APPROVAL SPECIFICATION

PRODUCT NAME:

KOOMAG PN:KMKC40 Series

CUSTOMER PN:

CUSTOMER RESPONSE

☐ Approval ☐ Approval with the following changes ☐ Reject

APPROVED BY	SIGNATURE	DATE

KOOMAG ENGINEERING SIGNATURE

APPROVED BY	CHECKED BY	ISSUED BY
DATE	DATE	DATE

深 圳 坤 磁 科 技 有 限 公 司

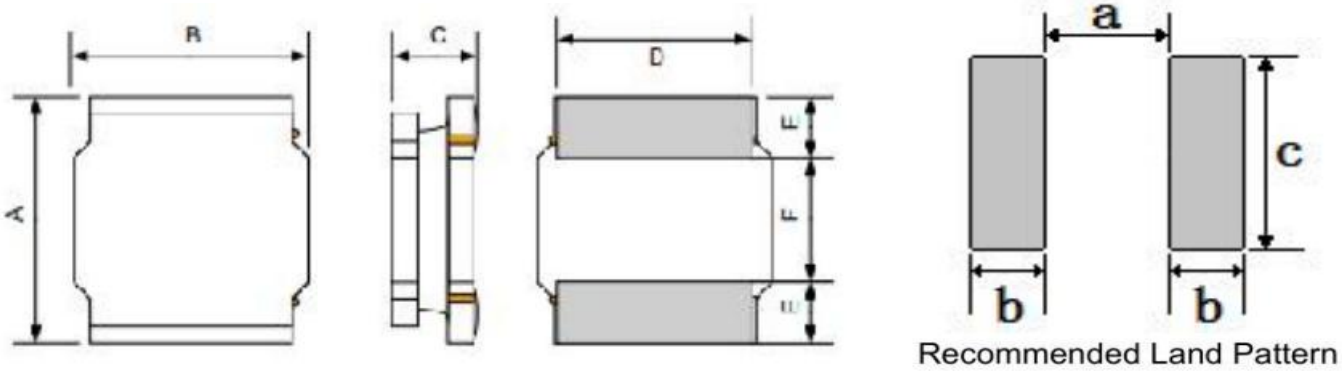
SHENZHEN KOOMAG TECHNOLOGY CO., LTD

Address: B503, Building B, HuaChuangDa Headquarters Building, Bao'an 49 District, Shenzhen

General Description

This specification applies to the KMKC40 Series of wire wound SMD power inductor.

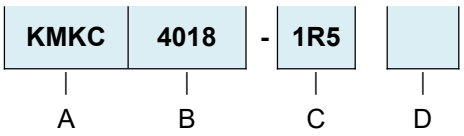
Appearance & Shape



Dimension (Unit:mm)

NO	Series	A	B	C	D	E	F	a Typ.	b Typ.	c Typ.
1	KMKC4018	4.0±0.2	4.0±0.2	1.8 Max	3.3±0.2	0.95±0.2	2.1±0.2	1.9	1.1	3.7
2	KMKC4020	4.0±0.2	4.0±0.2	2.0 Max	3.3±0.2	0.95±0.2	2.1±0.2	1.9	1.1	3.7
3	KMKC4030	4.0±0.2	4.0±0.2	3.0 Max	3.3±0.2	0.95±0.2	2.1±0.2	1.9	1.1	3.7

Part Number



A:Series name（产品品名）

B:Dimensions（产品尺寸）

C:Inductance value（电感值）1R5: 1.5μH 221：220μH

D:Tolerance（误差值）K: ±10%; M: ±20%; N: ±30%

Electrical Characteristics

Please refer to Item 5.

1). Operating temperature range (individual chip without packing): -40℃ ~ +125℃ .

2). Storage temperature range (packaging conditions): -40℃ ~ +85℃ and RH 70% (Max.).

3). Rating DC current: Temperature rise(△T) is 40℃ approximately at Irms.

4). Saturation DC current: Inductance drop approximately 30% of L0 at Isat.

NO	Part Number	Inductance	DC Resistance		Iast(A)		Irms(A)		Marking
		100KHz/1.0V	Max.	Typ.	Max.	Typ.	Max.	Typ.	
	Units	（uH）	Ω	Ω	A	A	A	A	
1	KMKC4018-R47N	0.47±30%	0.026	0.021	6.00	6.50	4.00	4.50	R47
2	KMKC4018-R68N	0.68±30%	0.033	0.026	5.00	6.00	3.30	4.00	R68
3	KMKC4018-1R0N	1.00±30%	0.035	0.027	4.80	5.20	3.00	3.20	1R0
4	KMKC4018-1R5N	1.50±30%	0.042	0.367	3.35	4.00	3.00	3.20	1R5
5	KMKC4018-2R2M	2.20±20%	0.059	0.051	3.00	3.20	2.70	3.00	2R2
6	KMKC4018-3R3M	3.30±20%	0.091	0.061	2.45	2.70	1.23	2.10	3R3
7	KMKC4018-4R7M	4.70±20%	0.117	0.096	1.70	2.20	2.00	2.20	4R7
8	KMKC4018-6R8M	6.80±20%	0.250	0.173	1.45	1.80	1.20	1.50	6R8
9	KMKC4018-100M	10.0±20%	0.234	0.210	1.30	1.60	0.84	1.20	100
10	KMKC4018-150M	15.0±20%	0.325	0.250	0.94	1.10	0.94	1.00	150
11	KMKC4018-220M	22.0±20%	0.468	0.350	0.80	0.88	0.59	0.85	220
12	KMKC4018-330M	33.0±20%	0.689	0.524	0.56	0.70	0.49	0.72	330
13	KMKC4018-470M	47.0±20%	0.845	0.750	0.57	0.60	0.42	0.65	470
14	KMKC4018-680M	68.0±20%	1.300	1.160	0.47	0.51	0.32	0.51	680
15	KMKC4018-101M	100.0±20%	1.854	1.600	0.40	0.44	0.25	0.41	101
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※Design as Customer's Requested Specifications. (可按顾客的特殊需求设计）

NO	Part Number	Inductance	DC Resistance		Iast(A)		Irms(A)		Marking
		100KHz/1.0V	Max.	Typ.	Max.	Typ.	Max.	Typ.	
	Units	（uH）	Ω	Ω	A	A	A	A	
1	KMKC4020-R47N	0.47±30%	0.018	0.012	7.00	7.50	3.30	3.70	R47
2	KMKC4020-R68N	0.68±30%	0.022	0.017	6.40	6.80	2.80	3.30	R68
3	KMKC4020-1R0N	1.00±30%	0.038	0.026	4.80	5.20	2.15	3.20	1R0
4	KMKC4020-1R5N	1.50±30%	0.046	0.035	4.45	4.90	1.98	3.00	1R5
5	KMKC4020-2R2M	2.20±20%	0.060	0.050	3.40	3.50	2.00	2.80	2R2
6	KMKC4020-3R3M	3.30±20%	0.091	0.081	3.20	3.50	1.40	2.50	3R3
7	KMKC4020-4R7M	4.70±20%	0.098	0.079	2.35	2.50	1.34	2.00	4R7
8	KMKC4020-6R8M	6.80±20%	0.200	0.153	2.20	2.40	1.10	1.60	6R8
9	KMKC4020-100M	10.0±20%	0.215	0.184	1.60	1.70	0.90	1.20	100
10	KMKC4020-150M	15.0±20%	0.299	0.240	1.35	1.50	0.77	1.10	150
11	KMKC4020-220M	22.0±20%	0.455	0.360	1.05	1.10	0.62	0.87	220
12	KMKC4020-330M	33.0±20%	0.715	0.490	0.85	1.00	0.50	0.60	330
13	KMKC4020-470M	47.0±20%	0.923	0.820	0.70	0.75	0.44	0.60	470
14	KMKC4020-471M	470.0±20%	9.950	7.660	0.30	0.32	0.28	0.30	471
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NO	Part Number	Inductance	DC Resistance		Isat(A)		Irms(A)		Marking
		100KHz/1.0V	Max.	Typ.	Max.	Typ.	Max.	Typ.	
	Units	（uH）	Ω	Ω	A	A	A	A	
1	KMKC4030-R47N	0.47±30%	0.016	0.011	7.5	8.50	3.5	4.50	R47
2	KMKC4030-1R0N	1.00±30%	0.025	0.019	5.26	5.70	4.15	4.7	1R0
3	KMKC4030-1R5N	1.50±30%	0.035	0.026	4.84	5.3	3.34	3.6	1R5
4	KMKC4030-2R2M	2.20±20%	0.039	0.030	4.9	5.8	2.95	3.2	2R2
5	KMKC4030-3R3M	3.30±20%	0.052	0.043	3.3	3.6	2.4	2.6	3R3
6	KMKC4030-4R7M	4.70±20%	0.078	0.067	2.9	3.2	2	2.3	4R7
7	KMKC4030-5R6M	5.60±20%	0.085	0.077	2.6	2.8	1.95	2.1	5R6
8	KMKC4030-6R8M	6.80±20%	0.117	0.082	2.4	2.5	1.6	1.7	6R8
9	KMKC4030-100M	10.0±20%	0.130	0.118	1.95	2.4	1.5	1.6	100
10	KMKC4030-150M	15.0±20%	0.247	0.213	1.65	1.8	1.11	1.2	150
11	KMKC4030-220M	22.0±20%	0.292	0.250	1.3	1.4	1	1.2	220
12	KMKC4030-330M	33.0±20%	0.429	0.320	1.1	1.2	0.84	1	330
13	KMKC4030-470M	47.0±20%	0.600	0.550	0.95	1	0.72	0.8	470
14	KMKC4030-560M	56.0±20%	0.722	0.550	0.85	0.9	0.65	0.7	560
15	KMKC4030-680M	68.0±20%	1.128	0.977	0.72	0.8	0.52	0.57	680
16	KMKC4030-101M	100.0±20%	1.495	1.240	0.6	0.73	0.45	0.49	101
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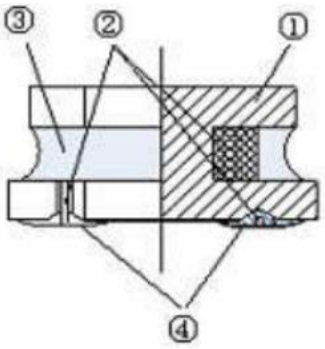
Structure (The structure of product.)

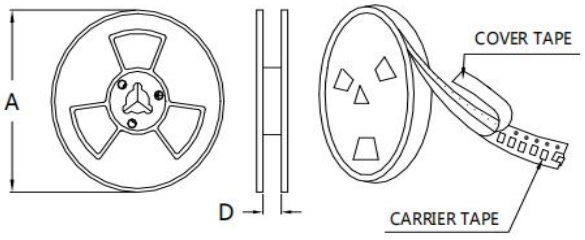


NO	Components	Material
1	Core	Ni-Zn Ferrite
2	Wire	Polyurethane system enameled copper wire
3	Magnetic Glue	Epoxy resin and magnetic powder
4	Plating	AgNiSn or FeNiCu + Sn Alloy

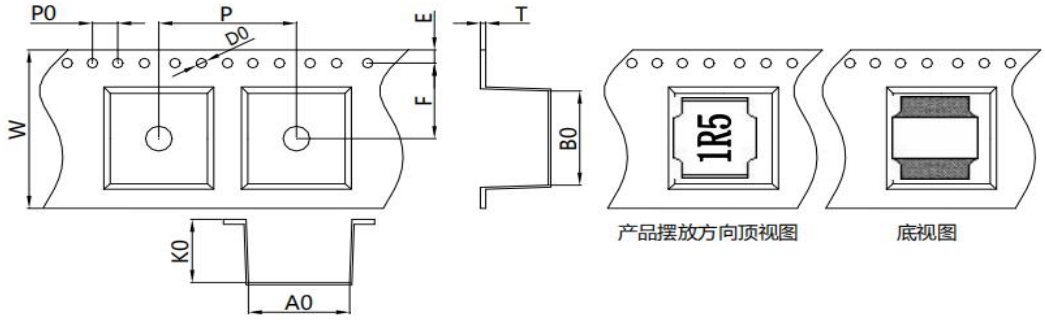
Packaging(unit:mm）

1.Tape Dimensions(Unit:mm)

2.Reel √ 13″ 盘 □ 7″ 盘



	13″ 盘	7″ 盘
A	Φ330±2.0	Φ178±2.0
D	12.5	



Size	Item	W	A0	B0	K0	P	T	E	F	D0	P0
4018	(mm)	12.0±0.3	4.4±0.2	4.4±0.2	2.0±0.2	8.0±0.3	0.3±0.1	1.75±0.1	5.5±0.2	1.5±0.1	4.0±0.2
4020	(mm)	12.0±0.3	4.4±0.2	4.4±0.2	2.1±0.2	8.0±0.3	0.3±0.1	1.75±0.1	5.5±0.2	1.5±0.1	4.0±0.2
4030	(mm)	12.0±0.3	4.4±0.2	4.4±0.2	3.1±0.2	8.0±0.3	0.3±0.1	1.75±0.1	5.5±0.2	1.5±0.1	4.0±0.2

Part No.	Tape	MPQ
4018	Embossed Tape	3000PCS
4020	Embossed Tape	3000PCS
4030	Embossed Tape	2000PCS

Soldering Condition Sproduct

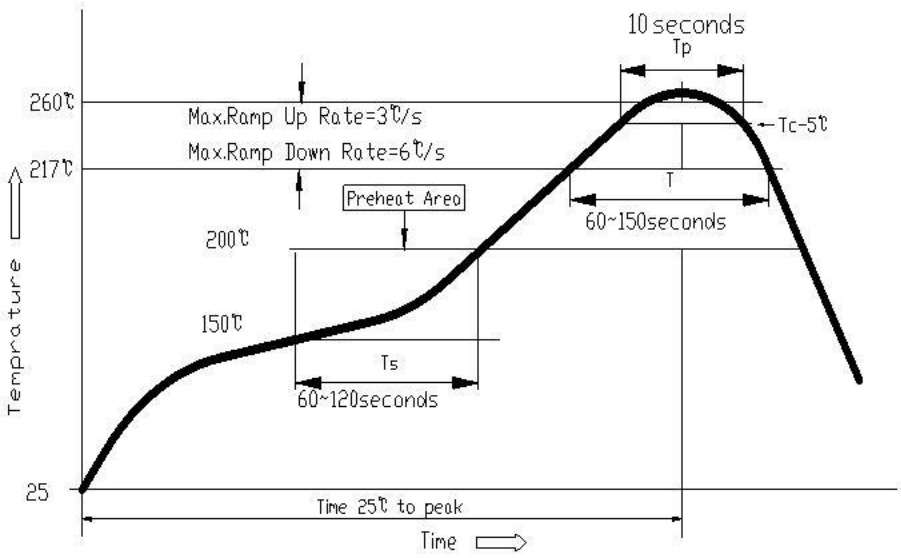
Applicable soldering process to the products is refl.

1.Soldering Materials

(1)Solder:Sn-3.0Ag-0.5Cu

(2)Flux:Use rosin-based flux,but not strongly acidic flux (with xhlorine exceeding 0.2wt%).Do not use water-soluble flux.

2.Reflow Soldering Profile



3.Solderin gIron

Reworking with electric solding iron must preheating at 150℃ for 1 minute is required,and do not directly touch the core with the tip of the soldering iron.The reworking soldering conditions are as follows.

①Temperature of soldering iron tip:350℃；

② Soldering iron power output:≤30W；

③ Diameter of soldering iron end:≤1.0mm；

④Soldering time:＜3s.