

Power Chip Inductors

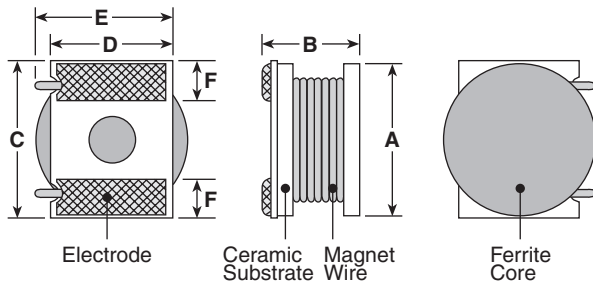
Type LPC10065

ISO 9001:2000
CERTIFIED
TS-16949
CERTIFIED

1. Scope

This specification applies to LPC10065 power chip inductors produced by KOA Corporation.

2. Dimensions and Construction

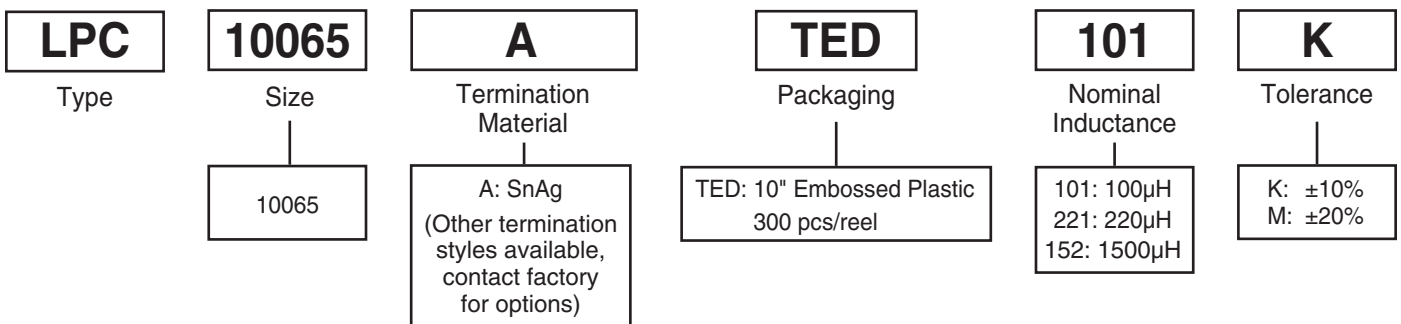


Size	Dimensions inches (mm)					
	A	B	C	D	E	F
10065	ø.394±.008 (ø10.0±0.2)	.295 Max. (7.5 Max.)	.409±.008 (10.4±0.2)	.315±.008 (8.0±0.2)	.354 (9.0)	.098±.008 (2.5±0.2)

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)	
LPC10065ATEDR68M	0.68	M: ±20%	40	75.0	6.0 mΩ	9.50	L Meas. Freq. 1 MHz Q Meas. Freq. 2.52 MHz	
LPC10065ATED1R0M	1.0			65.0	7.0 mΩ	9.00		
LPC10065ATED1R5M	1.5			50.0	8.0 mΩ	8.50		
LPC10065ATED2R2M	2.2			40.0	9.0 mΩ	7.50		
LPC10065ATED3R3M	3.3			30.0	0.012	6.80		
LPC10065ATED4R7M	4.7		30	25.0	0.017	5.70		
LPC10065ATED6R8M	6.8			20.0	0.024	4.70		
LPC10065ATED100K	10			20	15.0	0.036		3.90
LPC10065ATED150K	15				12.0	0.054		3.15
LPC10065ATED220K	22				9.0	0.080		2.60
LPC10065ATED330K	33	15	8.0		0.120	2.30		
LPC10065ATED470K	47		6.0		0.175	1.79		
LPC10065ATED680K	68		K: ±10%	30	5.0	0.255	1.48	100 MHz
LPC10065ATED101K	100				4.0	0.380	1.22	
LPC10065ATED151K	150				3.0	0.580	1.00	
LPC10065ATED221K	220	2.5			0.850	0.82		
LPC10065ATED331K	330	2.0			1.30	0.67		
LPC10065ATED471K	470	1.5			1.85	0.57		
LPC10065ATED681K	680	1.0			2.70	0.47		
LPC10065ATED102K	1000	0.95			4.00	0.38		
LPC10065ATED152K	1500	0.85			6.10	0.31		
LPC10065ATED222K	2200	0.70			9.00	0.26		
LPC10065ATED332K	3300	0.55			13.5	0.21		

4.1 Rating

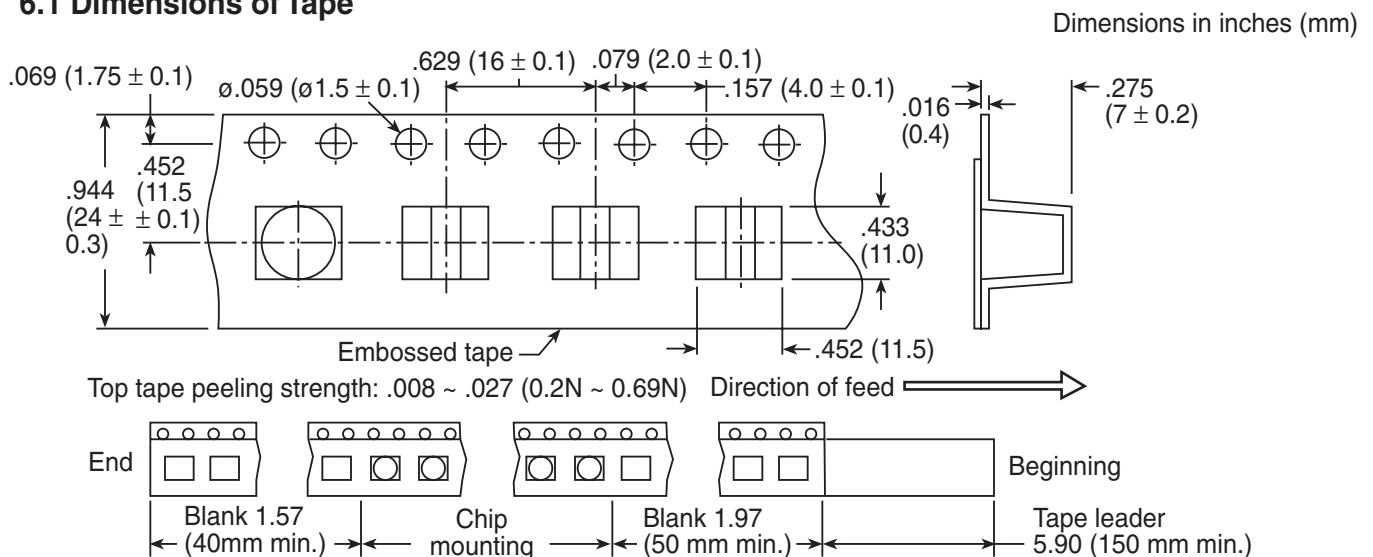
No.	Item	Specification
1	Storage temperature range	-40°C ~ +85°C
2	Operating temperature range	-30°C ~ +85°C

5. Reliability Test

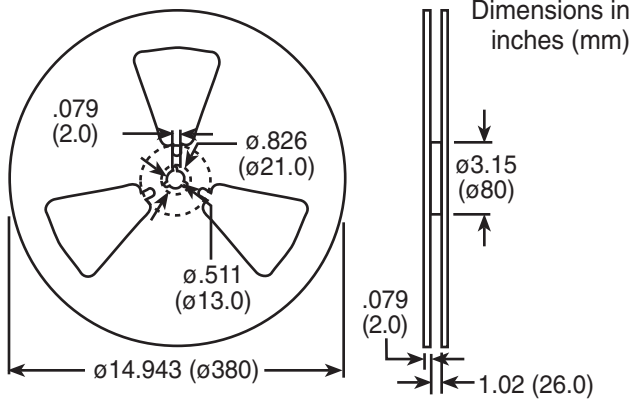
Item	Requirement	Test Methods
DC Super-imposition	$\Delta L/L$ within -5%	Inductance when the allowable current is applied
Resistance to soldering heat	No evidence of outer damage $\Delta L/L$ shall be within $\pm 5\%$	Solder $260 \pm 5^\circ\text{C}/10$ sec
Vibration	$\Delta L/L$ within $\pm 5\%$	2 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 leaving	$\Delta L/L$ within $\pm 5\%$	Store at $85 \pm 2^\circ\text{C}$ 500 Hrs.
Low temperature leaving	$\Delta L/L$ within $\pm 5\%$	Store at $-40 \pm 2^\circ\text{C}$ 500 Hrs.
Moisture leaving	$\Delta L/L$ within $\pm 5\%$	$40 \pm 2^\circ\text{C}$ 90 ~ 95% RH 500 Hrs.

6. Taping

6.1 Dimensions of Tape



6.2 Dimensions and Marking

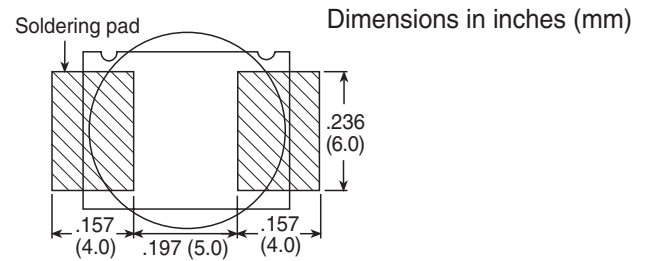


The following items shall be indicated on the reel.

Type: LPC10065

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

Recommended PAD dimension



6.3 Performance

Type LPC10065

