

## SMD POWER INDUCTOR ACKCS Series

### ● FEATURES 特性

1.表面贴装,小型、超薄电感器,大功率,高饱和,低电阻之特性.

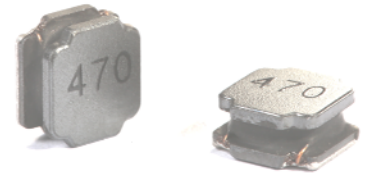
The inductor designed as surface mounting, smallest and thinnest with high power, high saturation and low resistance.

2.磁性胶水涂敷结构极大减少了噪声,闭合磁路结构设计,漏磁少,抗EMI能力强.

Magnetic-resin shielded structure reduces buzz noise to ultra-low levels, Closed magnetic circuit structure reduces magnetic leakage flux, high performance of anti-EMI.

3.符合AEC-Q200 AEC-Q200 qualified

4.Operating Temperature : -40°C ~ +125°C (Including self - temperature rise)



### ● PART NUMBERING SYSTEM 品名系统

ACKCS 6045 - 1uH - M  
A B C D

A: Type 型号 B: External Dimensions 外形尺寸

C: Inductance 电感值 D: Inductance Tolerance 电感值公差 (M:±20% N:±30%)

### ● SHAPES AND DIMENSIONS 外形尺寸 (Unit:mm)

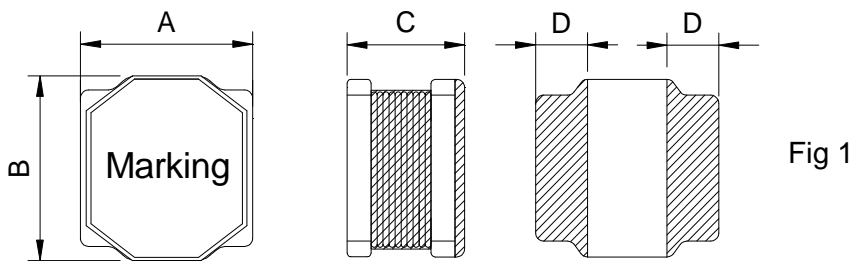


Fig 1

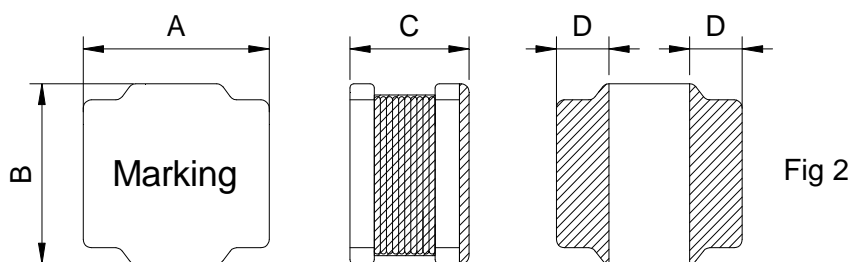
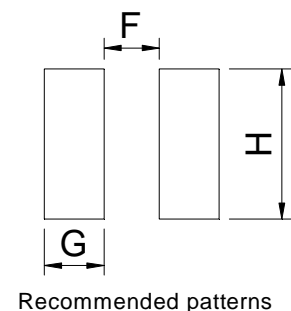


Fig 2



Recommended patterns

TYPE(型号)	A	B	C	D	F	G	H	Fig
ACKCS3015	3.0±0.2	3.0±0.2	1.7 Max	0.9±0.3	0.7	1.4	3.0	2
ACKCS4018	4.0±0.2	4.0±0.2	1.8 Max	1.2±0.3	1.0	1.7	4.0	2
ACKCS5040	5.0±0.2	5.0±0.2	4.1 Max	1.6±0.3	1.1	2.2	5.0	1
ACKCS6045	6.0±0.3	6.0±0.3	4.7 Max	1.85±0.3	1.8	2.4	6.0	1
ACKCS6055	6.0±0.3	6.0±0.3	5.7 Max	1.85±0.3	1.8	2.4	6.0	1

● SPECIFICATION TABLE 规格特性表

ACKCS3015 Series

PART NUMBER 品名	INDUCTANCE ( $\mu$ H) 电感值	DCR ( $\Omega$ ) 直流电阻		Isat (A) 饱和电流		Irms (A) 温升电流	
		Typical	Maximum	Typical	Maximum	Typical	Maximum
ACKCS3015-1 $\mu$ H/N	1 $\pm$ 30%	0.037	0.045	2.55	2.33	2.40	2.00
ACKCS3015-1.5 $\mu$ H/N	1.5 $\pm$ 30%	0.050	0.065	2.50	2.30	2.25	1.95
ACKCS3015-2.2 $\mu$ H/M	2.2 $\pm$ 20%	0.064	0.078	1.80	1.60	2.00	1.70
ACKCS3015-3.3 $\mu$ H/M	3.3 $\pm$ 20%	0.084	0.104	1.52	1.40	1.60	1.40
ACKCS3015-4.7 $\mu$ H/M	4.7 $\pm$ 20%	0.120	0.145	1.25	1.10	1.40	1.20
ACKCS3015-6.8 $\mu$ H/M	6.8 $\pm$ 20%	0.190	0.230	1.00	0.90	1.20	1.05
ACKCS3015-10 $\mu$ H/M	10 $\pm$ 20%	0.26	0.30	0.90	0.80	0.95	0.85
ACKCS3015-15 $\mu$ H/M	15 $\pm$ 20%	0.40	0.46	0.70	0.60	0.85	0.75
ACKCS3015-22 $\mu$ H/M	22 $\pm$ 20%	0.46	0.55	0.58	0.52	0.70	0.60
ACKCS3015-33 $\mu$ H/M	33 $\pm$ 20%	0.91	1.05	0.50	0.44	0.51	0.45
ACKCS3015-47 $\mu$ H/M	47 $\pm$ 20%	1.10	1.30	0.45	0.38	0.48	0.42
ACKCS3015-100 $\mu$ H/M	100 $\pm$ 20%	3.15	3.45	0.32	0.28	0.28	0.25

**Remark:** 1. All test data is reference to 25 $^{\circ}$ C ambient.

2. Inductance Tested at 1MHz,1Vrms

3. Isat: DC current at which the inductance drops approximate 30% from its value without current;

4. Irms: DC current that causes the temperature rise ( $\Delta T \leq 40^{\circ}C$ ) from 25 $^{\circ}$ C ambient.

5. ACKCS3015-1 $\mu$ H~47 $\mu$ H Absolute maximum voltage: DC 50V

ACKCS3015-100 $\mu$ H Absolute maximum voltage: DC 15V

● SPECIFICATION TABLE 规格特性表

**ACKCS4018 Series**

PART NUMBER 品名	INDUCTANCE ( $\mu$ H) 电感值	DCR ( $\Omega$ ) 直流电阻		Isat (A) 饱和电流		Irms (A) 温升电流	
		Typical	Maximum	Typical	Maximum	Typical	Maximum
ACKCS4018-1 $\mu$ H/N	1 $\pm$ 30%	0.031	0.038	5.80	5.50	3.00	2.70
ACKCS4018-1.5 $\mu$ H/N	1.5 $\pm$ 30%	0.037	0.044	4.70	4.40	2.85	2.45
ACKCS4018-2.2 $\mu$ H/M	2.2 $\pm$ 20%	0.058	0.070	3.80	3.60	2.40	2.00
ACKCS4018-3.3 $\mu$ H/M	3.3 $\pm$ 20%	0.068	0.084	2.90	2.60	2.10	1.80
ACKCS4018-4.7 $\mu$ H/M	4.7 $\pm$ 20%	0.095	0.113	2.60	2.30	1.80	1.50
ACKCS4018-6.8 $\mu$ H/M	6.8 $\pm$ 20%	0.125	0.142	2.10	1.90	1.60	1.30
ACKCS4018-10 $\mu$ H/M	10 $\pm$ 20%	0.162	0.187	1.60	1.40	1.48	1.10
ACKCS4018-15 $\mu$ H/M	15 $\pm$ 20%	0.300	0.330	1.40	1.20	1.20	1.00
ACKCS4018-22 $\mu$ H/M	22 $\pm$ 20%	0.375	0.405	1.05	0.95	0.95	0.76
ACKCS4018-33 $\mu$ H/M	33 $\pm$ 20%	0.560	0.590	0.95	0.80	0.70	0.55
ACKCS4018-47 $\mu$ H/M	47 $\pm$ 20%	0.770	0.850	0.70	0.63	0.60	0.50
ACKCS4018-68 $\mu$ H/M	68 $\pm$ 20%	1.010	1.150	0.62	0.54	0.45	0.40
ACKCS4018-100 $\mu$ H/M	100 $\pm$ 20%	1.460	1.600	0.55	0.48	0.41	0.35

**Remark:** 1. All test data is reference to 25 $^{\circ}$ C ambient.

2. Inductance Tested at 100kHz, 1Vrms

3. Isat: DC current at which the inductance drops approximate 30% from its value without current;

4. Irms: DC current that causes the temperature rise ( $\Delta T \leq 40^{\circ}C$ ) from 25 $^{\circ}$ C ambient.

5. ACKCS4018-100 $\mu$ H Absolute maximum voltage: DC 50V

**● SPECIFICATION TABLE 规格特性表**
**ACKCS4018 D08 Series (Low DCR)**

PART NUMBER 品名	INDUCTANCE ( $\mu$ H) 电感值	DCR ( $\Omega$ ) 直流电阻		Isat (A) 饱和电流		Irms (A) 温升电流	
		Typical	Maximum	Typical	Maximum	Typical	Maximum
ACKCS4018-1 $\mu$ H/N-D08	1 $\pm$ 30%	0.028	0.035	5.10	4.80	3.20	3.00
ACKCS4018-1.5 $\mu$ H/N-D08	1.5 $\pm$ 30%	0.033	0.040	4.00	3.70	2.90	2.50
ACKCS4018-2.2 $\mu$ H/M-D08	2.2 $\pm$ 20%	0.053	0.065	3.30	3.10	2.50	2.10
ACKCS4018-3.3 $\mu$ H/M-D08	3.3 $\pm$ 20%	0.060	0.075	2.50	2.20	2.30	2.00
ACKCS4018-4.7 $\mu$ H/M-D08	4.7 $\pm$ 20%	0.090	0.108	2.30	2.00	1.90	1.70
ACKCS4018-6.8 $\mu$ H/M-D08	6.8 $\pm$ 20%	0.120	0.137	1.90	1.70	1.70	1.40
ACKCS4018-10 $\mu$ H/M-D08	10 $\pm$ 20%	0.152	0.180	1.50	1.30	1.52	1.20
ACKCS4018-15 $\mu$ H/M-D08	15 $\pm$ 20%	0.285	0.320	1.30	1.10	1.05	0.95
ACKCS4018-22 $\mu$ H/M-D08	22 $\pm$ 20%	0.345	0.380	0.90	0.75	0.97	0.80
ACKCS4018-33 $\mu$ H/M-D08	33 $\pm$ 20%	0.525	0.570	0.85	0.70	0.75	0.60
ACKCS4018-47 $\mu$ H/M-D08	47 $\pm$ 20%	0.600	0.720	0.60	0.54	0.65	0.53
ACKCS4018-68 $\mu$ H/M-D08	68 $\pm$ 20%	0.950	1.080	0.56	0.50	0.48	0.43
ACKCS4018-100 $\mu$ H/M-D08	100 $\pm$ 20%	1.360	1.500	0.46	0.42	0.46	0.40

**Remark:** 1. All test data is reference to 25 $^{\circ}$ C ambient.

2. Inductance Tested at 100kHz, 1Vrms

3. Isat: DC current at which the inductance drops approximate 30% from its value without current;

4. Irms: DC current that causes the temperature rise ( $\Delta T \leq 40^{\circ}C$ ) from 25 $^{\circ}$ C ambient.

5. ACKCS4018-100 $\mu$ H/M-D08 Absolute maximum voltage: DC 50V

**● SPECIFICATION TABLE 规格特性表**
**ACKCS5040 Series**

PART NUMBER 品名	INDUCTANCE (uH) 电感值	DCR ( $\Omega$ ) 直流电阻		Isat (A) 饱和电流		Irms (A) 温升电流	
		Typical	Maximum	Typical	Maximum	Typical	Maximum
ACKCS5040-1uH/N	1 $\pm$ 30%	0.0156	0.0195	7.80	7.50	5.00	4.70
ACKCS5040-2.2uH/M	2.2 $\pm$ 20%	0.020	0.027	5.50	5.20	4.30	3.80
ACKCS5040-3.3uH/M	3.3 $\pm$ 20%	0.024	0.031	4.60	4.40	3.90	3.40
ACKCS5040-4.7uH/M	4.7 $\pm$ 20%	0.033	0.041	4.00	3.70	3.30	3.00
ACKCS5040-6.8uH/M	6.8 $\pm$ 20%	0.047	0.058	3.30	3.10	2.70	2.50
ACKCS5040-10uH/M	10 $\pm$ 20%	0.065	0.078	2.60	2.40	2.40	2.10
ACKCS5040-15uH/M	15 $\pm$ 20%	0.088	0.112	2.30	2.00	2.10	2.00
ACKCS5040-22uH/M	22 $\pm$ 20%	0.130	0.162	1.80	1.60	1.60	1.50
ACKCS5040-33uH/M	33 $\pm$ 20%	0.180	0.220	1.50	1.30	1.40	1.20
ACKCS5040-47uH/M	47 $\pm$ 20%	0.280	0.324	1.23	1.10	1.10	1.00

**Remark:** 1. All test data is reference to 25 $^{\circ}$ C ambient.

2. Inductance Tested at 100kHz, 1Vrms

3. Isat: DC current at which the inductance drops approximate 30% from its value without current;

4. Irms: DC current that causes the temperature rise ( $\Delta T \leq 40^{\circ}C$ ) from 25 $^{\circ}$ C ambient.

5. ACKCS5040-100uH~220uH Absolute maximum voltage: DC 50V

**● SPECIFICATION TABLE 规格特性表**
**ACKCS6045 Series**

PART NUMBER 品名	INDUCTANCE ( $\mu$ H) 电感值	DCR ( $\Omega$ ) 直流电阻		Isat (A) 饱和电流		Irms (A) 温升电流	
		Typical	Maximum	Typical	Maximum	Typical	Maximum
ACKCS6045-1 $\mu$ H/M	1 $\pm$ 20%	0.0088	0.013	12.00	10.80	6.50	5.80
ACKCS6045-1.5 $\mu$ H/M	1.5 $\pm$ 20%	0.011	0.016	10.00	9.00	6.00	5.30
ACKCS6045-2.2 $\mu$ H/M	2.2 $\pm$ 20%	0.0135	0.0195	7.60	7.00	5.10	4.60
ACKCS6045-3.3 $\mu$ H/M	3.3 $\pm$ 20%	0.021	0.027	6.70	6.20	4.50	4.00
ACKCS6045-4.7 $\mu$ H/M	4.7 $\pm$ 20%	0.026	0.034	5.50	5.10	4.00	3.50
ACKCS6045-6.8 $\mu$ H/M	6.8 $\pm$ 20%	0.040	0.052	5.20	4.70	3.50	3.00
ACKCS6045-10 $\mu$ H/M	10 $\pm$ 20%	0.050	0.062	3.80	3.40	2.70	2.50
ACKCS6045-15 $\mu$ H/M	15 $\pm$ 20%	0.071	0.090	3.20	2.90	2.30	2.00
ACKCS6045-22 $\mu$ H/M	22 $\pm$ 20%	0.100	0.130	2.80	2.50	1.90	1.70
ACKCS6045-33 $\mu$ H/M	33 $\pm$ 20%	0.150	0.180	2.20	2.00	1.60	1.40
ACKCS6045-47 $\mu$ H/M	47 $\pm$ 20%	0.220	0.280	1.90	1.70	1.30	1.10
ACKCS6045-68 $\mu$ H/M	68 $\pm$ 20%	0.330	0.390	1.55	1.40	1.00	0.90
ACKCS6045-100 $\mu$ H/M	100 $\pm$ 20%	0.450	0.540	1.30	1.10	0.85	0.70

**Remark:** 1. All test data is reference to 25 $^{\circ}$ C ambient.

2. Inductance Tested at 100kHz, 1Vrms

3. Isat: DC current at which the inductance drops approximate 30% from its value without current;

4. Irms: DC current that causes the temperature rise ( $\Delta T \leq 40^{\circ}C$ ) from 25 $^{\circ}$ C ambient.

5. ACKCS6045-100 $\mu$ H/M Absolute maximum voltage: DC 50V

**● SPECIFICATION TABLE 规格特性表**
**ACKCS6055 Series**

PART NUMBER 品名	INDUCTANCE (uH) 电感值	DCR ( $\Omega$ ) 直流电阻		Isat (A) 饱和电流		Irms (A) 温升电流	
		Typical	Maximum	Typical	Maximum	Typical	Maximum
ACKCS6055-3.3uH/M	3.3 $\pm$ 20%	0.0196	0.026	7.50	6.50	4.60	4.10
ACKCS6055-4.7uH/M	4.7 $\pm$ 20%	0.0215	0.028	6.00	5.50	4.30	3.80
ACKCS6055-6.8uH/M	6.8 $\pm$ 20%	0.030	0.041	5.20	4.70	4.10	3.60
ACKCS6055-10uH/M	10 $\pm$ 20%	0.045	0.054	4.00	3.60	3.20	2.70
ACKCS6055-15uH/M	15 $\pm$ 20%	0.066	0.074	3.30	2.80	2.80	2.40
ACKCS6055-22uH/M	22 $\pm$ 20%	0.092	0.110	2.80	2.50	2.35	2.00
ACKCS6055-33uH/M	33 $\pm$ 20%	0.130	0.170	2.20	1.90	1.80	1.60
ACKCS6055-47uH/M	47 $\pm$ 20%	0.220	0.250	1.90	1.70	1.50	1.30
ACKCS6055-100uH/M	100 $\pm$ 20%	0.417	0.458	1.30	1.10	1.10	0.90

**Remark:** 1. All test data is reference to 25 $^{\circ}$ C ambient.

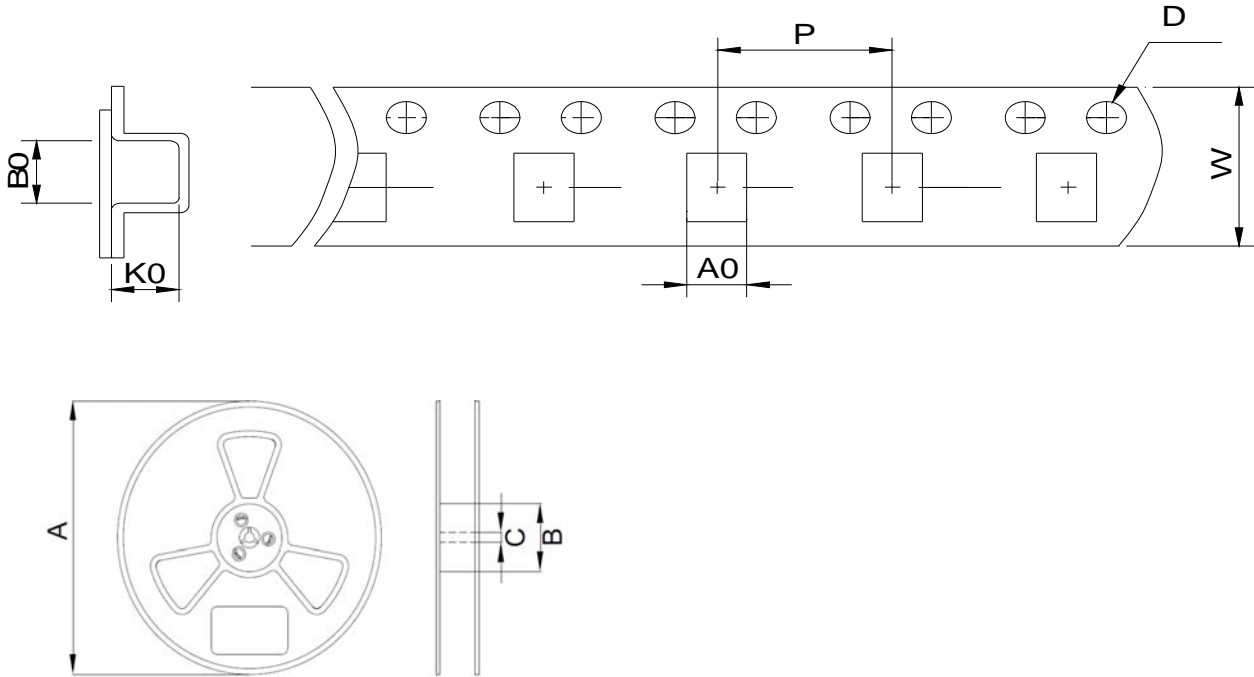
2. Inductance Tested at 100kHz, 1Vrms

3. Isat: DC current at which the inductance drops approximate 30% from its value without current;

4. Irms: DC current that causes the temperature rise ( $\Delta T \leq 40^{\circ}C$ ) from 25 $^{\circ}$ C ambient.

5. ACKCS6055-100uH~330uH Absolute maximum voltage: DC 50V

● PACKAGING SPECIFICATION :



Type	Tape Dimension (mm)						Reel Dimension (mm)			Quantity (Pcs/Reel)
	W	A0	B0	K0	D	P	A	B	C	
ACKCS3015	8	3.3	3.3	1.85	1.5	4	178	58	13	2000
ACKCS4018	12	4.3	4.3	2.0	1.5	8	330	100	13	3000
ACKCS5040	12	5.3	5.3	4.2	1.5	8	330	100	13	1500
ACKCS6045	16	6.4	6.4	4.75	1.5	8	330	100	13	1500
ACKCS6055	16	6.4	6.4	5.9	1.5	12	330	100	13	1000