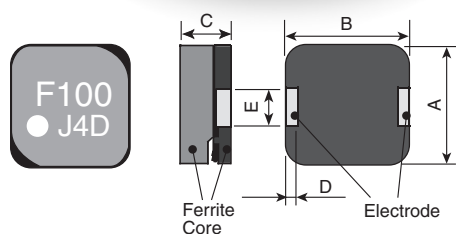
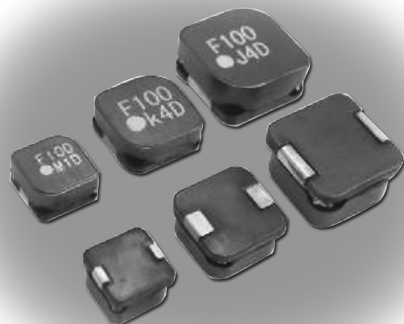


## features

- Magnetic shielded power chip inductors with a little leakage magnetic flux
- Small size and low-profile
- Low DC Resistance and larger Rated Current
- Suitable for reflow soldering
- Products meet EU RoHS requirements



| Type    | Dimensions inches (mm)  |                         |               |                        |                        |
|---------|-------------------------|-------------------------|---------------|------------------------|------------------------|
|         | A                       | B                       | C Max.        | D                      | E                      |
| LKS0745 | .295±.020<br>(7.5±0.5)  | .295±.020<br>(7.5±0.5)  | .177<br>(4.5) | .039±.012<br>(1.0±0.3) | .079±.008<br>(2.0±0.2) |
| LKS1045 | .398±.012<br>(10.1±0.3) | .398±.012<br>(10.1±0.3) | .177<br>(4.5) | .079±.012<br>(2.0±0.3) | .118±.008<br>(3.0±0.2) |
| LKS1260 | .492±.012<br>(12.5±0.3) | .492±.012<br>(12.5±0.3) | .236<br>(6.0) | .059±.012<br>(1.5±0.3) | .197±.008<br>(5.0±0.2) |

## ordering information

| LKS          | 0745                 | T                         | TEG                   | 100                                               | M                  |
|--------------|----------------------|---------------------------|-----------------------|---------------------------------------------------|--------------------|
| Product Code | Style (mm)           | Terminal Surface Material | Packaging             | Nominal Inductance                                | Tolerance          |
|              | 0745<br>1045<br>1260 | T: Sn                     | TEG: embossed plastic | 3 digits<br>3R3: 3.3μH<br>100: 10μH<br>101: 100μH | M: ±20%<br>N: ±30% |

For further information on packaging, please refer to Appendix A.

## applications and ratings

### LKS0745

| Type              | Nominal Inductance (μH) | Inductance Tolerance | DC Resistance (Ω)Max. | Allowable DC Current (A) Max.*1 | SRF (MHz) Typ. |
|-------------------|-------------------------|----------------------|-----------------------|---------------------------------|----------------|
| LKS0745 TTEG 3R3N | 3.3                     | N: ±30%              | 0.022                 | 4.5                             | 41             |
| LKS0745 TTEG 4R7N | 4.7                     |                      | 0.031                 | 3.8                             | 34             |
| LKS0745 TTEG 5R6N | 5.6                     |                      | 0.035                 | 3.6                             | 31             |
| LKS0745 TTEG 6R8N | 6.8                     |                      | 0.038                 | 3.4                             | 28             |
| LKS0745 TTEG 8R2N | 8.2                     |                      | 0.050                 | 2.8                             | 25             |
| LKS0745 TTEG 100M | 10                      | M: ±20%              | 0.057                 | 2.6                             | 24             |
| LKS0745 TTEG 120M | 12                      |                      | 0.067                 | 2.4                             | 22             |
| LKS0745 TTEG 150M | 15                      |                      | 0.100                 | 2.1                             | 19             |
| LKS0745 TTEG 180M | 18                      |                      | 0.113                 | 2.0                             | 17             |
| LKS0745 TTEG 220M | 22                      |                      | 0.127                 | 1.9                             | 16             |
| LKS0745 TTEG 330M | 33                      |                      | 0.199                 | 1.5                             | 13             |
| LKS0745 TTEG 470M | 47                      |                      | 0.253                 | 1.3                             | 11             |
| LKS0745 TTEG 560M | 56                      |                      | 0.288                 | 1.3                             | 10             |
| LKS0745 TTEG 680M | 68                      |                      | 0.437                 | 1.0                             | 9              |
| LKS0745 TTEG 820M | 82                      |                      | 0.483                 | 1.0                             | 8              |
| LKS0745 TTEG 101M | 100                     |                      | 0.598                 | 0.9                             | 7              |
| LKS0745 TTEG 121M | 120                     |                      | 0.644                 | 0.8                             | 6              |
| LKS0745 TTEG 151M | 150                     |                      | 0.817                 | 0.7                             | 6              |
| LKS0745 TTEG 181M | 180                     |                      | 0.897                 | 0.7                             | 5              |
| LKS0745 TTEG 221M | 220                     |                      | 1.104                 | 0.6                             | 5              |
| LKS0745 TTEG 331M | 330                     |                      | 2.093                 | 0.5                             | 4              |
| LKS0745 TTEG 471M | 470                     |                      | 2.576                 | 0.4                             | 3              |
| LKS0745 TTEG 561M | 560                     |                      | 4.200                 | 0.31                            | 3              |
| LKS0745 TTEG 681M | 680                     |                      | 4.680                 | 0.27                            | 3              |
| LKS0745 TTEG 821M | 820                     |                      | 6.360                 | 0.24                            | 2              |
| LKS0745 TTEG 102M | 1000                    |                      | 6.600                 | 0.23                            | 2              |

### LKS1045

| Type              | Nominal Inductance (μH) | Inductance Tolerance | DC Resistance (Ω)Max. | Allowable DC Current (A) Max.*1 | SRF (MHz) Typ. |
|-------------------|-------------------------|----------------------|-----------------------|---------------------------------|----------------|
| LKS1045 TTEG 3R3N | 3.3                     | N: ±30%              | 0.017                 | 5.8                             | 37             |
| LKS1045 TTEG 4R7N | 4.7                     |                      | 0.022                 | 5.1                             | 31             |
| LKS1045 TTEG 5R6N | 5.6                     |                      | 0.024                 | 4.9                             | 28             |
| LKS1045 TTEG 6R8N | 6.8                     |                      | 0.027                 | 4.6                             | 25             |
| LKS1045 TTEG 8R2N | 8.2                     |                      | 0.032                 | 4.0                             | 23             |
| LKS1045 TTEG 100M | 10                      | M: ±20%              | 0.042                 | 3.6                             | 21             |
| LKS1045 TTEG 120M | 12                      |                      | 0.043                 | 3.4                             | 19             |
| LKS1045 TTEG 150M | 15                      |                      | 0.065                 | 3.0                             | 17             |
| LKS1045 TTEG 180M | 18                      |                      | 0.066                 | 2.9                             | 15             |
| LKS1045 TTEG 220M | 22                      |                      | 0.089                 | 2.5                             | 14             |
| LKS1045 TTEG 330M | 33                      |                      | 0.159                 | 1.9                             | 11             |
| LKS1045 TTEG 470M | 47                      |                      | 0.196                 | 1.7                             | 9              |
| LKS1045 TTEG 560M | 56                      |                      | 0.215                 | 1.5                             | 8              |
| LKS1045 TTEG 680M | 68                      |                      | 0.242                 | 1.4                             | 8              |
| LKS1045 TTEG 820M | 82                      |                      | 0.265                 | 1.3                             | 7              |
| LKS1045 TTEG 101M | 100                     |                      | 0.414                 | 1.2                             | 6              |
| LKS1045 TTEG 121M | 120                     |                      | 0.472                 | 1.0                             | 6              |
| LKS1045 TTEG 151M | 150                     |                      | 0.575                 | 0.9                             | 5              |
| LKS1045 TTEG 181M | 180                     |                      | 0.633                 | 0.8                             | 4              |
| LKS1045 TTEG 221M | 220                     |                      | 0.874                 | 0.7                             | 4              |
| LKS1045 TTEG 331M | 330                     |                      | 1.300                 | 0.6                             | 3              |
| LKS1045 TTEG 471M | 470                     |                      | 1.716                 | 0.5                             | 3              |

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

12/07/16

## ratings (continued)

### LKS1260

| Type              | Nominal Inductance (μH) | Inductance Tolerance | DC Resistance (Ω)Max. | Allowable DC Current (A) Max.*1 | SRF (MHz) Typ. |
|-------------------|-------------------------|----------------------|-----------------------|---------------------------------|----------------|
| LKS1260 TTEG 3R3N | 3.3                     | N: ±30%              | 0.011                 | 6.6                             | 34             |
| LKS1260 TTEG 4R7N | 4.7                     |                      | 0.012                 | 6.3                             | 28             |
| LKS1260 TTEG 5R6N | 5.6                     |                      | 0.014                 | 5.8                             | 25             |
| LKS1260 TTEG 6R8N | 6.8                     |                      | 0.015                 | 5.6                             | 23             |
| LKS1260 TTEG 8R2N | 8.2                     |                      | 0.019                 | 5.0                             | 21             |
| LKS1260 TTEG 100M | 10                      | M: ±20%              | 0.021                 | 4.8                             | 19             |
| LKS1260 TTEG 120M | 12                      |                      | 0.023                 | 4.6                             | 18             |
| LKS1260 TTEG 150M | 15                      |                      | 0.026                 | 4.3                             | 16             |
| LKS1260 TTEG 180M | 18                      |                      | 0.034                 | 3.8                             | 14             |
| LKS1260 TTEG 220M | 22                      |                      | 0.040                 | 3.5                             | 13             |
| LKS1260 TTEG 330M | 33                      |                      | 0.058                 | 2.9                             | 10             |
| LKS1260 TTEG 470M | 47                      |                      | 0.083                 | 2.4                             | 8              |
| LKS1260 TTEG 560M | 56                      |                      | 0.093                 | 2.3                             | 8              |
| LKS1260 TTEG 680M | 68                      |                      | 0.127                 | 1.9                             | 7              |
| LKS1260 TTEG 820M | 82                      |                      | 0.140                 | 1.8                             | 6              |
| LKS1260 TTEG 101M | 100                     |                      | 0.157                 | 1.7                             | 6              |

| Type              | Nominal Inductance (μH) | Inductance Tolerance | DC Resistance (Ω)Max. | Allowable DC Current (A) Max.*1 | SRF (MHz) Typ. |
|-------------------|-------------------------|----------------------|-----------------------|---------------------------------|----------------|
| LKS1260 TTEG 121M | 120                     | M: ±20%              | 0.181                 | 1.5                             | 5              |
| LKS1260 TTEG 151M | 150                     |                      | 0.247                 | 1.2                             | 5              |
| LKS1260 TTEG 181M | 180                     |                      | 0.301                 | 1.1                             | 4              |
| LKS1260 TTEG 221M | 220                     |                      | 0.355                 | 1.0                             | 4              |
| LKS1260 TTEG 331M | 330                     |                      | 0.566                 | 0.8                             | 3              |
| LKS1260 TTEG 471M | 470                     |                      | 0.853                 | 0.7                             | 2              |
| LKS1260 TTEG 561M | 560                     |                      | 1.210                 | 0.68                            | 1.9            |
| LKS1260 TTEG 681M | 680                     |                      | 1.370                 | 0.66                            | 1.8            |
| LKS1260 TTEG 821M | 820                     |                      | 1.810                 | 0.57                            | 1.7            |
| LKS1260 TTEG 102M | 1000                    |                      | 1.950                 | 0.55                            | 1.5            |
| LKS1260 TTEG 152M | 1500                    |                      | 2.950                 | 0.45                            | 1.2            |
| LKS1260 TTEG 222M | 2200                    |                      | 4.270                 | 0.37                            | 0.9            |
| LKS1260 TTEG 332M | 3300                    |                      | 5.900                 | 0.31                            | 0.8            |
| LKS1260 TTEG 472M | 4700                    |                      | 9.560                 | 0.25                            | 0.6            |
| LKS1260 TTEG 682M | 6800                    |                      | 16.400                | 0.19                            | 0.5            |
| LKS1260 TTEG 103M | 10000                   |                      | 26.000                | 0.15                            | 0.4            |

\*1 Allowable DC Current: DC Current value when coil temperature rise is within  $\Delta T = 35^{\circ}\text{C}$  or when inductance change ratio is within  $\Delta L/L = -30\%$ , whichever is lower.

For complete environmental specifications, please refer to [www.koaspeer.com](http://www.koaspeer.com)

Operating Temperature Range:  $-40^{\circ}\text{C} - +120^{\circ}\text{C}$

The operating temperature range of the coil (ambient temperature + self heating) must remain at  $+120^{\circ}\text{C}$  or less

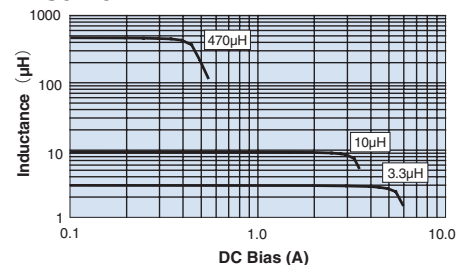
## environmental applications

### Performance Characteristics

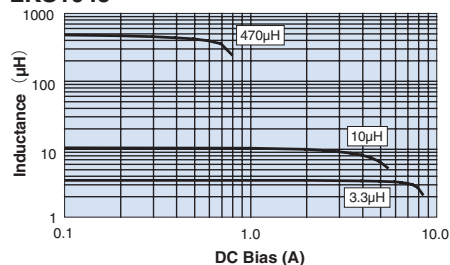
| Test Items                | Test Methods                                                                         | Limit                  |
|---------------------------|--------------------------------------------------------------------------------------|------------------------|
| Heat Shock                | $-40^{\circ}\text{C}(30\text{min.})/ +120^{\circ}\text{C}(30\text{min.})$ 100 cycles | $\Delta L/L: \pm 10\%$ |
| Low Temperature Exposure  | $-40^{\circ}\text{C}$ , 1,000h                                                       | $\Delta L/L: \pm 10\%$ |
| High Temperature Exposure | $+120^{\circ}\text{C}$ , 1,000h                                                      | $\Delta L/L: \pm 10\%$ |
| Moisture Endurance        | $+85^{\circ}\text{C}$ , 85%RH, 1,000h                                                | $\Delta L/L: \pm 10\%$ |

## DC Bias Characteristics

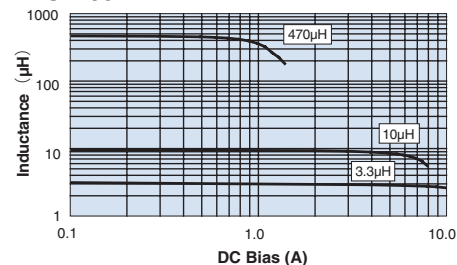
### LKS0745



### LKS1045

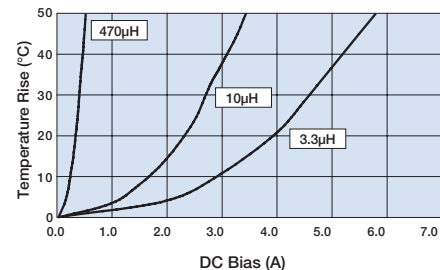


### LKS1260

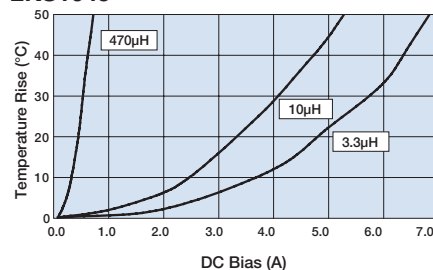


## Surface Temperature Rise

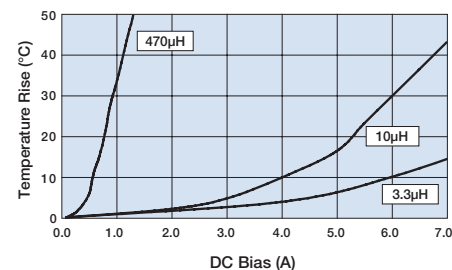
### LKS0745



### LKS1045



### LKS1260



Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use. 12/01/14