Inductors

For Power Line SMD

RLF Series RLF12545 Type

This inductor is designed for power circuits that require a low profile, low inductance, and large current, such as those used in notebook PCs. It measures L12.5×W12.8×T4.5mm, about 40% lower in profile than our existing products (the SLF12575 type).

FEATURES

- With the height at only 4.5mm, and retaining the DC current superimposition characteristic, this inductor reduces DC resistance 20 to 50% lower than our existing products(the SLF12575 type).
- Structural efficiency allows for both a lower profile than, and electrical features equivalent to, our existing devices.
- The low profile makes the inductor particularly optimal for power circuit applications requiring low voltages and large current.
- The inductor allows for application of reflow solder.

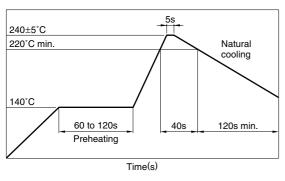
APPLICATIONS

- Choke coils for thin-type power circuits used in notebook PCs and similar items
- · 20W-class step-down converters

SPECIFICATIONS

Operating temperature range	−20 to +105°C		
	[Including self-temperature rise]		
Storage temperature range	-40 to +105°C[Unit of products]		

RECOMMENDED REFLOW SOLDERING CONDITIONS



PRODUCT IDENTIFICATIONS

RLF 12545 T- 2R7 N 8R7 (1) (2) (3) (4) (5) (6)

- (1) Series name
- (2) Dimensions L×W×T

12545	12.5×12.8×4.5mm	

Taping(reel)

(3) Packaging style

100

(4) Inductance value		
2R7	2.7uH	

10μΗ

(5) Inductance tolerance

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М	±20%	
N	+30%	

(6) Rated current

8R7 8.7A	1
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PACKAGING STYLE AND QUANTITIES

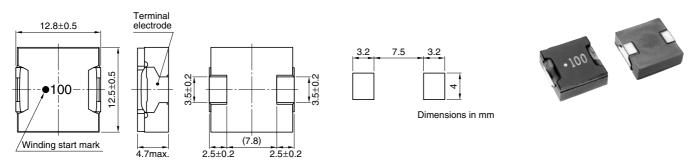
Packaging style	Quantity	
Taping	500 pieces/reel	

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SHAPES AND DIMENSIONS/RECOMMENDED PC BOARD PATTERN

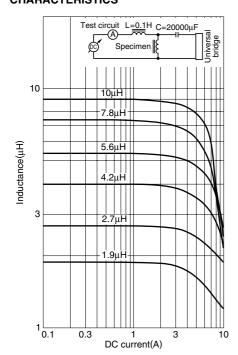


ELECTRICAL CHARACTERISTICS

Inductance (µH)	Inductance tolerance (%)	Test frequency L (kHz)	DC resistance (mΩ)±20%	Rated current(A)* Based on inductance change	Based on temperature rise	Part No.
1.9	±30	100	3.6	13 max.	10.5 typ.	RLF12545T-1R9N100
2.7	±30	100	4.5	12 max.	8.7 typ.	RLF12545T-2R7N8R7
4.2	±30	100	7.4	9.5 max.	6.5 typ.	RLF12545T-4R2N6R5
5.6	±30	100	8.5	8 max.	6.1 typ.	RLF12545T-5R6N6R1
7.8	±30	100	10.2	7 max.	5.4 typ.	RLF12545T-7R8N5R4
10	±20	100	12.4	6 max.	5.1 typ.	RLF12545T-100M5R1

^{*} Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the initial value of inductance has fallen by 50%, whichever is smaller.

TYPICAL ELECTRICAL CHARCTERISTICS INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS





Test equipment Inductance: YHP 4194A IMPEDANCE GAIN/PHASE ANALYZER, or equivalent DC resistance: DIGITAL MILLIOHM METER VP-2941A MATSUSHITA, or equivalent