

Radial Lead Inductors

TSL series

Type: TSL0709
 TSL0808
 TSL1112
 TSL1315

Issue date: November 2010

- All specifications are subject to change without notice.
 - 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.
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Radial Lead Inductors(Coils) For Power Line

Conformity to RoHS Directive

TSL Series TSL0709

FEATURES

- The TSL series feature low DC resistance and high current handling capacities, making them ideal for power supply line applications.
- These parts are manufactured to a high degree of dimensional accuracy using non-flammable material (UL94V-0).
- Available in tape packaging to support automated mounting machines.
- It is a product conforming to RoHS directive.

APPLICATIONS

Televisions, VCRs, personal computers, and other electronic equipment.

SPECIFICATIONS

Operating temperature range	-40 to +85°C [Including self-temperature rise]
Storage temperature range	-40 to +85°C[Unit of products]
Terminal tensile strength	9.8N min.
Flow soldering condition	260°C /10 seconds

PRODUCT IDENTIFICATION

TSL	0709	RA-	1R0	M	5R0	-	PF
(1)	(2)	(3)	(4)	(5)	(6)	(7)	

(1)Series name

(2)Dimensions

0709	ø7.7×9.5mm (lead pitch 5mm)
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(3)Packaging style

RA	Taping(Ammo-pack)
S	Bulk

(4)Inductance value

1R0	1μH
100	10μH

(5)Inductance tolerance

K	±10%
M	±20%

(6)Rated current

5R0	5A
R66	0.66A

(7)Lead-free compatible product

PF	Lead-free compatible product
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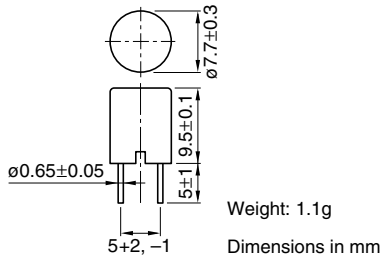
PACKAGING STYLE AND QUANTITIES

Packaging style	Quantity
Taping (Ammo-pack)	1000 pieces/box
Bulk	500 pieces/10tray

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SHAPES AND DIMENSIONS



ELECTRICAL CHARACTERISTICS

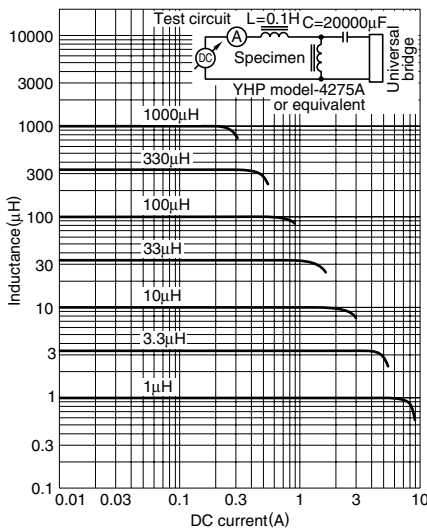
Inductance (μH)	Inductance tolerance	Q min.	Test frequency L/Q (Hz)	Self-resonant frequency (MHz)min.	DC resistance (Ω)max.	Rated current(A)*1max.		Part No.
						Based on inductance change	Based on temperature rise	
1	±20%	10	1k/7.96M	70	0.006	6.6	5	TSL0709□*2-1R0M5R0-PF
1.5	±20%	10	1k/7.96M	56	0.008	5.4	4.3	TSL0709□-1R5M4R3-PF
2.2	±20%	10	1k/7.96M	45	0.011	4	3.7	TSL0709□-2R2M3R7-PF
3.3	±20%	10	1k/7.96M	36	0.018	3.6	2.9	TSL0709□-3R3M2R9-PF
4.7	±20%	10	1k/7.96M	29	0.022	3.1	2.6	TSL0709□-4R7M2R6-PF
6.8	±20%	10	1k/7.96M	24	0.028	2.5	2.3	TSL0709□-6R8M2R3-PF
10	±10%	20	1k/2.52M	19	0.043	2.1	1.9	TSL0709□-100K1R9-PF
15	±10%	20	1k/2.52M	15	0.056	1.7	1.6	TSL0709□-150K1R6-PF
22	±10%	20	1k/2.52M	12	0.086	1.4	1.3	TSL0709□-220K1R3-PF
33	±10%	20	1k/2.52M	9.4	0.14	1.1	1	TSL0709□-330K1R0-PF
47	±10%	20	1k/2.52M	7.6	0.17	0.96	0.94	TSL0709□-470KR94-PF
68	±10%	20	1k/2.52M	6.2	0.28	0.79	0.73	TSL0709□-680KR73-PF
100	±10%	20	1k/796k	5	0.33	0.66	0.67	TSL0709□-101KR66-PF
150	±10%	20	1k/796k	4	0.56	0.53	0.52	TSL0709□-151KR52-PF
220	±10%	20	1k/796k	3.2	0.72	0.44	0.46	TSL0709□-221KR44-PF
330	±10%	20	1k/796k	2.5	1.1	0.36	0.37	TSL0709□-331KR36-PF
470	±10%	20	1k/796k	2	1.7	0.3	0.3	TSL0709□-471KR30-PF
680	±10%	20	1k/796k	1.7	2.3	0.25	0.26	TSL0709□-681KR25-PF
1000	±10%	70	1k/252k	1.3	4.3	0.2	0.19	TSL0709□-102KR19-PF
1500	±10%	50	1k/252k	1.3	5	0.17	0.16	TSL0709□-152KR16-PF

*1 Rated current: Value obtained when current flows and the temperature has risen to 25°C or when DC current flows and the initial value of inductance has fallen by 20%, whichever is smaller.

*2 □: Please specify packaging style, S(Bulk) or RA(Taping).

TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



Radial Lead Inductors(Coils) For Power Line

Conformity to RoHS Directive

TSL Series TSL0808

FEATURES

- The TSL series feature low DC resistance and high current handling capacities, making them ideal for power supply line applications.
- These parts are manufactured to a high degree of dimensional accuracy using non-flammable material (UL94V-0).
- Available in tape packaging to support automated mounting machines.
- It is a product conforming to RoHS directive.

APPLICATIONS

Televisions, VCRs, personal computers, and other electronic equipment.

SPECIFICATIONS

Operating temperature range	-40 to +85°C [Including self-temperature rise]
Storage temperature range	-40 to +85°C[Unit of products]
Terminal tensile strength	9.8N min.
Flow soldering condition	260°C /10 seconds

PRODUCT IDENTIFICATION

TSL	0808	RA-	3R3	M	3R8	-	PF
(1)	(2)	(3)	(4)	(5)	(6)	(7)	

(1)Series name

(2)Dimensions

0808	ø8.5×8.3mm (lead pitch 5mm)
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(3)Packaging style

RA	Taping(Ammo-pack)
S	Bulk

(4)Inductance value

3R3	3.3μH
100	10μH

(5)Inductance tolerance

K	±10%
M	±20%

(6)Rated current

3R8	3.8A
R67	0.67A

(7)Lead-free compatible product

PF	Lead-free compatible product
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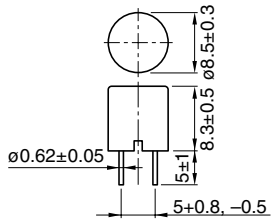
PACKAGING STYLE AND QUANTITIES

Packaging style	Quantity
Taping (Ammo-pack)	1000 pieces/box
Bulk	500 pieces/10tray

• 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.

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SHAPES AND DIMENSIONS



Weight: 1.5g

Dimensions in mm



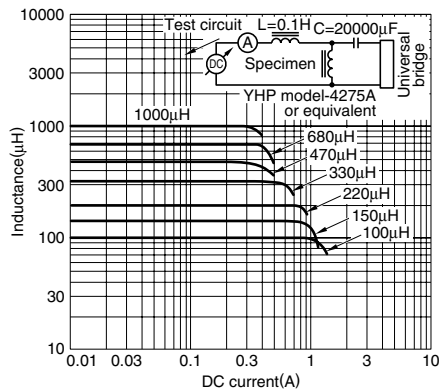
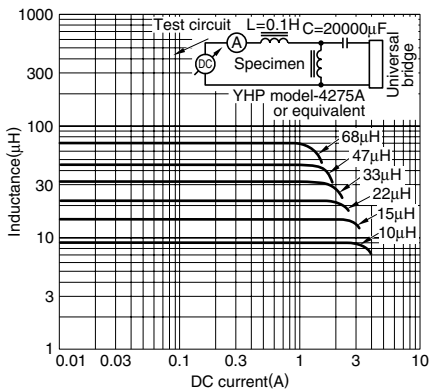
ELECTRICAL CHARACTERISTICS

Inductance (μH)	Inductance tolerance	Q min.	Test frequency L/Q (Hz)	Self-resonant frequency (MHz)min.	DC resistance (Ω)max.	Rated current (A)*1max.		Part No.
						Based on inductance change	Based on temperature rise	
2.2	±20%	10	1k/7.96M	45	0.015	5.6	3.9	TSL0808□*2-2R2M3R9-PF
3.3	±20%	10	1k/7.96M	34	0.017	4.5	3.8	TSL0808□-3R3M3R8-PF
4.7	±20%	10	1k/7.96M	27	0.021	3.8	3.5	TSL0808□-4R7M3R5-PF
6.8	±20%	10	1k/7.96M	22	0.025	3.2	3.1	TSL0808□-6R8M3R1-PF
10	±10%	20	1k/2.52M	17	0.031	2.6	2.7	TSL0808□-100K2R6-PF
15	±10%	20	1k/2.52M	13	0.042	2.1	2.4	TSL0808□-150K2R1-PF
22	±10%	20	1k/2.52M	10	0.07	1.7	1.9	TSL0808□-220K1R7-PF
33	±10%	20	1k/2.52M	8	0.092	1.4	1.5	TSL0808□-330K1R4-PF
47	±10%	20	1k/2.52M	6.5	0.13	1.2	1.3	TSL0808□-470K1R2-PF
68	±10%	20	1k/2.52M	5.4	0.16	1	1.1	TSL0808□-680K1R0-PF
100	±10%	20	1k/796k	4.4	0.25	0.8	0.94	TSL0808□-101KR80-PF
150	±10%	20	1k/796k	3.6	0.4	0.67	0.73	TSL0808□-151KR67-PF
220	±10%	15	1k/796k	2.9	0.53	0.54	0.64	TSL0808□-221KR54-PF
330	±10%	15	1k/796k	2.4	0.78	0.45	0.52	TSL0808□-331KR45-PF
470	±10%	15	1k/796k	2	1	0.38	0.46	TSL0808□-471KR38-PF
680	±10%	15	1k/796k	1.6	1.5	0.32	0.37	TSL0808□-681KR32-PF
1000	±10%	30	1k/252k	1.3	2.2	0.26	0.3	TSL0808□-102KR26-PF
1500	±10%	30	1k/252k	1.1	3.5	0.21	0.25	TSL0808□-152KR21-PF
2200	±10%	50	1k/252k	0.88	6.4	0.17	0.21	TSL0808□-222KR17-PF
3300	±10%	50	1k/252k	0.71	8.5	0.14	0.16	TSL0808□-332KR14-PF
4700	±5%	50	1k/252k	0.68	12.2	0.15	0.13	TSL0808□-472JR13-PF

*1 Rated current: Value obtained when current flows and the temperature has risen to 25°C or when DC current flows and the initial value of inductance has fallen by 10%, whichever is smaller.

*2 □: Please specify packaging style, S(Bulk) or RA(Taping).

TYPICAL ELECTRICAL CHARACTERISTICS INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



• All specifications are subject to change without notice.

Radial Lead Inductors(Coils) For Power Line

Conformity to RoHS Directive

TSL Series TSL1112

FEATURES

- The TSL series feature low DC resistance and high current handling capacities, making them ideal for power supply line applications.
- These parts are manufactured to a high degree of dimensional accuracy using non-flammable material (UL94V-0).
- Available in tape packaging to support automated mounting machines.
- It is a product conforming to RoHS directive.

APPLICATIONS

Televisions, VCRs, personal computers, and other electronic equipment.

SPECIFICATIONS

Operating temperature range	-40 to +85°C [Including self-temperature rise]
Storage temperature range	-40 to +85°C[Unit of products]
Terminal tensile strength	9.8N min.
Flow soldering condition	260°C /10 seconds

PRODUCT IDENTIFICATION

TSL	1112	RA-	3R3	M	5R9	- PF
(1)	(2)	(3)	(4)	(5)	(6)	(7)

(1)Series name

(2)Dimensions

1112	ø11.2×12.2mm (lead pitch 5mm)
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(3)Packaging style

RA	Taping(Ammo-pack)
S	Bulk

(4)Inductance value

3R3	3.3μH
100	10μH

(5)Inductance tolerance

J	±5%
K	±10%
M	±20%

(6)Rated current

5R9	5.9A
R56	0.56A

(7)Lead-free compatible product

PF	Lead-free compatible product
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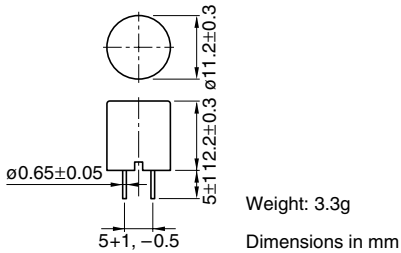
PACKAGING STYLE AND QUANTITIES

Packaging style	Quantity
Taping (Ammo-pack)	500 pieces/box
Bulk	400 pieces/8tray

• 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.

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SHAPES AND DIMENSIONS



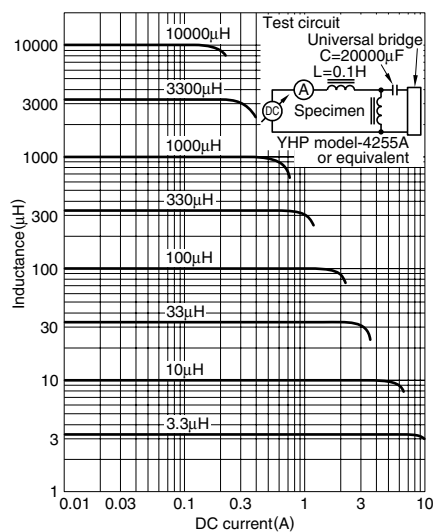
ELECTRICAL CHARACTERISTICS

Inductance (μH)	Inductance tolerance	Q min.	Test frequency L/Q (Hz)	Self-resonant frequency (MHz)min.	DC resistance (Ω)max.	Rated current (A)*1max.		Part No.
						Based on inductance change	Based on temperature rise	
1.0	±20%	15	1k/7.96M	144	0.058	14	7.7	TSL1112□*2-1R0M7R7-PF
2.2	±20%	15	1k/7.96M	70	0.073	10	6.7	TSL1112□-2R2M6R7-PF
3.3	±20%	10	1k/7.96M	36	0.01	8.8	5.9	TSL1112□-3R3M5R9-PF
4.7	±20%	10	1k/7.96M	28	0.015	7.2	4.8	TSL1112□-4R7M4R8-PF
6.8	±20%	10	1k/7.96M	18	0.016	6.1	4.6	TSL1112□-6R8M4R6-PF
10	±20%	20	1k/2.52M	16	0.025	5	3.7	TSL1112□-100M3R7-PF
15	±20%	20	1k/2.52M	12	0.029	4.2	3.4	TSL1112□-150M3R4-PF
22	±10%	20	1k/2.52M	9.5	0.04	3.4	2.9	TSL1112□-220K2R9-PF
33	±10%	30	1k/2.52M	7	0.062	2.8	2.3	TSL1112□-330K2R3-PF
47	±10%	30	1k/2.52M	5.8	0.075	2.3	2.1	TSL1112□-470K2R1-PF
68	±10%	20	1k/2.52M	4.7	0.13	1.9	1.6	TSL1112□-680K1R6-PF
100	±10%	20	1k/796k	3.8	0.16	1.6	1.4	TSL1112□-101K1R4-PF
150	±10%	20	1k/796k	3.1	0.26	1.3	1.1	TSL1112□-151K1R1-PF
220	±10%	20	1k/796k	2.5	0.33	1.1	1	TSL1112□-221K1R0-PF
330	±10%	20	1k/796k	2	0.52	0.88	0.82	TSL1112□-331KR82-PF
470	±10%	10	1k/796k	1.6	0.66	0.75	0.72	TSL1112□-471KR72-PF
680	±10%	10	1k/796k	1.3	1.1	0.61	0.56	TSL1112□-681KR56-PF
1000	±5%	20	1k/252k	1.1	1.4	0.51	0.5	TSL1112□-102JR50-PF
1500	±5%	30	1k/252k	0.82	2.4	0.43	0.38	TSL1112□-152JR38-PF
2200	±5%	20	1k/252k	0.76	3.2	0.35	0.33	TSL1112□-222JR33-PF
3300	±5%	30	1k/252k	0.64	4.9	0.28	0.26	TSL1112□-332JR26-PF
4700	±5%	30	1k/252k	0.54	7.6	0.24	0.21	TSL1112□-472JR21-PF
6800	±5%	30	1k/252k	0.45	9.8	0.2	0.18	TSL1112□-682JR18-PF
10000	±5%	30	1k/79.6k	0.38	18	0.17	0.14	TSL1112□-103JR14-PF
15000	±5%	50	1k/79.6k	0.29	24	0.13	0.12	TSL1112□-153JR12-PF

*1 Rated current: Value obtained when current flows and the temperature has risen to 25°C or when DC current flows and the initial value of inductance has fallen by 10%, whichever is smaller.

*2 □: Please specify packaging style, S(Bulk) or RA(Taping).

TYPICAL ELECTRICAL CHARACTERISTICS INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



• All specifications are subject to change without notice.

Radial Lead Inductors(Coils) For Power Line

Conformity to RoHS Directive

TSL Series TSL1315

FEATURES

- The TSL series feature low DC resistance and high current handling capacities, making them ideal for power supply line applications.
- These parts are manufactured to a high degree of dimensional accuracy using non-flammable material (UL94V-0).
- Available in tape packaging to support automated mounting machines.
- It is a product conforming to RoHS directive.

APPLICATIONS

Televisions, VCRs, personal computers, and other electronic equipment.

SPECIFICATIONS

Operating temperature range	-40 to +85°C [Including self-temperature rise]
Storage temperature range	-40 to +85°C[Unit of products]
Terminal tensile strength	9.8N min.
Flow soldering condition	260°C /10 seconds

PRODUCT IDENTIFICATION

TSL	1315	RA-	100	K	5R1	-	PF
(1)	(2)	(3)	(4)	(5)	(6)	(7)	

(1)Series name

(2)Dimensions

1315	ø14×17mm (lead pitch 7.5mm)
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(3)Packaging style

RA	Taping(Ammo-pack)
S	Bulk

(4)Inductance value

100	10μH
102	1000μH

(5)Inductance tolerance

J	±5%
K	±10%

(6)Rated current

5R1	5.1A
R99	0.99A

(7)Lead-free compatible product

PF	Lead-free compatible product
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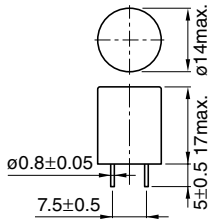
PACKAGING STYLE AND QUANTITIES

Packaging style	Quantity
Taping (Ammo-pack)	200 pieces/box
Bulk	50 pieces/pack

• 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.

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SHAPES AND DIMENSIONS



Weight: 7.5g

Dimensions in mm



ELECTRICAL CHARACTERISTICS

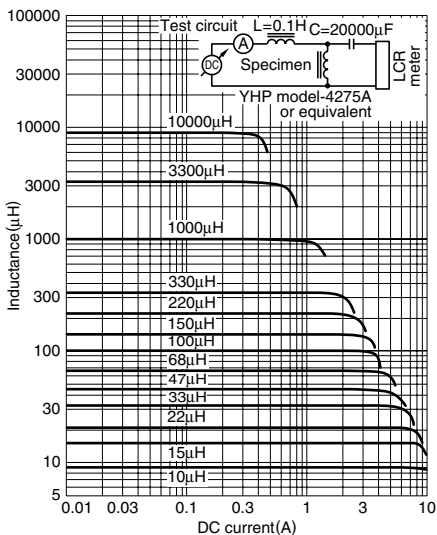
Inductance (μH)	Inductance tolerance	Q typ.	Test frequency L/Q (Hz)	Self-resonant frequency (MHz)min.	DC resistance (Ω)max.	Rated current (A)*1max.		Part No.
						Based on inductance change	Based on temperature rise	
10	±10%	70	1k/2.52M	19	0.023	12	5.1	TSL1315□*2-100K5R1-PF
15	±10%	70	1k/2.52M	12	0.028	9.5	4.5	TSL1315□-150K4R5-PF
22	±10%	60	1k/2.52M	7.6	0.035	8.2	4.2	TSL1315□-220K4R2-PF
33	±10%	50	1k/2.52M	6.9	0.043	6.8	3.7	TSL1315□-330K3R7-PF
47	±10%	50	1k/2.52M	5.6	0.052	5.7	3.4	TSL1315□-470K3R4-PF
68	±10%	40	1k/2.52M	4.4	0.068	4.8	3	TSL1315□-680K3R0-PF
100	±10%	50	1k/796k	3.3	0.097	3.9	2.5	TSL1315□-101K2R5-PF
150	±10%	50	1k/796k	2.6	0.14	3.2	2.1	TSL1315□-151K2R1-PF
220	±10%	40	1k/796k	2.2	0.2	2.7	1.7	TSL1315□-221K1R7-PF
330	±10%	30	1k/796k	1.8	0.3	2.1	1.4	TSL1315□-331K1R4-PF
470	±10%	30	1k/796k	1.5	0.43	1.8	1.1	TSL1315□-471K1R1-PF
680	±10%	30	1k/796k	1.2	0.61	1.5	0.99	TSL1315□-681KR99-PF
1000	±5%	30	1k/252k	1	1	1.2	0.78	TSL1315□-102JR78-PF
1500	±5%	40	1k/252k	0.83	1.3	1	0.68	TSL1315□-152JR68-PF
2200	±5%	40	1k/252k	0.7	2	0.83	0.55	TSL1315□-222JR55-PF
3300	±5%	40	1k/252k	0.6	3.1	0.69	0.44	TSL1315□-332JR44-PF
4700	±5%	40	1k/252k	0.43	4.4	0.58	0.37	TSL1315□-472JR37-PF
6800	±5%	30	1k/252k	0.38	6.5	0.46	0.3	TSL1315□-682JR30-PF
10000	±5%	70	1k/79.6k	0.3	10	0.4	0.24	TSL1315□-103JR24-PF

*1 Rated current: Value obtained when current flows and the temperature has risen to 25°C or when DC current flows and the initial value of inductance has fallen by 10%, whichever is smaller.

*2 □: Please specify packaging style, S(Bulk) or RA(Taping).

TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



• All specifications are subject to change without notice.