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

FEATURES
- Material categorization:
  for definitions of compliance please see
  www.vishay.com/doc?99912

ELECTRICAL SPECIFICATIONS
Inductance Range: 10 μH to 47 000 μH, measured at 0.10 Vrms at 10 kHz without DC current, using an HP 4263A or HP 4284A impedance analyzer
DC Resistance Range: 0.03 Ω to 19.1 Ω, measured at +25 °C ± 5 °C
Rated Current Range: 2.00 A to 0.09 A
Dielectric Withstanding Voltage: 500 Vrms, 60 Hz, 5 s

Notes
(1) DC current that will create a maximum temperature rise of 30 °C when applied at +25 °C ambient
(2) 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/DC converters or other circuits carrying DC currents or requiring inductance stability over a temperature range

STANDARD ELECTRICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>MODEL</th>
<th>IND. (μH)</th>
<th>IND. TOL.</th>
<th>SCHEMATIC LETTER</th>
<th>DCR MAX. (Ω)</th>
<th>MAX. RATED DC CURRENT (A) (1)</th>
<th>SATURATING CURRENT (A) (2)</th>
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<tr>
<td>LPE4841ER101NU</td>
<td>100</td>
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<td>A</td>
<td>0.17</td>
<td>0.88</td>
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<td>0.170</td>
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<td>E</td>
<td>17.7</td>
<td>0.09</td>
<td>0.117</td>
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</tbody>
</table>

DESCRIPTION

LPE 4841 1000 μH ± 30 % A ER e2

GLOBAL PART NUMBER

<table>
<thead>
<tr>
<th>L</th>
<th>P</th>
<th>E</th>
<th>4</th>
<th>8</th>
<th>4</th>
<th>1</th>
<th>E</th>
<th>R</th>
<th>1</th>
<th>0</th>
<th>2</th>
<th>N</th>
<th>U</th>
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<tbody>
<tr>
<td>PRODUCT FAMILY</td>
<td>SIZE</td>
<td>PACKAGE CODE</td>
<td>INDUCTANCE VALUE</td>
<td>TOL.</td>
<td>CORE</td>
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<td></td>
<td></td>
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</table>

Note
- Series is also available with SnPb terminations by using package code RY for tape and reel (in place of ER) or SM for bulk (in place of EB)
**DIMENSIONS** in inches [millimeters]

**Pad Layout**
- 0.110 [2.8] Typical, 8 places
- 0.045 [1.14]
- 0.382 [9.70] Typical, 3 places
- 0.437 [11.1] Reference Only

**Dimensional Outline**
- 0.079 [2.01] Typ.
- 0.400 [10.16] Typ.
- 0.028 [0.71]

Notes
- Pad layout guidelines per MIL-STD-275E (printed wiring for electronic equipment)
- Tolerances: xx ± 0.01" [± 0.25 mm]; xxx ± 0.005" [± 0.12 mm]
- The underside of these components contains metal and thus should not come in contact with active circuit traces

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**SCHEMATIC** (top view)

**Schematic A**
- 5 o
- 6 o
- 7 o
- 8 o

**Schematic B**
- 5 o
- 6 o
- 7 o
- 8 o

**Schematic C**
- 5 o
- 6 o
- 7 o
- 8 o

**Schematic D**
- 5 o
- 6 o
- 7 o
- 8 o

**Schematic E**
- 5 o
- 6 o
- 7 o
- 8 o

Note
- Schematic A is for ungapped LPE series

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**ENVIRONMENTAL PERFORMANCE**

**TEST** | **CONDITIONS**
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Thermal cycling | Withstands -55 °C to +125 °C
Operating temperature | -55 °C to +125 °C (1)
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

Note
- (1) Must be checked in end use application

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**PART MARKING**
- Vishay Dale
- Date code
- Marking code (suffix of model #)
- Pin 1 indicator

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**PACKAGING**

**TAPE SPECIFICATIONS:**
- Carrier tape type: conductive
- Cover tape type: anti-static
- Cover tape adhesion to carrier: 40 g ± 30 g

**REEL SPECIFICATIONS:**
- Diameter (flange): 13" [330.2 mm]
- Maximum width (over flanges): 1.197" [30.4 mm]

**Tape and Reel Orientation**
- Pin 1 Indicator

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**USUER DIRECTION OF FEED**

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**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" REEL**
--- | --- | --- | ---
LPE-4841 | 24 mm | 16 mm | 600

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Note
- Top view shown with cover tape removed
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