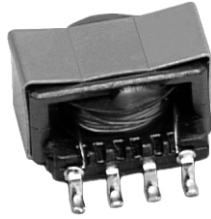


Surface Mount Transformers/Inductors, Gapped and Ungapped, Custom Configurations Available


FEATURES

- Compliant to RoHS Directive 2002/95/EC
- Halogen-free according to IEC 61249-2-21 definition


ELECTRICAL SPECIFICATIONS

Inductance Range: 10 μ H to 47 000 μ H, measured at 0.10 V_{RMS} 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 \pm 5 °C

Rated Current Range: 2.00 A to 0.09 A

Dielectric Withstanding Voltage: 500 V_{RMS} , 60 Hz, 5 s

**RoHS
COMPLIANT
HALOGEN
FREE**

STANDARD ELECTRICAL SPECIFICATIONS

| MODEL | IND. (μ H) | IND. TOL. | SCHEMATIC LETTER | DCR MAX. (Ω) | MAX. RATED DC CURRENT (A) ⁽¹⁾ | SATURATING CURRENT (A) ⁽²⁾ | |
|----------------|-----------------|------------|------------------|-----------------------|--|---------------------------------------|---------------------|
| LPE4841ER101NU | 100 | \pm 30 % | A | 0.17 | 0.88 | N/A | UNGAPPED MODELS (A) |
| LPE4841ER151NU | 150 | \pm 30 % | A | 0.21 | 0.79 | N/A | |
| LPE4841ER221NU | 220 | \pm 30 % | A | 0.25 | 0.721 | N/A | |
| LPE4841ER331NU | 330 | \pm 30 % | A | 0.30 | 0.65 | N/A | |
| LPE4841ER471NU | 470 | \pm 30 % | A | 0.36 | 0.60 | N/A | |
| LPE4841ER681NU | 680 | \pm 30 % | A | 0.44 | 0.54 | N/A | |
| LPE4841ER102NU | 1000 | \pm 30 % | A | 0.53 | 0.49 | N/A | |
| LPE4841ER152NU | 1500 | \pm 30 % | A | 0.65 | 0.45 | N/A | |
| LPE4841ER222NU | 2200 | \pm 30 % | A | 0.79 | 0.40 | N/A | |
| LPE4841ER332NU | 3300 | \pm 30 % | A | 1.55 | 0.29 | N/A | |
| LPE4841ER472NU | 4700 | \pm 30 % | A | 1.85 | 0.26 | N/A | |
| LPE4841ER682NU | 6800 | \pm 30 % | A | 4.36 | 0.17 | N/A | |
| LPE4841ER103NU | 10 000 | \pm 30 % | A | 5.29 | 0.16 | N/A | UNGAPPED MODELS (B) |
| LPE4841ER153NU | 15 000 | \pm 30 % | A | 6.48 | 0.14 | N/A | |
| LPE4841ER223NU | 22 000 | \pm 30 % | A | 13.1 | 0.10 | N/A | |
| LPE4841ER333NU | 33 000 | \pm 30 % | A | 16.0 | 0.09 | N/A | |
| LPE4841ER473NU | 47 000 | \pm 30 % | A | 19.1 | 0.08 | N/A | |
| LPE4841ER100MG | 10 | \pm 20 % | B | 0.03 | 2.03 | 2.320 | |
| LPE4841ER150MG | 15 | \pm 20 % | B | 0.04 | 1.84 | 1.925 | |
| LPE4841ER220MG | 22 | \pm 20 % | C | 0.07 | 1.32 | 1.610 | |
| LPE4841ER330MG | 33 | \pm 20 % | C | 0.09 | 1.20 | 1.330 | |
| LPE4841ER470MG | 47 | \pm 20 % | D | 0.13 | 0.98 | 1.125 | |
| LPE4841ER680MG | 68 | \pm 20 % | D | 0.21 | 0.79 | 0.941 | |
| LPE4841ER101MG | 100 | \pm 20 % | E | 0.35 | 0.58 | 0.781 | GAPPED MODELS (B) |
| LPE4841ER151MG | 150 | \pm 20 % | E | 0.48 | 0.52 | 0.641 | |
| LPE4841ER221MG | 220 | \pm 20 % | E | 0.73 | 0.42 | 0.532 | |
| LPE4841ER331MG | 330 | \pm 20 % | E | 1.14 | 0.34 | 0.436 | |
| LPE4841ER471MG | 470 | \pm 20 % | E | 1.36 | 0.31 | 0.366 | |
| LPE4841ER681MG | 680 | \pm 20 % | E | 2.07 | 0.25 | 0.305 | |
| LPE4841ER102MG | 1000 | \pm 20 % | E | 3.15 | 0.20 | 0.252 | |
| LPE4841ER152MG | 1500 | \pm 20 % | E | 4.76 | 0.16 | 0.206 | |
| LPE4841ER222MG | 2200 | \pm 20 % | E | 7.29 | 0.13 | 0.170 | |
| LPE4841ER332MG | 3300 | \pm 20 % | E | 11.7 | 0.11 | 0.139 | |
| LPE4841ER472MG | 4700 | \pm 20 % | E | 17.7 | 0.09 | 0.117 | |

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.

DESCRIPTION

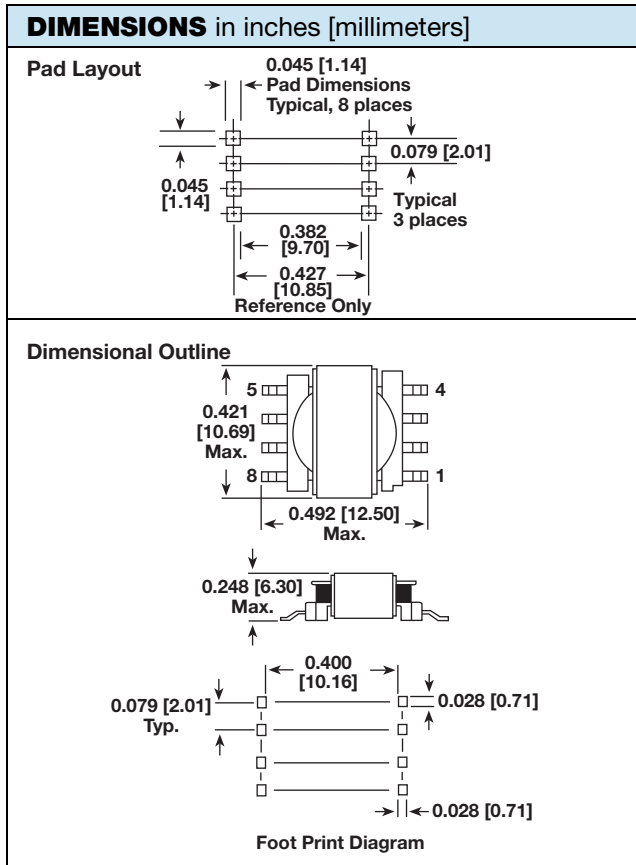
| | | | | | | |
|-------|------|------------------|----------------------|------|--------------|-------------------------------|
| LPE | 4841 | 1000 μ H | \pm 30 % | A | ER | e2 |
| MODEL | SIZE | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | CORE | PACKAGE CODE | JEDEC LEAD (Pb)-FREE STANDARD |

GLOBAL PART NUMBER

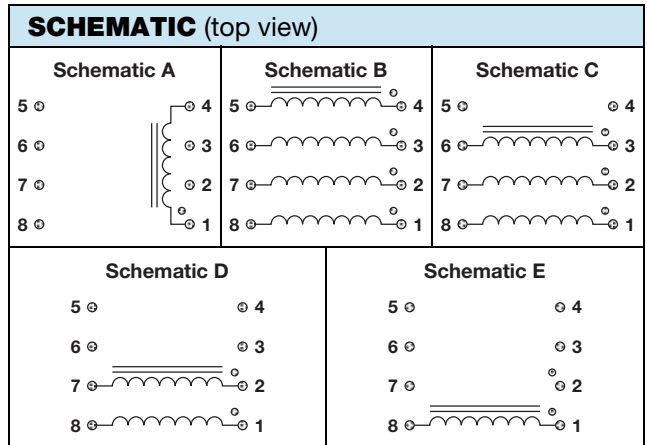
| | | | | | | | | | | | | | |
|----------------|---|---|------|---|---|--------------|---|------------------|---|---|------|------|---|
| L | P | E | 4 | 8 | 4 | 1 | E | R | 1 | 0 | 2 | N | U |
| PRODUCT FAMILY | | | SIZE | | | PACKAGE CODE | | INDUCTANCE VALUE | | | TOL. | CORE | |

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).



- 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.



- 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 ⁽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

PART MARKING

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

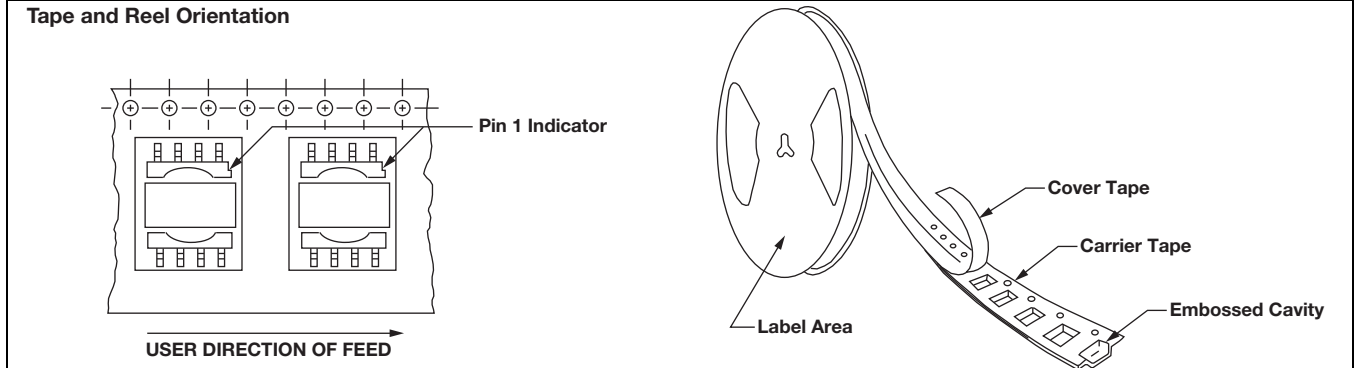
PACKAGING

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

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

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 |



- Note**
- Top view shown with cover tape removed



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