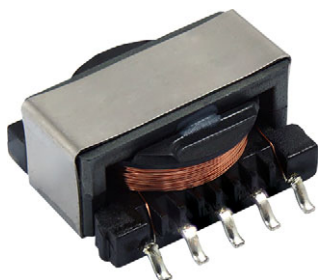


## Surface-Mount Transformers / Inductors, Gapped and Ungapped, Custom Configurations Available



### FEATURES

- Material categorization:  
for definitions of compliance please see  
[www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


**RoHS**  
COMPLIANT

### ELECTRICAL SPECIFICATIONS

(multiple winds are connected in parallel)

**Inductance Range:** 10  $\mu$ H to 330 000  $\mu$ 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  $\Omega$  to 53.7  $\Omega$ , measured at +25  $^{\circ}$ C  $\pm$  5  $^{\circ}$ C

**Rated Current Range:** 3.00 A to 0.06 A

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

| STANDARD ELECTRICAL SPECIFICATIONS |                 |               |                  |                       |                                          |                                       |
|------------------------------------|-----------------|---------------|------------------|-----------------------|------------------------------------------|---------------------------------------|
| MODEL                              | IND. ( $\mu$ H) | IND. TOL. (%) | SCHEMATIC LETTER | DCR MAX. ( $\Omega$ ) | MAX. RATED DC CURRENT (A) <sup>(1)</sup> | SATURATING CURRENT (A) <sup>(2)</sup> |
| LPE6562ER221NU                     | 220             | $\pm$ 30      | A                | 0.28                  | 0.90                                     | N/A                                   |
| LPE6562ER331NU                     | 330             | $\pm$ 30      | A                | 0.34                  | 0.81                                     | N/A                                   |
| LPE6562ER471NU                     | 470             | $\pm$ 30      | A                | 0.40                  | 0.74                                     | N/A                                   |
| LPE6562ER681NU                     | 680             | $\pm$ 30      | A                | 0.48                  | 0.67                                     | N/A                                   |
| LPE6562ER102NU                     | 1000            | $\pm$ 30      | A                | 0.59                  | 0.61                                     | N/A                                   |
| LPE6562ER152NU                     | 1500            | $\pm$ 30      | A                | 0.72                  | 0.55                                     | N/A                                   |
| LPE6562ER222NU                     | 2200            | $\pm$ 30      | A                | 0.87                  | 0.50                                     | N/A                                   |
| LPE6562ER332NU                     | 3300            | $\pm$ 30      | A                | 1.07                  | 0.45                                     | N/A                                   |
| LPE6562ER472NU                     | 4700            | $\pm$ 30      | A                | 1.27                  | 0.41                                     | N/A                                   |
| LPE6562ER682NU                     | 6800            | $\pm$ 30      | A                | 1.53                  | 0.38                                     | N/A                                   |
| LPE6562ER103NU                     | 10 000          | $\pm$ 30      | A                | 1.86                  | 0.34                                     | N/A                                   |
| LPE6562ER153NU                     | 15 000          | $\pm$ 30      | A                | 2.27                  | 0.31                                     | N/A                                   |
| LPE6562ER223NU                     | 22 000          | $\pm$ 30      | A                | 8.67                  | 0.16                                     | N/A                                   |
| LPE6562ER333NU                     | 33 000          | $\pm$ 30      | A                | 10.6                  | 0.14                                     | N/A                                   |
| LPE6562ER473NU                     | 47 000          | $\pm$ 30      | A                | 12.7                  | 0.13                                     | N/A                                   |
| LPE6562ER683NU                     | 68 000          | $\pm$ 30      | A                | 15.2                  | 0.12                                     | N/A                                   |
| LPE6562ER104NU                     | 100 000         | $\pm$ 30      | A                | 18.5                  | 0.11                                     | N/A                                   |
| LPE6562ER154NU                     | 150 000         | $\pm$ 30      | A                | 37.7                  | 0.08                                     | N/A                                   |
| LPE6562ER224NU                     | 220 000         | $\pm$ 30      | A                | 45.6                  | 0.07                                     | N/A                                   |
| LPE6562ER334NU                     | 330 000         | $\pm$ 30      | A                | 53.7                  | 0.06                                     | N/A                                   |
| LPE6562ER100MG                     | 10              | $\pm$ 20      | B                | 0.03                  | 3.09                                     | 5.055                                 |
| LPE6562ER150MG                     | 15              | $\pm$ 20      | B                | 0.04                  | 2.79                                     | 4.160                                 |
| LPE6562ER220MG                     | 22              | $\pm$ 20      | B                | 0.05                  | 2.26                                     | 3.460                                 |
| LPE6562ER330MG                     | 33              | $\pm$ 20      | B                | 0.08                  | 1.81                                     | 2.840                                 |
| LPE6562ER470MG                     | 47              | $\pm$ 20      | D                | 0.12                  | 1.48                                     | 2.390                                 |
| LPE6562ER680MG                     | 68              | $\pm$ 20      | C                | 0.19                  | 1.20                                     | 1.990                                 |
| LPE6562ER101MG                     | 100             | $\pm$ 20      | D                | 0.29                  | 0.98                                     | 1.650                                 |
| LPE6562ER151MG                     | 150             | $\pm$ 20      | E                | 0.45                  | 0.78                                     | 1.350                                 |
| LPE6562ER221MG                     | 220             | $\pm$ 20      | E                | 0.54                  | 0.71                                     | 1.115                                 |
| LPE6562ER331MG                     | 330             | $\pm$ 20      | E                | 0.84                  | 0.57                                     | 0.912                                 |
| LPE6562ER471MG                     | 470             | $\pm$ 20      | E                | 1.24                  | 0.47                                     | 0.765                                 |
| LPE6562ER681MG                     | 680             | $\pm$ 20      | E                | 1.89                  | 0.38                                     | 0.637                                 |
| LPE6562ER102MG                     | 1000            | $\pm$ 20      | E                | 2.91                  | 0.31                                     | 0.526                                 |
| LPE6562ER152MG                     | 1500            | $\pm$ 20      | E                | 4.50                  | 0.25                                     | 0.430                                 |
| LPE6562ER222MG                     | 2200            | $\pm$ 20      | E                | 6.90                  | 0.20                                     | 0.355                                 |
| LPE6562ER332MG                     | 3300            | $\pm$ 20      | E                | 10.4                  | 0.16                                     | 0.290                                 |
| LPE6562ER472MG                     | 4700            | $\pm$ 20      | E                | 15.7                  | 0.13                                     | 0.243                                 |

UNGAPPED MODELS (A)

GAPPED MODELS (B)

### Notes

<sup>(1)</sup> DC current that will create a maximum temperature rise of 30  $^{\circ}$ C when applied at +25  $^{\circ}$ C ambient.

<sup>(2)</sup> 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**

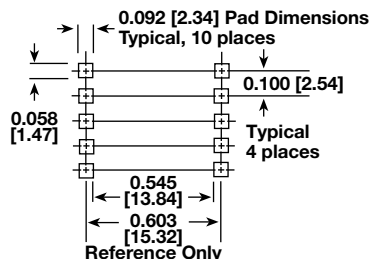
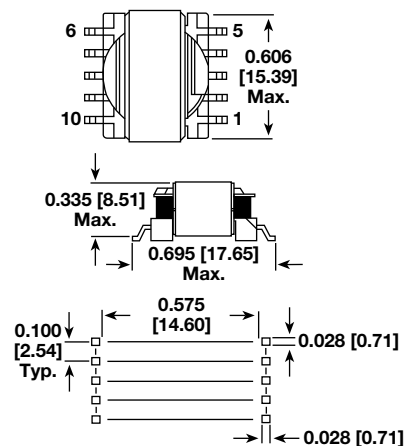
|       |      |                  |                      |      |              |                                |
|-------|------|------------------|----------------------|------|--------------|--------------------------------|
| LPE   | 6562 | 1000 $\mu$ H     | $\pm 30\%$           | A    | ER           | e2                             |
| MODEL | SIZE | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | CORE | PACKAGE CODE | JEDEC® LEAD (Pb)-FREE STANDARD |

**GLOBAL PART NUMBER**

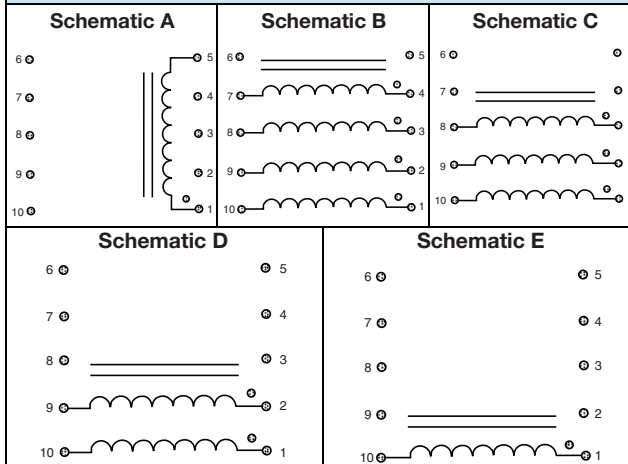
|                |   |   |      |   |   |              |   |                    |   |           |   |      |   |
|----------------|---|---|------|---|---|--------------|---|--------------------|---|-----------|---|------|---|
| L              | P | E | 6    | 5 | 6 | 2            | E | R                  | 1 | 0         | 2 | N    | T |
| PRODUCT FAMILY |   |   | SIZE |   |   | PACKAGE CODE |   | INDUCTANCE VALUE   |   | TOLERANCE |   | CORE |   |
|                |   |   |      |   |   |              |   | 102 = 1000 $\mu$ H |   | N = 30 %  |   |      |   |

**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****Dimensional Outline****Foot Print Diagram****Notes**

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

**SCHEMATIC** (top view)**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 <sup>(1)</sup>   |
| 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**

- <sup>(1)</sup> 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  $\pm$  30 g

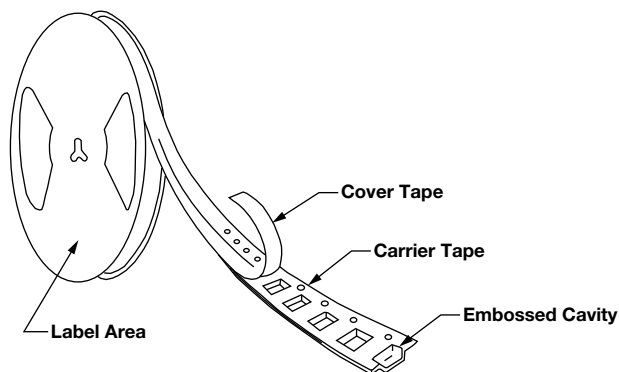
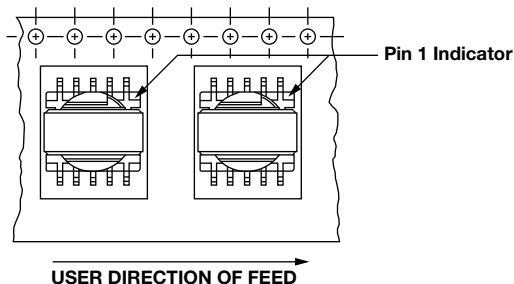
### REEL SPECIFICATIONS:

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-6562 (RY) | 32 mm      | 20 mm           | 300                |
| LPE-6562 (ER) | 24 mm      | 20 mm           | 300                |

### Tape and Reel Orientation



### Note

- Top view shown with cover tape removed.



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