wire construction
- Super low resistance, ultra high current rating

### ■ Applications

- Excellent for power line DC-DC conversion applications used in hard disk, notebook computers and other electronic equipment

A : 12.50±0.30m/m  
 B : 12.50±0.30m/m  
 D : 1.90±0.20m/m  
 E : 2.50 nom.m/m  
 E1 : 3.00 ref. m/m  
 E2 : 2.00 ref. m/m  
 F : 7.50±0.25m/m  
 F1 : 6.40 ref. m/m  
 F2 : 5.20 ref. m/m  
 H : 10.50 ref. m/m  
 I : 4.15 ref. m/m  
 J : 3.00 ref. m/m  
 K : 13.00 ref. m/m  
 M : 4.70 ref. m/m  
 N : 4.50 ref. m/m  
 P : 7.50 ref. m/m  
 P1 : 3.75 ref. m/m  
 P2 : 3.75 ref. m/m

## II. Schematic Diagram :



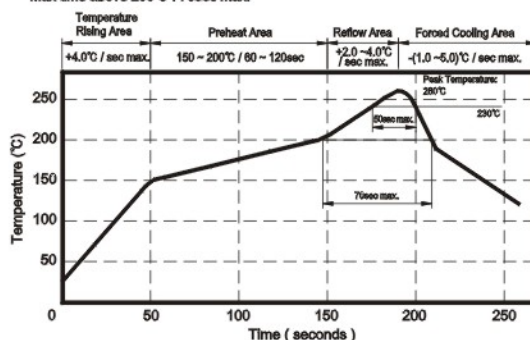
## III. Materials :

- Core : Ferrite ER core
- Core : Ferrite SB core
- Wire : Ultra-fine rectangular Enamelled copper wire
- Terminal : Cu/Sn
- Adhesive : Epoxy resin
- Adhesive : Epoxy resin
- Remark : Products comply with RoHS' requirements










## IV. General Specification :







- Storage temp. : -40°C --- +125°C
- Operating temp. : -40°C --- +105°C
- Resistance to solder heat : 260°C, 10 secs.

Peak Temp : 260°C max.  
 Max time above 230°C : 50sec max.  
 Max time above 200°C : 70sec max.

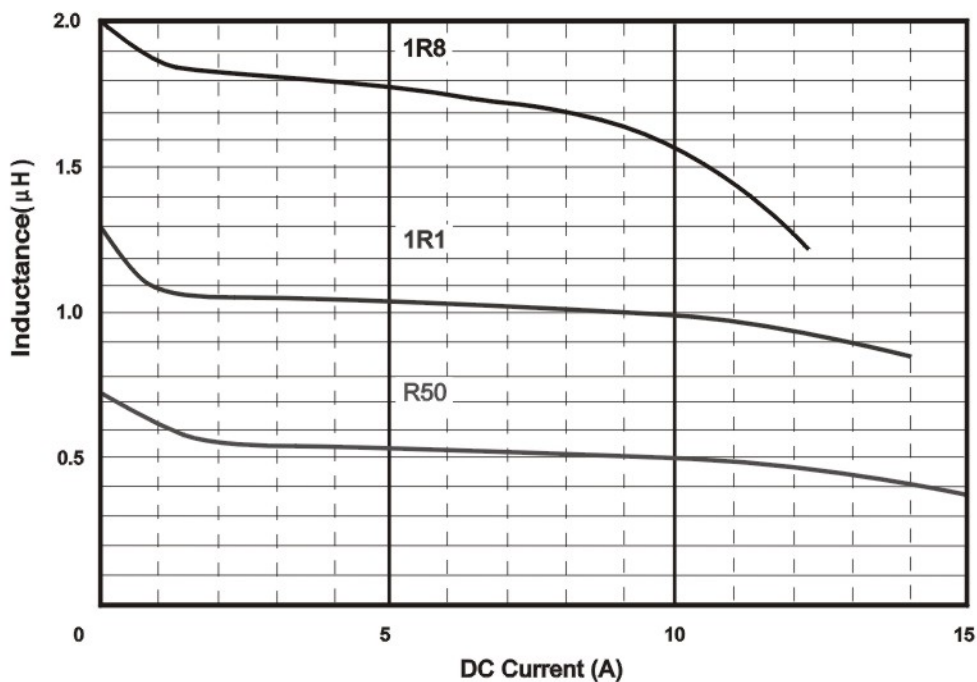


## V. Electrical Characteristics : - SP1204-L Series

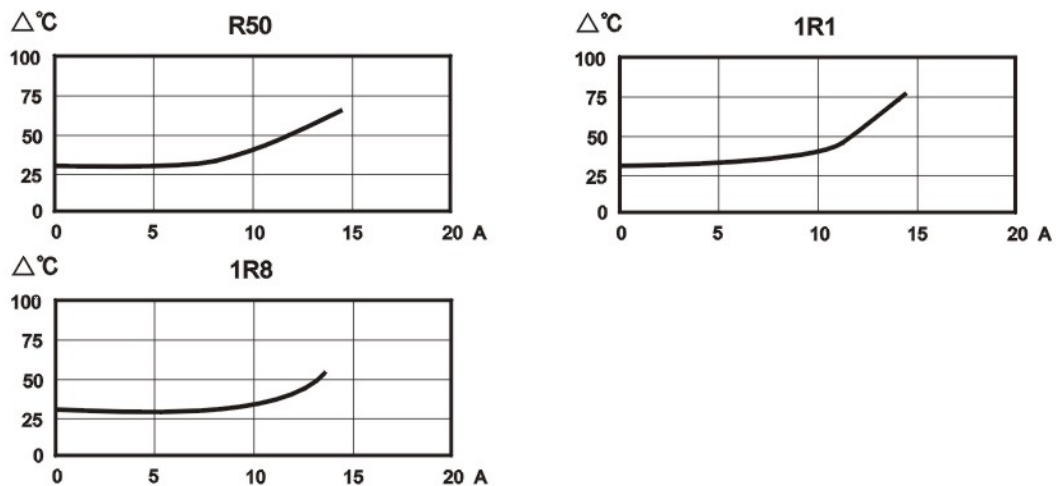
DWG No.	Initial Inductance L0 ( $\mu$ H)	Inductance at flat point L1 ( $\mu$ H)	Flat point ref. (A)	I <sub>rms</sub> (A)	I <sub>sat</sub> (A)	DC resistance max. (m $\Omega$ )
SP1204 R50ML   	0.75 $\pm$ 20%	0.55 $\pm$ 20%	2.0	13.0	14.0	3.0
1R1ML   	1.30 $\pm$ 20%	1.10 $\pm$ 20%	2.0	12.0	13.0	4.5
1R8ML   	2.00 $\pm$ 20%	1.80 $\pm$ 20%	2.0	10.0	11.0	6.0

- 1).  : Packaging information ...  : Bulk  : Taping reel
- 2). "-  ": Reference Code
- 3). Measured Freq. of inductance is 100KHz / 1V
- 4). I<sub>rms</sub> base on Temp. rise 40°C max.
- 5). I<sub>sat</sub> base on inductance drop 20% typ. of L1 value

### @ Inductance VS. DC Superposition Characteristics



### @ DC Current VS. Temperature Rise

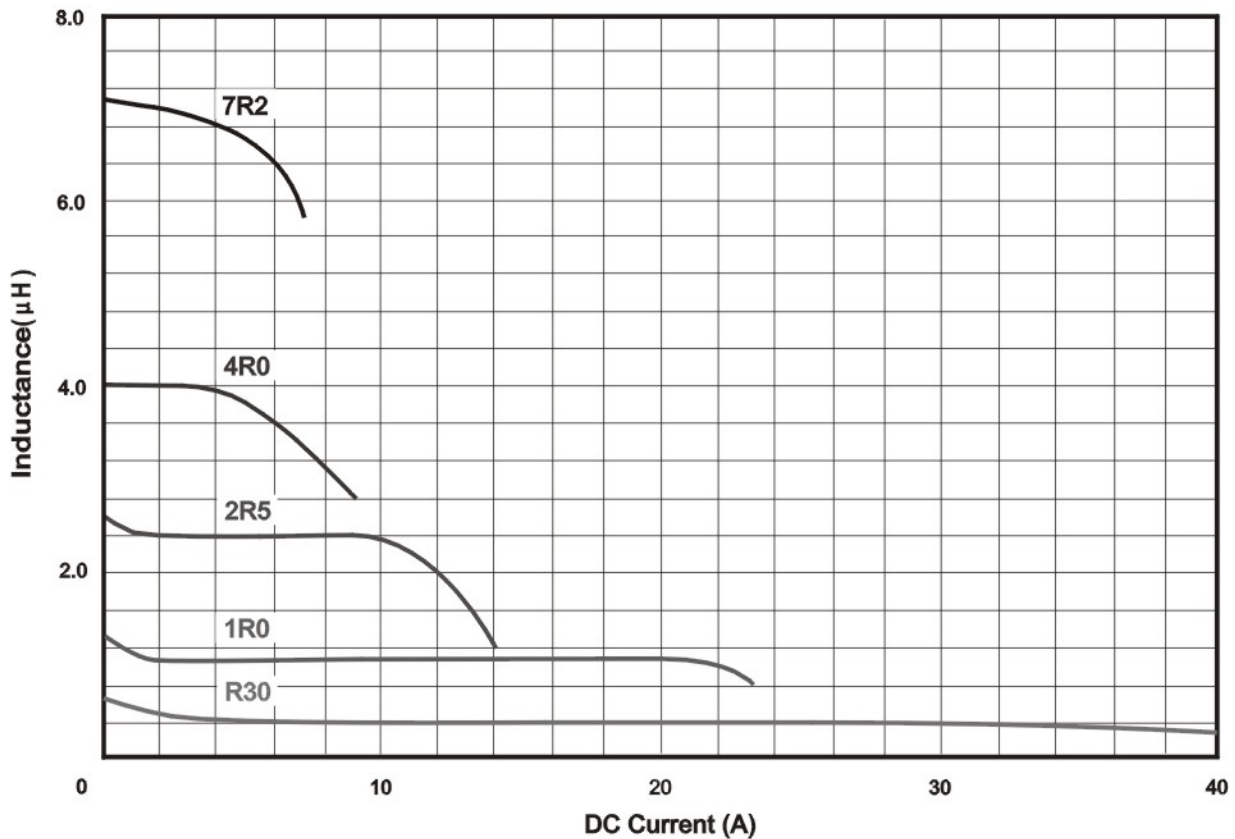


• SP1205-L Series

DWG No.	Initial Inductance L0 (μH)	Inductance at flat point L1 (μH)	Flat point ref. (A)	I <sub>rms</sub> (A)	I <sub>sat</sub> (A)	DC resistance (mΩ)	
						max.	typ.
SP1205 R30YL □-□□□	0.54±25%	0.30±25%	5.00	38.0	35.0	1.8	0.8
R60YL □-□□□	0.85±25%	0.60±25%	5.00	28.0	27.0	2.5	1.5
1R0YL □-□□□	1.25±25%	1.00±25%	5.00	23.0	22.0	3.4	2.8
1R8YL □-□□□	2.00±25%	1.80±25%	2.00	20.0	16.0	3.4	2.5
2R5YL □-□□□	2.70±25%	2.50±25%	2.00	18.0	12.0	3.4	2.5
3R3YL □-□□□	3.50±25%	3.30±25%	2.00	16.0	11.8	5.4	4.3
4R0YL □-□□□	4.20±25%	4.00±25%	3.00	15.0	8.3	5.4	4.3
5R6YL □-□□□	5.80±25%	5.60±25%	2.00	12.0	8.0	11.4	9.2
7R2YL □-□□□	7.40±25%	7.20±25%	2.00	10.0	7.5	13.5	10.5

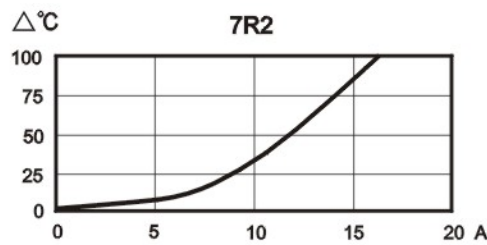
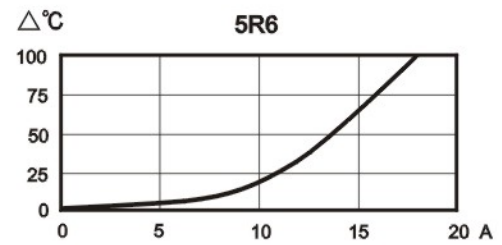
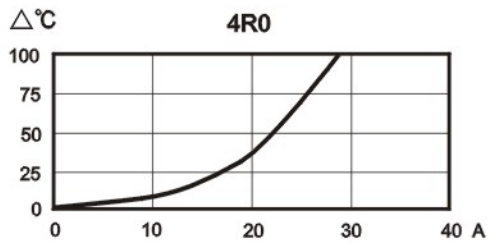
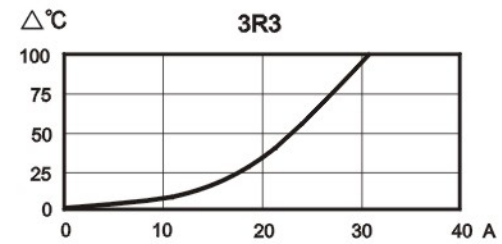
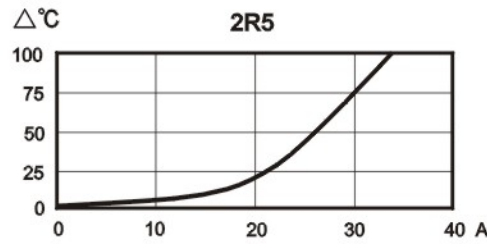
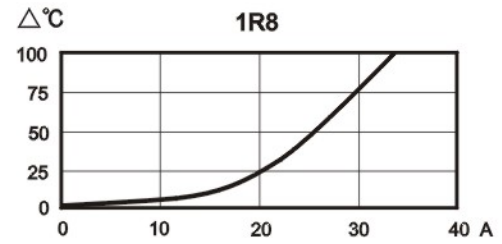
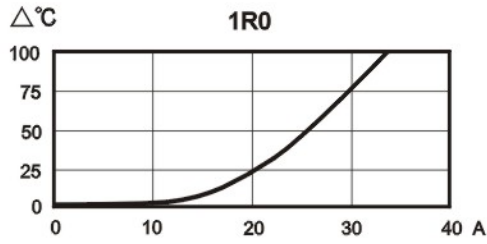
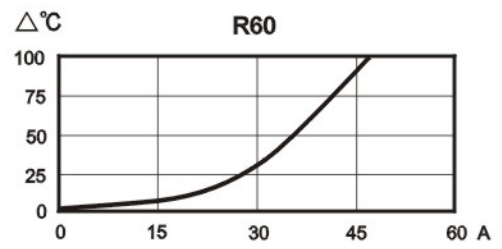
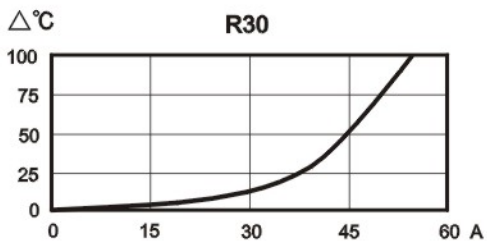
- 1). □ : Packaging information --- [A] : Bulk [B] : Taping reel
- 2). "-□□□" : Reference Code
- 3). Measured Freq. of inductance is 100KHz / 1V
- 4). I<sub>rms</sub> base on Temp. rise 40°C max.
- 5). I<sub>sat</sub> base on inductance drop 20% typ. of L1 value

@ Inductance VS. DC Superposition Characteristics





# @ DC Current VS. Temperature Rise

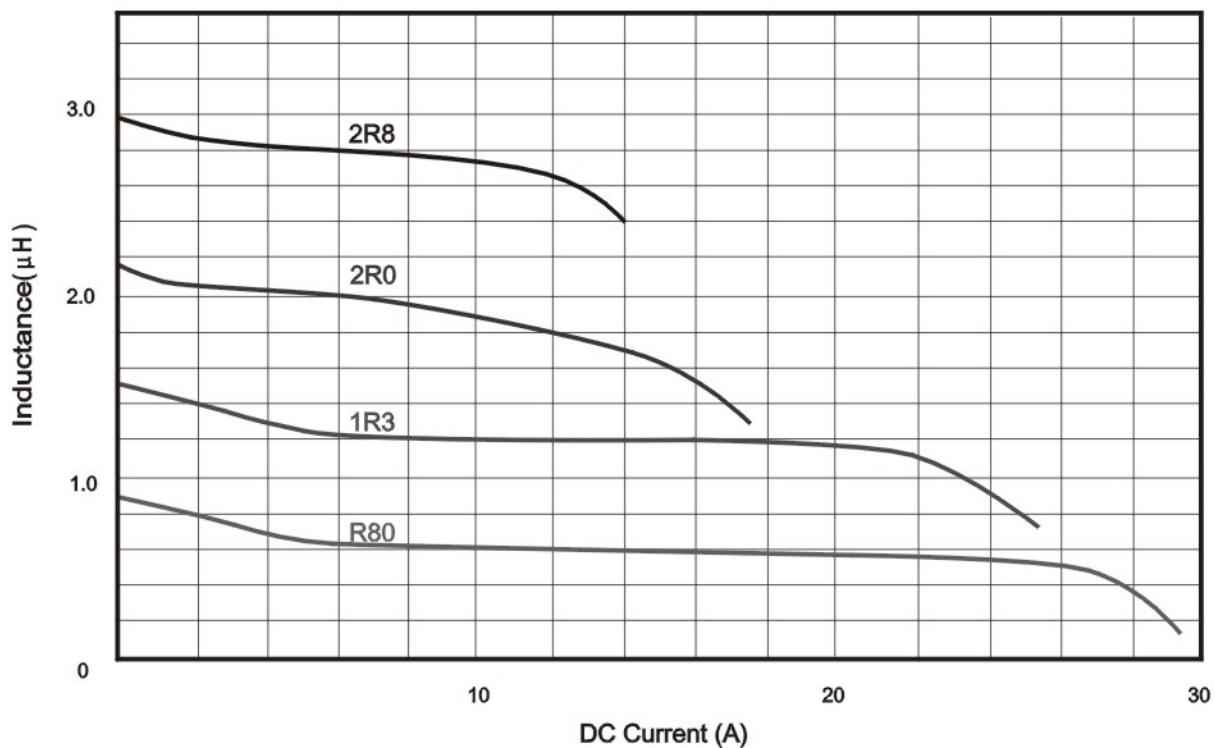


• SP1206-L Series

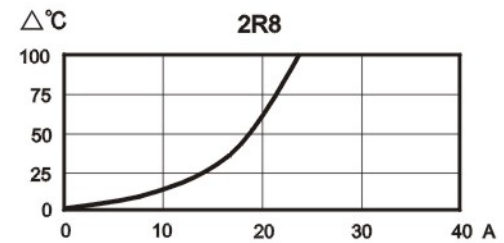
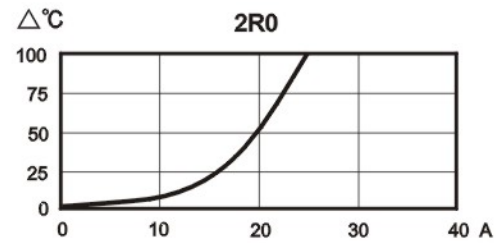
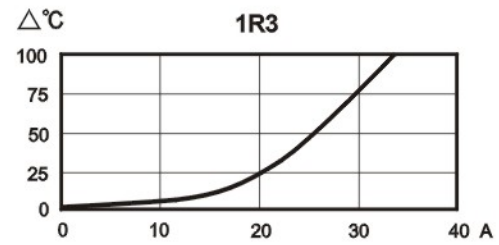
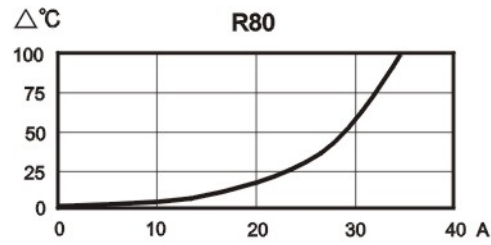
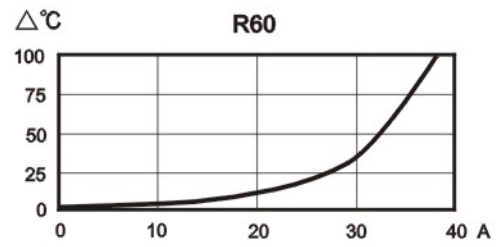
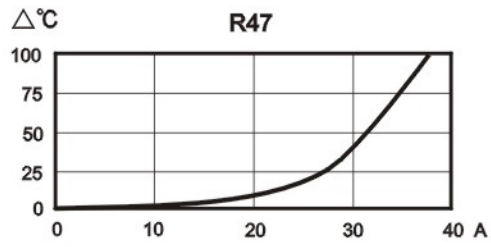
DWG No.	Initial Inductance L0 (μH)	Inductance at flat point L1 (μH)	Flat point ref. (A)	I <sub>rms</sub> (A)	I <sub>sat</sub> (A)	DC resistance max. (mΩ)
SP1206 R47YL □-□□□	0.70±25%	0.47±25%	5.0	30.0	30.0	2.3
R60YL □-□□□	0.90±25%	0.60±25%	5.0	28.0	26.0	2.3
R80YL □-□□□	1.10±25%	0.80±25%	5.0	26.0	25.0	3.2
1R3YL □-□□□	1.50±25%	1.30±25%	4.0	22.0	19.0	3.6
2R0YL □-□□□	2.20±25%	2.00±25%	4.0	17.0	15.0	6.0
2R8YL □-□□□	3.00±25%	2.80±25%	3.0	15.0	13.0	7.0

- 1). □ : Packaging information --- [A] : Bulk [B] : Taping reel
- 2). "-□□□" : Reference Code
- 3). Measured Freq. of inductance is 100KHz / 1V
- 4). I<sub>rms</sub> base on Temp. Rise 40°C max.
- 5). I<sub>sat</sub> base on inductance drop 20% typ. of L1 value

@ Inductance VS. DC Superposition Characteristics



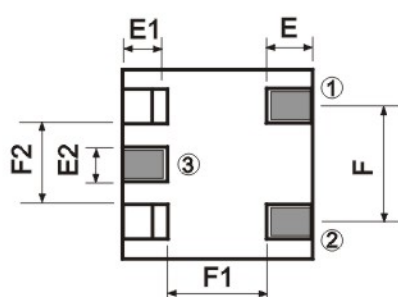
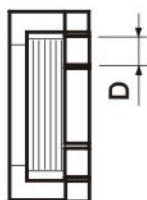
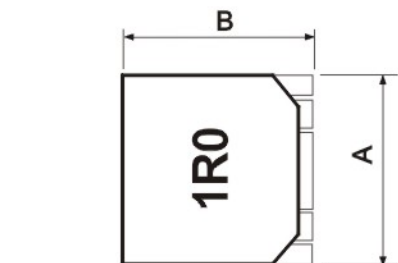
## @ DC Current VS. Temperature Rise



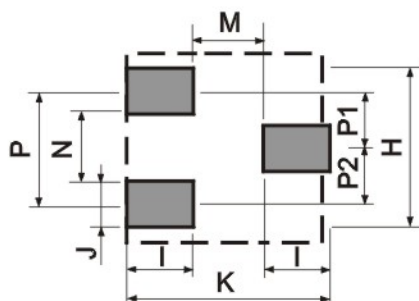


# Shielded SMD Power Inductor SP1305-L Series

## I. Configuration & Dimensions : (m/m)



■ : Clip ③ For mounting fixed



(PCB Pattern)

### ■ Features

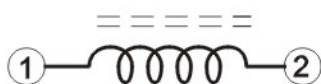
- Using the latest state of the art fine rectangular magnet wire construction
- Super low resistance, ultra high current rating

### ■ Applications

- Excellent for power line DC-DC conversion applications used in hard disk, notebook computers and other electronic equipment

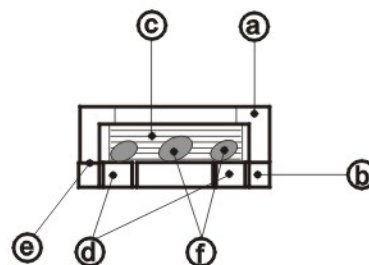
A	: 13.30 ± 0.30 m/m
B	: 13.10 ± 0.30 m/m
C	: 5.00 max. m/m
D	: 2.00 typ. m/m
E	: 2.50 typ. m/m
E1	: 2.00 typ. m/m
E2	: 2.00 typ. m/m
F	: 8.00 typ. m/m
F1	: 6.90 typ. m/m
F2	: 6.20 typ. m/m
H	: 11.00 ref. m/m
I	: 4.30 typ. m/m
J	: 3.00 ref. m/m
K	: 13.60 ref. m/m
M	: 5.00 ref. m/m
N	: 5.00 typ. m/m
P	: 8.00 ref. m/m
P1	: 4.00 ref. m/m
P2	: 4.00 ref. m/m

## II. Schematic Diagram :



## III. Materials :

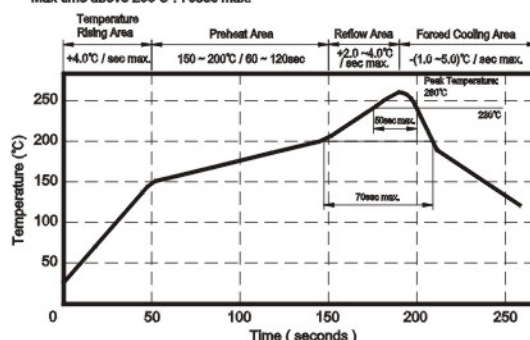
- Core : Ferrite ER core
- Core : Ferrite SB core
- Wire : Ultra-fine rectangular Enamelled copper wire
- Terminal : Cu/Sn
- Adhesive : Epoxy resin
- Adhesive : Epoxy resin
- Remark : Products comply with RoHS' requirements


















## IV. General Specification :







- Storage temp. : -40°C --- +125°C
- Operating temp. : -40°C --- +105°C
- Resistance to solder heat : 260°C, 10 secs.

Peak Temp : 260°C max.  
Max time above 230°C : 50sec max.  
Max time above 200°C : 70sec max.

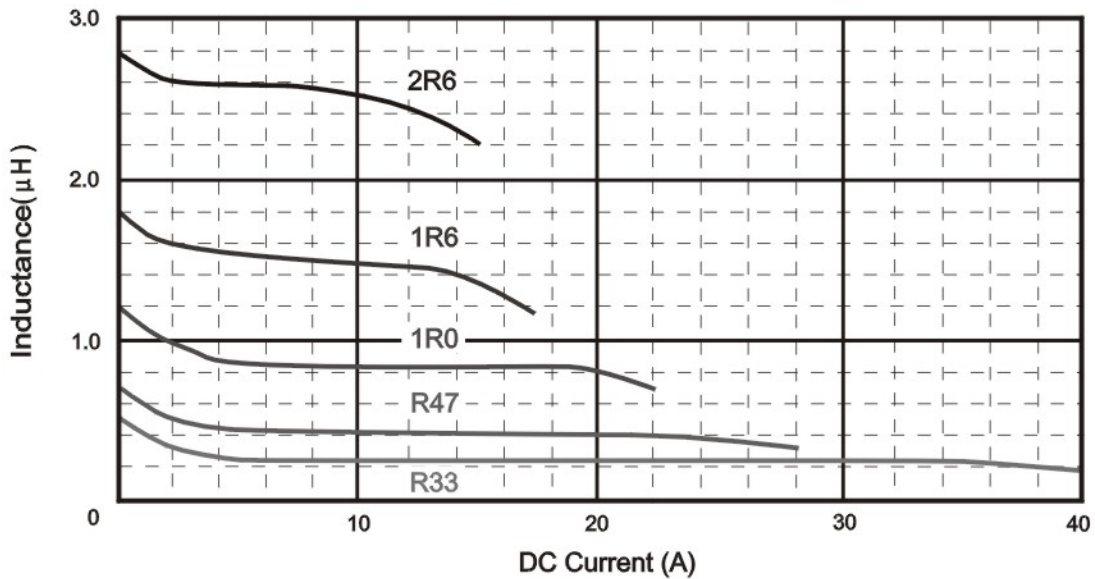


## V. Electrical Characteristics : - SP1305-L Series

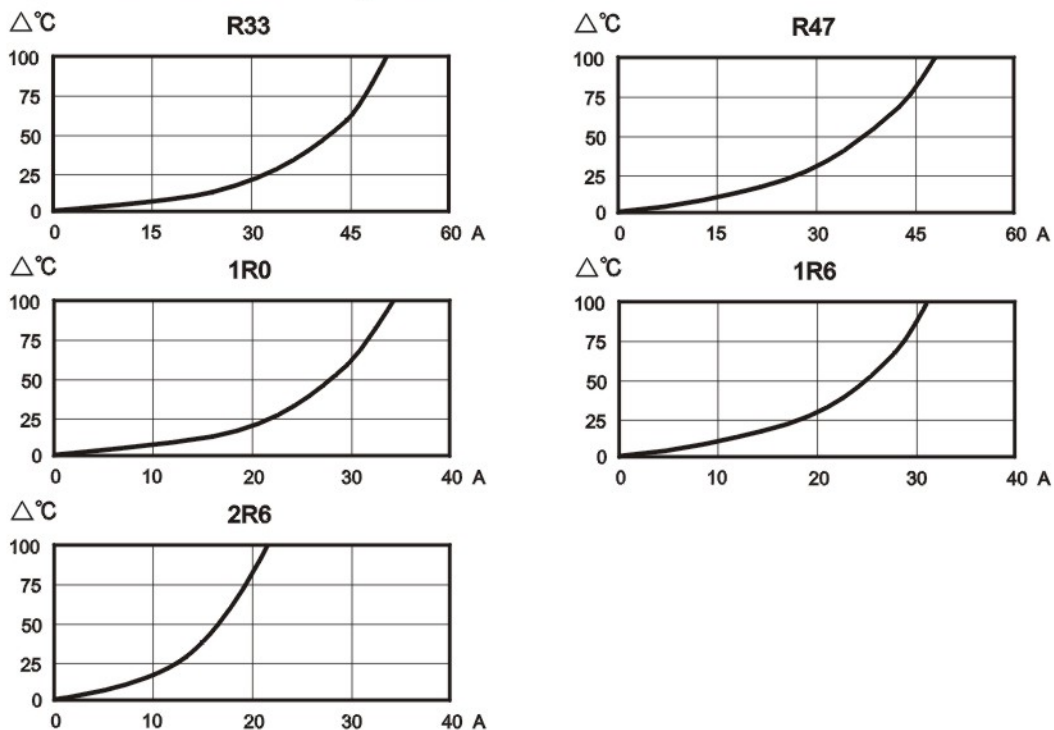
DWG No.	Initial Inductance L0 ( $\mu\text{H}$ )	Inductance at flat point L1 ( $\mu\text{H}$ )	Flat point ref. (A)	I <sub>rms</sub> (A)	I <sub>sat</sub> (A)	DC Resistance typ. (m $\Omega$ )
SP1305 R33YL   	$0.56 \pm 25\%$	$0.33 \pm 25\%$	3.0	35.0	38.0	1.26
R47YL   	$0.68 \pm 25\%$	$0.47 \pm 25\%$	3.0	30.0	29.0	1.80
1R0YL   	$1.20 \pm 25\%$	$1.00 \pm 25\%$	2.0	25.0	22.0	2.65
1R6YL   	$1.80 \pm 25\%$	$1.60 \pm 25\%$	2.0	20.0	18.0	3.45
2R6YL   	$2.80 \pm 25\%$	$2.60 \pm 25\%$	2.0	13.0	15.0	7.95

- 1).  : Packaging information  : Bulk  : Taping reel
- 2). "-  ": Reference Code
- 3). Measured Freq. of inductance is 100KHz / 1V
- 4). I<sub>rms</sub> base on Temp. rise 40°C typ.
- 5). I<sub>sat</sub> base on inductance drop 20% typ. of L1 value

### @ Inductance VS. DC Superposition Characteristics



### @ DC Current VS. Temperature Rise

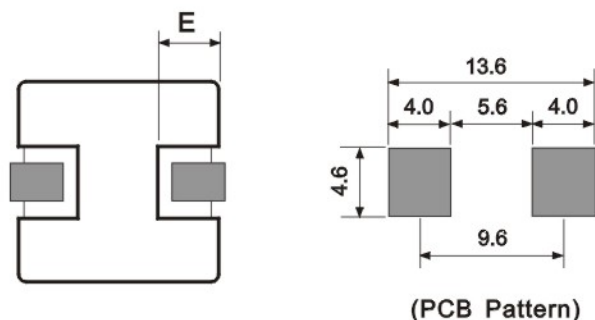
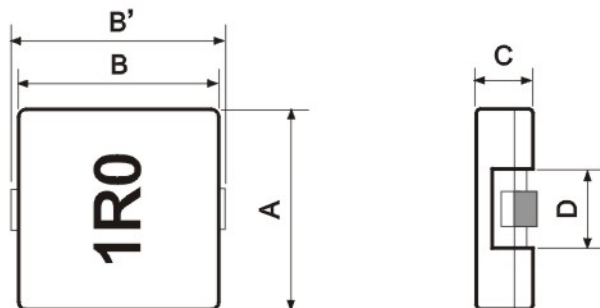


S P



# Shielded SMD Power Inductor SP1235-L Series

## I. Configuration & Dimensions : (m/m)



### ■ Features

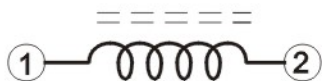
- Using the latest state of the art fine rectangular magnet wire construction
- Super low resistance, ultra high current rating

### ■ Applications

- Excellent for power line DC-DC conversion applications used in hard disk, notebook computers and other electronic equipment

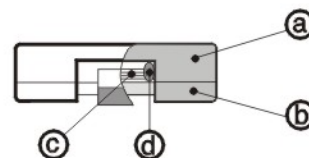
- A :  $12.70 \pm 0.30$  m/m
- B :  $12.70 \pm 0.30$  m/m
- B' :  $13.00 \pm 0.30$  m/m
- C :  $3.50 \pm 0.30$  m/m
- D : 4.20 typ. m/m
- E : 3.30 typ. m/m

## II. Schematic Diagram :



## III. Materials :

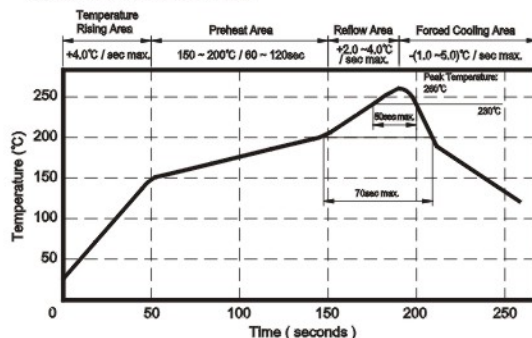
- a. Core : Iron ER core
- b. Core : Iron I core
- c. Wire : Ultra-fine rectangular Enamelled copper wire
- d. Adhesive : Epoxy resin
- e. Remark : Products comply with RoHS' requirements























## IV. General Specification :








- a. Storage temp. :  $-55^{\circ}\text{C} \text{ --- } +125^{\circ}\text{C}$
- b. Operating temp. :  $-55^{\circ}\text{C} \text{ --- } +125^{\circ}\text{C}$   
(Temp. rise included)
- c. Resistance to solder heat :  $260^{\circ}\text{C}$ , 10 secs.

Peak Temp :  $260^{\circ}\text{C}$  max.  
Max time above  $230^{\circ}\text{C}$  : 50sec max.  
Max time above  $200^{\circ}\text{C}$  : 70sec max.

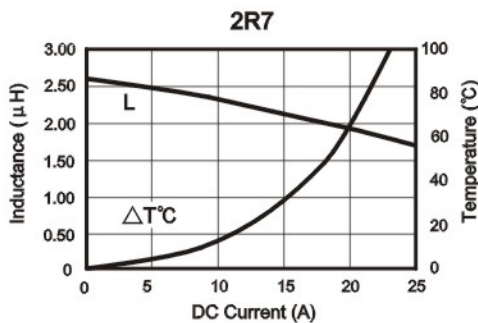
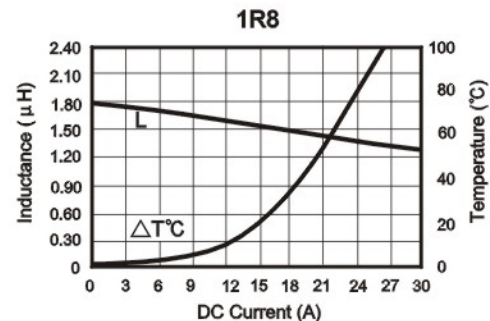
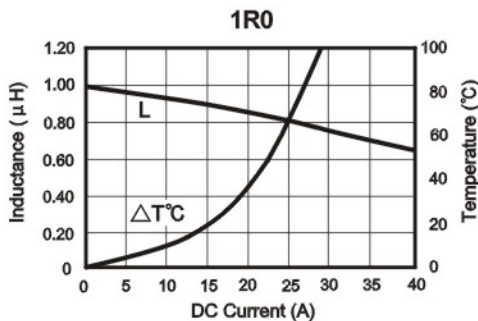
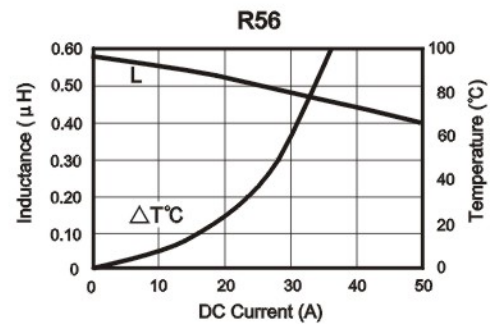
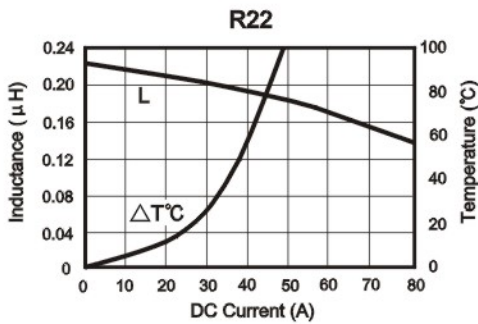


## V. Electrical Characteristics : - SP1235-L Series

DWG No.	Inductance L ( $\mu$ H)	Isat 1 (A)	Isat 2 (A)	I <sub>rms</sub> (A)	RDC (m $\Omega$ )	
					max.	typ.
SP1235 R22YL  -   	0.22 $\pm$ 30%	35.0	60.0	32.0	1.70	1.30
R56YL  -   	0.56 $\pm$ 30%	25.0	45.0	22.0	2.60	2.00
1R0YL  -   	1.00 $\pm$ 25%	15.0	30.0	18.6	4.40	3.40
1R8YL  -   	1.80 $\pm$ 25%	12.0	25.0	16.0	5.70	4.40
2R7YL  -   	2.70 $\pm$ 25%	9.0	18.0	14.0	7.40	5.70

- 1).  : Packaging information ... : Bulk  : Taping reel
- 2). "-": Reference Code
- 3). Measured Freq. of inductance is 100KHz /1 V
- 4). Isat 1 base on inductance drop 10% typ. of L value at 20 $^{\circ}$ C
- 5). Isat 2 base on inductance drop 30% typ. of L value at 20 $^{\circ}$ C
- 6). I<sub>rms</sub> base on Temp. rise 40 $^{\circ}$ C typ.

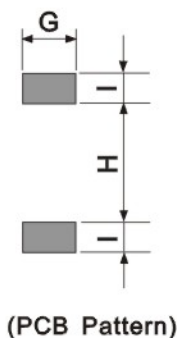
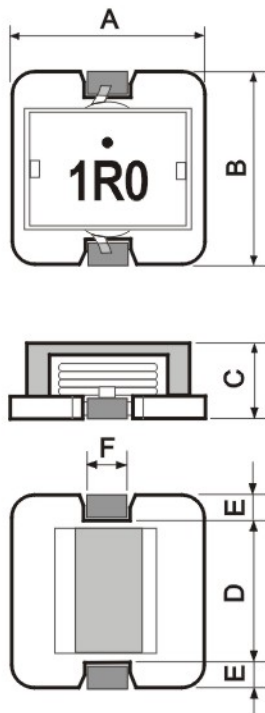
### @ Performance Graphs





# Shielded SMD Power Inductor SP2480-L Series

## I. Configuration & Dimensions : (m/m)



### ■ Features

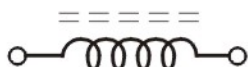
- Using the latest state of the art fine rectangular magnet wire construction
- Super low resistance, ultra high current rating  
Base material meets flammability requirements of UL 94-0
- Lead free construction

### ■ Applications

- Excellent for power line DC-DC conversion applications used in hard disk, notebook computers and other electronic equipment

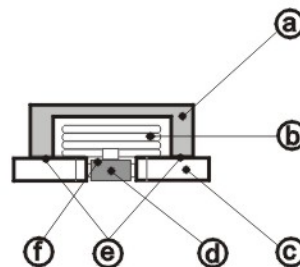
A	: 22.50 ± 0.50 m/m
B	: 24.50 ± 0.50 m/m
C	: 8.70 max. m/m
H	: 17.60 typ. m/m
E	: 3.30 typ. m/m
E	: 5.00 typ. m/m
E	: 7.00 typ. m/m
H	: 15.80 typ. m/m
I	: 5.00 typ. m/m

## II. Schematic Diagram :



## III. Materials :

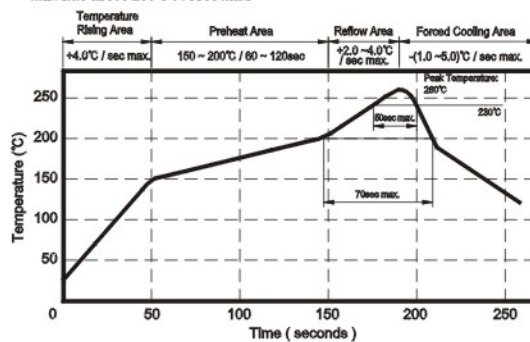
- Core : Ferrite core
- Wire : Ultra-fine rectangular Enamelled copper wire
- Base : UL 94V-0
- Terminal : Cu/Ni/Sn
- Adhesive : Epoxy resin
- Tape : Kapton class H
- Remark : Products comply with RoHS' requirements



## IV. General Specification :

- Storage temp. : -40°C --- +125°C
- Operating temp. : -40°C --- +125°C  
(Temp. rise included)
- Resistance to solder heat : 260°C, 10 secs.



Peak Temp : 260°C max.  
Max time above 230°C : 50sec max.  
Max time above 200°C : 70sec max.



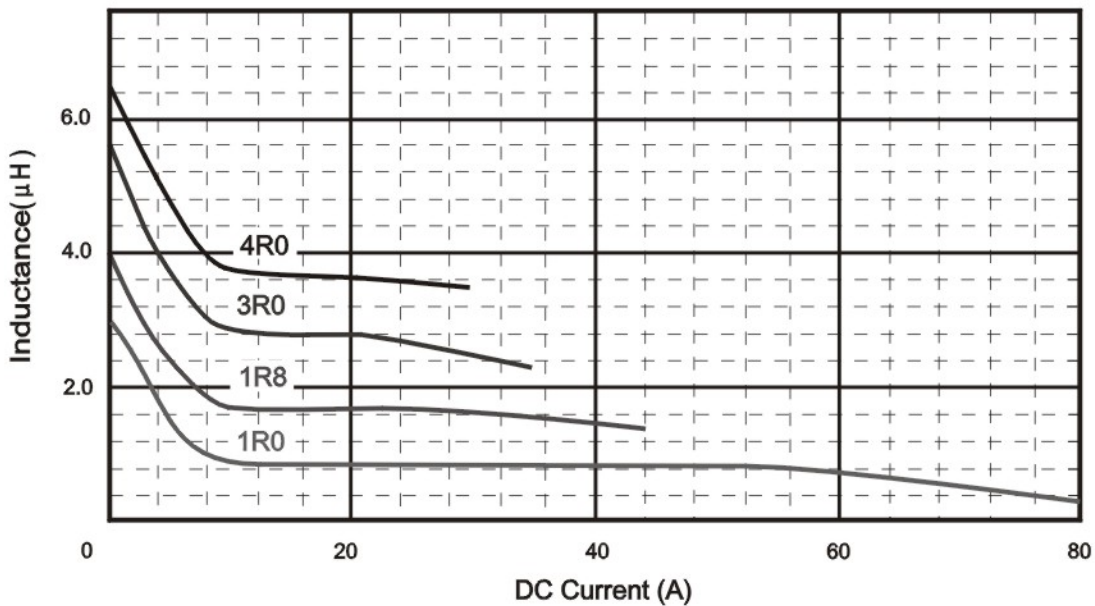


## V. Electrical Characteristics : - SP2480-L Series

DWG No.	Initial Inductance L0 (μH)	Inductance at flat point L1 (μH)	Flat point ref. (A)	IDC (A)	DC resistance (mΩ)	
					max.	typ.
SP2480 1R0YL□-□□□	3.0±25%	1.0±25%	8	50	1.0	0.70
1R8YL□-□□□	4.0±25%	1.8±25%	8	40	1.6	1.16
3R0YL□-□□□	5.3±25%	3.0±25%	8	32	2.8	2.17
4R0YL□-□□□	6.5±25%	4.0±25%	8	28	3.4	2.63

- 1). □ : Packaging information ... : Bulk  : Taping reel
- 2). "□□□" : Reference Code
- 3). Measured Freq. of inductance is 100KHz / 1V
- 4). IDC : Temp. rise 40°C max. & Δ L/L0A 25% typ

### @ Inductance VS. DC Superposition Characteristics



### @ DC Current VS. Temperature Rise

