

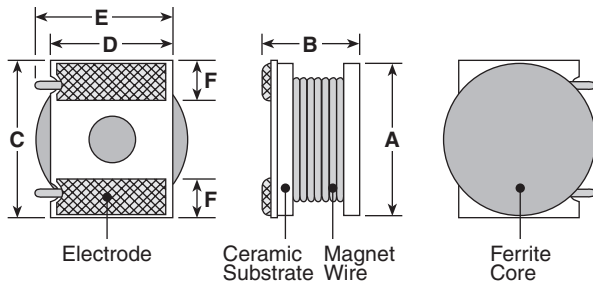
# Surface Mount Power Chip Inductors Type LPC12065

ISO 9001:2000  
CERTIFIED  
TS-16949  
CERTIFIED

## 1. Scope

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

## 2. Dimensions and Construction

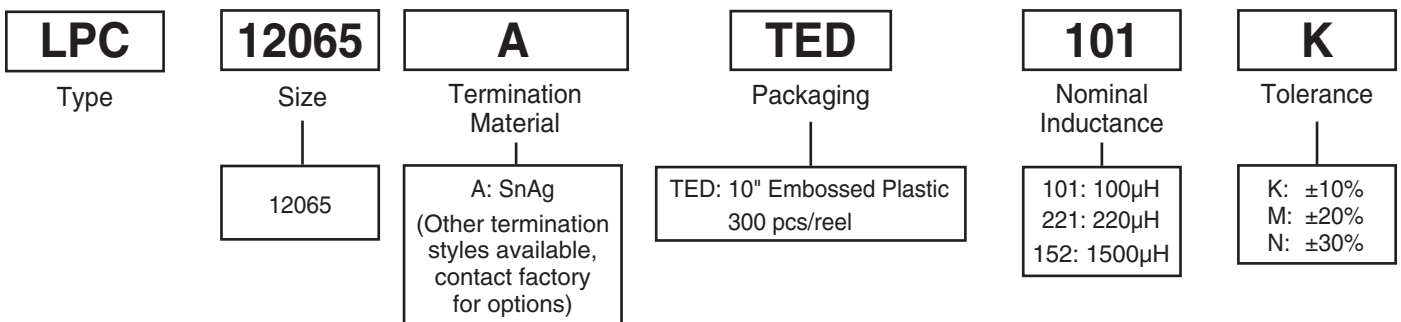


Size	Dimensions inches (mm)					
	A	B	C	D	E	F
12065	0.472±.008 (12.0±0.2)	.295 Max. (7.5 Max.)	.488±.008 (12.4±0.2)	.472±.008 (10.0±0.2)	.433 (11.0)	.146±.112 (3.7±0.3)

## 3. Type Designation

The type designation shall be the following form:

### New Type




## 4. Rating

Part Designation	Inductance (μH)	Inductance Tolerance	Quality Factor Minimum (MHz)	Self Resonant Frequency Minimum (MHz)	DC Resistance Maximum (Ω)	Allowable DC Current Maximum (Amps)	Measured Frequency (Hz)	
LPC12065ATEDR68N	0.68	N: ±30%	40	77.0	5.0 mΩ	10.0	2.52 MHz	
LPC12065ATED1R0N	1.0			60.0	7.0 mΩ	9.50		
LPC12065ATED1R5N	1.5			47.0	8.0 mΩ	9.00		
LPC12065ATED2R2N	2.2			38.0	10.0 mΩ	8.00		
LPC12065ATED3R3M	3.3	M: ±20%	30	30.0	0.012	7.00		
LPC12065ATED4R7M	4.7			24.0	0.016	6.50		
LPC12065ATED6R8M	6.8			19.0	0.022	5.40		
LPC12065ATED100K	10	K: ±10%	20	15.0	0.031	4.50		100 KHz
LPC12065ATED150K	15			12.0	0.046	3.63		
LPC12065ATED220K	22			9.5	0.065	3.00		
LPC12065ATED330K	33			7.5	0.093	2.40		
LPC12065ATED470K	47			6.2	0.130	2.05		
LPC12065ATED680K	68		15	30	4.9	0.182	1.70	
LPC12065ATED101K	100				4.0	0.260	1.38	
LPC12065ATED151K	150				3.2	0.380	1.14	
LPC12065ATED221K	220				2.5	0.540	0.94	
LPC12065ATED331K	330				2.0	0.790	0.77	
LPC12065ATED471K	470		30	30	1.6	1.08	0.65	
LPC12065ATED681K	680				1.3	1.55	0.53	
LPC12065ATED102K	1.0 mH				1.0	2.21	0.44	
LPC12065ATED152K	1.5 mH				0.83	3.20	0.35	
LPC12065ATED222K	2.2 mH				0.67	4.60	0.29	
LPC12065ATED332K	3.3 mH			0.53	6.60	0.23		
LPC12065ATED472K	4.7 mH			0.43	9.30	0.19		
LPC12065ATED682K	6.8 mH			0.34	13.2	0.16		

### 4.1 Rating

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

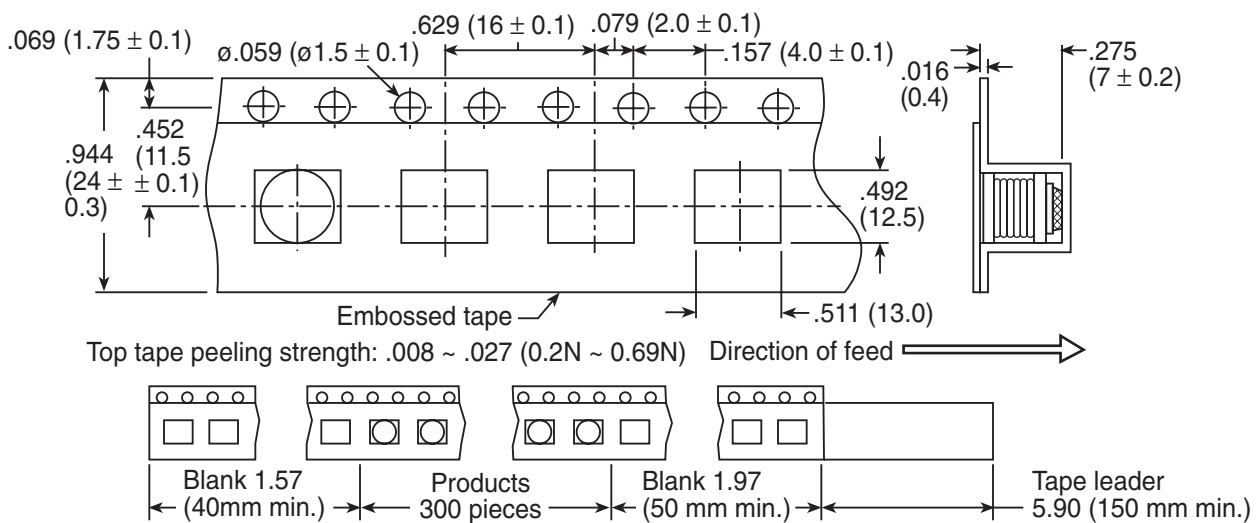
## 5. Reliability Test

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

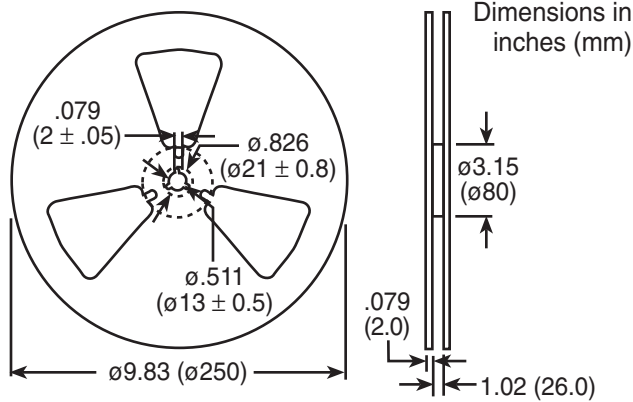
## 6. Taping

### 6.1 Dimensions of Tape

Dimensions in inches (mm)



**6.2 Dimensions and Marking**

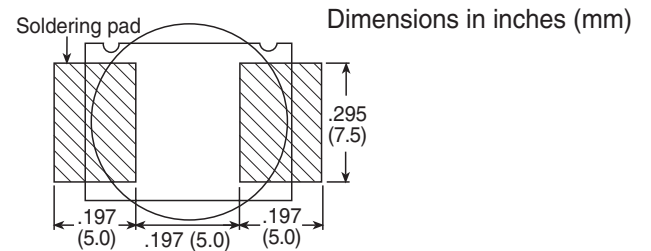


Reel/300 pieces maximum. The following items shall be indicated on the reel.

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**

