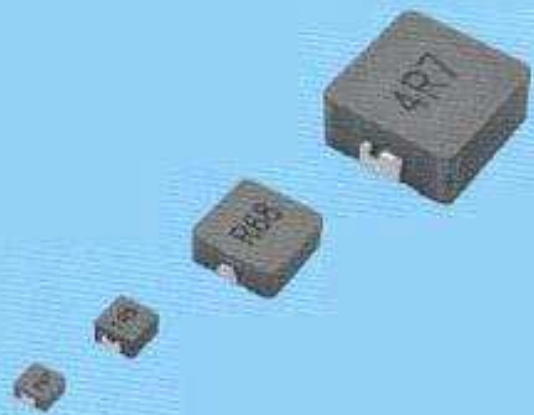


[www.aeccrystal.com](http://www.aeccrystal.com)

# Abundance Enterprise Company

# AEC



Surface Mount Large Current  
POWER INDUCTOR

## Brochure



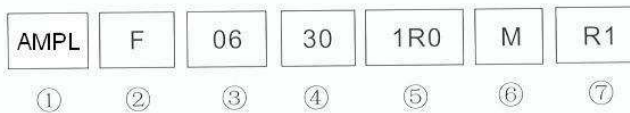
## ■ Features

- A coil embedded inductor with magnetic metal alloy powder. Shielded construction.
- Superior DC current characteristics, suitable for large current application.
- Low loss realized with low DC resistance.
- Ultra low buzz noise.

## ■ Application

- Ideal for DC/DC converters in personal computer, notebook PC, VTR and set top box etc.
- High current POL converters.
- DC/DC converters in other portable game devices, communication equipments and office automation electronic equipments.

## ■ Part Numbering



## Code Description

① Product Type Code	
AMPL	Power Inductor

② Coil Code

A/B/F

③ Dimensions ( L×W ) ( mm )

12	13.8X12.6
10	10.8X10.0
06	7.3X6.7
05	5.6X5.0
04	4.3X4.0

④ Product Height (H) ( mm)

50	5.0
40	4.0
30	3.0
20	2.0

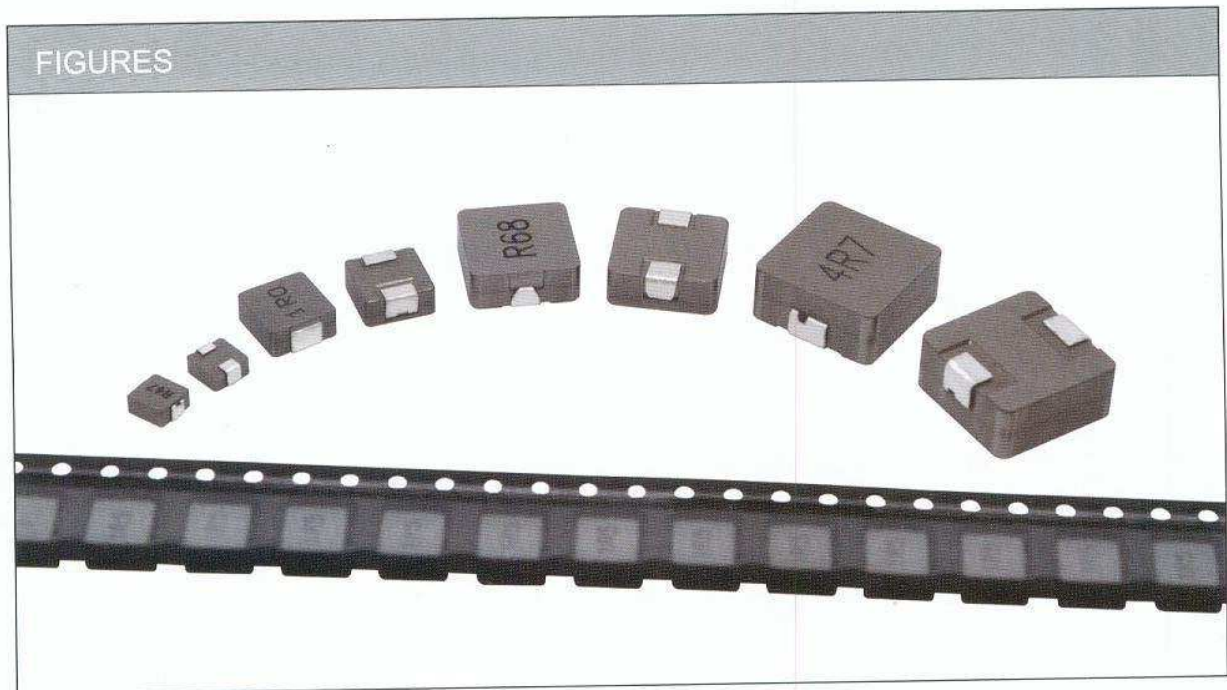
⑤ Nominal Inductance

Example	Nominal Value
R10	0.1 $\mu$ H
1R0	1.0 $\mu$ H
100	10 $\mu$ H
101	100 $\mu$ H
102	1000 $\mu$ H(1mH)
103	10000 $\mu$ H(10mH)

## Code Description

⑥ Inductance Tolerance	
J	$\pm 5\%$
K	$\pm 10\%$
L	$\pm 15\%$
M	$\pm 20\%$
N	$\pm 30\%$

⑦ Package	
R1	Tape & Reel
T1	Tray



## ■ List of Power Inductor

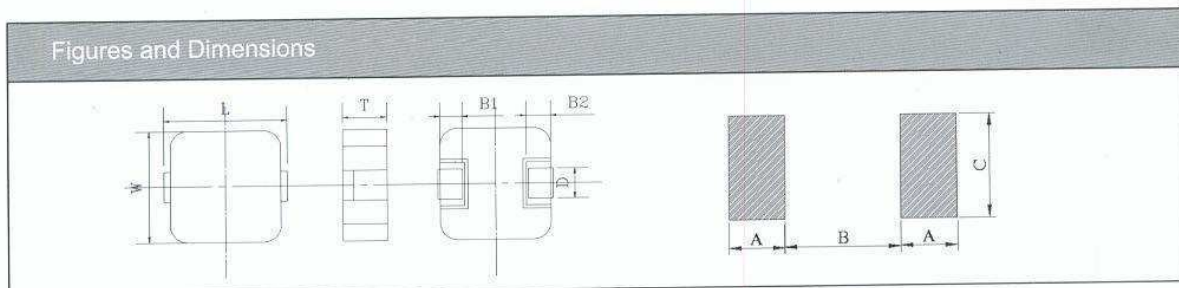
Series	Dimensions LxWxT (mm)	Inductance Range( $\mu$ H)	DCR Range (m $\Omega$ )	Saturation Current Isat Typ. (A)	Heat Rating Current Irms Typ. (A)
A MPLF0420	4.3x 4.0 x 2.0	0.47 ~ 4.7	14.0 ~ 105.0	2.4 ~ 9.0	2.0 ~ 7.0
A MPLF0520	5.6x 5.0 x 2.0	0.47 ~ 2.2	8.0 ~ 38.0	4.5 ~ 11.5	4.0 ~ 10.5
A MPLF0530	5.6x 5.0 x 3.0	1.0 ~ 10.0	10.0 ~ 107.0	2.4 ~ 7.5	2.1 ~ 7.2
A MPLF0620	7.3x 6.7 x 2.0	1.0 ~ 6.8	18.0 ~ 120.0	3.2 ~ 9.0	2.5 ~ 7.0
A MPLF0624	7.3x 6.7 x 2.4	2.2 ~ 10.0	24.0 ~ 95.0	2.8 ~ 6.5	2.7 ~ 5.7
A MPLF0630	7.3x 6.7 x 3.0	0.2 ~ 33.0	1.9 ~ 220.0	2.2 ~ 24.0	1.8 ~ 20.0
A MPLF0640	7.3x 6.7 x 4.0	2.2 ~ 15.0	11.5 ~ 92.0	3.5 ~ 9.5	3.1 ~ 8.5
A MPLF0650	7.3x 6.7 x 5.0	1.0 ~ 47.0	6.0 ~ 230.0	1.8 ~ 13.5	1.5 ~ 12.5
AMPLB/F1040	10.8x10.0 x 4.0	0.22 ~ 100.0	0.8 ~ 300.0	15 ~ 45.0	12 ~ 35.0
AMPLB/F1250	13.8x12.6 x 5.2	0.36 ~ 4.7	0.8 ~ 8.5	12.0 ~ 38.0	11.5 ~ 32.0
AMPLB/F1260	13.8x12.6 x 6.0	0.44 ~ 150.0	0.8 ~ 340.0	2.3 ~ 40.0	2.0 ~ 38.0

## ■ Notes

- Inductance is measured with a Q meter, LCR meter or an impedance analyzer. Test frequency: 100KHz;
- DC resistance is measured with a digital DCR analyzer;
- Saturation current (Isat) that will cause L0 to approximately drop 20% .
- Heat rating current (Irms) that will cause a temperature rise  $\Delta T$  of 40°C approximately.
- Operating temperature range - 55 °C to + 125 °C.
- Withstanding voltage: 30V DC max.

## ■ Electrical Characteristics

### AMPLB/F 1260 Series



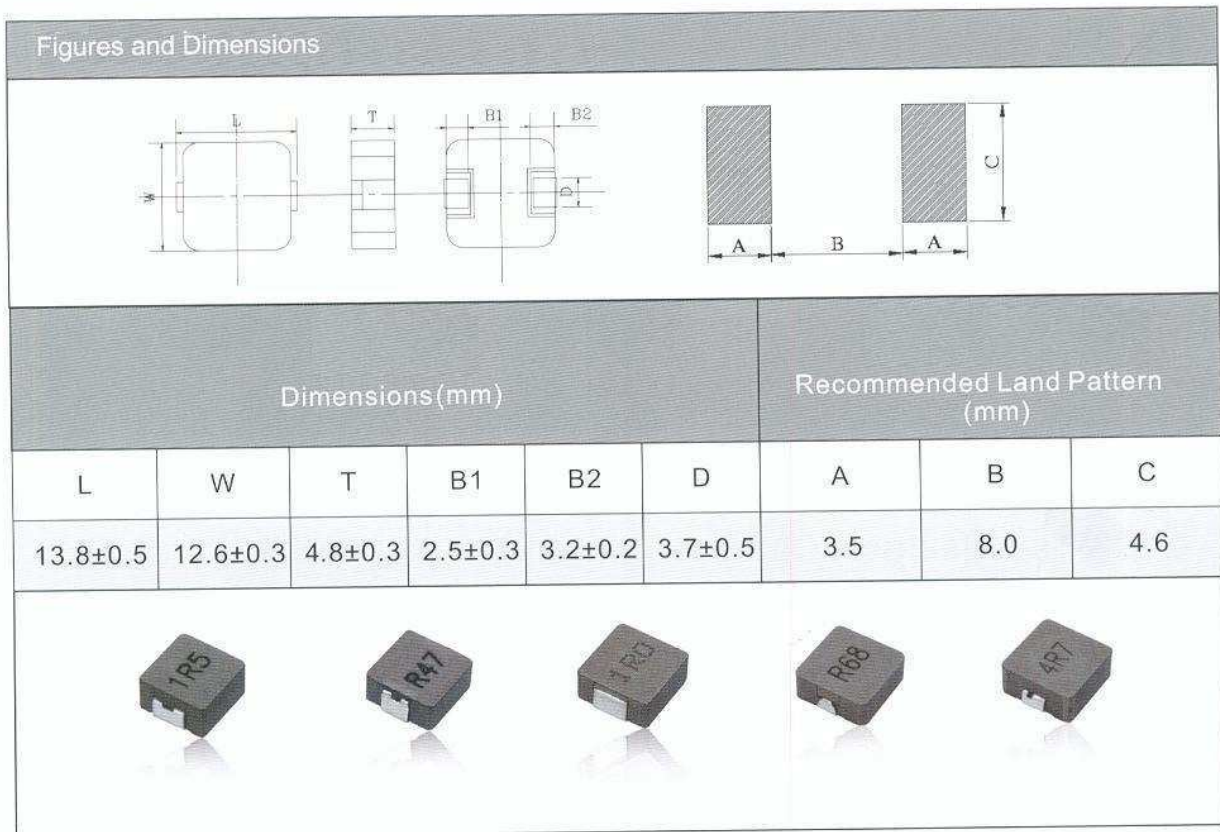
## AMPLB/F 1260 Series

Dimensions (mm)						Recommended Land Pattern(mm)		
L	W	T	B1	B2	D	A	B	C
13.8±0.5	12.6±0.3	5.8±0.3	2.5±0.3	3.2±0.2	3.7±0.5	3.5	8.0	4.6

## Electrical Characteristics

Part Number	Inductance ( $\mu\text{H}$ )@0A	Tolerance	Resistance ( $\text{m}\Omega$ ) $\pm 7\%$	Saturation Current Typ.(A)	Heat Rating Current Typ.(A)
AMPLB1260-R44	0.44	$\pm 20\%$	0.8	40.0	38.0
AMPLB1260-R68	0.68	$\pm 20\%$	1.25	38.0	32.0
AMPLB1260-1R0	1.00	$\pm 20\%$	1.75	25.0	24.0
AMPLB1260-1R5	1.50	$\pm 20\%$	2.45	21.0	18.0
AMPLB1260-2R2	2.20	$\pm 20\%$	3.4	18.0	16.0
AMPLF1260-3R3	3.30	$\pm 20\%$	7.0	15.0	14.0
AMPLF1260-4R7	4.70	$\pm 20\%$	8.5	13.0	12.0
AMPLF1260-5R6	5.60	$\pm 20\%$	10.0	12.0	10.0
AMPLF1260-6R8	6.80	$\pm 20\%$	12.0	11.0	9.0
AMPLF1260-8R0	8.00	$\pm 20\%$	14.0	9.5	8.0
AMPLF1260-100	10.0	$\pm 20\%$	17.5	8.0	7.5
AMPLF1260-120	12.0	$\pm 20\%$	23.0	8.0	6.0
AMPLF1260-150	15.0	$\pm 20\%$	30.0	7.5	6.0
AMPLF1260-220	22.0	$\pm 20\%$	38.0	6.0	5.0
AMPLF1260-330	33.0	$\pm 20\%$	53.0	5.0	4.0
AMPLF1260-470	47.0	$\pm 20\%$	82.0	4.3	3.5
AMPLF1260-680	68.0	$\pm 20\%$	120.0	3.5	3.0
AMPLF1260 101	100.0	$\pm 20\%$	185.0	3.0	2.5
AMPLF1260 121	120.0	$\pm 20\%$	220.0	2.5	2.0
AMPLF1260-151	150.0	$\pm 20\%$	340.0	2.3	2.0

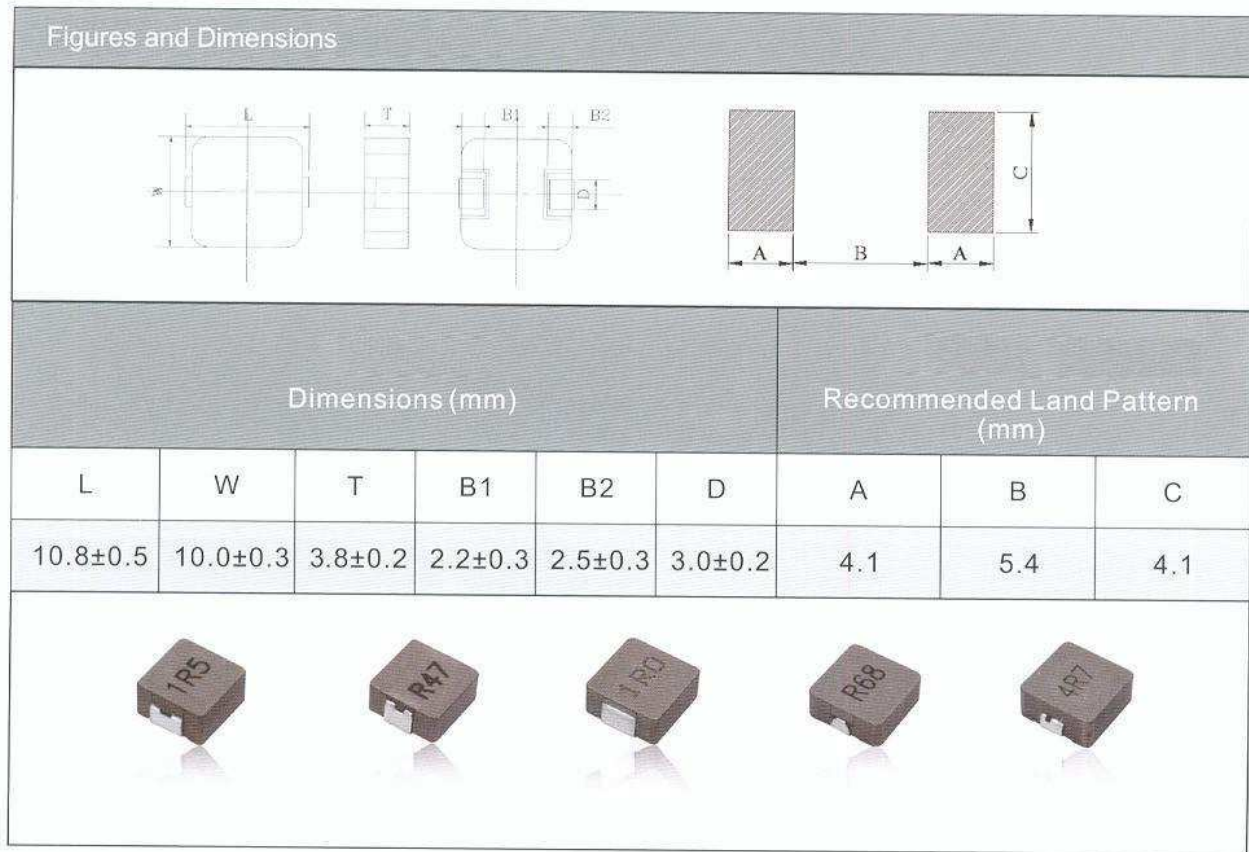
## AMPLB/F 1250 Series



## Electrical Characteristics

Part Number	Inductance (μH)@0A	Tolerance	Resistance (mΩ) ±7%	Saturation Current Typ.(A)	Heat Rating Current Typ.(A)
AMPLB1250-R36	0.36	±20%	0.80	38.0	32.0
AMPLB1250-R47	0.47	±20%	1.10	35.0	27.0
AMPLB1250-R68	0.68	±20%	1.40	30.0	25.0
AMPLB1250-R82	0.82	±20%	1.60	29.0	23.5
AMPLB1250-1R0	1.00	±20%	1.80	24.0	23.0
AMPLB1250-1R5	1.50	±20%	2.70	20.0	17.0
AMPLB1250-2R2	2.20	±20%	3.7	17.0	14.0
AMPLF1250-3R3	3.30	±20%	7.50	15.0	13.0
AMPLF1250-4R7	4.70	±20%	8.8	12.5	11.5

## AMPLB/F 1040 Series



## Electrical Characteristics

Part Number	Inductance (μH)@0A	Tolerance	Resistance (mΩ) ±7%	Saturation Current Typ.(A)	Heat Rating Current Typ.(A)
AMPLB1040-R22	0.22	±20%	0.90	45	35
AMPLB1040-R33	0.33	±20%	1.0	38	30
AMPLB1040-R36	0.36	±20%	1.10	35	28
AMPLB1040-R47	0.47	±20%	1.20	28	24
AMPLB1040-R56	0.56	±20%	1.70	27	23
AMPLB1040-R68	0.68	±20%	2.10	25	22
AMPLB1040-1R0	1.00	±20%	3.00	23	20
AMPLF1040-1R5	1.50	±20%	4.7	18	15
AMPLF1040-2R2	2.20	±20%	6.5	13.5	12.0
AMPLF1040-3R3	3.30	±20%	11.0	12.0	10.0



## AMPLB/F 1040 Series

### Electrical Characteristics

PartNumber	Inductance ( $\mu\text{H}$ )@0A	Tolerance	Resistance ( $\text{m}\Omega$ ) $\pm 7\%$	Saturation Current Typ.(A)	HeatRating Current Typ.(A)
AMPLF1040-4R7	4.70	$\pm 20\%$	14.0	10.5	9.0
AMPLF1040-6R8	6.80	$\pm 20\%$	20.7	8.5	7.2
AMPLF1040-8R2	8.20	$\pm 20\%$	25.0	6.5	6.0
AMPLF1040-100	10.0	$\pm 20\%$	30.0	6.0	5.3
AMPLF1040-150	15.0	$\pm 20\%$	45.0	5.4	4.5
AMPLF1040-220	22.0	$\pm 20\%$	62.0	4.5	4.0
AMPLF1040-330	33.0	$\pm 20\%$	95.0	4.0	3.5
AMPLF1040-470	47.0	$\pm 20\%$	150.0	3.0	2.5
AMPLF1040-680	68.0	$\pm 20\%$	190.0	2.3	2.0
AMPLF1040-101	100.0	$\pm 20\%$	300.0	1.5	1.2

## AMPLF 0630 Series

Figures and Dimensions								
Dimensions (mm)						Recommended Land Pattern (mm)		
L	W	T	B1	B2	D	A	B	C
7.3 $\pm$ 0.3	6.7 $\pm$ 0.3	2.8 $\pm$ 0.2	1.5 $\pm$ 0.3	2.0 $\pm$ 0.2	3.0 $\pm$ 0.2	2.3	3.7	3.5

## Electrical Characteristics

Part Number	Inductance (μH)@0A	Tolerance	Resistance (mΩ) ±7%	Saturation Current Typ.(A)	Heat rating Current Typ.(A)
AMPLF0630-R20	0.20	±20%	1.9	24.0	20.0
AMPLF0630-R33	0.33	±20%	3.0	20.0	18.0
AMPLF0630-R47	0.47	±20%	4.0	18.0	16.0
AMPLF0630-R56	0.56	±20%	4.1	16.5	15.5
AMPLF0630-R68	0.68	±20%	5.0	15.5	12.0
AMPLF0630-1R0	1.00	±20%	7.0	12.5	11.5
AMPLF0630-1R5	1.50	±20%	11.5	10.9	9.2
AMPLF0630-2R2	2.20	±20%	14.0	8.2	8.0
AMPLF0630-3R3	3.30	±20%	25.5	7.6	6.1
AMPLF0630-4R7	4.70	±20%	36.0	6.3	5.0
AMPLF0630-6R8	6.80	±20%	53.0	4.9	4.3
AMPLF0630-8R2	8.20	±20%	59.5	3.8	3.6
AMPLF0630-100	10.0	±20%	69.5	3.6	3.6
AMPLF0630-150	15.0	±20%	110.0	2.9	2.7
AMPLF0630-220	22.0	±20%	150.0	2.5	2.3
AMPLF0630-330	33.0	±20%	220.0	2.2	1.8

## AMPLF 0624 Series

Figures and Dimensions								
Dimensions (mm)						Recommended Land Pattern (mm)		
L	W	T	B1	B2	D	A	B	C
7.3±0.3	6.7±0.3	2.2±0.2	1.5±0.3	2.0±0.2	3.0±0.2	2.3	3.7	3.5

## AMPLF 0624 Series

### Electrical Characteristics

PartNumber	Inductance ( $\mu\text{H}$ )@0A	Tolerance	Resistance ( $\text{m}\Omega$ ) $\pm 7\%$	Saturation Current Typ.(A)	HeatRating Current Typ.(A)
AMPLF0624-2R2	2.20	$\pm 20\%$	24	6.5	5.7
AMPLF0624-3R3	3.30	$\pm 20\%$	36	5.0	4.3
AMPLF0624-4R7	4.70	$\pm 20\%$	60	4.3	3.5
AMPLF0624-6R8	6.80	$\pm 20\%$	79	3.5	3.1
AMPLF0624-100	10.0	$\pm 20\%$	95	2.8	2.7

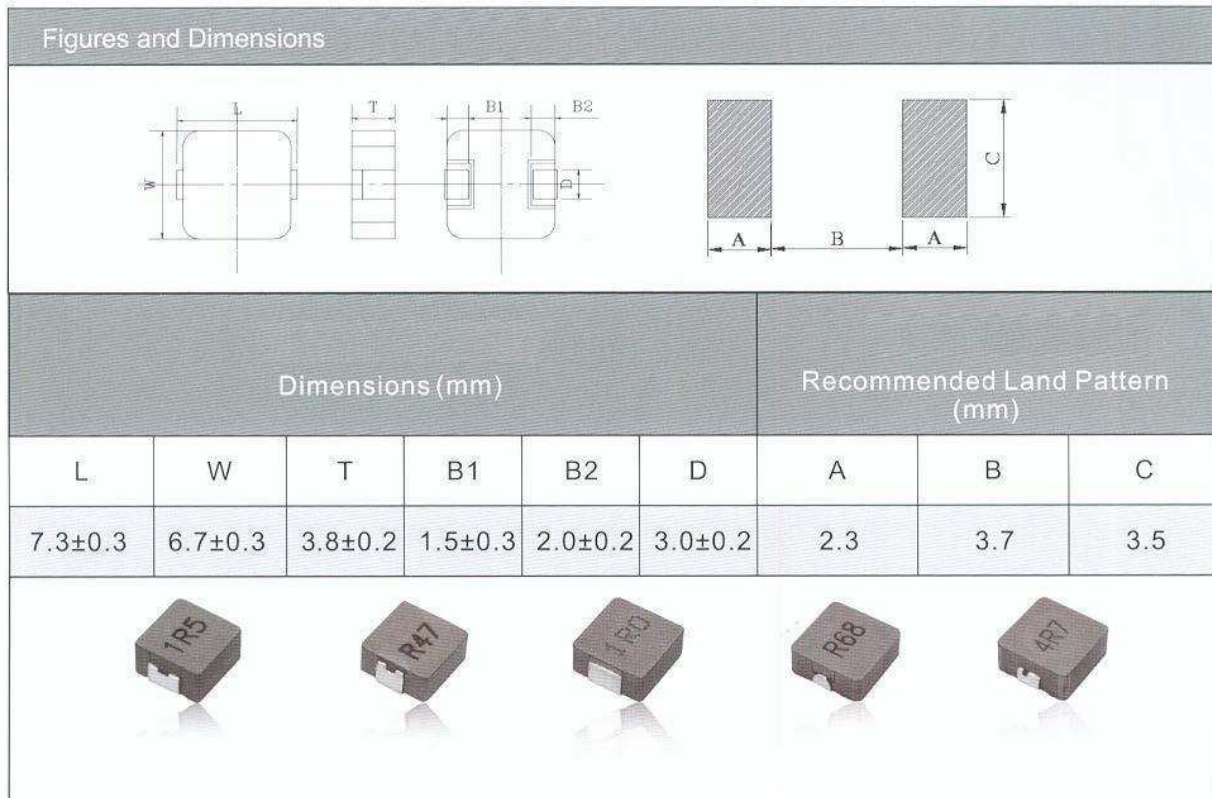
## AMPLF 0620 Series

Figures and Dimensions								
Dimensions (mm)						Recommended Land Pattern (mm)		
L	W	T	B1	B2	D	A	B	C
7.3 $\pm$ 0.3	6.7 $\pm$ 0.3	1.8 $\pm$ 0.2	1.5 $\pm$ 0.3	2.0 $\pm$ 0.2	3.0 $\pm$ 0.2	2.3	3.7	3.5

### Electrical Characteristics

PartNumber	Inductance ( $\mu\text{H}$ )@0A	Tolerance	Resistance ( $\text{m}\Omega$ ) $\pm 7\%$	Saturation Current Typ.(A)	HeatRating Current Typ.(A)
AMPLF0620-1R0	1.00	$\pm 20\%$	18	9.0	7.0
AMPLF0620-1R5	1.50	$\pm 20\%$	24	6.5	5.5
AMPLF0620-2R2	2.20	$\pm 20\%$	37	5.5	4.5
AMPLF0620-3R3	3.30	$\pm 20\%$	50	4.3	3.5
AMPLF0620-4R7	4.70	$\pm 20\%$	70	4.0	3.0
AMPLF0620-6R8	6.80	$\pm 20\%$	115	2.8	2.3

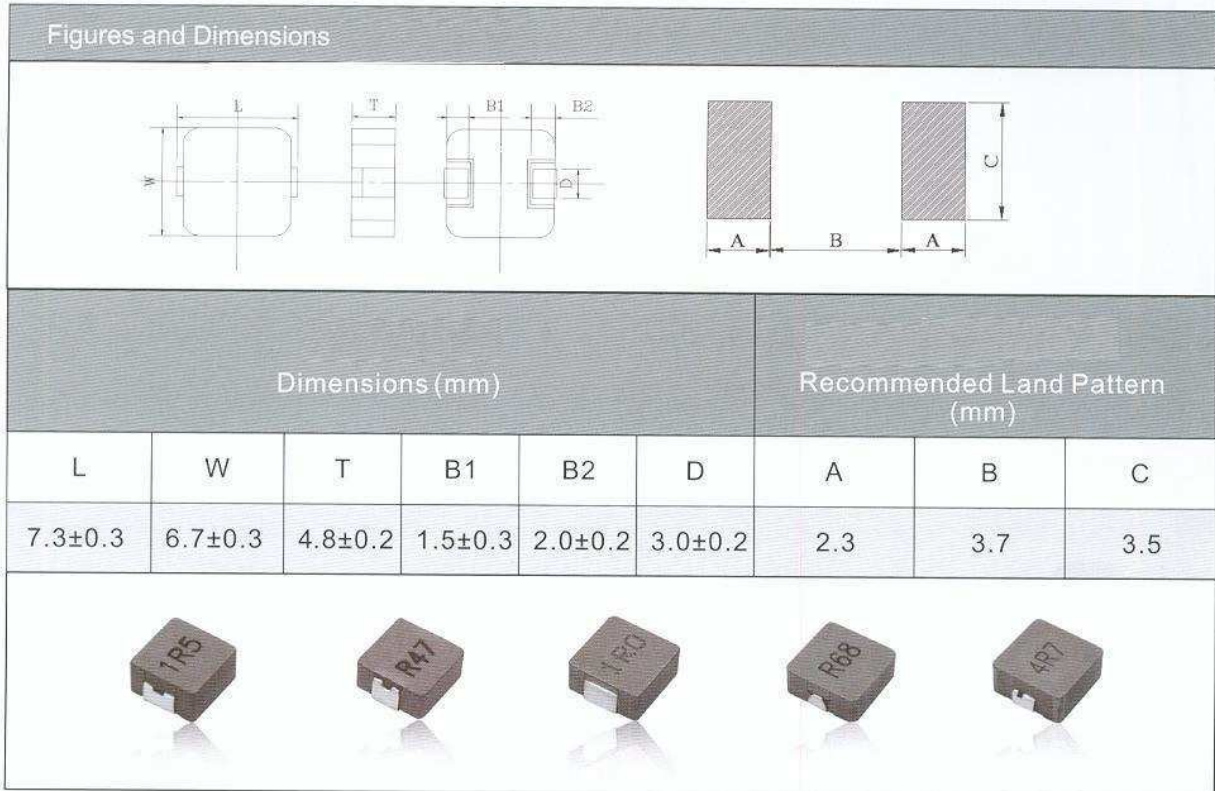
## AMPLF 0640 Series



## Electrical Characteristics

PartNumber	Inductance (μH)@0A	Tolerance	Resistance (mΩ) ±7%	Saturation Current Typ.(A)	HeatRating Current Typ.(A)
AMPLF0640-1R5	1.50	±20%	7.7	11.0	10.0
AMPLF0640-2R2	2.20	±20%	11.5	9.5	8.5
AMPLF0640-3R3	3.30	±20%	19.0	9.0	8.0
AMPLF0640-4R7	4.70	±20%	32.0	7.0	6.0
AMPLF0640-100	10.0	±20%	62.0	4.0	4.0
AMPLF0640-150	15.0	±20%	92.0	3.5	3.1

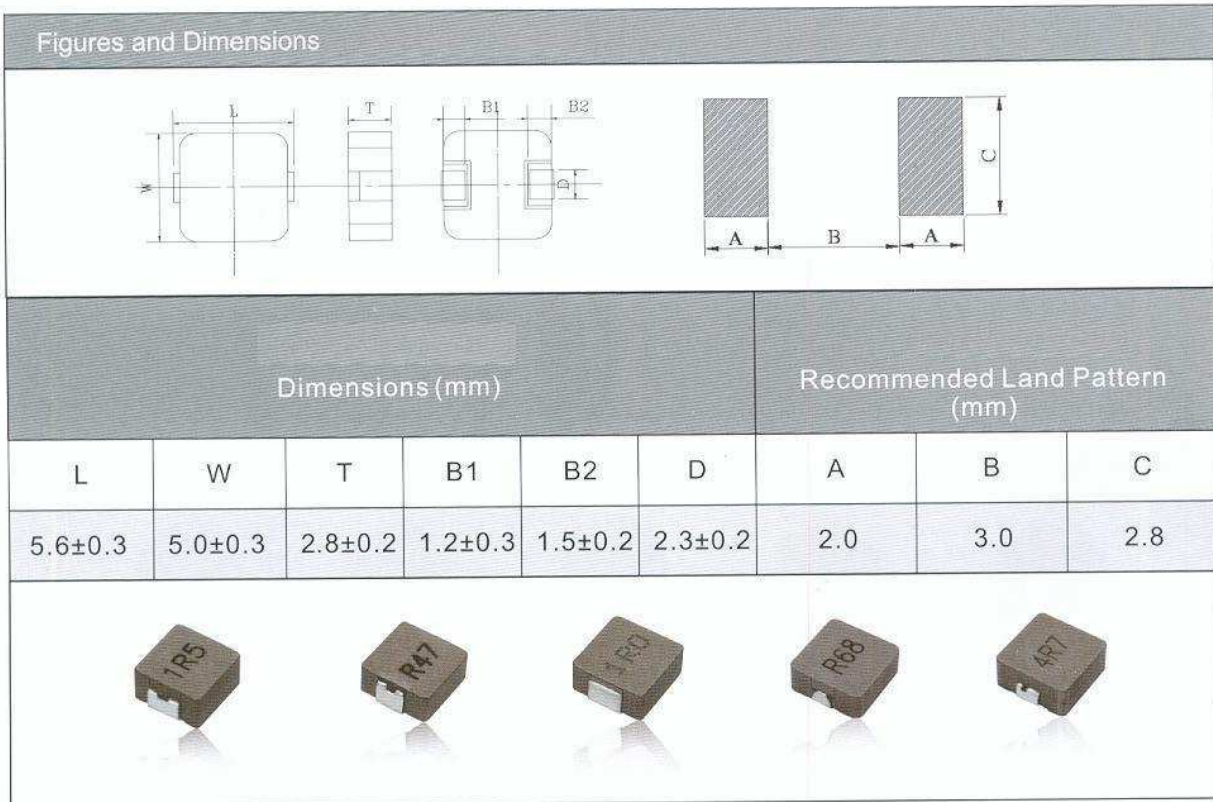
## AMPLF 0650 Series



## Electrical Characteristics

Part Number	Inductance (μH)@0A	Tolerance	Resistance (mΩ) ±7%	Saturation Current Typ.(A)	Heat Rating Current Typ.(A)
AMPLF0650-1R0	1.00	±20%	5.8	15.0	12.5
AMPLF0650-1R5	1.50	±20%	7.5	12.0	11.0
AMPLF0650-2R2	2.20	±20%	10.5	11.0	10.0
AMPLF0650-3R3	3.30	±20%	17.0	9.0	8.0
AMPLF0650-4R7	4.70	±20%	22.5	8.0	6.5
AMPLF0650-5R6	5.60	±20%	31.0	7.0	6.0
AMPLF0650-6R8	6.80	±20%	36.0	6.0	5.5
AMPLF0650-8R2	8.20	±20%	40.0	5.5	5.0
AMPLF0650-100	10.0	±20%	48.0	5.2	4.5
AMPLF0650-150	15.0	±20%	75.0	4.5	3.3
AMPLF0650-180	18.0	±20%	95.0	4.0	3.0
AMPLF0650-220	22.0	±20%	115.0	3.4	2.6
AMPLF0650-330	33.0	±20%	170.0	2.8	2.2
AMPLF0650-470	47.0	±20%	230.0	2.1	1.5

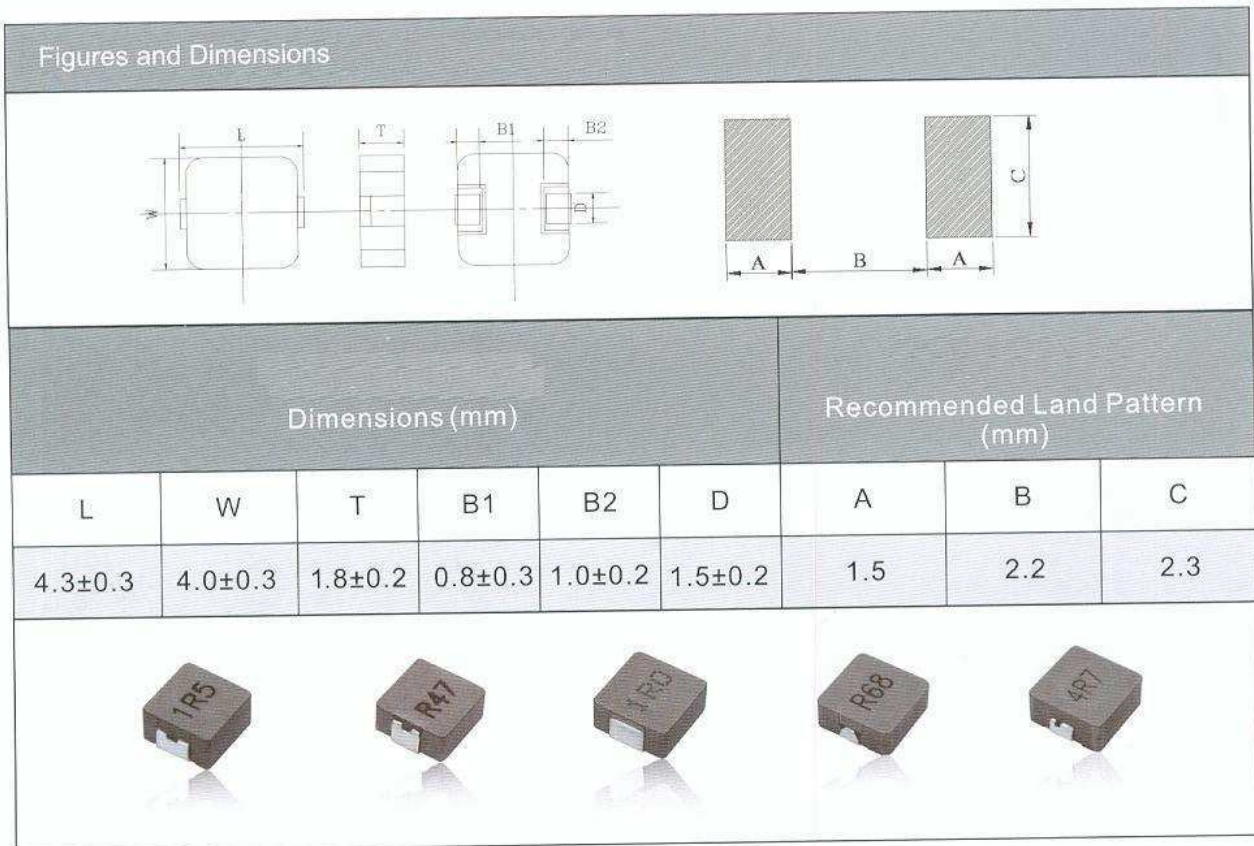
## AMPLF 0530 Series



## Electrical Characteristics

PartNumber	Inductance (μH)@0A	Tolerance	Resistance (mΩ) ±7%	Saturation Current Typ.(A)	HeatRating Current Typ.(A)
A MPLF0530-1R0	1.00	±20%	10.0	7.5	7.0
A MPLF0530-1R5	1.50	±20%	16.5	6.5	6.0
A MPLF0530-2R2	2.20	±20%	24.0	6.0	5.5
A MPLF0530-3R3	3.30	±20%	34.0	4.8	4.5
A MPLF0530-4R7	4.70	±20%	55.0	3.5	3.2
A MPLF0530-100	10.0	±20%	107.0	2.4	2.1

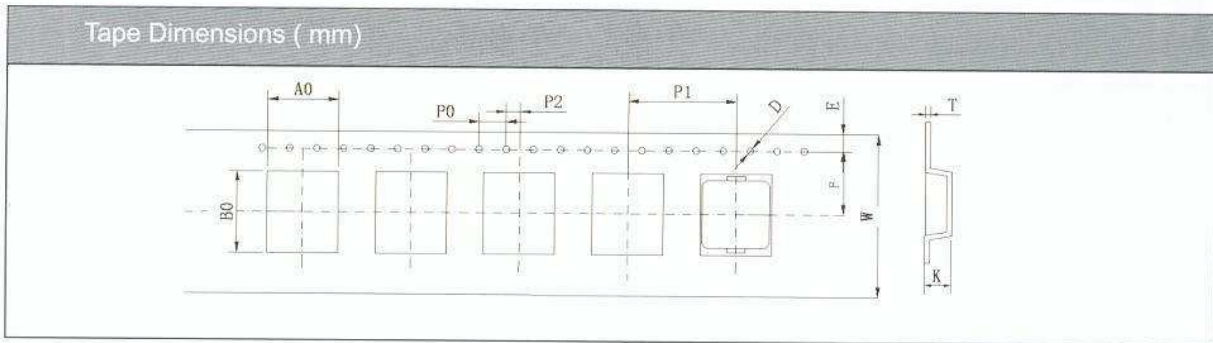
## AMPLF 0420 Series



## Electrical Characteristics

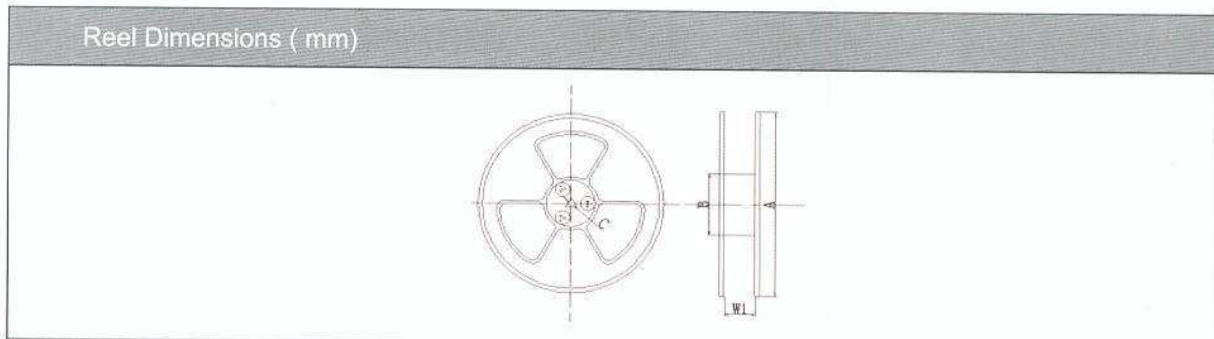
Part number	Inductance (μH)@0A	Tolerance	Resistance (mΩ) ±7%	Saturation current Typ.(A)	Heat rating current Typ.(A)
AMPLF0420-R47	0.47	±20%	14	9.0	7.0
AMPLF0420-1R0	1.00	±20%	24	5.5	4.5
AMPLF0420-1R5	1.50	±20%	45	4.5	3.7
AMPLF0420-2R2	2.20	±20%	60	3.5	3.0
AMPLF0420-3R3	3.30	±20%	77	2.6	2.5
AMPLF0420-4R7	4.70	±20%	105	2.4	2.0

## Package



	A0	B0	W	F	E	P1	P2	P0	D	T	K
12 Series	±0.1	±0.1	±0.3	±0.1	±0.1	±0.1	±0.1	±0.1	±0.05	±0.05	±0.1
	13.0	14.0	24	11.5	1.75	16	2.0	4.0	1.5	0.4	H+0.2
10 Series	±0.1	±0.1	±0.3	±0.1	±0.1	±0.1	±0.1	±0.1	±0.05	±0.05	±0.1
	10.3	11.6	24	11.5	1.75	16	2.0	4.0	1.5	0.4	H+0.2
06 Series	±0.1	±0.1	±0.3	±0.1	±0.1	±0.1	±0.1	±0.1	±0.05	±0.05	±0.1
	7.0	7.8	16	7.5	1.75	12	2.0	4.0	1.5	0.4	H+0.2
05 Series	±0.1	±0.1	±0.3	±0.1	±0.1	±0.1	±0.1	±0.1	±0.05	±0.05	±0.1
	5.5	6.1	12	5.5	1.75	8	2.0	4.0	1.5	0.3	H+0.2
04 Series	±0.1	±0.1	±0.3	±0.1	±0.1	±0.1	±0.1	±0.1	±0.05	±0.05	±0.1
	4.3	4.7	12	5.5	1.75	8	2.0	4.0	1.5	0.3	H+0.2

Note: H product height.



	A	B	C	W1	Quality(pcs/Reel)
12 Series	330	100	13.0	24.0	500
10 Series	330	100	13.0	24.0	500
06 Series	330	100	13.0	16.0	1000
05 Series	330	100	13.0	12.0	2000
04 Series	330	100	13.0	12.0	2000





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