

**SURFACE MOUNT POWER
INDUCTOR SERIES LPPI5040**

FEATURES

- Low profile
- High reliability and efficiency
- RoHS compliant plus Lead & Halogen free
- Magnetically shielded

ELECTRICAL SPECIFICATIONS

- Inductance range 0.47uH to 220.0uH
- Test frequency 100KHz with test level 1 V
- Test equipment Quadtech 1910 L analyzer
- Rated current range 0.55 to 12.0 Amps
- Tolerance ± 10% (K), ± 15%(L),
 ± 20% (M) & ± 30% (Y)
- Rated current Refer to notes below

PHYSICAL SPECIFICATIONS

- Operating temp. -40°C to +125°C
- Core Ferrite core
- Terminal construction Ag/Ni/Sn plating +
 Lead free solder
- Packaging T & R 1500 pieces per reel
- Tape & reel spec. Tape 12 mm embossed carrier
 Reel 330 mm reel

DIMENSIONS IN MILLIMETERS

- Length A 4.95 ± 0.2
- Width B 4.95 ± 0.2
- Height C For L ≤ 10 uH 3.9 ± 0.2
 For L > 10 uH 3.8 ± 0.2
- Terminal width D 1.3 ± 0.3
- Terminal length E 4.2 ± 0.2
- Terminal center space F 3.7 ref.

RECOMMENDED PC BOARD PATTERN

- L = 5.1 mm ref.
- G = 2.1 mm ref.
- H = 4.2 mm ref.

Notes:

- (1) Based on coil temperature rise ΔT approximately 40°C
- (2) L drops 30% from OCL typical

All test data based on 25°C ambient

Part temperature (ambient + temperature rise) must not exceed 125°C under worst case operating conditions.

Circuit design, components, PCB trace size, airflow and other cooling provisions all effect the part temperature.

SPECIFICATIONS

| Part Number | L (μ H) | Tol % ± | DCR ±20% (m Ω) | Rated Current (A) | |
|--------------|-----------------|---------------|------------------------------|---------------------------------|---------------------------------|
| | | | | I _{rms} ⁽¹⁾ | I _{sat} ⁽²⁾ |
| LPPI5040-R47 | 0.47 | 20/30 | 6.5 | 9.00 | 12.0 |
| LPPI5040-R60 | 0.60 | 20/30 | 8.0 | 8.00 | 11.0 |
| LPPI5040-1R0 | 1.00 | 20/30 | 12.0 | 5.00 | 7.50 |
| LPPI5040-1R5 | 1.50 | 20/30 | 15.0 | 4.50 | 6.50 |
| LPPI5040-1R8 | 1.80 | 20/30 | 18.0 | 4.20 | 6.10 |
| LPPI5040-2R2 | 2.20 | 20/30 | 21.0 | 3.80 | 5.70 |
| LPPI5040-3R3 | 3.30 | 20/30 | 24.0 | 3.50 | 4.40 |
| LPPI5040-4R7 | 4.70 | 20/30 | 32.0 | 3.20 | 3.90 |
| LPPI5040-6R8 | 6.80 | 20/30 | 43.0 | 2.50 | 3.30 |
| LPPI5040-8R2 | 8.20 | 20/30 | 50.0 | 2.35 | 2.90 |
| LPPI5040-100 | 10.0 | 20/30 | 56.0 | 2.20 | 2.52 |
| LPPI5040-150 | 15.0 | 15~30 | 80.0 | 1.80 | 2.00 |
| LPPI5040-220 | 22.0 | 15~30 | 123.0 | 1.50 | 1.62 |
| LPPI5040-270 | 27.0 | 15~30 | 160.0 | 1.30 | 1.40 |
| LPPI5040-330 | 33.0 | 15~30 | 180.0 | 1.20 | 1.30 |
| LPPI5040-470 | 47.0 | 10~30 | 270.0 | 1.00 | 1.10 |
| LPPI5040-680 | 68.0 | 10~30 | 400.0 | 0.80 | 0.90 |
| LPPI5040-820 | 82.0 | 10~30 | 490.0 | 0.75 | 0.78 |
| LPPI5040-101 | 100.0 | 10~30 | 560.0 | 0.72 | 0.75 |
| LPPI5040-221 | 220.0 | 10~30 | 1500 | 0.55 | 0.62 |

