



RL-8250

HIGH CURRENT SMD POWER INDUCTORS

DESCRIPTION

- High Current SMD Power Inductors

ENVIRONMENTAL DATA

- Storage temperature range:
-55°C to +130°C
- Operating temperature range:
-40°C to +130°C

PACKAGING INFORMATION

- Packaging information: pg. 491

FEATURES & APPLICATIONS

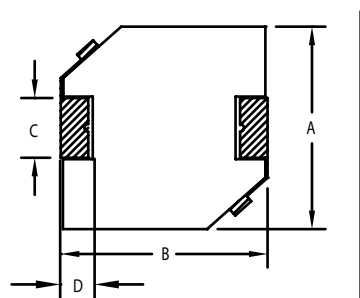
- Lowest height in this package footprint
 - Shielded construction
 - Epoxy coated
 - Lowest DCR/ μ H, in this package size
 - Handles high transient current spikes without saturation
 - Ultra low buzz noise, due to composite construction
 - Frequency up to 5 MHz
 - Typical applications include: notebook computers, desktop computers, server applications, high current POL converters, and low profile high current power supplies
- Verify operation with sample in actual circuit. Order samples at www.rencousa.com.

MECHANICAL DIMENSIONS

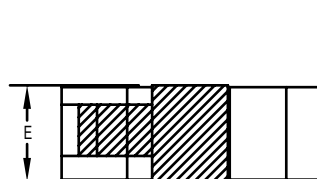
U.S. Standard (mm)

PART NUMBER	A (MAX.)	B (MAX.)	C ± 0.020 (0.5)	D ± 0.020 (0.5)	E (MAX.)	F (REF.)	G (REF.)	H (REF.)
RL-8250-1	0.28 (7.00)	0.31 (7.80)	0.08 (2.10)	0.06 (1.60)	0.12 (3.00)	0.34 (8.70)	0.14 (3.56)	0.14 (3.5)
RL-8250-1.4	0.28 (7.00)	0.31 (7.80)	0.08 (2.10)	0.06 (1.60)	0.16 (4.00)	0.34 (8.70)	0.14 (3.56)	0.14 (3.5)
RL-8250-1.5	0.35 (9.00)	0.37 (9.50)	0.11 (2.90)	0.09 (2.20)	0.21 (5.20)	0.39 (10.0)	0.16 (4.00)	0.16 (4.0)
RL-8250-2	0.41 (10.50)	0.47 (11.80)	0.11 (2.90)	0.09 (2.20)	0.16 (4.00)	0.49 (12.4)	0.25 (6.35)	0.18 (4.5)
RL-8250-3	0.53 (13.50)	0.55 (13.90)	0.12 (3.00)	0.10 (2.50)	0.14 (3.50)	0.59 (15.0)	0.25 (6.35)	0.18 (4.5)
RL-8250-4	0.53 (13.50)	0.55 (13.90)	0.12 (3.00)	0.10 (2.50)	0.20 (5.00)	0.59 (15.0)	0.25 (6.35)	0.18 (4.5)

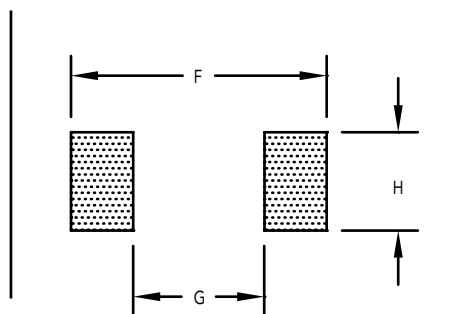
BOTTOM VIEW



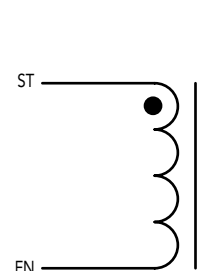
SIDE VIEW



RECOMMENDED PCB LAYOUT



SCHEMATIC



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RL-8250-1, RL-8250-1.4, RL-8250-1.5

Renco Part No. RL-8250-1	Inductance (μ H)	DCR Max. (mOhms)	Isat (A)	Irms (A)
RL-8250-1-R10M	0.10	1.7	42.0	30.00
RL-8250-1-R15M	0.15	2.5	38.0	30.00
RL-8250-1-R20M	0.20	3.0	36.0	29.00
RL-8250-1-R22M	0.22	2.8	36.0	29.00
RL-8250-1-R33M	0.33	3.9	30.0	29.00
RL-8250-1-R47M	0.47	4.2	26.0	25.00
RL-8250-1-R68M	0.68	5.5	23.0	20.00
RL-8250-1-R82M	0.82	8.0	20.0	17.00
RL-8250-1-1R0M	1.00	10.0	16.0	11.00
RL-8250-1-1R5M	1.50	15.0	14.0	9.00
RL-8250-1-1R8M	1.80	20.0	17.0	12.00
RL-8250-1-2R2M	2.20	20.0	12.0	8.00
RL-8250-1-3R3M	3.30	30.0	10.0	9.00
RL-8250-1-4R7M	4.70	40.0	6.5	5.75
RL-8250-1-6R8M	6.80	60.0	6.0	5.00
RL-8250-1-8R2M	8.20	68.0	5.5	5.25
RL-8250-1-100M	10.00	105.0	4.5	4.25

Renco Part No. RL-8250-1.4	Inductance (μ H)	DCR Max. (mOhms)	Isat (A)	Irms (A)
RL-8250-1.4-R33M	0.33	1.4	32.0	23.00
RL-8250-1.4-R47M	0.47	2.0	30.0	28.50
RL-8250-1.4-R68M	0.68	3.8	28.0	19.00
RL-8250-1.4-R82M	0.82	5.0	24.0	18.00
RL-8250-1.4-1R0M	1.00	7.0	20.0	16.00
RL-8250-1.4-1R2M	1.20	8.0	18.0	11.00
RL-8250-1.4-1R5M	1.50	10.0	16.0	12.00
RL-8250-1.4-1R8M	1.80	13.0	14.0	14.00
RL-8250-1.4-2R2M	2.20	15.0	14.0	14.25
RL-8250-1.4-3R3M	3.30	18.0	11.0	8.00
RL-8250-1.4-4R7M	4.70	21.0	9.0	7.25
RL-8250-1.4-5R6M	5.60	30.0	7.0	5.75
RL-8250-1.4-6R8M	6.80	32.0	7.0	6.25

Renco Part No. RL-8250-1.5	Inductance (μ H)	DCR Max. (mOhms)	Isat (A)	Irms (A)
RL-8250-1.5-R10M	0.10	0.7	45.0	41.00
RL-8250-1.5-R20M	0.20	0.8	45.0	37.75
RL-8250-1.5-R36M	0.36	1.2	40.0	36.00
RL-8250-1.5-R47M	0.47	1.5	38.0	34.00
RL-8250-1.5-R56M	0.56	1.8	36.0	31.00
RL-8250-1.5-R68M	0.68	2.4	32.0	27.00
RL-8250-1.5-R82M	0.82	2.4	25.0	23.00
RL-8250-1.5-1R0M	1.00	3.8	22.0	19.00
RL-8250-1.5-1R5M	1.50	4.5	20.0	17.00
RL-8250-1.5-2R2M	2.20	5.4	16.0	14.75
RL-8250-1.5-3R3M	3.30	7.1	14.0	11.75
RL-8250-1.5-4R7M	4.70	12.3	13.0	11.00
RL-8250-1.5-5R6M	5.60	14.5	12.0	11.00
RL-8250-1.5-6R8M	6.80	20.5	11.0	8.50
RL-8250-1.5-8R2M	8.20	21.9	10.0	8.50
RL-8250-1.5-100M	10.00	26.5	9.0	7.00

NOTES:

1. INDUCTANCE $\pm 20\%$ TESTED AT 100 kHz, 0.25 Vrms
2. Isat - DC CURRENT THAT WILL CAUSE INDUCTANCE TO DROP BY 20%
3. Irms - CURRENT THAT CAUSES THE TEMPERATURE TO RISE APPROX. 40°C ABOVE AMBIENT OF 25°C
4. ELECTRICAL SPECIFICATIONS MEASURED AT 25°C

*FOR ADDITIONAL GRAPHS SEE RL-8250 DATA SHEET ONLINE



RL-8250-2, RL-8250-3, RL-8250-4

Renco Part No. RL-8250-2	Inductance (μ H)	DCR Max. (mOhms)	Isat (A)	Irms (A)
RL-8250-2-R20M	0.20	1.0	40.0	36.00
RL-8250-2-R36M	0.36	1.4	40.0	31.00
RL-8250-2-R47M	0.47	1.6	38.0	28.25
RL-8250-2-R56M	0.56	1.9	36.0	32.00
RL-8250-2-R68M	0.68	2.4	32.0	33.00
RL-8250-2-1R0M	1.00	3.5	28.0	24.75
RL-8250-2-1R5M	1.50	7.5	20.0	22.00
RL-8250-2-2R2M	2.20	8.6	16.5	17.00
RL-8250-2-3R3M	3.30	10.0	14.0	12.75
RL-8250-2-4R7M	4.70	13.5	13.0	12.75
RL-8250-2-5R6M	5.60	16.0	12.0	12.00
RL-8250-2-8R2M	8.20	32.5	8.0	7.50
RL-8250-2-100M	10.00	35.0	9.0	6.50

Renco Part No. RL-8250-4	Inductance (μ H)	DCR Max. (mOhms)	Isat (A)	Irms (A)
RL-8250-4-R36M	0.36	1.1	75.0	41.0
RL-8250-4-R47M	0.47	1.3	65.0	38.0
RL-8250-4-R56M	0.56	1.5	55.0	36.0
RL-8250-4-R68M	0.68	1.7	54.0	34.0
RL-8250-4-1R0M	1.00	2.5	50.0	29.0
RL-8250-4-1R5M	1.50	7.5	48.0	26.0
RL-8250-4-2R2M	2.20	5.5	32.0	22.0
RL-8250-4-3R3M	3.30	9.2	32.0	21.0
RL-8250-4-4R7M	4.70	15.0	27.0	15.75
RL-8250-4-6R8M	6.80	18.0	21.0	14.0
RL-8250-4-7R8M	7.80	20.5	18.0	11.0
RL-8250-4-100M	10.00	25.5	16.0	10.0

Renco Part No. RL-8250-3	Inductance (μ H)	DCR Max. (mOhms)	Isat (A)	Irms (A)
RL-8250-3-R10M	0.10	0.96	56.0	44.00
RL-8250-3-R15M	0.15	1.20	50.0	40.00
RL-8250-3-R22M	0.22	1.30	50.0	43.00
RL-8250-3-R33M	0.33	1.50	50.0	41.00
RL-8250-3-R47M	0.47	2.00	44.0	34.00
RL-8250-3-R60M	0.60	2.50	42.0	36.00
RL-8250-3-R68M	0.68	2.50	40.0	36.00
RL-8250-3-R82M	0.82	3.00	38.0	30.00
RL-8250-3-1R0M	1.00	3.50	36.0	30.00
RL-8250-3-1R5M	1.50	5.50	28.0	23.75
RL-8250-3-1R8M	1.80	7.00	24.0	19.00
RL-8250-3-2R2M	2.20	8.00	20.0	20.75
RL-8250-3-3R3M	3.30	12.00	18.0	16.75
RL-8250-3-4R7M	4.70	15.00	16.0	14.75
RL-8250-3-5R6M	5.60	18.00	14.0	14.75
RL-8250-3-6R8M	6.80	22.00	13.0	10.50
RL-8250-3-8R2M	8.20	28.00	12.0	9.50
RL-8250-3-100M	10.00	34.00	9.5	9.25

PART NUMBER	PART WEIGHT
RL-8250-1	0.8g (0.028oz)
RL-8250-1.4	0.8g (0.028oz)
RL-8250-1.5	0.8g (0.028oz)
RL-8250-2	2.5g (0.088oz)
RL-8250-3	3.0g (0.100oz)
RL-8250-4	3.7g (0.130oz)

NOTES:

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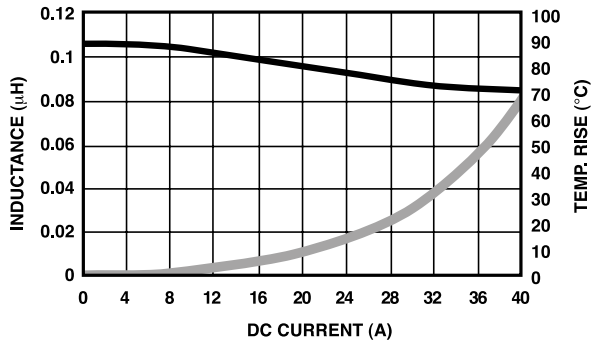


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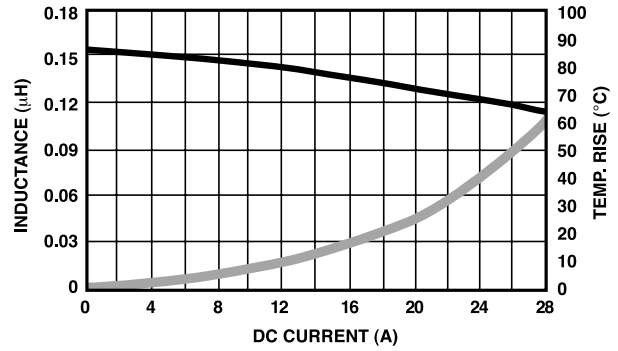
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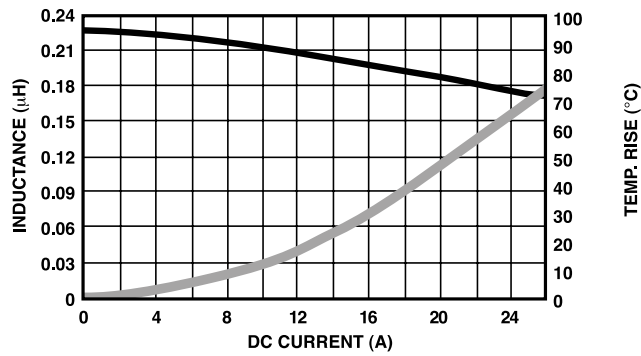
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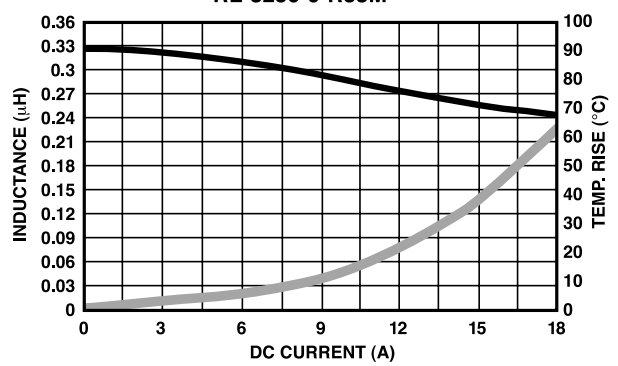
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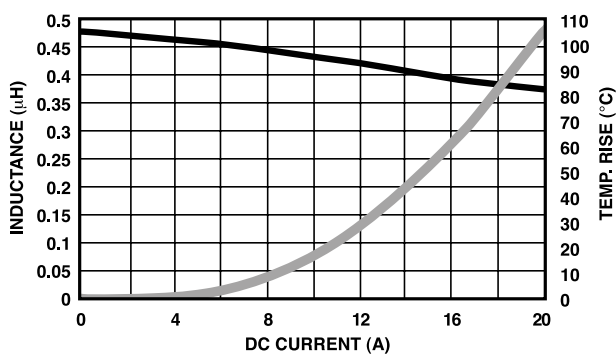
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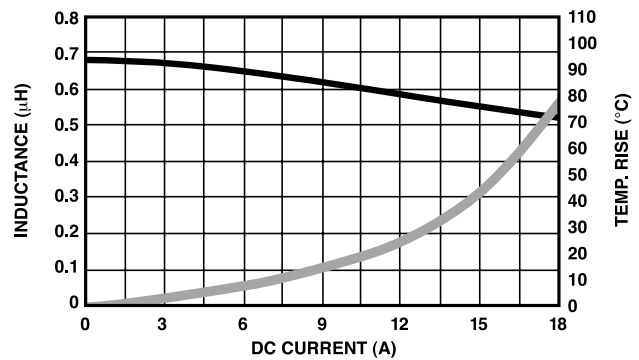
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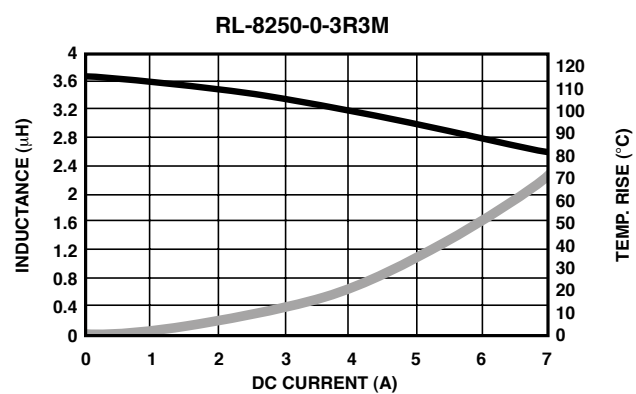
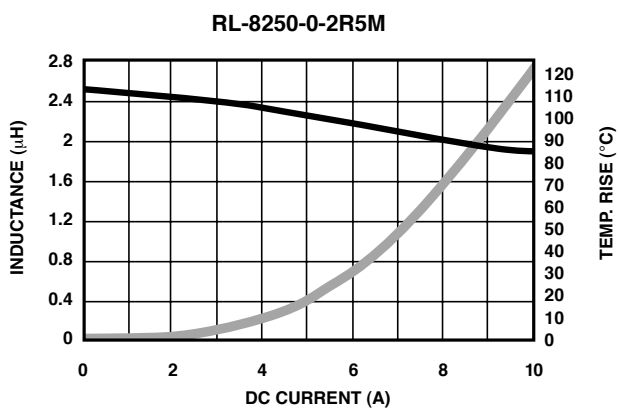
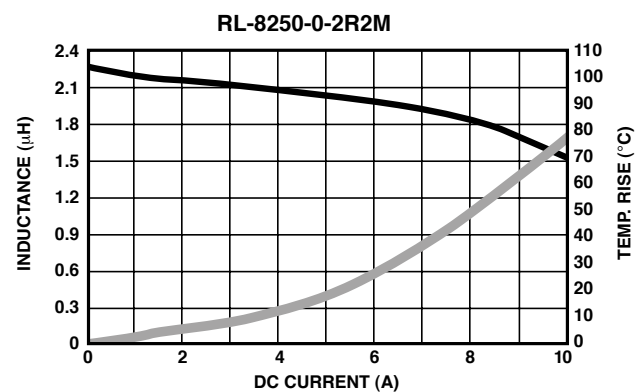
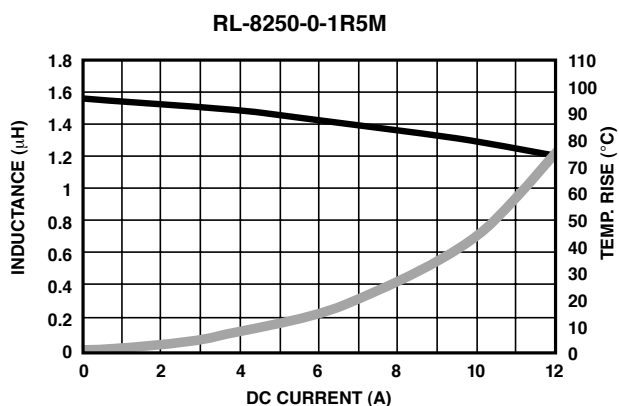
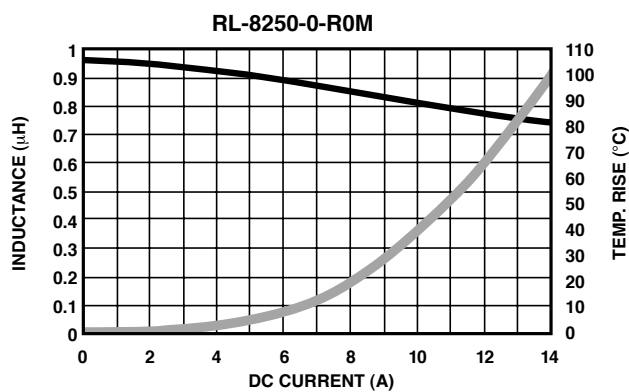
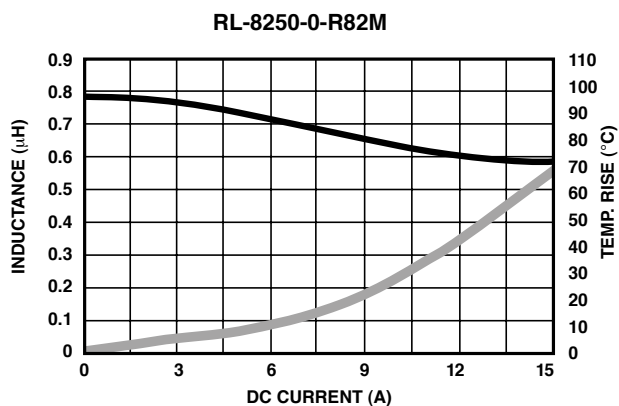


RL-8250-0-R47M



RL-8250-0-R68M





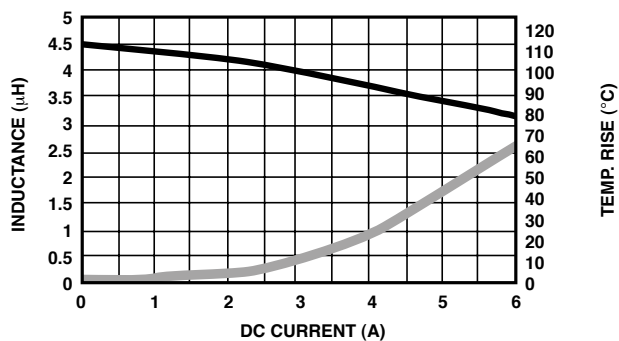
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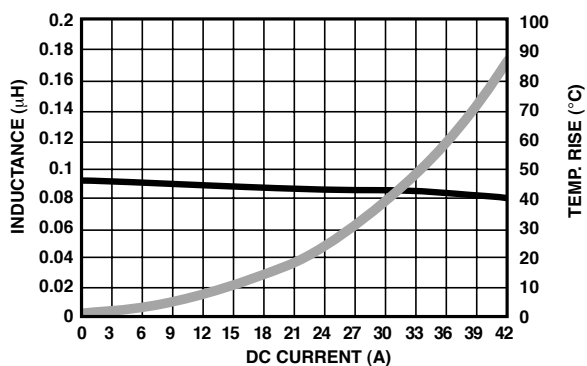




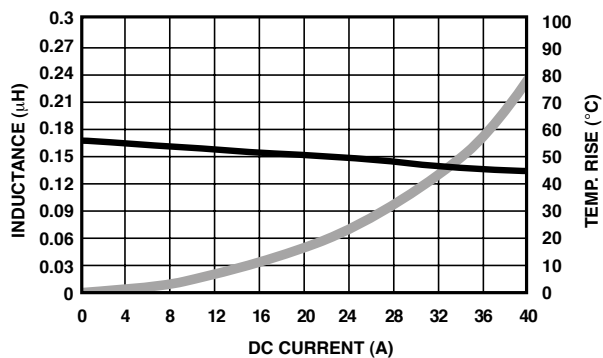
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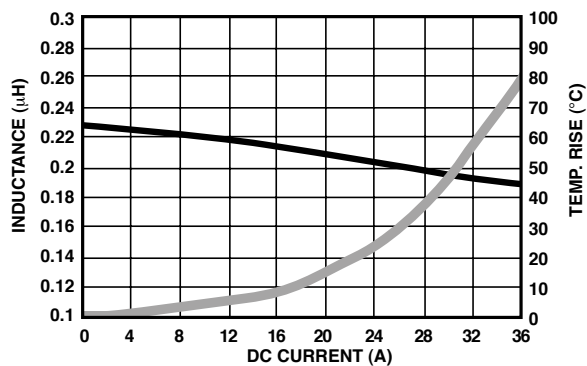
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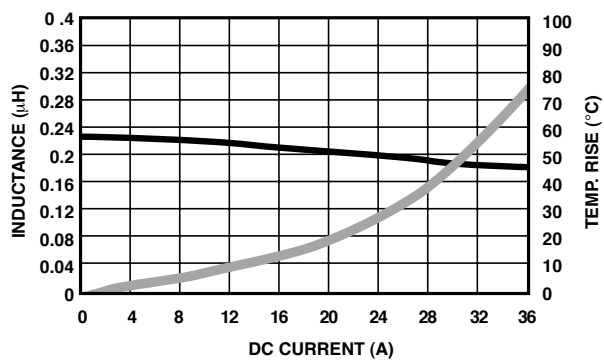
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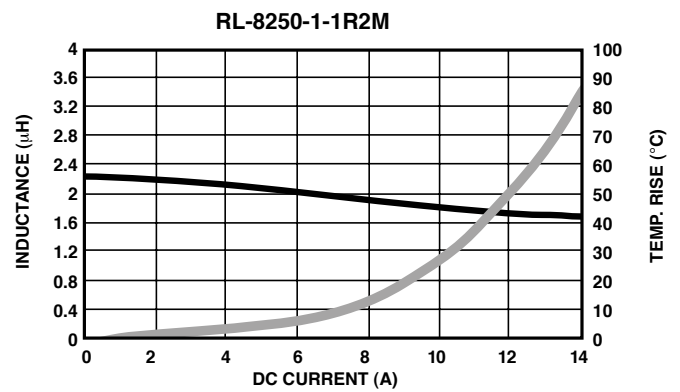
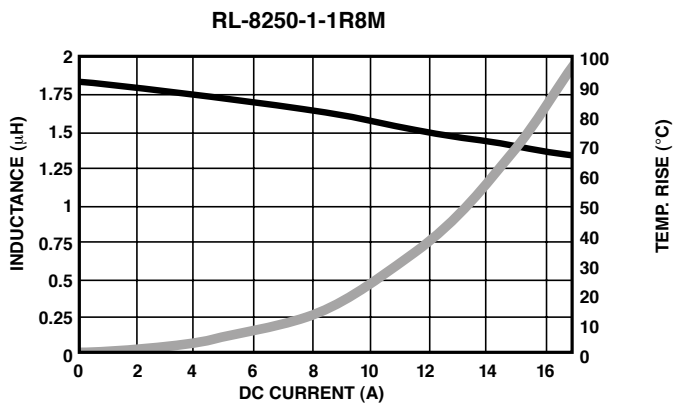
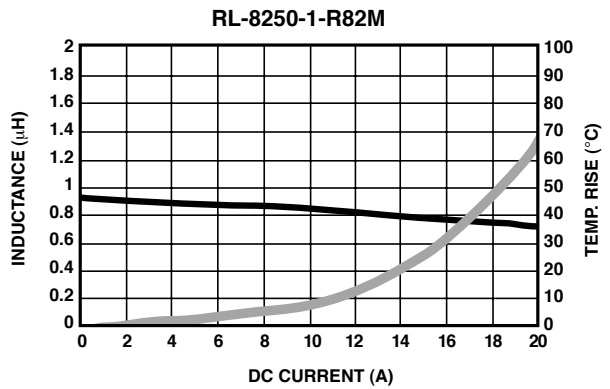
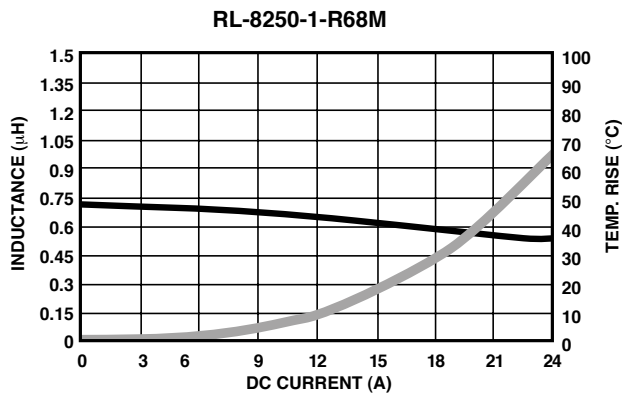
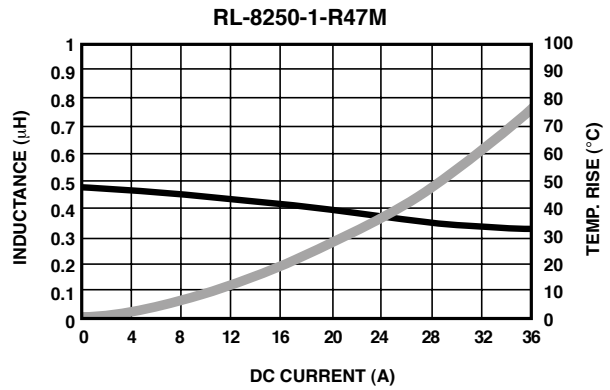
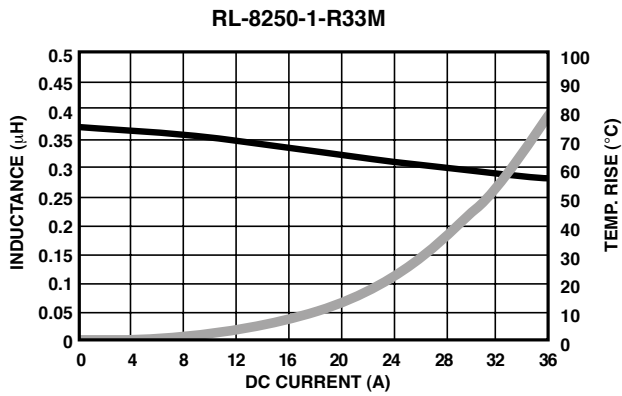
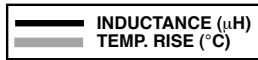


RL-8250-1-R20M



RL-8250-1-R22M

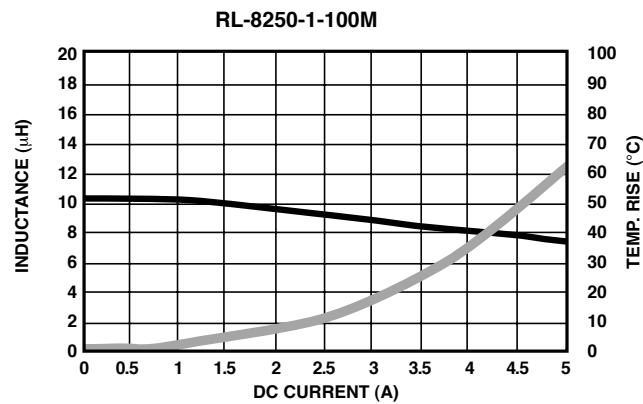
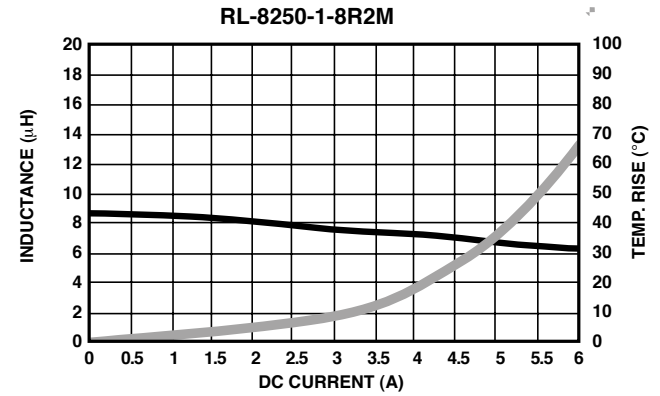
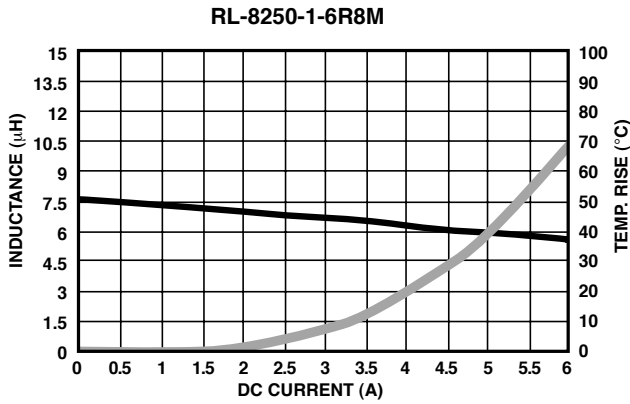
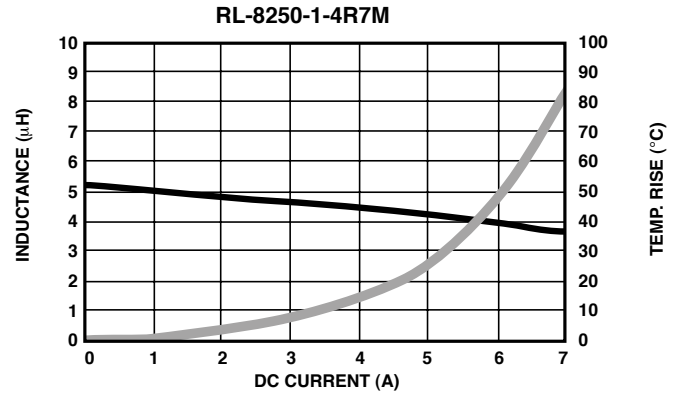
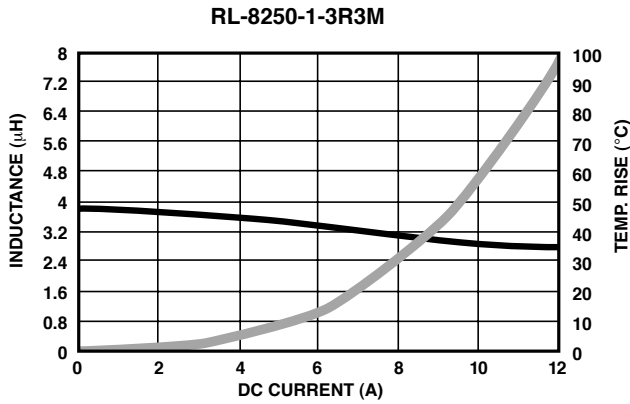
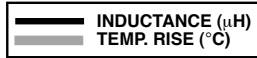




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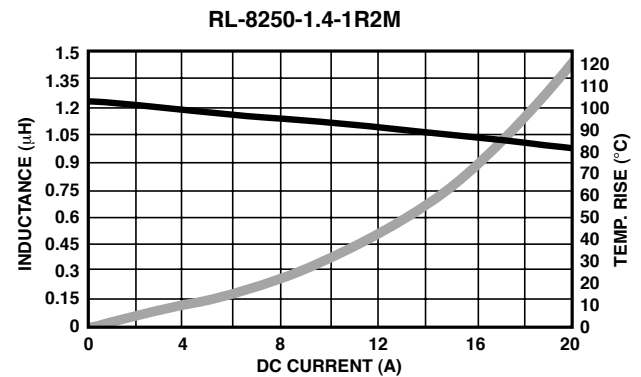
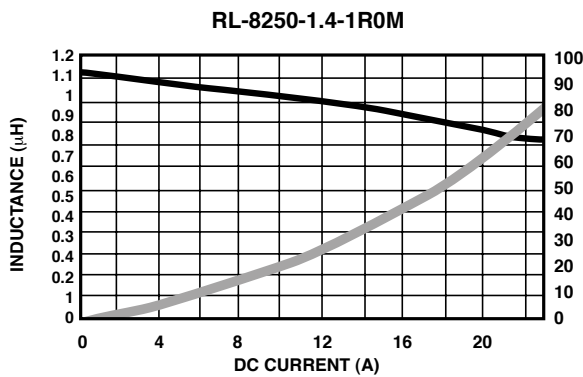
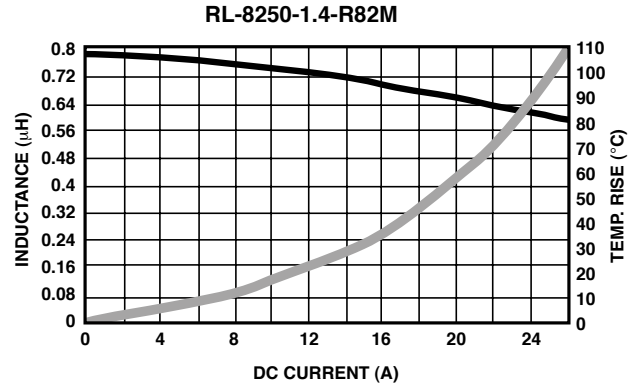
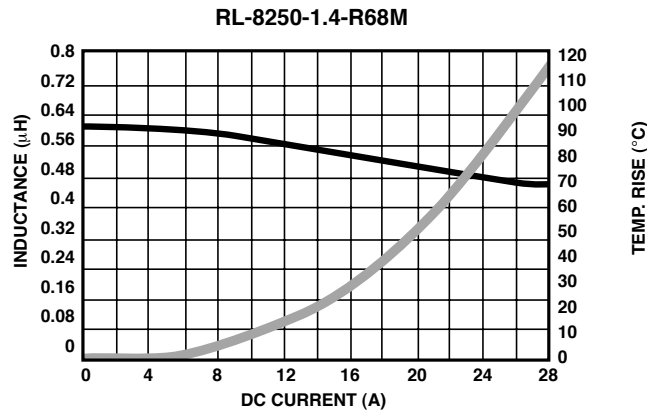
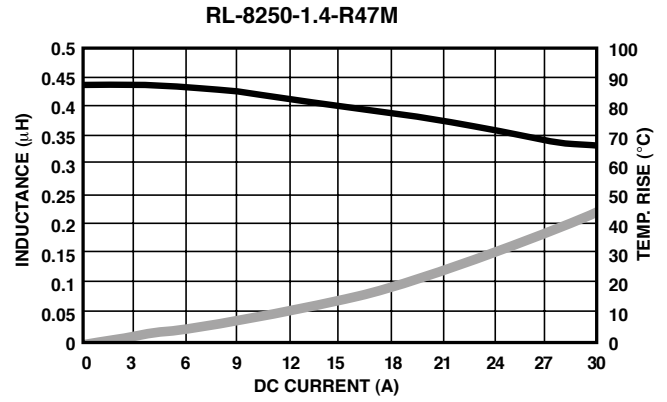
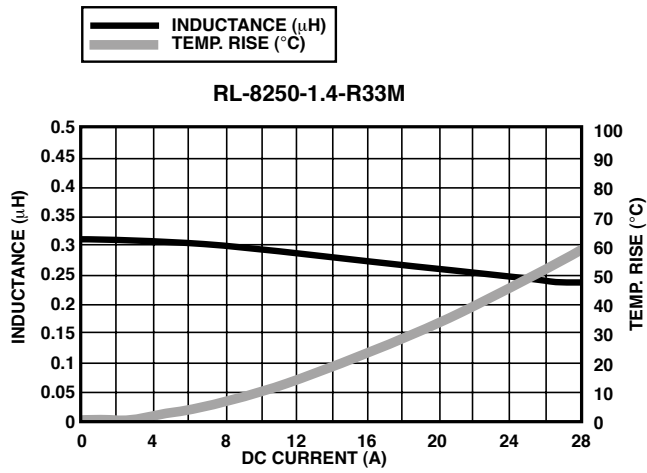




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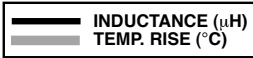




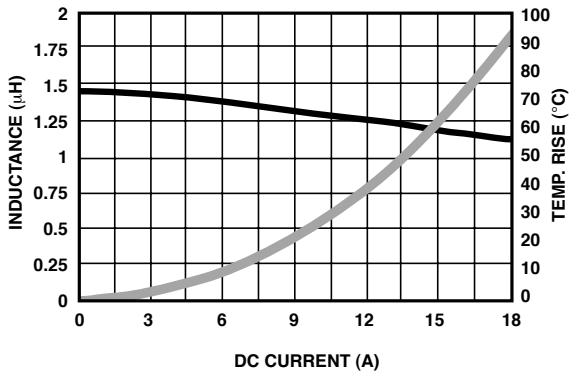
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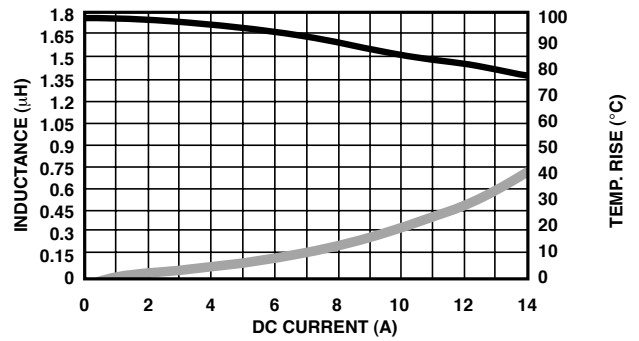




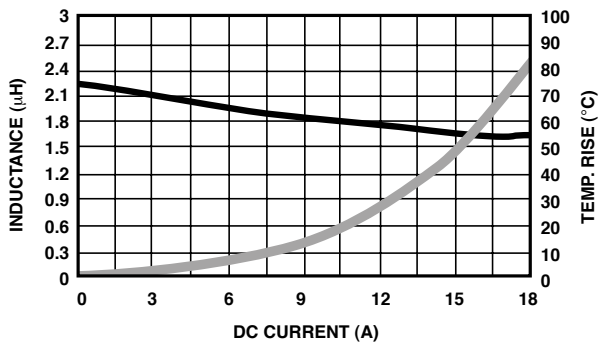
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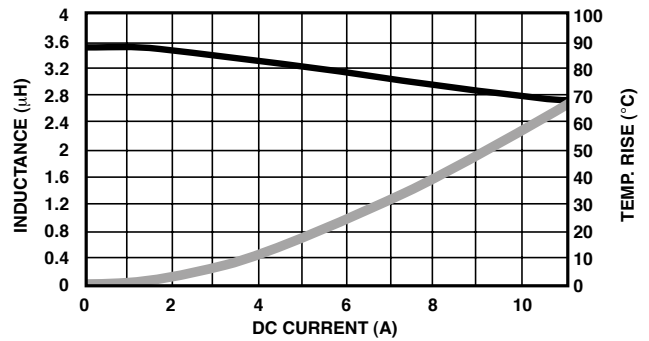
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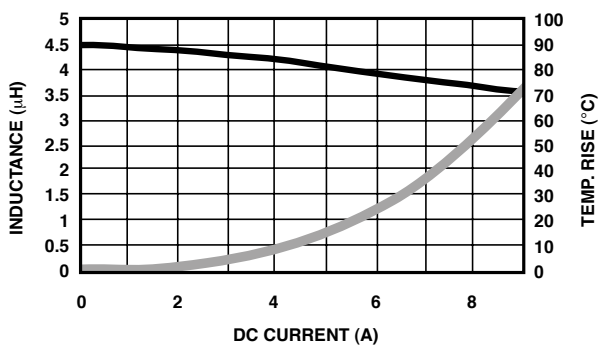
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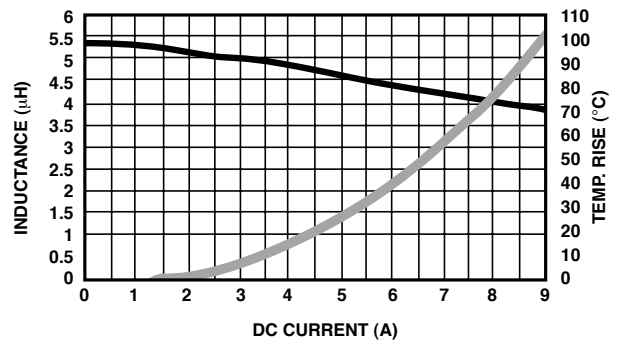
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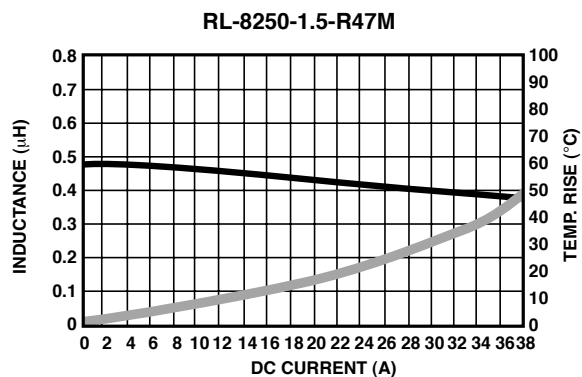
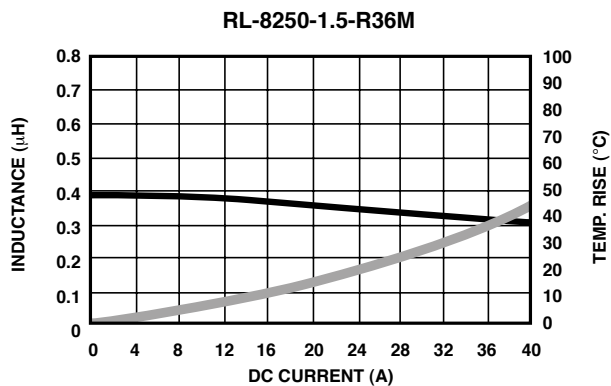
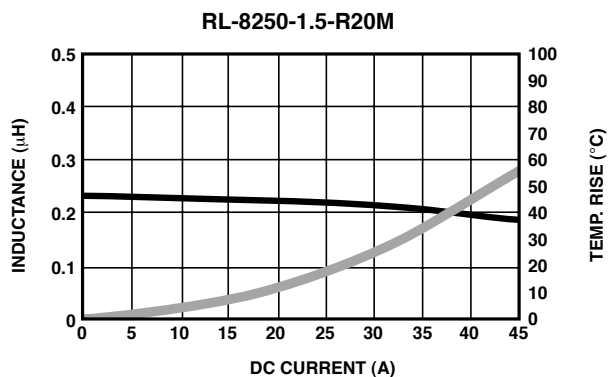
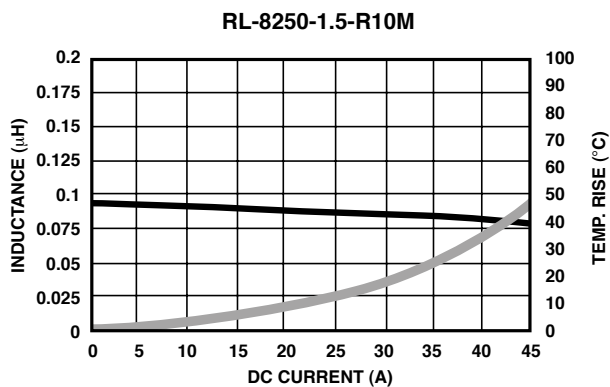
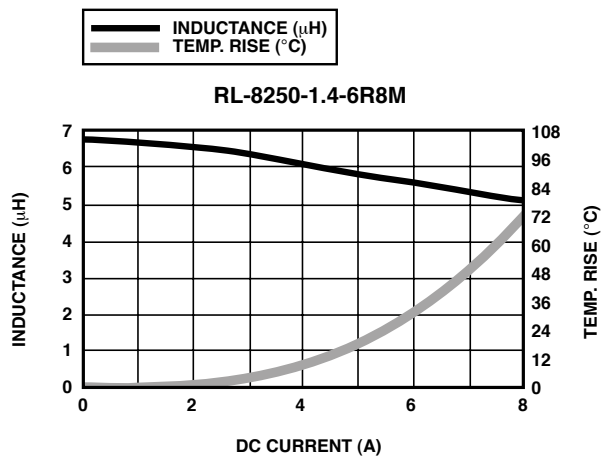


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RL-8250-1.4-5R6M





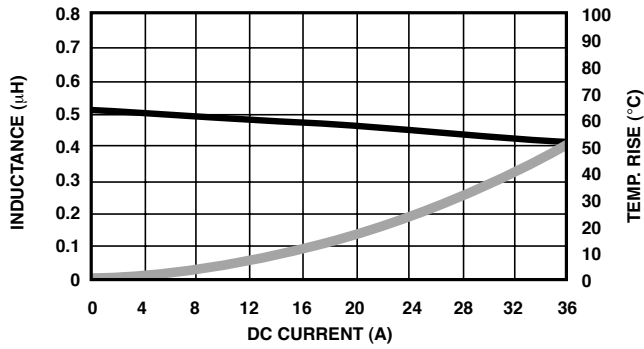
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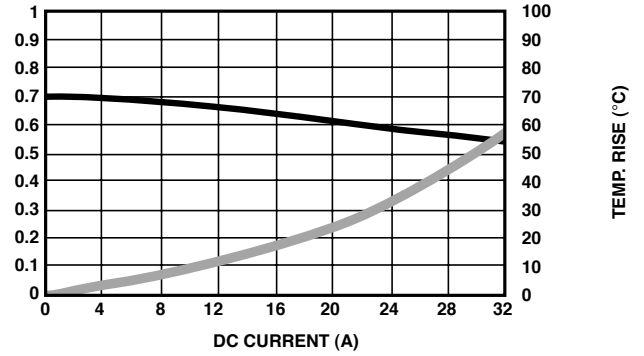




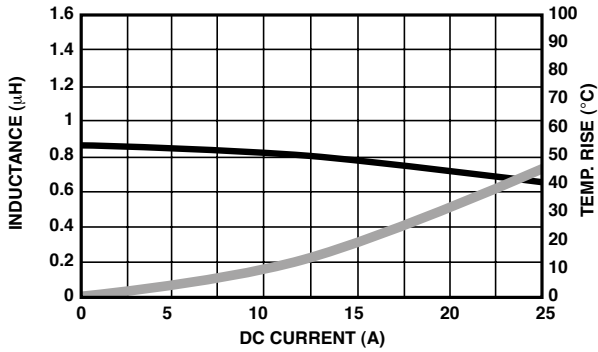
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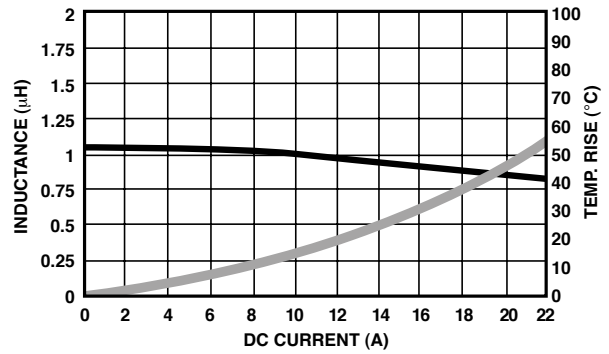
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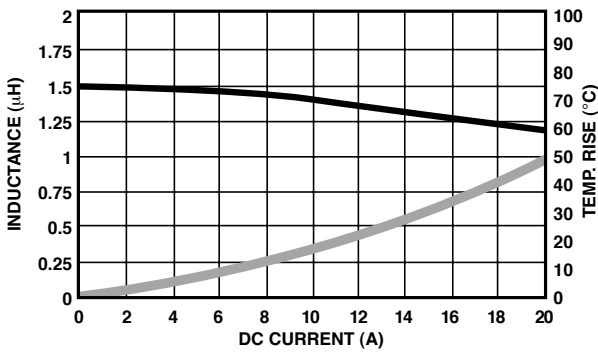
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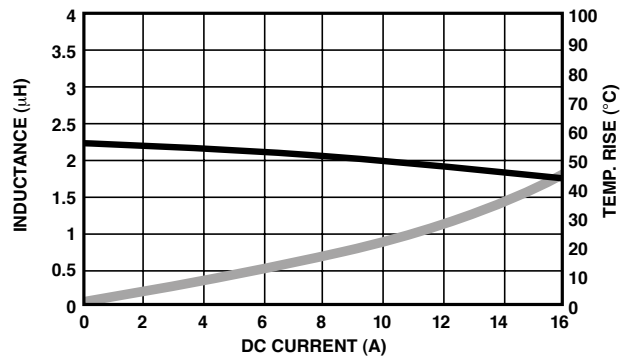
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RL-8250-1.5-1R5M



RL-8250-1.5-2R2M



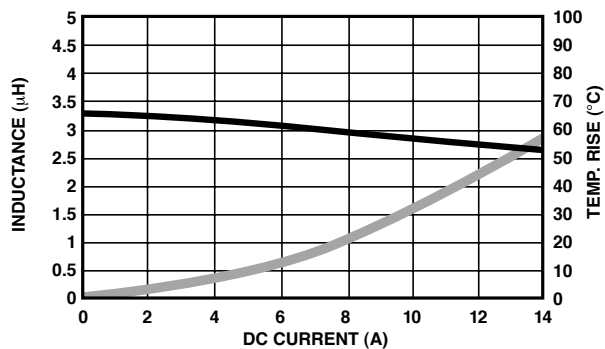
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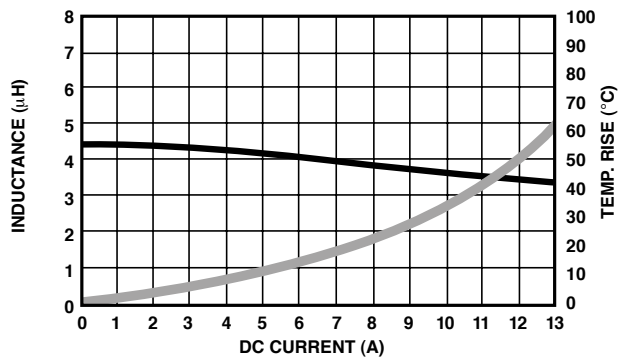




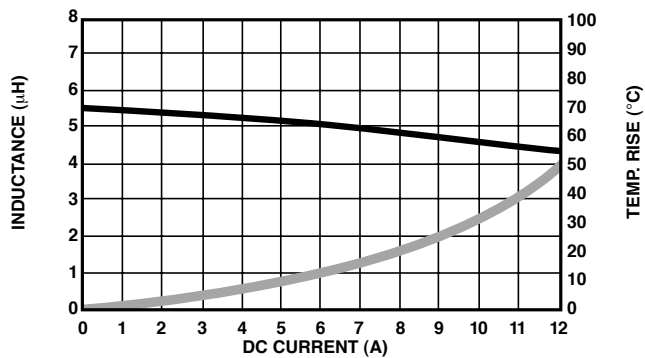
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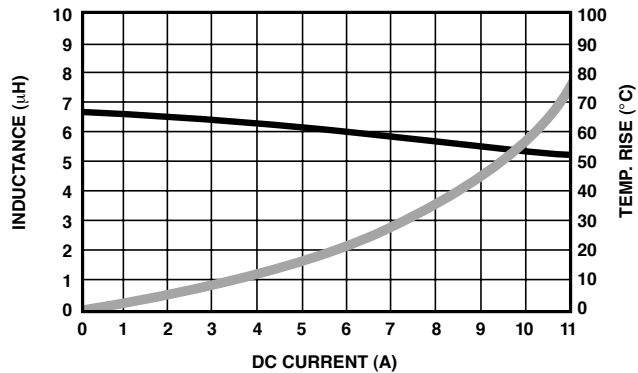
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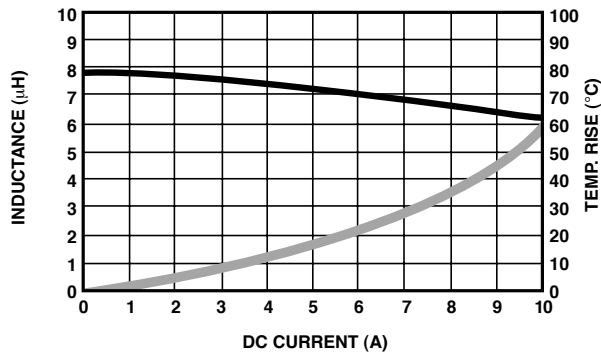
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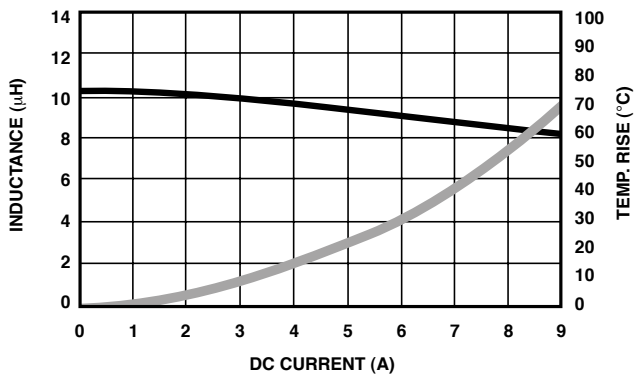
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RL-8250-1.5-8R2M



RL-8250-1.5-100M



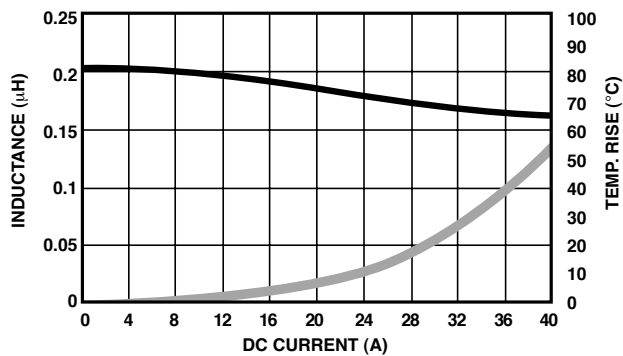
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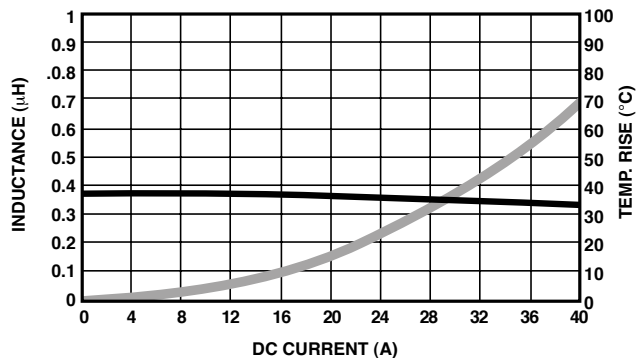




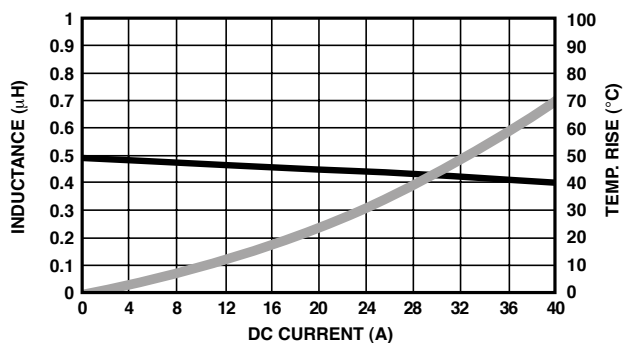
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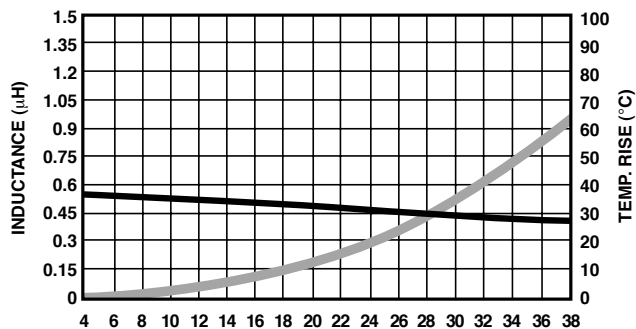
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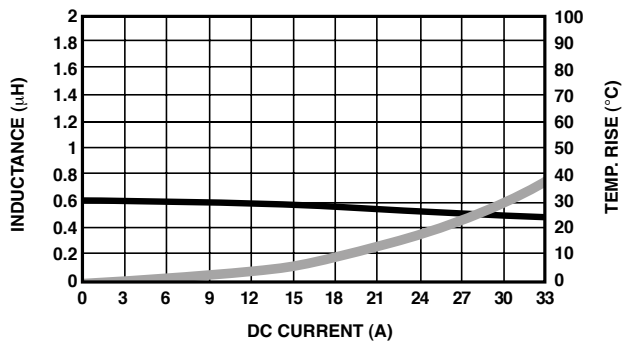
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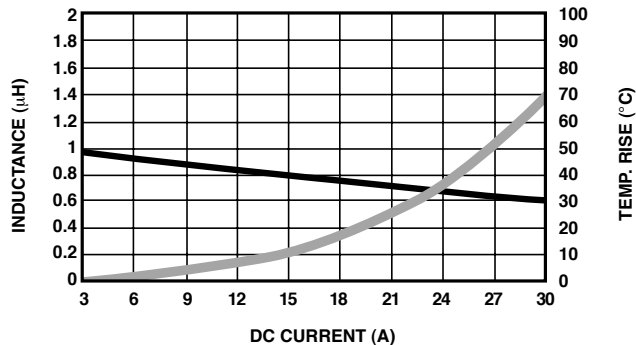
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RL-8250-2-R68M



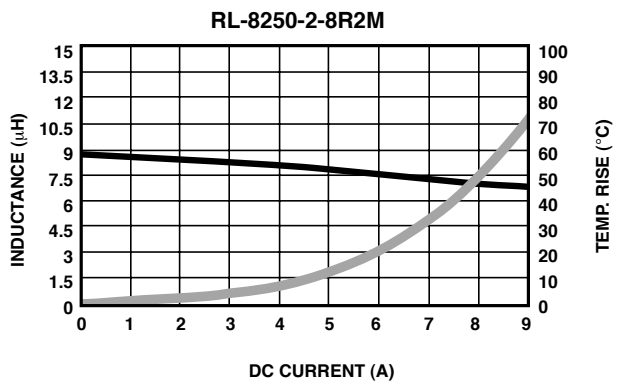
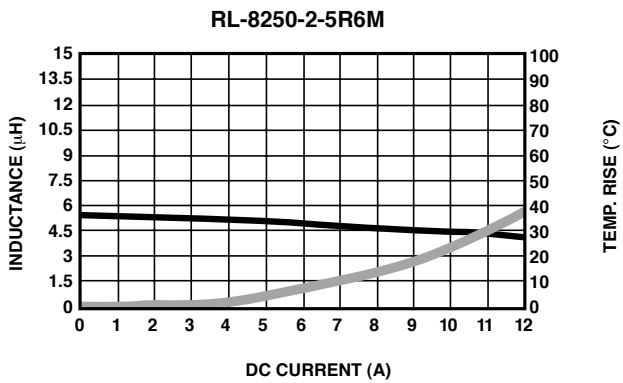
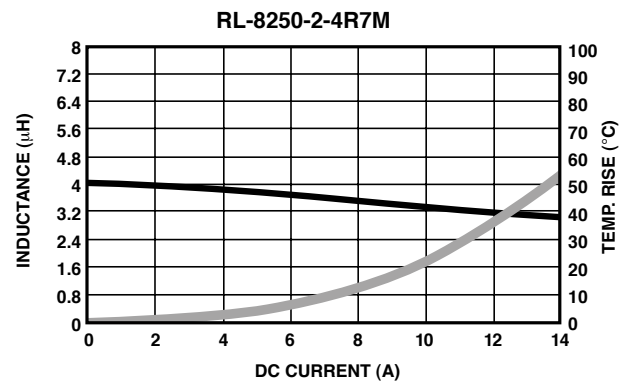
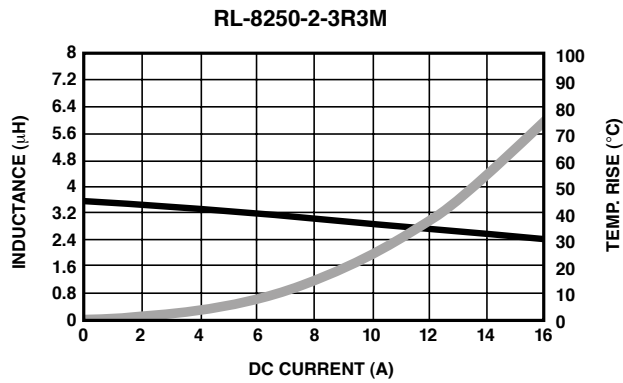
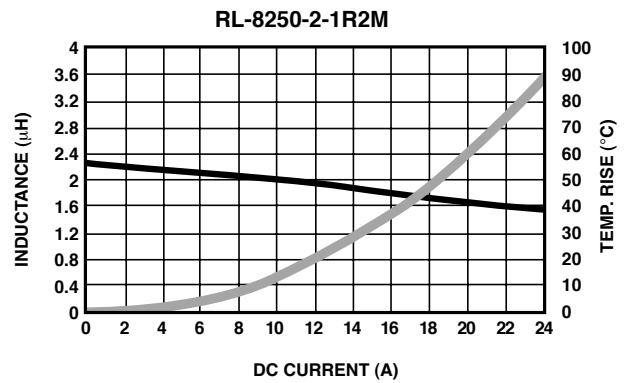
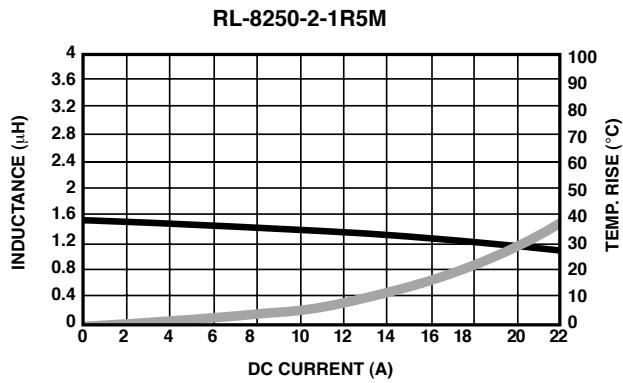
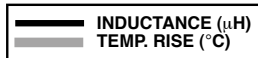
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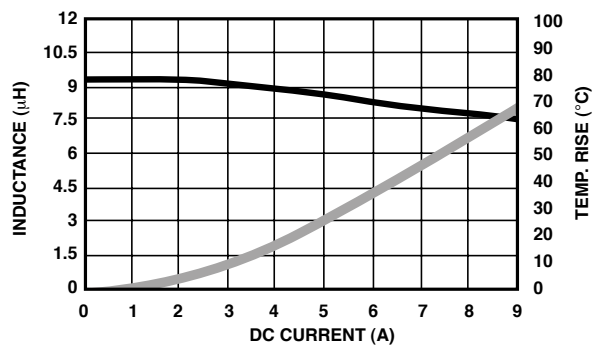
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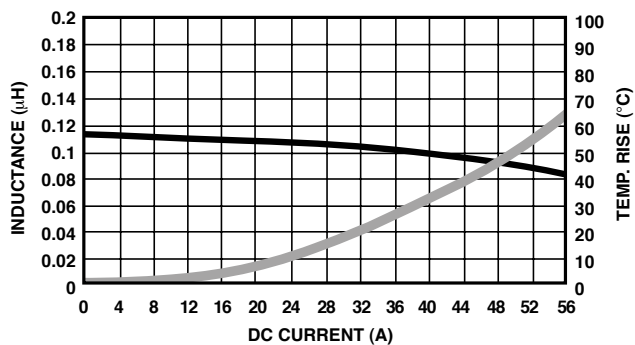




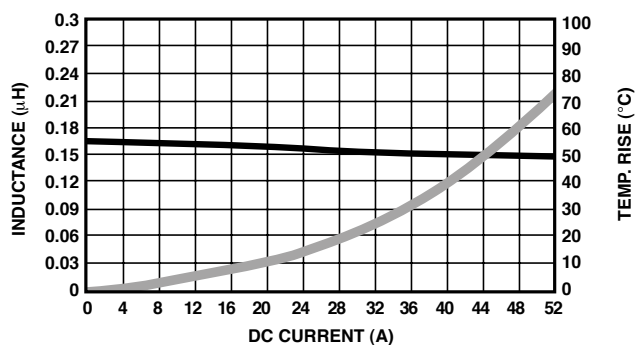
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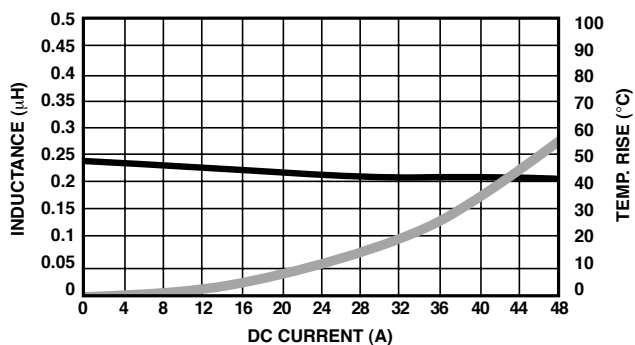
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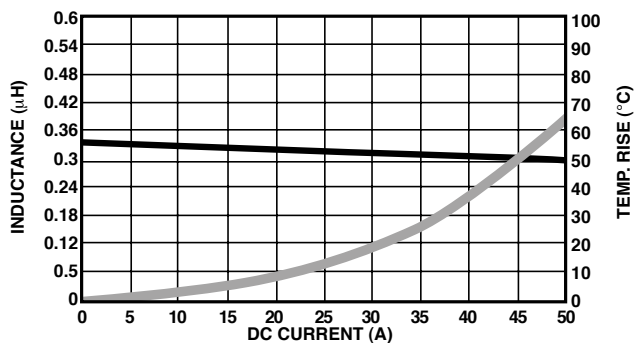
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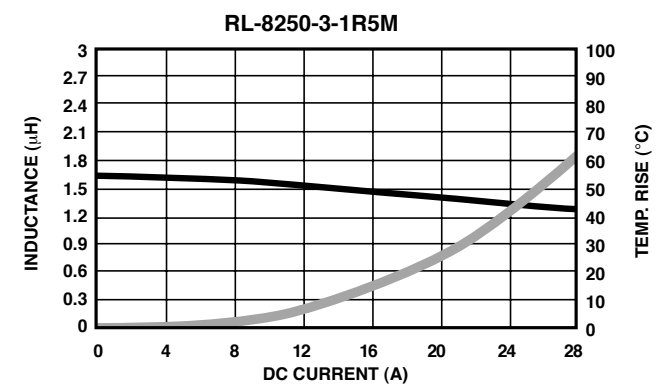
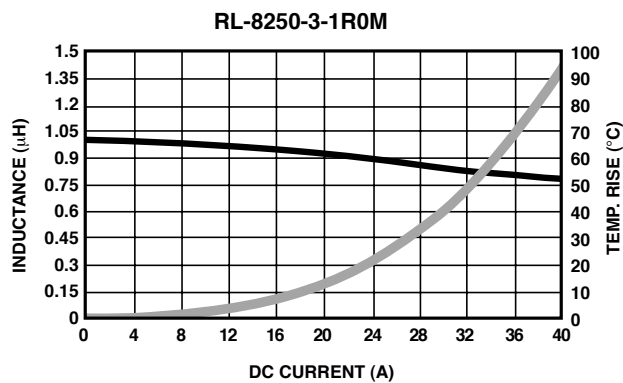
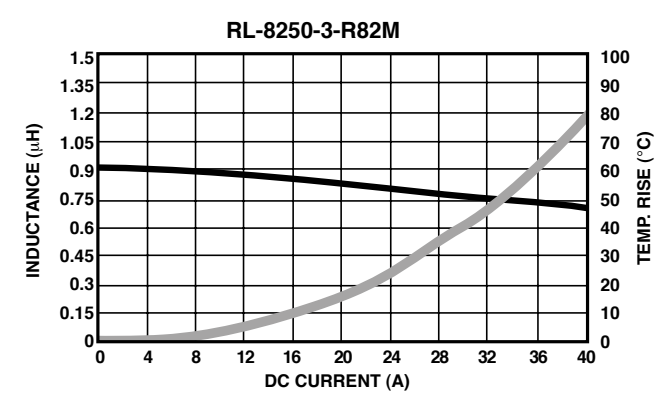
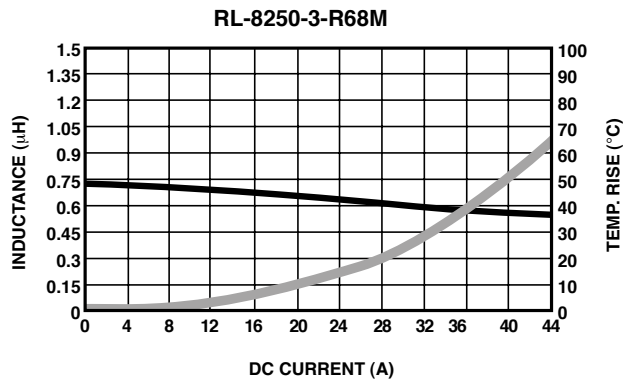
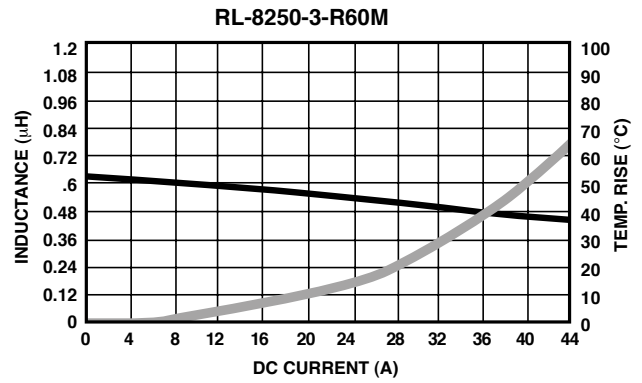
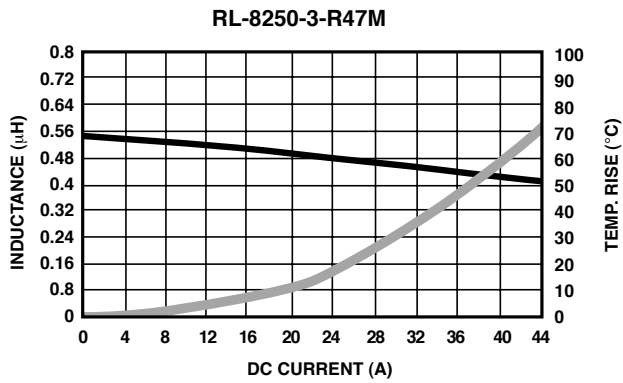


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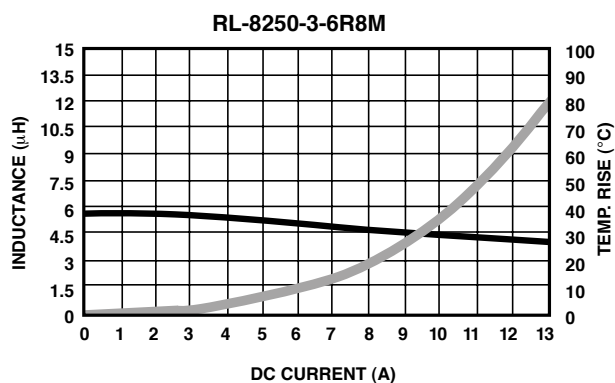
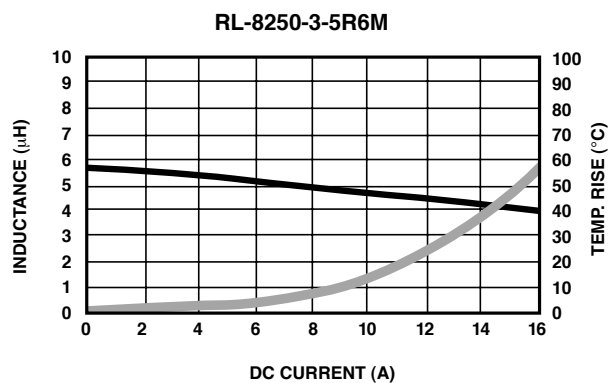
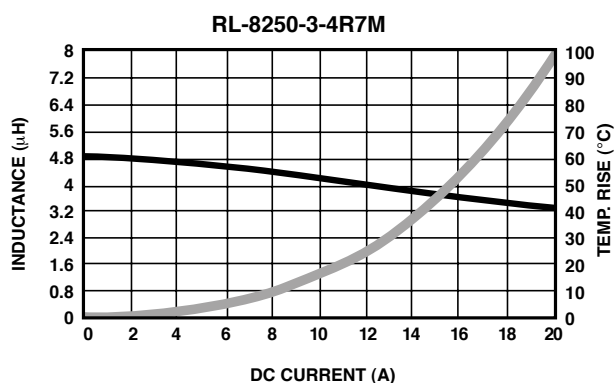
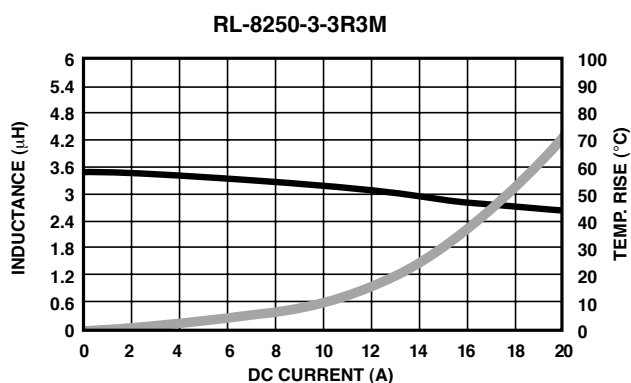
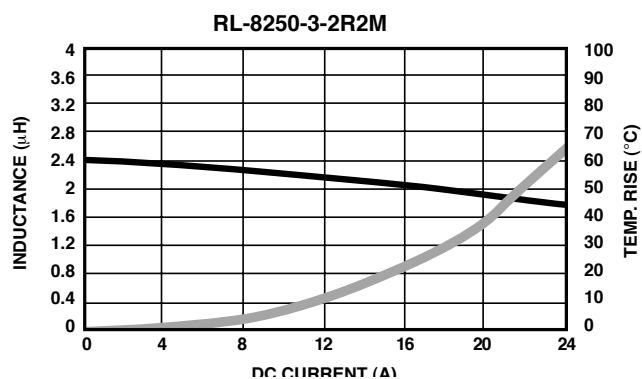
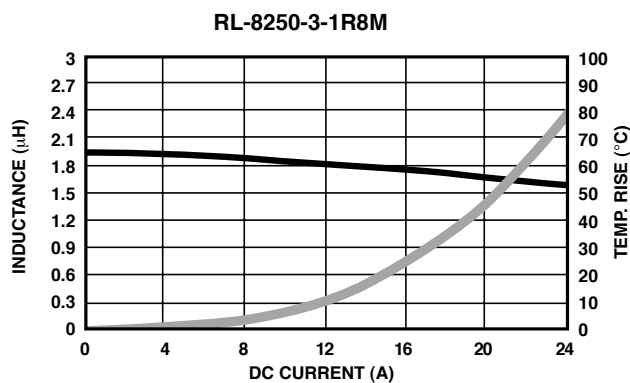


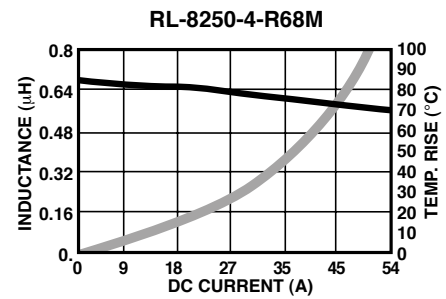
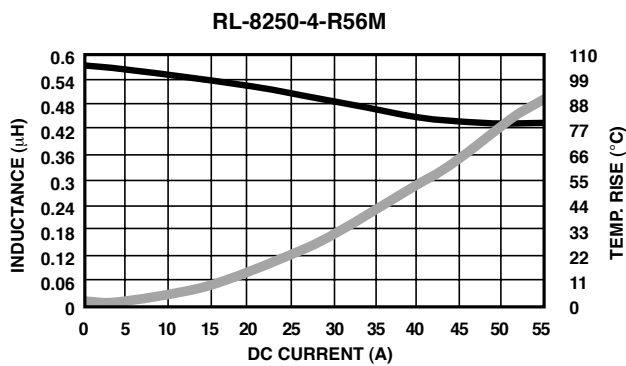
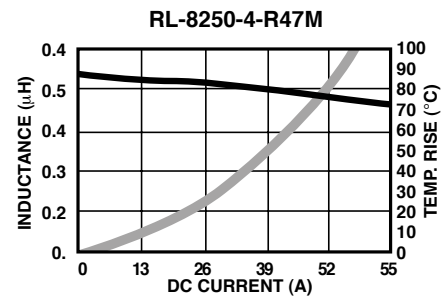
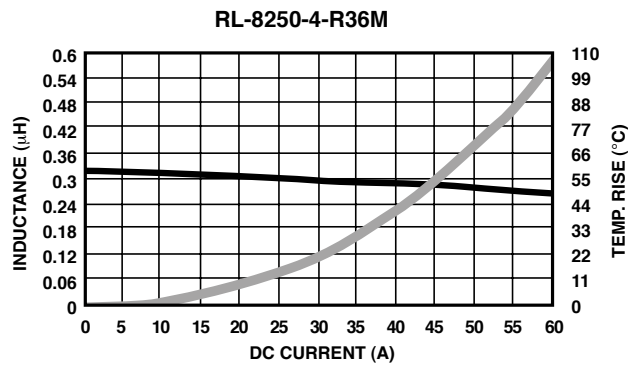
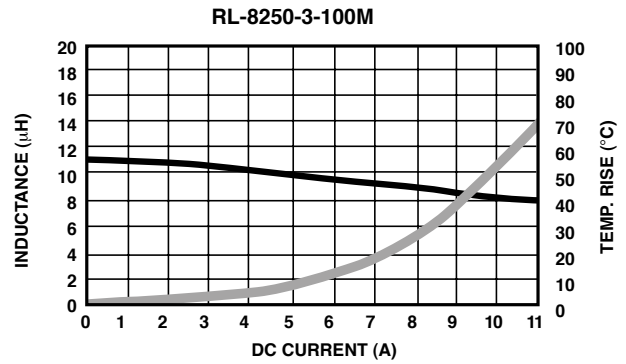
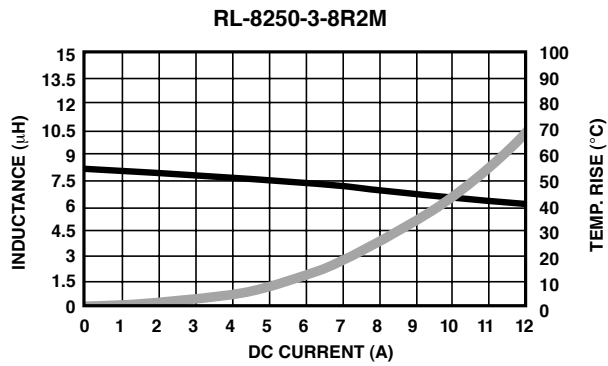


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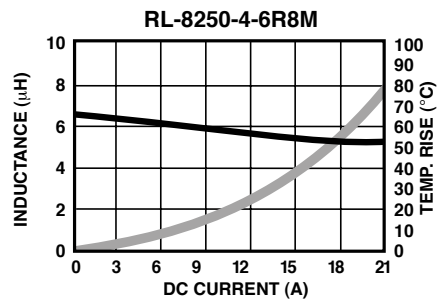
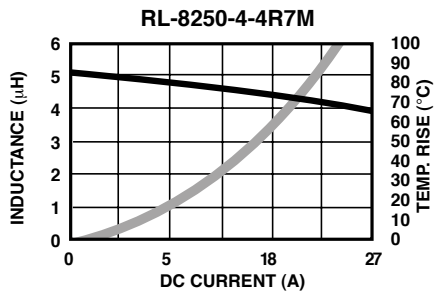
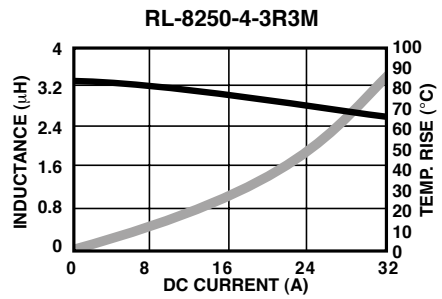
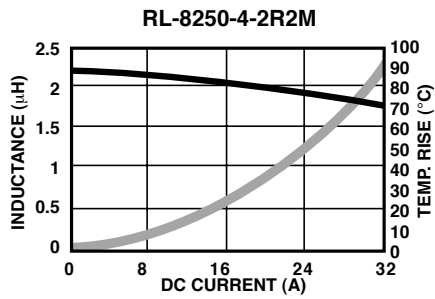
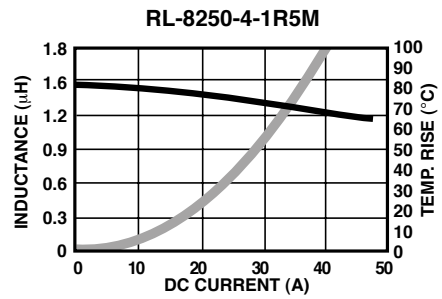
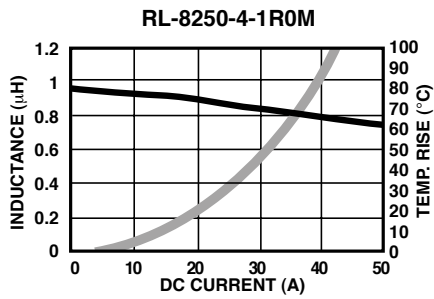
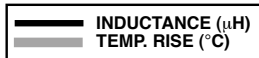


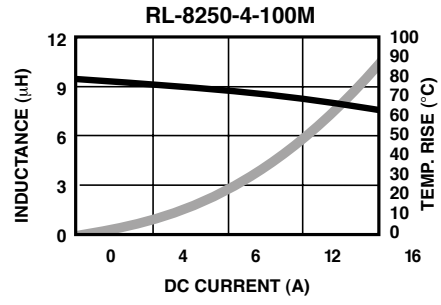
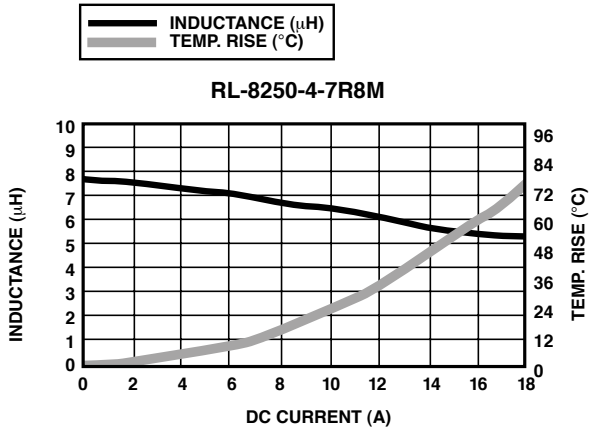


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