KOA SPEER ELECTRONICS, INC.

spec sheet

SS-198 R5
AHA 7/28/05

ISO 9001:2000 CERTIFIED
TS-16949 CERTIFIED

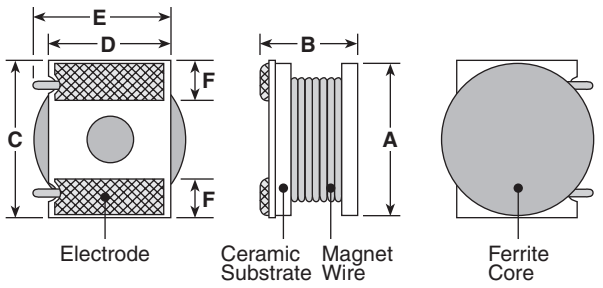
Surface Mount Power Chip Inductors

Type LPC12065

1. Scope

This specification applies to LPC12065 power chip inductors produced by KOA Corporation.

2. Dimensions and Construction



Size	Dimensions inches (mm)					
	A	B	C	D	E	F
12065	ø.472±.008 (ø12.0±0.2)	.295 Max. (7.5 Max.)	.488±.008 (12.4±0.2)	.472±.008 (10.0±0.2)	.433 (11.0)	.146±.112 (3.7±0.3)

3. Type Designation

The type designation shall be the following form:

New Type

LPC	12065	A	TED	101	K
Type	Size	Termination Material	Packaging	Nominal Inductance	Tolerance
	12065	A: SnAg L: SnPb	TED: 10" Embossed Plastic 300 pcs/reel	101: 100µH 221: 220µH	K: ±10% M: ±20% N: ±30%

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4. Rating

Type	Inductance			Quality Factor		Self-Resonant Freq. Min. (MHz)	DC Resistance Max. (Ω)	Allowable DC Current Max. (A)
	(μH)	Tolerance (%)	Freq. Inductance Measuring	Q Min.	Freq. Q Measuring			
LPC12065 R68	0.68	N(±30%)	1 MHz	40	2.52MHz	77	0.005	10.00
LPC12065 1R0	1.0					60	0.007	8.50
LPC12065 1R5	1.5					47	0.008	8.00
LPC12065 2R2	2.2					38	0.010	7.50
LPC12065 3R3	3.3	M(±20%)		30		30	0.012	7.00
LPC12065 4R7	4.7					24	0.016	6.50
LPC12065 6R8	6.8					19	0.022	5.40
LPC12065 100	10	K(±10%)				15	0.031	4.50
LPC12065 150	15			20		12	0.046	3.63
LPC12065 220	22					9.5	0.065	3.00
LPC12065 330	33					7.5	0.093	2.40
LPC12065 470	47					6.2	0.130	2.05
LPC12065 680	68					4.9	0.182	1.70
LPC12065 101	100		100 KHz	15	100KHz	4.0	0.260	1.38
LPC12065 151	150					3.2	0.380	1.14
LPC12065 221	220					2.5	0.540	0.94
LPC12065 331	330					2.0	0.790	0.77
LPC12065 471	470					1.6	1.08	0.65
LPC12065 681	680					1.3	1.55	0.53
LPC12065 102	1,000		50 KHz	30		1.0	2.21	0.44
LPC12065 152	1,500					0.83	3.20	0.35
LPC12065 222	2,200					0.67	4.50	0.29
LPC12065 332	3,300					0.53	6.60	0.235
LPC12065 472	4,700					0.43	9.30	0.198
LPC12065 682	6,800					0.34	13.20	0.165

4.1 Rating

No.	Item	Specification
1	Storage temperature range	-40°C ~ +85°C
2	Operating temperature range	-30°C ~ +80°C

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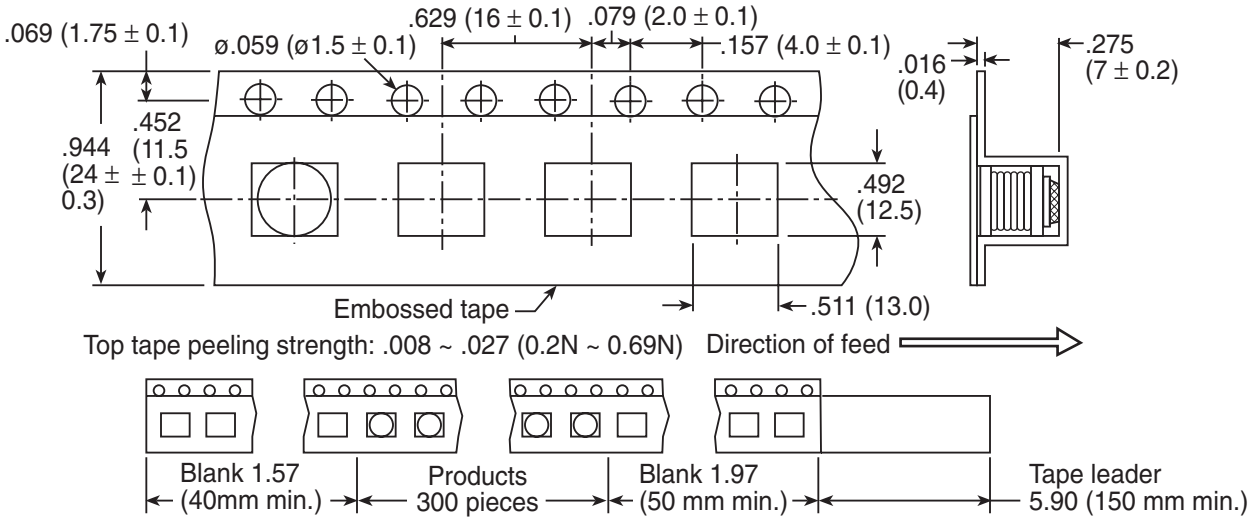
5. Reliability Test

Item	Requirement	Test Methods
DC Super-imposition	ΔL/L within -5%	Inductance when the allowable current is applied
Resistance to soldering heat	No evidence of outer damage ΔL/L shall be within ±5%	Solder 260 ± 5°C/6 ± 10 seconds
Vibration	ΔL/L within ±5%	2 hours in each direction of X, Y, Z, at a frequency range of 10 ~ 55 ~10Hz with 1.5 mm amplitude
Heat shock	ΔL/L within ±5%	-40 ± 2°C/0.5 Hr ◄► 85 ± 2°C/0.5 Hr 100 cycles 85°C -40°C 0.5 Hr
High temperature storage	ΔL/L within ±5%	Store at 85 ± 2°C 500 Hrs.
Low temperature storage	ΔL/L within ±5%	Store at -40 ± 2°C 500 Hrs.
Moisture resistance	ΔL/L within ±5%	40 ± 2°C 90 ~ 95% RH 500 Hrs.

6. Taping

6.1 Dimensions of Tape

Dimensions in inches (mm)



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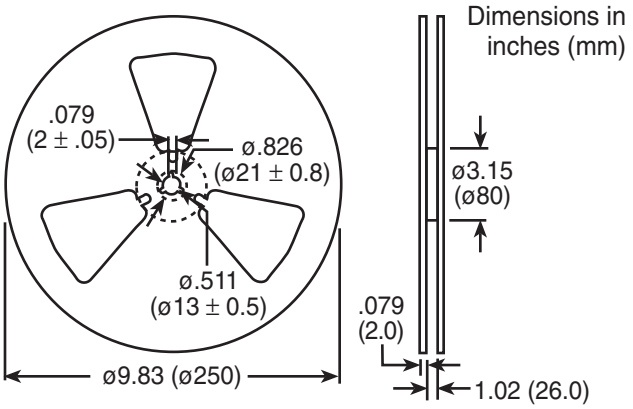
6.2 Dimensions and Marking

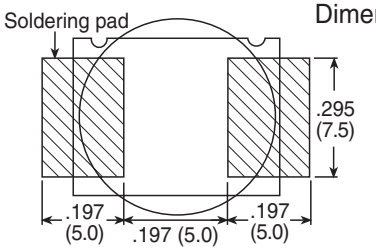


Reel/300 pieces maximum. The following items shall be indicated on the reel.

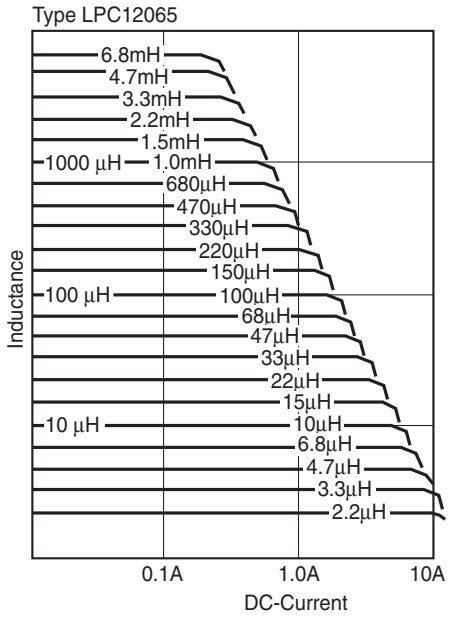
Type: LPC12065

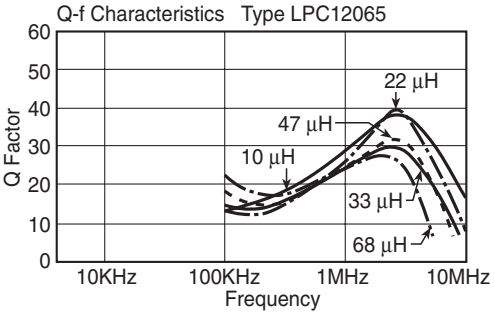
(1) Nominal inductance and tolerance
(2) Quantity
(3) Production lot number
(4) Manufacturer's name or trade mark

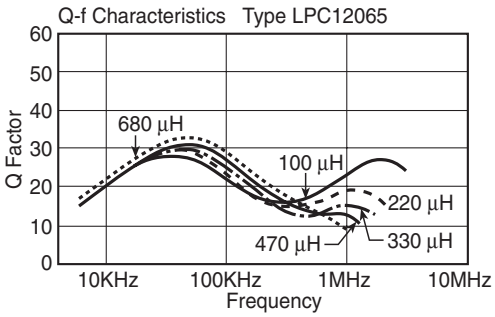
Recommended PAD dimension

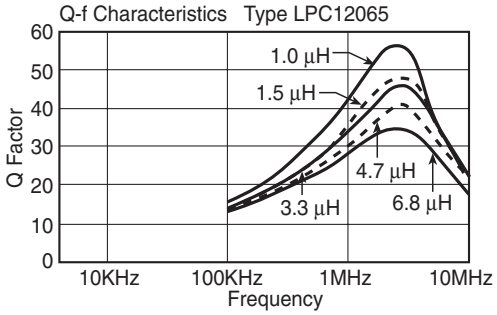


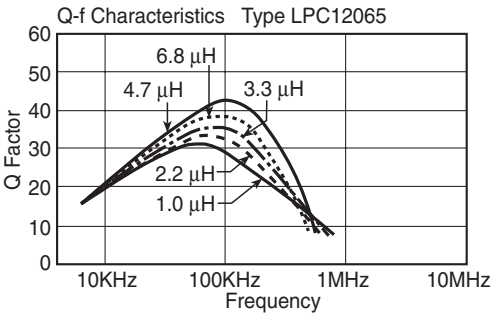
6.3 Performance











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