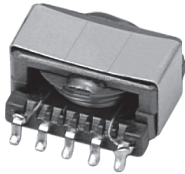


Surface Mount Transformers/Inductors, Gapped and Ungapped Custom Configurations Available



ELECTRICAL SPECIFICATIONS

(Multiple winds are connected in parallel)

Inductance Range: 10 μ H to 68000 μ H, measured at 0.10V RMS @ 10kHz without DC current, using an HP 4263A or HP 4284A impedance analyzer.

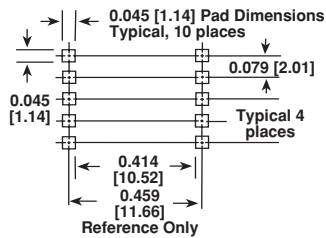
DC Resistance Range: 0.03 ohm to 24.1 ohm, measured at + 25°C \pm 5°C.

Rated Current Range: 2.29 amps to .07 amps.

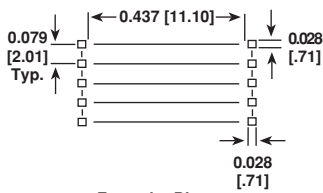
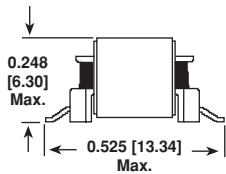
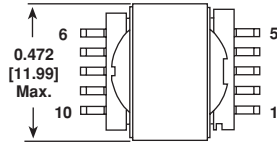
Dielectric Withstanding Voltage: 500V RMS, 60Hz, 5 seconds.

DIMENSIONS in inches (millimeters)

Pad Layout



Dimensional Outline



Footprint Diagram

NOTE: Pad layout guidelines per MIL-STD-275E (printed wiring for electronic equipment). Tolerances: xx \pm 0.01" [\pm 0.25mm], xxx \pm 0.005" [\pm 0.12mm].

STANDARD ELECTRICAL SPECIFICATIONS

| MODEL | IND. (μ H) | IND. TOL. | SCHEMATIC LETTER | DCR MAX. (Ohms) | MAX. RATED* DC CURRENT (Amps) | SATURATING** CURRENT (Amps) |
|------------------------|-----------------|-----------|------------------|-----------------|-------------------------------|-----------------------------|
| Ungapped Models | | | | | | |
| LPE-5047-151NA | 150 | \pm 30% | A | 0.20 | 0.79 | N/A |
| LPE-5047-221NA | 220 | \pm 30% | A | 0.24 | 0.72 | N/A |
| LPE-5047-331NA | 330 | \pm 30% | A | 0.29 | 0.65 | N/A |
| LPE-5047-471NA | 470 | \pm 30% | A | 0.35 | 0.59 | N/A |
| LPE-5047-681NA | 680 | \pm 30% | A | 0.42 | 0.54 | N/A |
| LPE-5047-102NA | 1000 | \pm 30% | A | 0.51 | 0.49 | N/A |
| LPE-5047-152NA | 1500 | \pm 30% | A | 0.63 | 0.44 | N/A |
| LPE-5047-222NA | 2200 | \pm 30% | A | 0.76 | 0.40 | N/A |
| LPE-5047-332NA | 3300 | \pm 30% | A | 1.00 | 0.35 | N/A |
| LPE-5047-472NA | 4700 | \pm 30% | A | 2.24 | 0.24 | N/A |
| LPE-5047-682NA | 6800 | \pm 30% | A | 2.70 | 0.21 | N/A |
| LPE-5047-103NA | 10000 | \pm 30% | A | 3.27 | 0.19 | N/A |
| LPE-5047-153NA | 15000 | \pm 30% | A | 6.26 | 0.14 | N/A |
| LPE-5047-223NA | 22000 | \pm 30% | A | 7.58 | 0.13 | N/A |
| LPE-5047-333NA | 33000 | \pm 30% | A | 9.50 | 0.11 | N/A |
| LPE-5047-473NA | 47000 | \pm 30% | A | 18.5 | 0.08 | N/A |
| LPE-5047-683NA | 68000 | \pm 30% | A | 24.1 | 0.07 | N/A |
| Gapped Models | | | | | | |
| LPE-5047-100MB | 10 | \pm 20% | B | 0.03 | 2.29 | 2.690 |
| LPE-5047-150MB | 15 | \pm 20% | B | 0.04 | 2.07 | 2.230 |
| LPE-5047-220MB | 22 | \pm 20% | B | 0.05 | 1.68 | 1.860 |
| LPE-5047-330MB | 33 | \pm 20% | C | 0.09 | 1.35 | 1.540 |
| LPE-5047-470MB | 47 | \pm 20% | D | 0.13 | 1.11 | 1.300 |
| LPE-5047-680MB | 68 | \pm 20% | D | 0.15 | 1.01 | 1.085 |
| LPE-5047-101MB | 100 | \pm 20% | D | 0.24 | 0.81 | 0.900 |
| LPE-5047-151MB | 150 | \pm 20% | D | 0.37 | 0.65 | 0.740 |
| LPE-5047-221MB | 220 | \pm 20% | E | 0.55 | 0.53 | 0.610 |
| LPE-5047-331MB | 330 | \pm 20% | E | 0.85 | 0.43 | 0.500 |
| LPE-5047-471MB | 470 | \pm 20% | E | 1.29 | 0.35 | 0.420 |
| LPE-5047-681MB | 680 | \pm 20% | E | 1.96 | 0.28 | 0.350 |
| LPE-5047-102MB | 1000 | \pm 20% | E | 2.38 | 0.26 | 0.290 |
| LPE-5047-152MB | 1500 | \pm 20% | E | 3.66 | 0.21 | 0.240 |
| LPE-5047-222MB | 2200 | \pm 20% | E | 5.47 | 0.17 | 0.195 |
| LPE-5047-332MB | 3300 | \pm 20% | E | 8.48 | 0.14 | 0.160 |
| LPE-5047-472MB | 4700 | \pm 20% | E | 13.2 | 0.11 | 0.135 |

*DC current that will create a maximum temperature rise of 30°C when applied at + 25°C ambient. **DC current that will typically reduce the initial inductance by 20%.

UNGAPPED MODELS: Highest possible inductance with the lowest DCR and highest Q capability. Beneficial in filter, impedance matching and line coupling devices.

GAPPED MODELS: Capable of handling large amounts of DC current, tighter inductance tolerance with better temperature stability than ungapped models. Beneficial in DC to DC converters or other circuits carrying DC currents or requiring inductance stability over a temperature range.

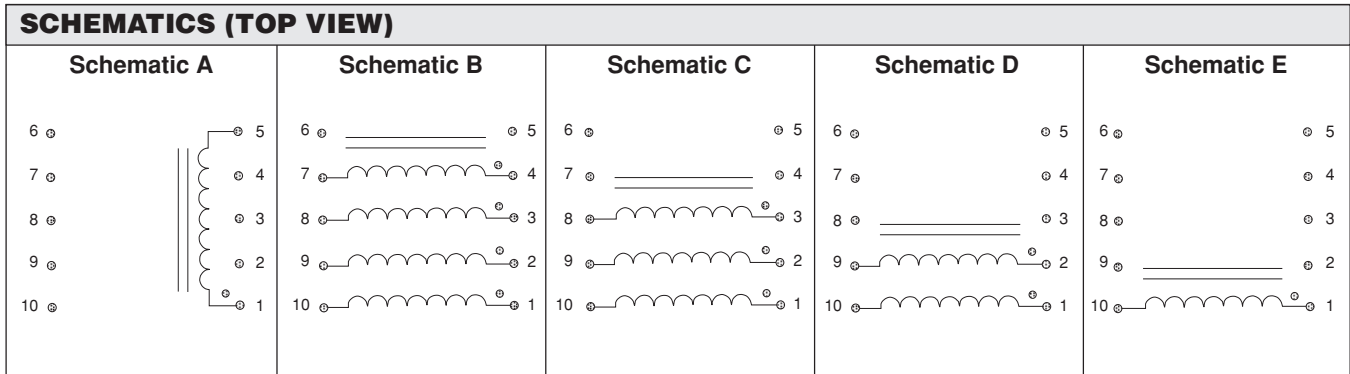
DESCRIPTION - LPE-5047-102NA

| | | | | |
|-------|------|------------------|----------------------|------|
| LPE | 5047 | 1000 μ H | \pm 30% | A |
| MODEL | SIZE | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | CORE |

SAP PART NUMBERING GUIDELINES (INTERNAL)



See the end of this data book for conversion tables



NOTE: Schematic A is for Ungapped LPE Series.

| ENVIRONMENTAL PERFORMANCE | |
|---------------------------|------------------------------------|
| TEST | CONDITIONS |
| Thermal Cycling | Withstands - 55°C to +125°C |
| Operating Temperature | - 55°C to + 125°C* |
| High Humidity | 85% |
| Soldering Heat | Tested to + 230°C |
| Mechanical Shock | Per MIL-STD-202, Method 213 (100G) |
| Vibration | Per MIL-STD-202, Method 204 (20G) |
| Solderability | Per industry standards |

*Must be checked in end use application

| PART MARKING | |
|--------------|----------------------------------|
| — | Vishay Dale |
| — | Date code |
| — | Marking code (Suffix of model #) |
| — | Pin 1 indicator |

PACKAGING

TAPE SPECIFICATIONS:
Carrier Tape Type: Conductive.
Cover Tape Type: Anti-static.
Cover Tape Adhesion to Carrier: 40 ± 30 grams.

REEL SPECIFICATIONS:
Diameter (flange): 13" [330.2mm].
Maximum Width (over flanges): 1.197" [30.4mm].

STANDARDS: All embossed carrier tape packaging will be accomplished in compliance with latest revision of EIA-481 "Taping of Surface Mount Components for Automatic Placement".

| MODEL | TAPE WIDTH | COMPONENT PITCH | UNITS PER 13 INCH REEL |
|----------|------------|-----------------|------------------------|
| LPE-5047 | 24mm | 16mm | 600 |

Tape and Reel Orientation

NOTE: Top view shown with cover tape removed.