

# SMD Inductors(Coils) For Power Line(Wound)

Conformity to RoHS Directive

## VLP Series VLP4612

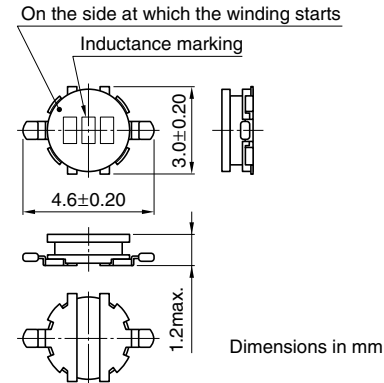
### FEATURES

- This is an SMD power inductor for power supplies that has an open magnetic path construction based on a low-height drum core (upright).
- User terminals are contact-formed on the bottom of the drum core using copper (finished with tin plating).
- It uses crosswise windings and supports large currents.
- It is lead-free compatible.
- With several variations in drum core height, users can choose the perfect product for their application.

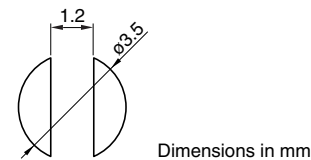
### APPLICATIONS

- LCD modules
- Cellular phones
- Hard disk drives

### SHAPES AND DIMENSIONS



### RECOMMENDED PC BOARD PATTERN



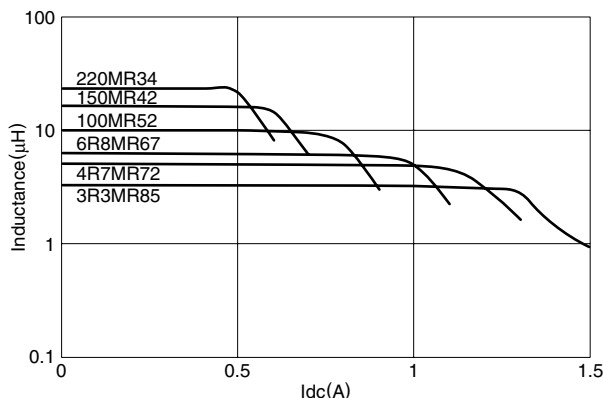
### ELECTRICAL CHARACTERISTICS

| Part No.         | Inductance (μH) | Inductance tolerance (%) | Test frequency (kHz) | DC resistance (Ω) max. | Rated current(A)*<br>Based on inductance change | Based on temperature rise |
|------------------|-----------------|--------------------------|----------------------|------------------------|-------------------------------------------------|---------------------------|
| VLP4612T-1R0M1R5 | 1.0             | ±20%                     | 100                  | 0.11                   | 2.30 max.                                       | 1.50 typ.                 |
| VLP4612T-1R8M1R3 | 1.8             | ±20%                     | 100                  | 0.14                   | 1.70 max.                                       | 1.30 typ.                 |
| VLP4612T-2R5M1R1 | 2.5             | ±20%                     | 100                  | 0.17                   | 1.40 max.                                       | 1.10 typ.                 |
| VLP4612T-3R3MR85 | 3.3             | ±20%                     | 100                  | 0.26                   | 0.90 max.                                       | 0.85 typ.                 |
| VLP4612T-4R7MR72 | 4.7             | ±20%                     | 100                  | 0.28                   | 0.88 max.                                       | 0.72 typ.                 |
| VLP4612T-6R8MR67 | 6.8             | ±20%                     | 100                  | 0.38                   | 0.77 max.                                       | 0.67 typ.                 |
| VLP4612T-100MR52 | 10.0            | ±20%                     | 100                  | 0.62                   | 0.59 max.                                       | 0.52 typ.                 |
| VLP4612T-150MR42 | 15.0            | ±20%                     | 100                  | 0.96                   | 0.45 max.                                       | 0.42 typ.                 |
| VLP4612T-220MR34 | 22.0            | ±20%                     | 100                  | 1.42                   | 0.39 max.                                       | 0.34 typ.                 |

\* Rated current: The rated current is the smaller of the values given based on the rate of inductance change (10% decrease from the initial value) or the temperature rise (temperature rise of 40°C caused by the heat generated by the product itself). Please note that the current applied must be DC.

### TYPICAL ELECTRICAL CHARACTERISTICS

#### INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS



• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.