



# Inductors / Transformers Customizable, Surface-Mount Torodial, Kool-Mu®, Powdered Iron and MPP Cores

**Note**

- Kool Mu® is a registered trademark of Spang & Company

**FEATURES**

- Toroidal design for minimal EMI radiation in DC/DC converter applications
- Designed to support the growing need for efficient DC/DC converters in battery operated equipment
- Two separate windings provide versatility by ability to connect windings in series or parallel
- Dielectric withstanding voltage: 500 V<sub>RMS</sub>, 60 Hz, 5 s
- Operating temperature range: -40 °C to +125 °C
- Supplied on tape and reel and is designed to be pick and place compatible
- Custom versions and turns ratios available. Contact the factory with your specifications
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

**RoHS  
COMPLIANT**

| STANDARD ELECTRICAL SPECIFICATIONS (in parallel) |                   |           |                           |            |                                      |                                                        |
|--------------------------------------------------|-------------------|-----------|---------------------------|------------|--------------------------------------|--------------------------------------------------------|
| MODEL                                            | STD. IND.<br>(μH) | IND. TOL. | ACTUAL IND. (LOC)<br>(μH) | DCR<br>(Ω) | RATED I <sub>DC</sub><br>(40 °C) (A) | IND. AT I <sub>DC</sub> (L <sub>BIAS</sub> )<br>(30 %) |
| LPT4545ER1R0LK                                   | 1.0               | ± 15 %    | 0.832                     | 0.003      | 6.90                                 | 0.51 at 7.62                                           |
| LPT4545ER1R5LK                                   | 1.5               | ± 15 %    | 1.30                      | 0.004      | 6.45                                 | 0.80 at 6.10                                           |
| LPT4545ER2R5LK                                   | 2.5               | ± 15 %    | 2.55                      | 0.006      | 5.75                                 | 1.57 at 4.35                                           |
| LPT4545ER3R3LK                                   | 3.3               | ± 15 %    | 3.33                      | 0.007      | 5.50                                 | 2.05 at 3.81                                           |
| LPT4545ER5R0LK                                   | 5.0               | ± 15 %    | 5.20                      | 0.011      | 4.45                                 | 3.20 at 3.05                                           |
| LPT4545ER100LK                                   | 10                | ± 15 %    | 10.2                      | 0.019      | 3.45                                 | 6.28 at 2.18                                           |
| LPT4545ER150LK                                   | 15                | ± 15 %    | 15.0                      | 0.029      | 2.79                                 | 9.26 at 1.79                                           |
| LPT4545ER200LK                                   | 20                | ± 15 %    | 20.8                      | 0.038      | 2.61                                 | 12.4 at 1.53                                           |
| LPT4545ER250LK                                   | 25                | ± 15 %    | 25.2                      | 0.048      | 2.25                                 | 15.5 at 1.39                                           |
| LPT4545ER330LK                                   | 33                | ± 15 %    | 32.5                      | 0.068      | 1.85                                 | 20.0 at 1.22                                           |
| LPT4545ER500LK                                   | 50                | ± 15 %    | 50.0                      | 0.107      | 1.50                                 | 30.8 at 0.98                                           |
| LPT4545ER101LK                                   | 100               | ± 15 %    | 101                       | 0.195      | 1.15                                 | 62.0 at 0.69                                           |
| LPT4545ER151LK                                   | 150               | ± 15 %    | 152                       | 0.302      | 0.92                                 | 93.4 at 0.56                                           |
| LPT4545ER251LK                                   | 250               | ± 15 %    | 248                       | 0.491      | 0.73                                 | 153.0 at 0.44                                          |
| LPT4545ER301LK                                   | 300               | ± 15 %    | 300                       | 0.670      | 0.63                                 | 179.0 at 0.40                                          |
| LPT4545ER331LK                                   | 330               | ± 15 %    | 333                       | 0.706      | 0.60                                 | 205.0 at 0.38                                          |
| LPT4545ER1R0LP                                   | 1.0               | ± 15 %    | 0.838                     | 0.004      | 6.61                                 | 0.53 at 7.09                                           |
| LPT4545ER1R5LP                                   | 1.5               | ± 15 %    | 1.21                      | 0.005      | 6.08                                 | 0.76 at 5.91                                           |
| LPT4545ER2R5LP                                   | 2.5               | ± 15 %    | 2.71                      | 0.009      | 5.01                                 | 1.71 at 3.94                                           |
| LPT4545ER3R3LP                                   | 3.3               | ± 15 %    | 3.35                      | 0.012      | 4.22                                 | 2.11 at 3.54                                           |
| LPT4545ER5R0LP                                   | 5.0               | ± 15 %    | 5.66                      | 0.019      | 3.32                                 | 3.57 at 2.73                                           |
| LPT4545ER100LP                                   | 10                | ± 15 %    | 10.9                      | 0.034      | 2.52                                 | 6.84 at 1.97                                           |
| LPT4545ER150LP                                   | 15                | ± 15 %    | 14.8                      | 0.049      | 2.10                                 | 9.31 at 1.69                                           |
| LPT4545ER250LP                                   | 25                | ± 15 %    | 26.3                      | 0.084      | 1.61                                 | 16.5 at 1.27                                           |
| LPT4545ER330LP                                   | 33                | ± 15 %    | 34.3                      | 0.119      | 1.34                                 | 21.6 at 1.11                                           |
| LPT4545ER500LP                                   | 50                | ± 15 %    | 51.0                      | 0.180      | 1.09                                 | 32.1 at 0.91                                           |
| LPT4545ER101LP                                   | 100               | ± 15 %    | 105                       | 0.342      | 0.81                                 | 66.2 at 0.63                                           |
| LPT4545ER151LP                                   | 150               | ± 15 %    | 150                       | 0.509      | 0.66                                 | 94.7 at 0.53                                           |
| LPT4545ER251LP                                   | 250               | ± 15 %    | 248                       | 0.831      | 0.52                                 | 156.0 at 0.41                                          |
| LPT4545ER331LP                                   | 330               | ± 15 %    | 335                       | 1.194      | 0.43                                 | 211.0 at 0.35                                          |
| LPT4545ER1R0LM                                   | 1.0               | ± 15 %    | 0.838                     | 0.004      | 7.54                                 | 0.54 at 11.11                                          |
| LPT4545ER1R5LM                                   | 1.5               | ± 15 %    | 1.30                      | 0.004      | 6.82                                 | 0.84 at 8.89                                           |
| LPT4545ER2R5LM                                   | 2.5               | ± 15 %    | 2.55                      | 0.007      | 5.84                                 | 1.64 at 6.35                                           |
| LPT4545ER3R3LM                                   | 3.3               | ± 15 %    | 3.33                      | 0.008      | 5.49                                 | 2.14 at 5.56                                           |
| LPT4545ER5R0LM                                   | 5.0               | ± 15 %    | 5.20                      | 0.012      | 4.37                                 | 3.35 at 4.45                                           |
| LPT4545ER100LM                                   | 10                | ± 15 %    | 10.2                      | 0.022      | 3.32                                 | 6.56 at 3.18                                           |
| LPT4545ER150LM                                   | 15                | ± 15 %    | 15.0                      | 0.033      | 2.69                                 | 9.68 at 2.61                                           |
| LPT4545ER250LM                                   | 25                | ± 15 %    | 25.2                      | 0.054      | 2.12                                 | 16.2 at 2.02                                           |
| LPT4545ER330LM                                   | 33                | ± 15 %    | 32.5                      | 0.076      | 1.76                                 | 20.9 at 1.78                                           |
| LPT4545ER500LM                                   | 50                | ± 15 %    | 50.0                      | 0.119      | 1.41                                 | 32.2 at 1.43                                           |
| LPT4545ER101LM                                   | 100               | ± 15 %    | 101                       | 0.219      | 1.07                                 | 64.8 at 1.01                                           |
| LPT4545ER151LM                                   | 150               | ± 15 %    | 152                       | 0.340      | 0.86                                 | 97.7 at 0.82                                           |
| LPT4545ER251LM                                   | 250               | ± 15 %    | 248                       | 0.551      | 0.67                                 | 159.0 at 0.64                                          |
| LPT4545ER331LM                                   | 330               | ± 15 %    | 333                       | 0.788      | 0.56                                 | 214.0 at 0.56                                          |

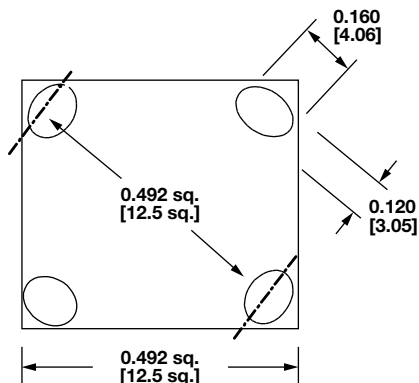
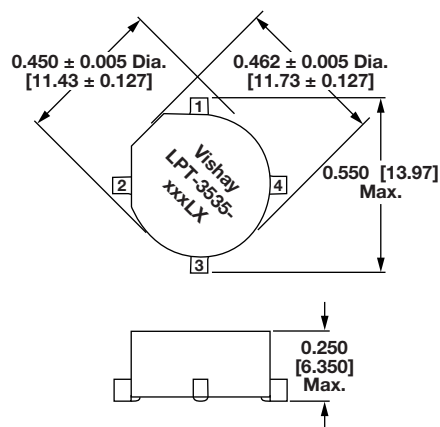
| DESCRIPTION |      |                     |                         |                                                                           |                           |                                   |
|-------------|------|---------------------|-------------------------|---------------------------------------------------------------------------|---------------------------|-----------------------------------|
| LPT         | 4545 | 100 μH              | ± 15 %                  | A                                                                         | ER                        | e2                                |
| MODEL       | SIZE | INDUCTANCE<br>VALUE | INDUCTANCE<br>TOLERANCE | CORE / HEIGHT<br>K = KOOL MU® (A)<br>P = POWDERED IRON (B)<br>M = MPP (C) | PACKAGE CODE<br>ER = reel | JEDEC® LEAD (Pb)-FREE<br>STANDARD |

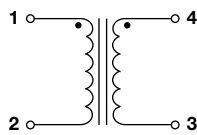
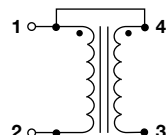
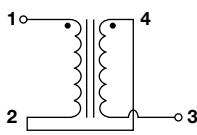
| GLOBAL PART NUMBER |   |   |      |   |              |   |                  |   |      |
|--------------------|---|---|------|---|--------------|---|------------------|---|------|
| L                  | P | T | 4    | 5 | 4            | 5 | E                | R | 1    |
| PRODUCT FAMILY     |   |   | SIZE |   | PACKAGE CODE |   | INDUCTANCE VALUE |   | TOL. |
|                    |   |   |      |   |              |   |                  |   | CORE |

**Note**

- Series is also available with SnPb terminations by using package code RH for tape and reel (in place of ER)

**DIMENSIONS** in inches [millimeters]

**Pad Layout**

**Dimensional Outline**

**SCHEMATICS** (connection diagrams)

**Transformer**

**Parallel**

**Series**

**PART MARKING**

- Vishay
- Model number
- Pin 1 identification

**PACKAGING** in inches [millimeters]

All embossed carrier tape packaging will be in compliance with the latest revision of EIA-481.

**CARRIER TAPE WIDTH**

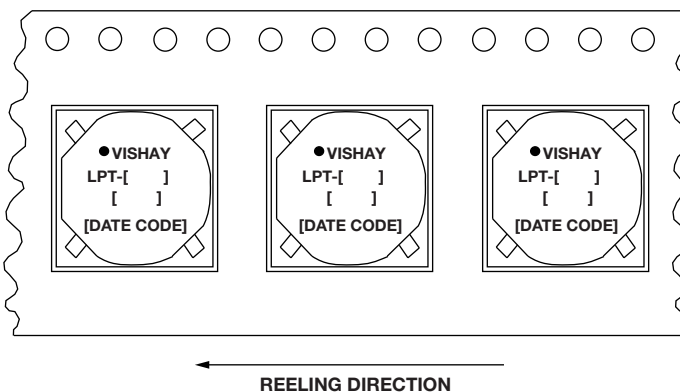
0.945 [24.0]

**PITCH**

0.630 [16.0]

**PARTS PER 13" [330.2] REEL**

600





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