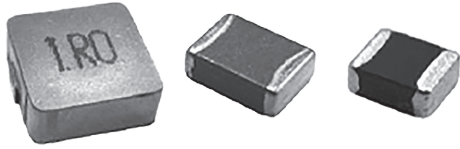




SMD Molding Type Power Inductor

EMPI Series



Features

- Shielded construction
- Handles high transient current spikes without saturation
- Ultra low buzz noise, due to composite construction

Application

- Excellent for power line DC-DC conversion applications used in power switching, personal computers and other handheld electronic equipment

Part Numbering

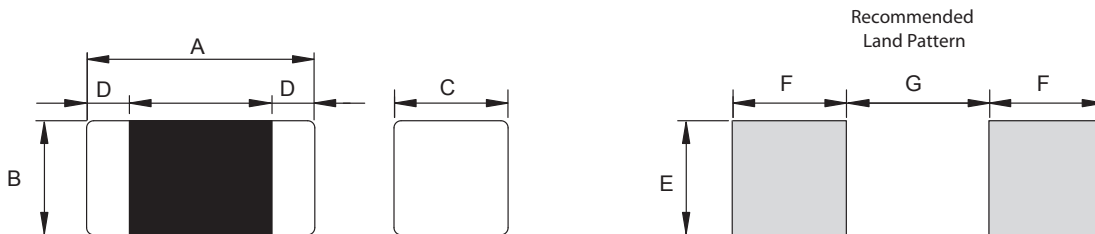
EMPI 160808 - **R24** **M** -

① ② ③ ④ ⑤ ⑥

- ① Product Group
- ② Dimension Code
- ③ Type Code
- ④ Inductance Code: R means decimal point
Ex: R24→0.24μH
- ⑤ Inductance Tolerance M=±20%
- ⑥ Control Code

Shapes and Dimension

EMPI160808 / EMP201208 / EMPI201210 / EMPI201608 / EMPI201610
EMPI252010 / EMPI252012 / EMPI322510 / EMPI322512



Unit: mm

Type	A	B	C	D	E	F	G
EMPI160808	1.60±0.20	0.80±0.20	0.80 (Max.)	0.30±0.20	0.95	0.57	0.75
EMPI201208	2.00±0.20	1.25±0.20	0.80 (Max.)	0.50±0.30	1.23	0.80	1.00
EMPI201210	2.00±0.20	1.25±0.20	1.00 (Max.)	0.50±0.30	1.22	0.80	1.00
EMPI201608	2.00±0.20	1.60±0.20	0.80 (Max.)	0.50±0.30	1.80	0.80	0.70
EMPI201610	2.00±0.20	1.60±0.20	1.00 (Max.)	0.50±0.30	1.80	0.80	0.70
EMPI252010	2.50±0.20	2.00±0.20	1.00 (Max.)	0.60±0.30	2.30	0.80	1.20
EMPI252012	2.50±0.20	2.00±0.20	1.20 (Max.)	0.60±0.30	2.30	0.80	1.20
EMPI322510	3.20±0.30	2.50±0.30	1.00 (Max.)	0.50±0.30	2.80	0.90	1.70
EMPI322512	3.20±0.30	2.50±0.30	1.20 (Max.)	0.50±0.30	2.80	0.90	1.70

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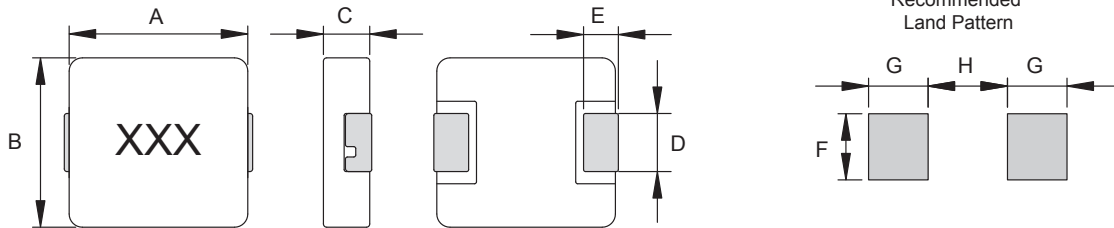


SMD Molding Type Power Inductor

EMPI Series

Shapes and Dimension

EMPI0412 / EMPI0415 / EMPI0402 / EMPI0518 / EMPI0502 / EMPI0503
EMPI0615 / EMPI0618 / EMPI0605 / EMPI0624 / EMPI107040 / EMPI107050
EMPI1004 / EMPI1205



Unit: mm

Type	A	B	C	D	E	F	G	H
EMPI0412	4.60±0.20	4.10±0.20	1.20 (Max.)	1.50±0.30	1.00±0.50	2.50	1.50	2.20
EMPI0415	4.60±0.30	4.10±0.20	1.50 (Max.)	1.50±0.30	1.00±0.50	2.50	1.50	2.20
EMPI0402	4.60±0.20	4.10±0.20	2.00 (Max.)	1.50±0.30	1.00±0.50	2.50	1.50	2.20
EMPI0518	5.70±0.20	5.40±0.35	1.80 (Max.)	2.00±0.30	1.50±0.30	2.50	1.90	2.20
EMPI0502	5.70±0.20	5.40±0.35	1.80±0.20	2.00±0.30	1.50±0.30	2.50	1.90	2.20
EMPI0503	5.70±0.20	5.40±0.35	3.00 (Max.)	2.00±0.30	1.50±0.30	2.50	1.90	2.20
EMPI0615	7.30 (Max.)	6.60±0.20	1.30±0.20	2.90 (Typ.)	1.60±0.50	3.50	2.35	3.70
EMPI0618	7.30 (Max.)	6.60±0.20	1.60±0.20	2.90 (Typ.)	1.60±0.50	3.50	2.35	3.70
EMPI0605	7.50 (Max.)	6.60±0.20	5.00 (Max.)	2.90 (Typ.)	1.60±0.50	3.50	2.35	3.70
EMPI0624	7.60 (Max.)	6.60±0.20	2.40 (Max.)	2.90 (Typ.)	1.60±0.50	3.50	2.35	3.70
EMPI107040	11.50 (Max.)	7.50±0.30	4.00 (Max.)	3.00±0.50	2.40±0.30	4.10	4.05	5.40
EMPI107050	11.50 (Max.)	7.50 (Max.)	4.80±0.20	3.00±0.50	2.00±0.50	3.50	3.00	6.50
EMPI1004	11.60 (Max.)	10.10±0.30	4.00 (Max.)	3.00 (Typ.)	2.50±0.50	4.00	3.50	6.00
EMPI1205	13.80 (Max.)	12.60±0.20	5.00 (Max.)	See Spectable	2.70±0.70	5.00	4.00	6.50

General Technical Data

Operating Temperature Range	-40°C~+125°C
Storage Temperature	40°C Max. , 70%RHMax.

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SMD Molding Type Power Inductor

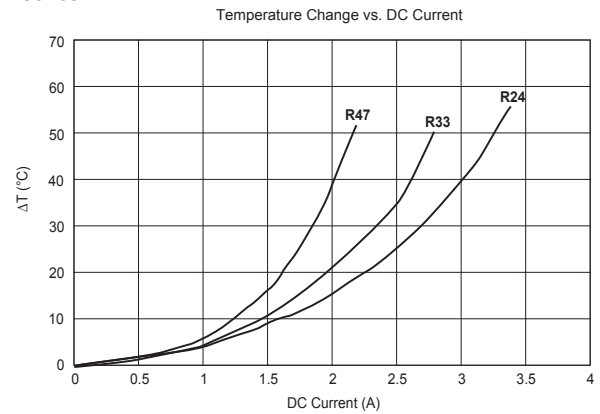
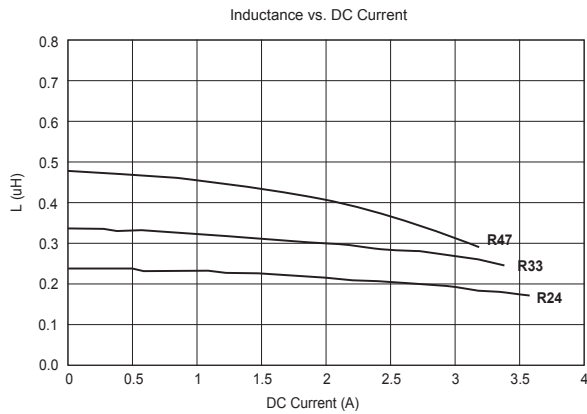
EMPI Series

Electrical Characteristics

Part Number	Inductance	Test Frequency	DC Resistance (R_{DC}) Typ. / Max.	Saturation Current (I_{SAT}) Typ. / Max.	Temperature Rise Current (I_{RMS}) Typ. / Max.
EMPI160808H Series					
EMPI160808H-R24M-□	0.24 μ H \pm 20%	2MHz	47m Ω / 54m Ω	3.6A / 3.2A	3.0A / 2.6A
EMPI160808H-R33M-□	0.33 μ H \pm 20%	2MHz	62m Ω / 75m Ω	3.4A / 3.0A	2.6A / 2.2A
EMPI160808H-R47M-□	0.47 μ H \pm 20%	2MHz	87m Ω / 100m Ω	2.6A / 2.2A	2.0A / 1.6A

- Saturation Current for Inductance becomes 30% lower than its initial value
- Temperature Rise Current for a 40°C rise above 25°C ambient

EMPI160808H Series



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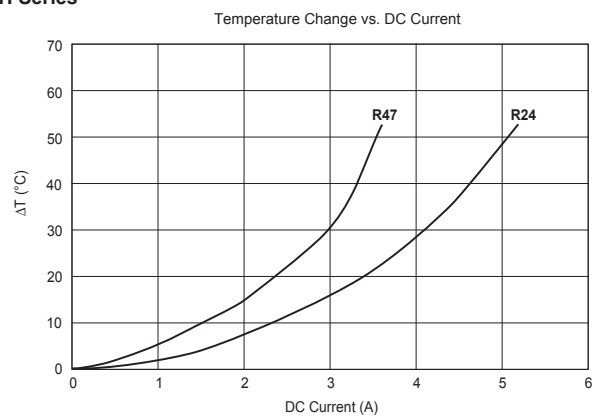
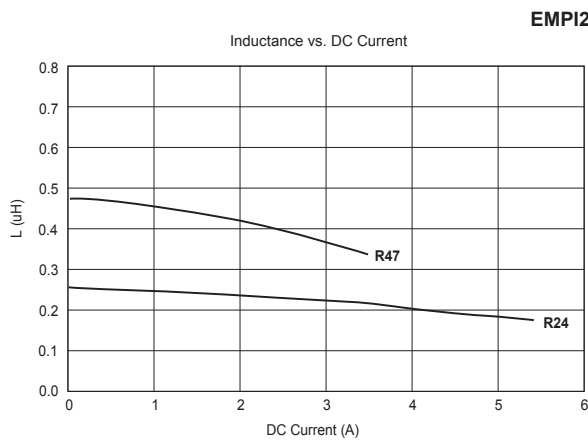
SMD Molding Type Power Inductor

EMPI Series

Electrical Characteristics

Part Number	Inductance	Test Frequency	DC Resistance (R_{DC}) Typ. / Max.	Saturation Current (I_{SAT}) Typ. / Max.	Temperature Rise Current (I_{RMS}) Typ. / Max.
EMPI201208H Series					
EMPI201208H-R24M-□	0.24 μ H \pm 20%	2MHz	19m Ω / 25m Ω	5.4A / 4.8A	4.8A / 4.2A
EMPI201208H-R47M-□	0.47 μ H \pm 20%	2MHz	40m Ω / 48m Ω	3.6A / 3.2A	3.4A / 3.0A

- Saturation Current for Inductance becomes 30% lower than its initial value
- Temperature Rise Current for a 40°C rise above 25°C ambient



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SMD Molding Type Power Inductor

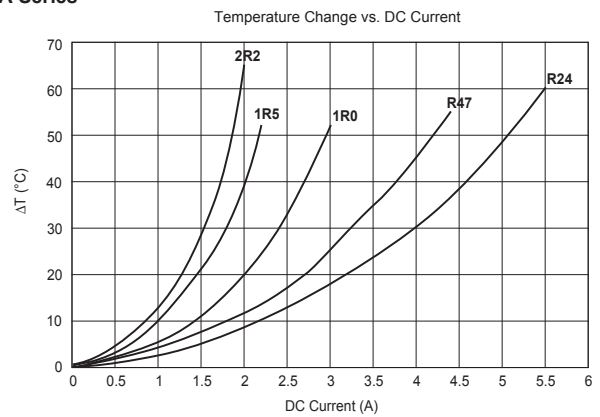
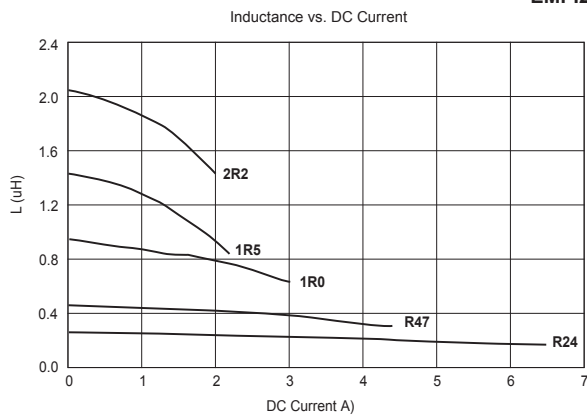
EMPI Series

Electrical Characteristics

Part Number	Inductance	Test Frequency	DC Resistance (R_{DC}) Typ. / Max.	Saturation Current (I_{SAT}) Typ. / Max.	Temperature Rise Current (I_{RMS}) Typ. / Max.
EMPI201210A Series					
EMPI201210A-R24M-□	0.24 μ H \pm 20%	2MHz	22m Ω / 28m Ω	5.7A / 4.5A	4.6A / 3.7A
EMPI201210A-R47M-□	0.47 μ H \pm 20%	2MHz	33m Ω / 42m Ω	4.2A / 3.3A	3.7A / 3.0A
EMPI201210A-1R0M-□	1.00 μ H \pm 20%	2MHz	69m Ω / 78m Ω	2.8A / 2.3A	2.7A / 2.2A
EMPI201210A-1R5M-□	1.50 μ H \pm 20%	2MHz	108m Ω / 126m Ω	2.2A / 1.7A	2.1A / 1.6A
EMPI201210A-2R2M-□	2.20 μ H \pm 20%	2MHz	166m Ω / 176m Ω	1.7A / 1.6A	1.5A / 1.4A

- Saturation Current for Inductance becomes 30% lower than its initial value
- Temperature Rise Current for a 40°C rise above 25°C ambient

EMPI201210A Series



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SMD Molding Type Power Inductor

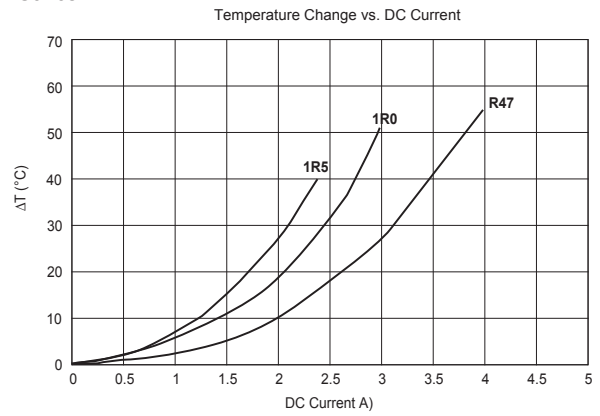
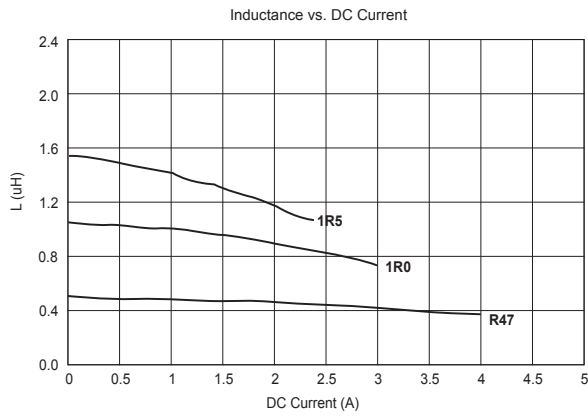
EMPI Series

Electrical Characteristics

Part Number	Inductance	Test Frequency	DC Resistance (R_{DC}) Typ. / Max.	Saturation Current (I_{SAT}) Typ. / Max.	Temperature Rise Current (I_{RMS}) Typ. / Max.
EMPI201608H Series					
EMPI201608H-R47M-□	0.47 μ H \pm 20%	2MHz	42m Ω / 51m Ω	3.6A / 3.3A	3.4A / 3.1A
EMPI201608H-1R0M-□	1.00 μ H \pm 20%	2MHz	76m Ω / 87m Ω	2.8A / 2.5A	2.7A / 2.3A
EMPI201608H-1R5M-□	1.50 μ H \pm 20%	2MHz	102m Ω / 115m Ω	2.3A / 2.0A	2.4A / 2.1A

- Saturation Current for Inductance becomes 30% lower than its initial value
- Temperature Rise Current for a 40°C rise above 25°C ambient

EMPI201608H Series



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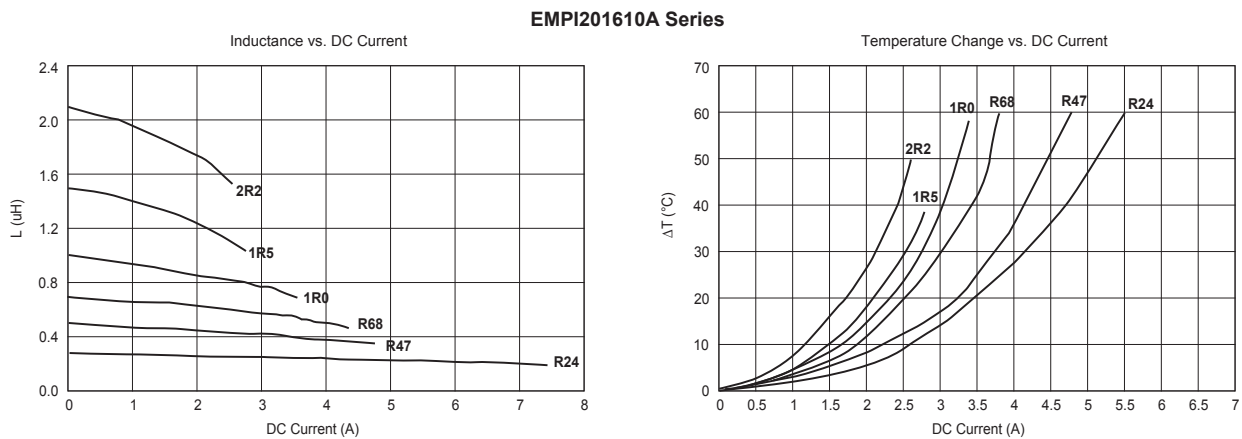
SMD Molding Type Power Inductor

EMPI Series

Electrical Characteristics

Part Number	Inductance	Test Frequency	DC Resistance (R_{DC}) Typ. / Max.	Saturation Current (I_{SAT}) Typ. / Max.	Temperature Rise Current (I_{RMS}) Typ. / Max.
EMPI201610A Series					
EMPI201610A-R24M-□	0.24 μ H \pm 20%	2MHz	21.0m Ω / 27.0m Ω	7.0A / 5.6A	4.8A / 3.9A
EMPI201610A-R47M-□	0.47 μ H \pm 20%	2MHz	33.0m Ω / 42.0m Ω	4.8A / 3.9A	4.2A / 3.5A
EMPI201610A-R68M-□	0.68 μ H \pm 20%	2MHz	43.0m Ω / 56.0m Ω	4.0A / 3.2A	3.4A / 2.7A
EMPI201610A-1R0M-□	1.00 μ H \pm 20%	2MHz	53.0m Ω / 65.0m Ω	3.6A / 2.9A	3.1A / 2.5A
EMPI201610A-1R5M-□	1.50 μ H \pm 20%	2MHz	75.0m Ω / 85.0m Ω	2.8A / 2.5A	2.7A / 2.3A
EMPI201610A-2R2M-□	2.20 μ H \pm 20%	2MHz	112.0m Ω / 135.0m Ω	2.7A / 2.4A	2.2A / 1.8A

- Saturation Current for Inductance becomes 30% lower than its initial value
- Temperature Rise Current for a 40°C rise above 25°C ambient



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SMD Molding Type Power Inductor

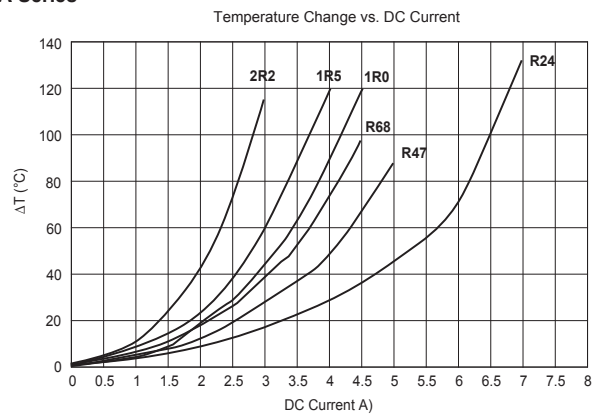
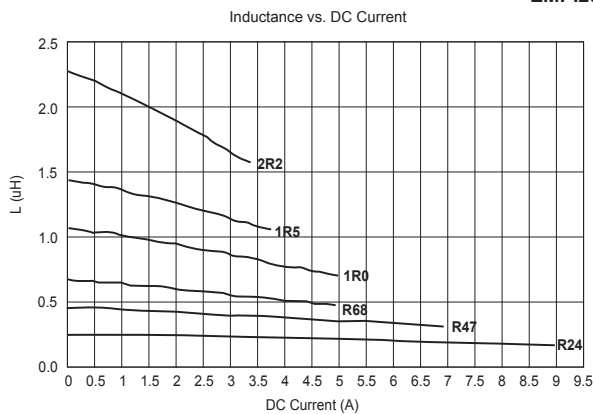
EMPI Series

Electrical Characteristics

Part Number	Inductance	Test Frequency	DC Resistance (R_{DC}) Max.	Saturation Current (I_{SAT}) Typ. / Max.	Temperature Rise Current (I_{RMS}) Typ. / Max.
EMPI252010A Series					
EMPI252010A-R24M-□	0.24 μ H \pm 20%	2MHz	40.0m Ω	9.5A / 7.5A	5.0A / 4.5A
EMPI252010A-R47M-□	0.47 μ H \pm 20%	2MHz	46.0m Ω	6.5A / 5.2A	3.6A / 3.1A
EMPI252010A-R68M-□	0.68 μ H \pm 20%	2MHz	65.0m Ω	5.0A / 3.8A	3.3A / 2.9A
EMPI252010A-1R0M-□	1.00 μ H \pm 20%	2MHz	78.0m Ω	4.3A / 3.4A	3.0A / 2.5A
EMPI252010A-1R5M-□	1.50 μ H \pm 20%	2MHz	105.0m Ω	4.0A / 3.2A	2.9A / 2.2A
EMPI252010A-2R2M-□	2.20 μ H \pm 20%	2MHz	156.0m Ω	3.2A / 2.6A	1.8A / 1.4A

- Saturation Current for Inductance becomes 30% lower than its initial value
- Temperature Rise Current for a 40°C rise above 25°C ambient

EMPI252010A Series



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SMD Molding Type Power Inductor

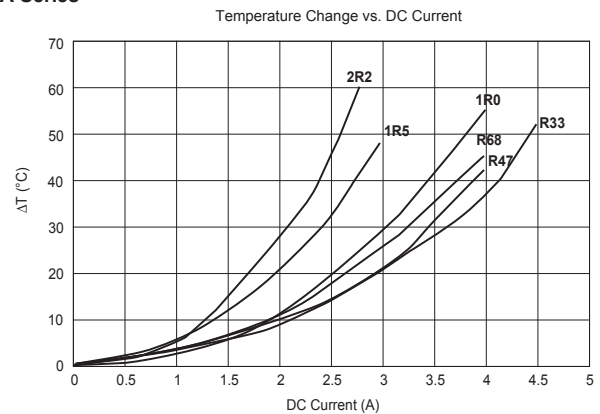
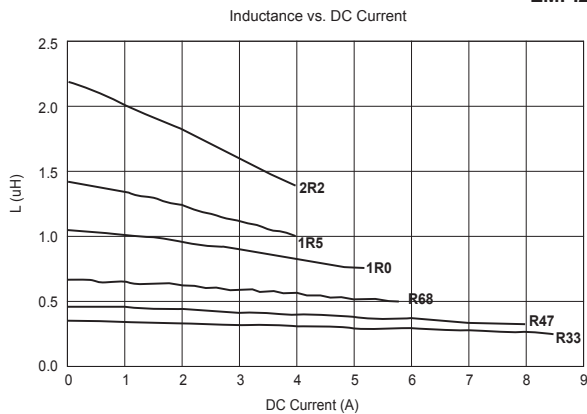
EMPI Series

Electrical Characteristics

Part Number	Inductance	Test Frequency	DC Resistance (R_{DC}) Typ. / Max.	Saturation Current (I_{SAT}) Typ. / Max.	Temperature Rise Current (I_{RMS}) Typ. / Max.
EMPI252012A Series					
EMPI252012A-R33M-□	0.33 μ H \pm 20%	2MHz	27m Ω / 35m Ω	8.5A / 6.8A	4.6A / 4.0A
EMPI252012A-R47M-□	0.47 μ H \pm 20%	2MHz	29m Ω / 39m Ω	7.8A / 6.2A	4.4A / 3.7A
EMPI252012A-R68M-□	0.68 μ H \pm 20%	2MHz	40m Ω / 46m Ω	6.5A / 5.5A	3.7A / 3.3A
EMPI252012A-1R0M-□	1.00 μ H \pm 20%	2MHz	45m Ω / 59m Ω	5.0A / 4.0A	3.5A / 3.0A
EMPI252012A-1R5M-□	1.50 μ H \pm 20%	2MHz	62m Ω / 70m Ω	4.0A / 3.4A	2.7A / 2.5A
EMPI252012A-2R2M-□	2.20 μ H \pm 20%	2MHz	102m Ω / 115m Ω	3.8A / 3.3A	2.3A / 2.0A

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- Temperature Rise Current for a 40°C rise above 25°C ambient

EMPI252012A Series



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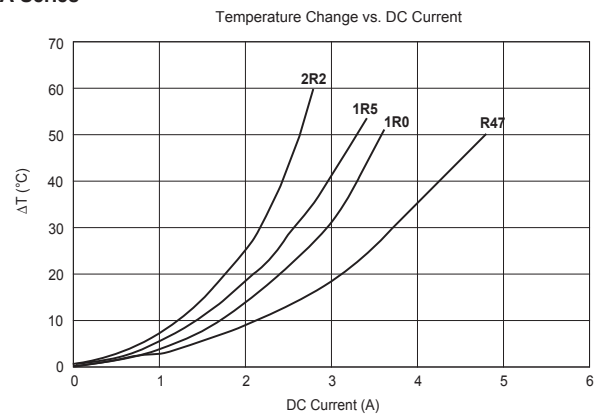
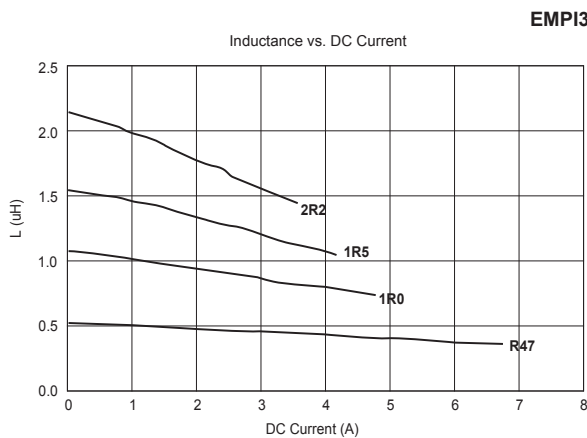
SMD Molding Type Power Inductor

EMPI Series

Electrical Characteristics

Part Number	Inductance	Test Frequency	DC Resistance (R_{DC}) Typ. / Max.	Saturation Current (I_{SAT}) Typ. / Max.	Temperature Rise Current (I_{RMS}) Typ. / Max.
EMPI322510A Series					
EMPI322510A-R47M-□	0.47 μ H \pm 20%	2MHz	30m Ω / 37m Ω	6.6A / 5.8A	4.2A / 3.6A
EMPI322510A-1R0M-□	1.00 μ H \pm 20%	2MHz	49m Ω / 56m Ω	4.6A / 4.0A	3.3A / 3.0A
EMPI322510A-1R5M-□	1.50 μ H \pm 20%	2MHz	66m Ω / 75m Ω	4.0A / 3.4A	3.0A / 2.6A
EMPI322510A-2R2M-□	2.20 μ H \pm 20%	2MHz	95m Ω / 108m Ω	3.2A / 2.7A	2.5A / 2.2A

- Saturation Current for Inductance becomes 30% lower than its initial value
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SMD Molding Type Power Inductor

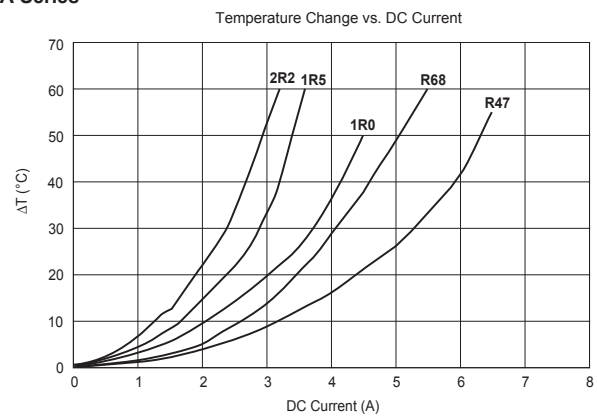
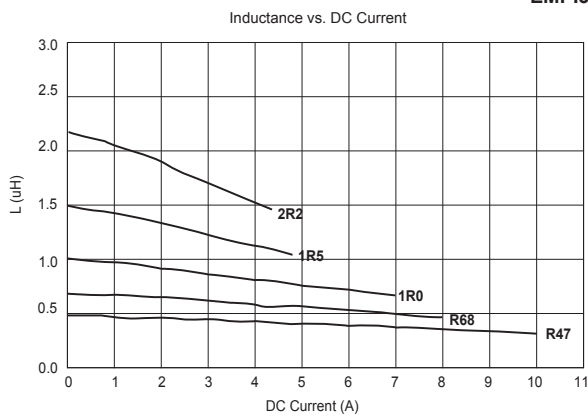
EMPI Series

Electrical Characteristics

Part Number	Inductance	Test Frequency	DC Resistance (R_{DC}) Typ. / Max.	Saturation Current (I_{SAT}) Typ. / Max.	Temperature Rise Current (I_{RMS}) Typ. / Max.
EMPI322512A Series					
EMPI322512A-R47M-□	0.47 μ H \pm 20%	2MHz	21m Ω / 27m Ω	9.0A / 8.0A	5.8A / 5.0A
EMPI322512A-R68M-□	0.68 μ H \pm 20%	2MHz	26m Ω / 34m Ω	7.5A / 6.3A	4.6A / 4.0A
EMPI322512A-1R0M-□	1.00 μ H \pm 20%	2MHz	34m Ω / 42m Ω	6.3A / 5.8A	4.2A / 3.8A
EMPI322512A-1R5M-□	1.50 μ H \pm 20%	2MHz	58m Ω / 68m Ω	4.5A / 4.0A	3.2A / 2.8A
EMPI322512A-2R2M-□	2.20 μ H \pm 20%	2MHz	75m Ω / 85m Ω	4.0A / 3.6A	2.7A / 2.4A

- Saturation Current for Inductance becomes 30% lower than its initial value
- Temperature Rise Current for a 40°C rise above 25°C ambient

EMPI322512A Series



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SMD Molding Type Power Inductor

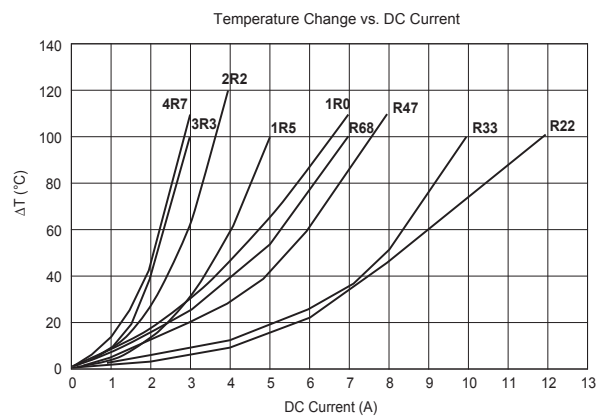
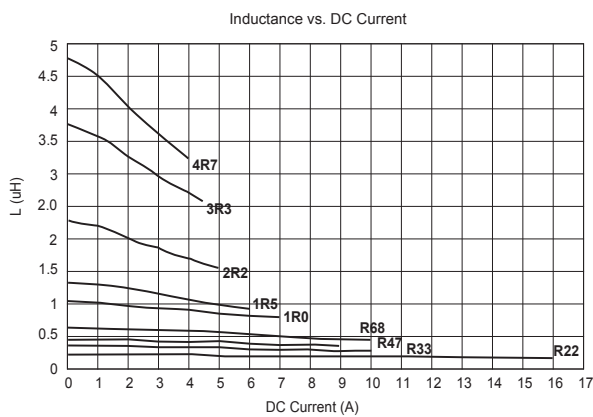
EMPI Series

Electrical Characteristics

Part Number	Inductance	Test Frequency	DC Resistance (R _{DC}) Max.	Saturation Current (I _{SAT}) Typ.	Temperature Rise Current (I _{RMS}) Typ.
EMPI0412E Series					
EMPI0412E-R22M-□	0.22μH±20%	100KHz	12.0mΩ	11.50A	8.50A
EMPI0412E-R33M-□	0.33μH±20%	100KHz	19.0mΩ	8.50A	6.50A
EMPI0412E-R47M-□	0.47μH±20%	100KHz	25.0mΩ	7.00A	5.00A
EMPI0412E-R68M-□	0.68μH±20%	100KHz	37.0mΩ	6.00A	4.50A
EMPI0412E-1R0M-□	1.00μH±20%	100KHz	47.0mΩ	5.20A	4.20A
EMPI0412E-1R5M-□	1.50μH±20%	100KHz	75.0mΩ	4.00A	3.25A
EMPI0412E-2R2M-□	2.20μH±20%	100KHz	83.5mΩ	3.50A	2.75A
EMPI0412E-3R3M-□	3.30μH±20%	100KHz	165.0mΩ	3.00A	2.00A
EMPI0412E-4R7M-□	4.70μH±20%	100KHz	195.0mΩ	2.80A	1.80A

- Saturation Current for Inductance becomes 30% lower than its initial value
- Temperature Rise Current for a 40°C rise above 25°C ambient

EMPI0412E Series



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SMD Molding Type Power Inductor

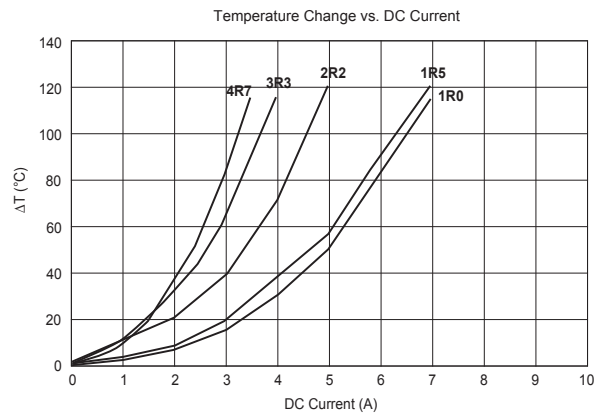
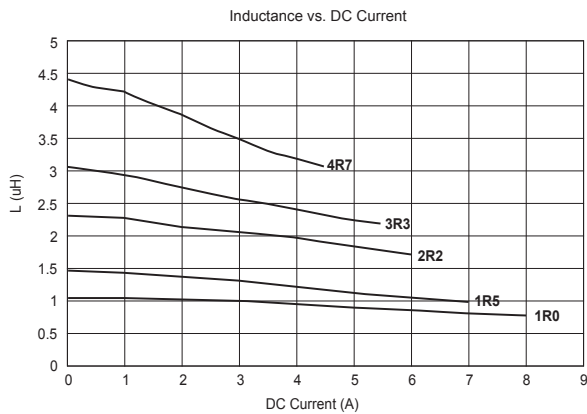
EMPI Series

Electrical Characteristics

Part Number	Inductance	Test Frequency	DC Resistance (R_{DC}) Max.	Saturation Current (I_{SAT}) Typ.	Temperature Rise Current (I_{RMS}) Typ.
EMPI0415E Series					
EMPI0415E-1R0M-□	1.00 μ H \pm 20%	100KHz	42.0m Ω	7.0A	4.0A
EMPI0415E-1R5M-□	1.50 μ H \pm 20%	100KHz	50.0m Ω	6.0A	3.5A
EMPI0415E-2R2M-□	2.20 μ H \pm 20%	100KHz	79.0m Ω	5.0A	3.0A
EMPI0415E-3R3M-□	3.30 μ H \pm 20%	100KHz	132.0m Ω	4.5A	2.3A
EMPI0415E-4R7M-□	4.70 μ H \pm 20%	100KHz	146.0m Ω	4.0A	2.0A

- Saturation Current for Inductance becomes 30% lower than its initial value
- Temperature Rise Current for a 40°C rise above 25°C ambient

EMPI0415E Series



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SMD Molding Type Power Inductor

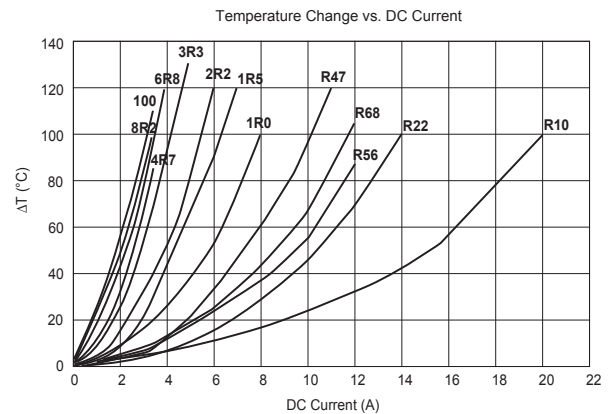
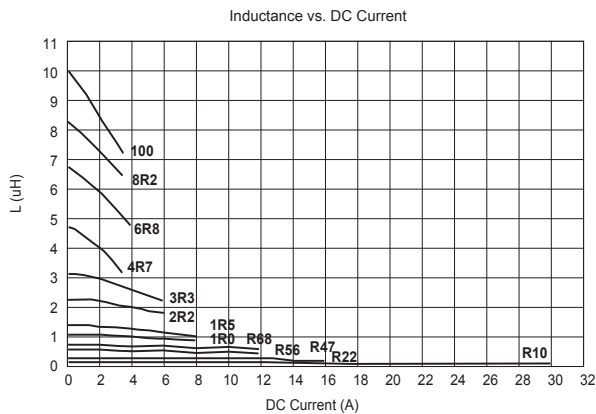
EMPI Series

Electrical Characteristics

Part Number	Inductance	Test Frequency	DC Resistance (R _{DC}) Max.	Saturation Current (I _{SAT}) Typ.	Temperature Rise Current (I _{RMS}) Typ.
EMPI0402E Series					
EMPI0402E-R10M-□	0.10μH±20%	100KHz	4.0mΩ	25.0A	12.0A
EMPI0402E-R22M-□	0.22μH±20%	100KHz	6.6mΩ	12.5A	9.0A
EMPI0402E-R47M-□	0.47μH±20%	100KHz	14.0mΩ	9.5A	7.0A
EMPI0402E-R56M-□	0.56μH±20%	100KHz	16.0mΩ	10.0A	6.5A
EMPI0402E-R68M-□	0.68μH±20%	100KHz	21.0mΩ	8.0A	5.2A
EMPI0402E-1R0M-□	1.00μH±20%	100KHz	27.0mΩ	7.0A	4.5A
EMPI0402E-1R5M-□	1.50μH±20%	100KHz	46.0mΩ	6.0A	4.0A
EMPI0402E-2R2M-□	2.20μH±20%	100KHz	58.0mΩ	5.0A	3.0A
EMPI0402E-3R3M-□	3.30μH±20%	100KHz	87.0mΩ	4.0A	2.5A
EMPI0402E-4R7M-□	4.70μH±20%	100KHz	126.0mΩ	3.0A	2.2A
EMPI0402E-6R8M-□	6.80μH±20%	100KHz	135.0mΩ	2.5A	2.0A
EMPI0402E-8R2M-□	8.20μH±20%	100KHz	216.0mΩ	2.5A	2.0A
EMPI0402E-100M-□	10.00μH±20%	100KHz	258.0mΩ	2.0A	1.6A

- Saturation Current for Inductance becomes 30% lower than its initial value
- Temperature Rise Current for a 40°C rise above 25°C ambient

EMPI0402E Series



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SMD Molding Type Power Inductor

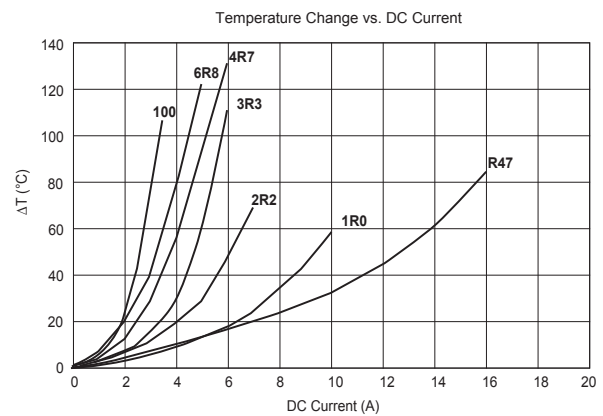
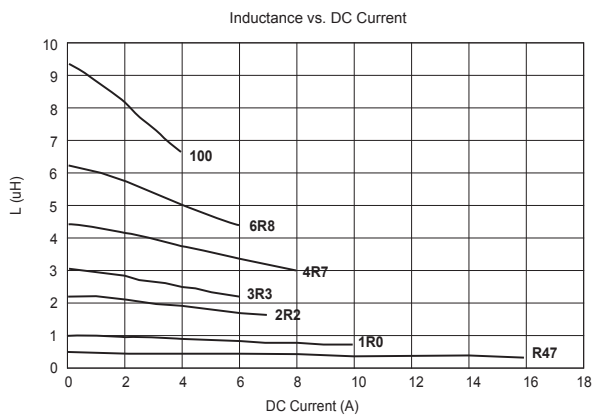
EMPI Series

Electrical Characteristics

Part Number	Inductance	Test Frequency	DC Resistance (R_{DC}) Max.	Saturation Current (I_{SAT}) Typ.	Temperature Rise Current (I_{RMS}) Typ.
EMPI0518E Series					
EMPI0518E-R47M-□	0.47 μ H \pm 20%	100KHz	9m Ω	15.5A	10.5A
EMPI0518E-1R0M-□	1.00 μ H \pm 20%	100KHz	17m Ω	9.0A	8.0A
EMPI0518E-2R2M-□	2.20 μ H \pm 20%	100KHz	35m Ω	6.5A	5.0A
EMPI0518E-3R3M-□	3.30 μ H \pm 20%	100KHz	58m Ω	5.0A	4.5A
EMPI0518E-4R7M-□	4.70 μ H \pm 20%	100KHz	85m Ω	4.0A	3.5A
EMPI0518E-6R8M-□	6.80 μ H \pm 20%	100KHz	120m Ω	3.4A	2.8A
EMPI0518E-100M-□	10.00 μ H \pm 20%	100KHz	155m Ω	3.0A	2.5A

- Saturation Current for Inductance becomes 30% lower than its initial value
- Temperature Rise Current for a 40°C rise above 25°C ambient

EMPI0518E Series



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SMD Molding Type Power Inductor

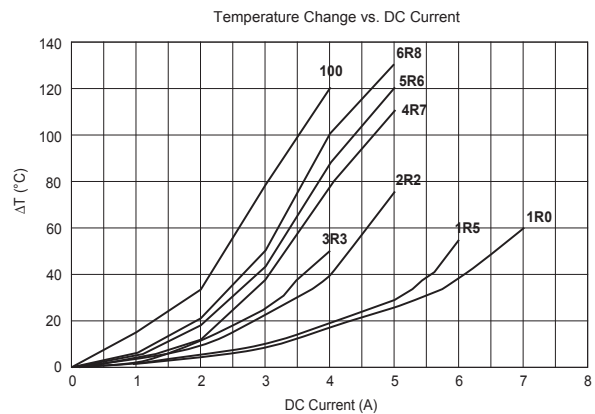
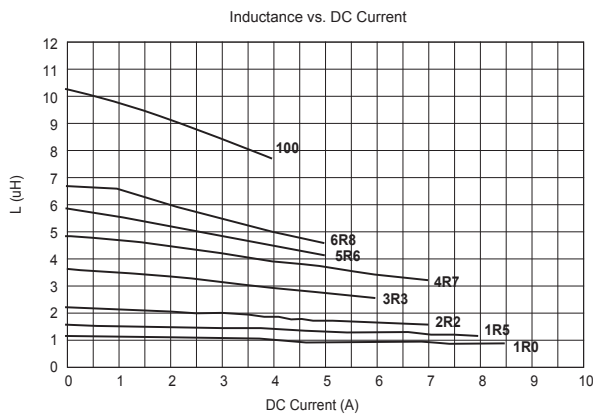
EMPI Series

Electrical Characteristics

Part Number	Inductance	Test Frequency	DC Resistance (R_{DC}) Max.	Saturation Current (I_{SAT}) Typ.	Temperature Rise Current (I_{RMS}) Typ.
EMPI0502E Series					
EMPI0502E-R47M-□	0.47 μ H \pm 20%	100KHz	9.0m Ω	15.5A	10.5A
EMPI0502E-1R0M-□	1.0 μ H \pm 20%	100KHz	30.0m Ω	7.0A	6.0A
EMPI0502E-1R5M-□	1.5 μ H \pm 20%	100KHz	35.0m Ω	6.5A	5.5A
EMPI0502E-2R2M-□	2.2 μ H \pm 20%	100KHz	45.0m Ω	6.0A	4.0A
EMPI0502E-3R3M-□	3.3 μ H \pm 20%	100KHz	60.0m Ω	5.5A	3.5A
EMPI0502E-4R7M-□	4.7 μ H \pm 20%	100KHz	90.0m Ω	5.0A	3.0A
EMPI0502E-5R6M-□	5.6 μ H \pm 20%	100KHz	120.0m Ω	4.5A	2.8A
EMPI0502E-6R8M-□	6.8 μ H \pm 20%	100KHz	125.0m Ω	4.5A	2.8A
EMPI0502E-100M-□	10.0 μ H \pm 20%	100KHz	180.0m Ω	4.0A	2.3A

- Saturation Current for Inductance becomes 30% lower than its initial value
- Temperature Rise Current for a 40°C rise above 25°C ambient

EMPI0502E Series



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SMD Molding Type Power Inductor

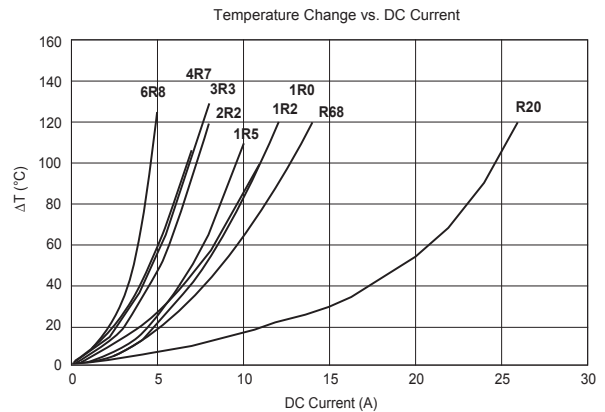
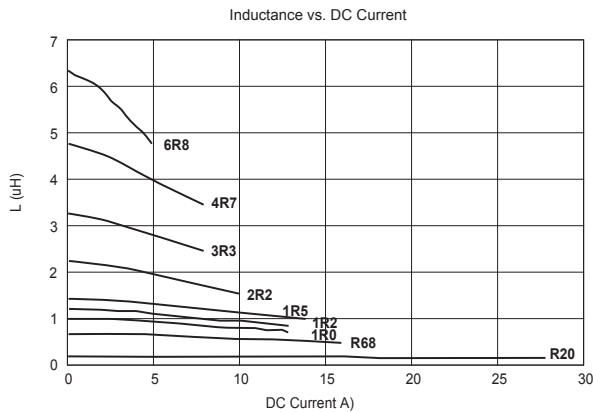
EMPI Series

Electrical Characteristics

Part Number	Inductance	Test Frequency	DC Resistance (R_{DC}) Max.	Saturation Current (I_{SAT}) Typ.	Temperature Rise Current (I_{RMS}) Typ.
EMPI0503E Series					
EMPI0503E-R20M-□	0.20 μ H \pm 20%	100KHz	3.9m Ω	14.5A	17.0A
EMPI0503E-R47M-□	0.47 μ H \pm 20%	100KHz	8m Ω	14.0A	10.0A
EMPI0503E-R68M-□	0.68 μ H \pm 20%	100KHz	12m Ω	14.0A	8.0A
EMPI0503E-1R0M-□	1.00 μ H \pm 20%	100KHz	15m Ω	11.0A	7.0A
EMPI0503E-1R2M-□	1.20 μ H \pm 20%	100KHz	16m Ω	11.0A	6.5A
EMPI0503E-1R5M-□	1.50 μ H \pm 20%	100KHz	25m Ω	10.0A	6.0A
EMPI0503E-2R2M-□	2.20 μ H \pm 20%	100KHz	35m Ω	8.0A	5.0A
EMPI0503E-3R3M-□	3.30 μ H \pm 20%	100KHz	46m Ω	7.0A	4.5A
EMPI0503E-4R7M-□	4.70 μ H \pm 20%	100KHz	60m Ω	6.0A	4.0A
EMPI0503E-6R8M-□	6.80 μ H \pm 20%	100KHz	110m Ω	5.0A	3.0A
EMPI0503E-100M-□	10.0 μ H \pm 20%	100KHz	126m Ω	4.5A	2.5A

- Saturation Current for Inductance becomes 30% lower than its initial value
- Temperature Rise Current for a 40°C rise above 25°C ambient

EMPI0503E Series



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SMD Molding Type Power Inductor

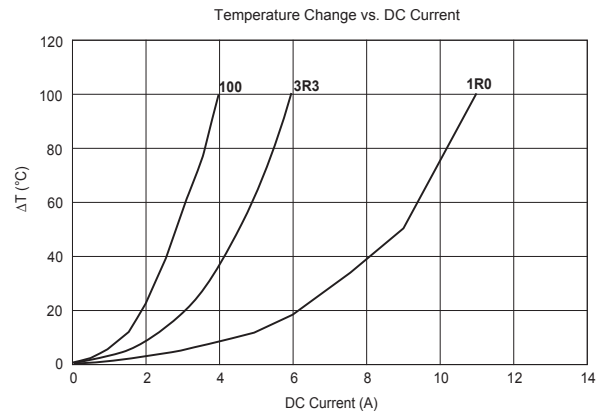
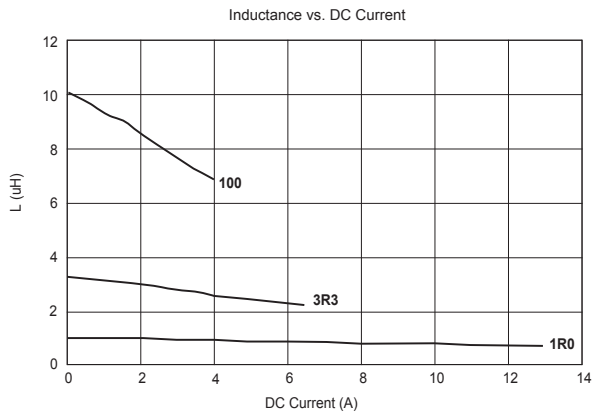
EMPI Series

Electrical Characteristics

Part Number	Inductance	Test Frequency	DC Resistance (R_{DC}) Max.	Saturation Current (I_{SAT}) Typ.	Temperature Rise Current (I_{RMS}) Typ.
EMPI0615E Series					
EMPI0615E-1R0M-□	1.00 μ H \pm 20%	100KHz	21m Ω	9.0A	5.5A
EMPI0615E-3R3M-□	3.30 μ H \pm 20%	100KHz	63m Ω	5.5A	3.3A
EMPI0615E-100M-□	10.00 μ H \pm 20%	100KHz	175m Ω	3.0A	2.0A

- Saturation Current for Inductance becomes 30% lower than its initial value
- Temperature Rise Current for a 40°C rise above 25°C ambient

EMPI0615E Series



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SMD Molding Type Power Inductor

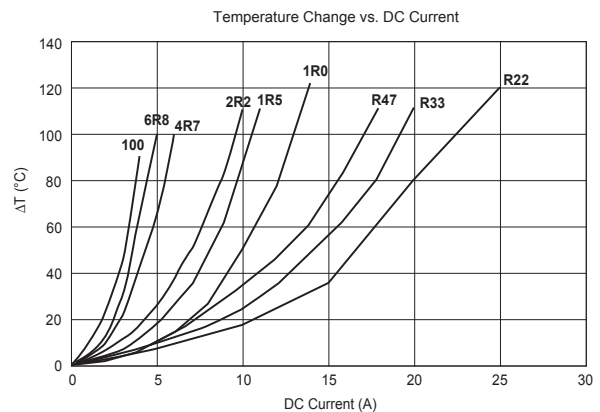
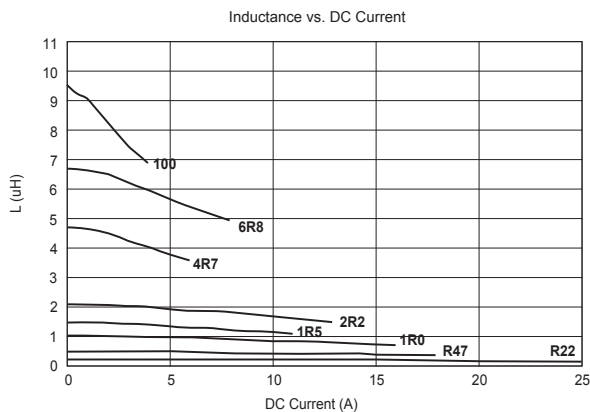
EMPI Series

Electrical Characteristics

Part Number	Inductance	Test Frequency	DC Resistance (R_{DC}) Max.	Saturation Current (I_{SAT}) Typ.	Temperature Rise Current (I_{RMS}) Typ.
EMPI0618E Series					
EMPI0618E-R22M-□	0.22 μ H \pm 20%	100KHz	5.2m Ω	29.0A	14.0A
EMPI0618E-R33M-□	0.33 μ H \pm 20%	100KHz	6.8m Ω	22.0A	12.0A
EMPI0618E-R47M-□	0.47 μ H \pm 20%	100KHz	8.4m Ω	18.0A	11.0A
EMPI0618E-R68M-□	0.68 μ H \pm 20%	100KHz	12.7m Ω	17.0A	9.0A
EMPI0618E-1R0M-□	1.00 μ H \pm 20%	100KHz	17.0m Ω	14.0A	7.0A
EMPI0618E-1R5M-□	1.50 μ H \pm 20%	100KHz	26.0m Ω	12.0A	6.5A
EMPI0618E-2R2M-□	2.20 μ H \pm 20%	100KHz	35.0m Ω	10.0A	6.0A
EMPI0618E-4R7M-□	4.70 μ H \pm 20%	100KHz	70.0m Ω	5.0A	3.5A
EMPI0618E-6R8M-□	6.80 μ H \pm 20%	100KHz	110.0m Ω	3.5A	2.8A
EMPI0618E-100M-□	10.0 μ H \pm 20%	100KHz	155.0m Ω	2.5A	2.3A

- Saturation Current for Inductance becomes 30% lower than its initial value
- Temperature Rise Current for a 40°C rise above 25°C ambient

EMPI0618E Series



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SMD Molding Type Power Inductor

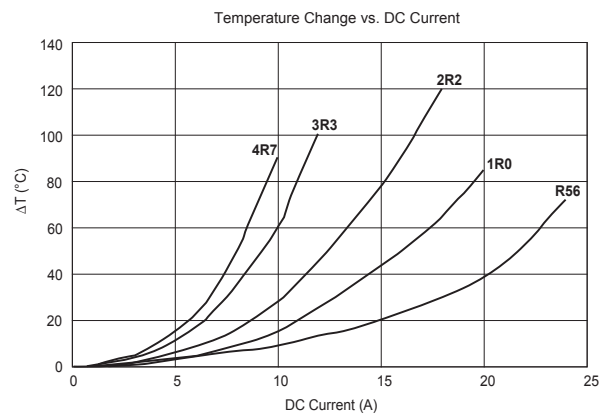
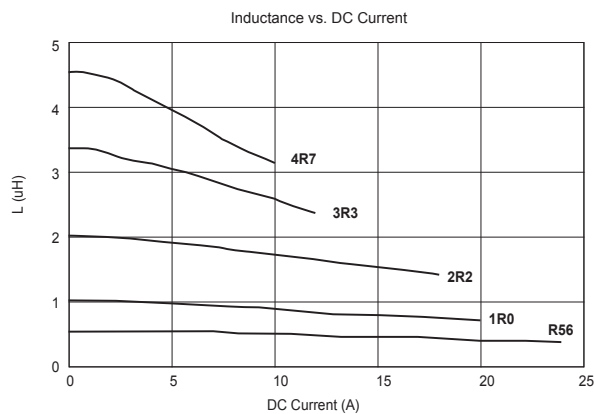
EMPI Series

Electrical Characteristics

Part Number	Inductance	Test Frequency	DC Resistance (R_{DC}) Max.	Saturation Current (I_{SAT}) Typ.	Temperature Rise Current (I_{RMS}) Typ.
EMPI0605E Series					
EMPI0605E-R56M-□	0.56 μ H \pm 20%	100KHz	3.3m Ω	20.0A	20.0A
EMPI0605E-1R0M-□	1.00 μ H \pm 20%	100KHz	6.5m Ω	15.0A	13.0A
EMPI0605E-2R2M-□	2.20 μ H \pm 20%	100KHz	12.5m Ω	12.0A	8.0A
EMPI0605E-3R3M-□	3.30 μ H \pm 20%	100KHz	20.9m Ω	9.0A	7.0A
EMPI0605E-4R7M-□	4.70 μ H \pm 20%	100KHz	25.0m Ω	7.0A	6.5A

- Saturation Current for Inductance becomes 30% lower than its initial value
- Temperature Rise Current for a 40°C rise above 25°C ambient

EMPI0605E Series



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SMD Molding Type Power Inductor

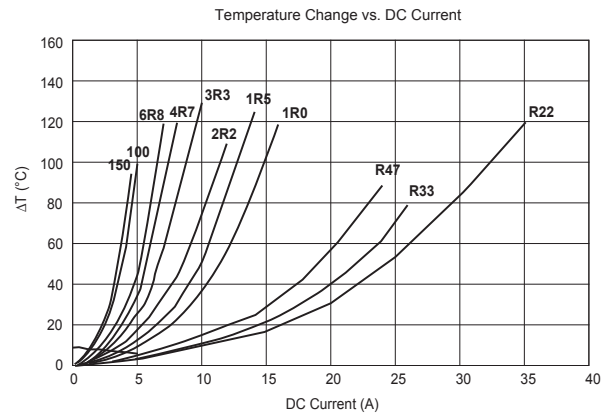
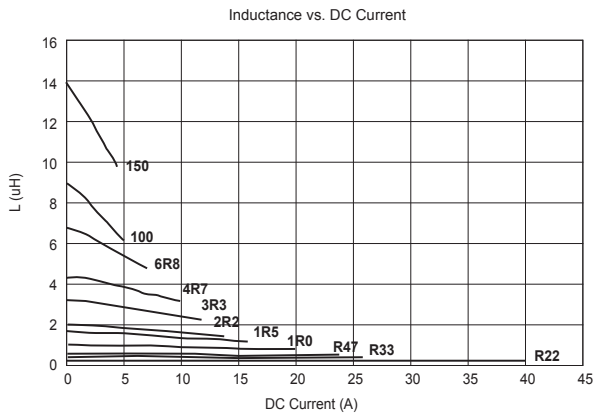
EMPI Series

Electrical Characteristics

Part Number	Inductance	Test Frequency	DC Resistance (R _{DC}) Max.	Saturation Current (I _{SAT}) Typ.	Temperature Rise Current (I _{RMS}) Typ.
EMPI0624E Series					
EMPI0624E-R22M-□	0.22μH±20%	100KHz	3.2mΩ	34.0A	21.0A
EMPI0624E-R33M-□	0.33μH±20%	100KHz	4.1mΩ	24.5A	18.0A
EMPI0624E-R47M-□	0.47μH±20%	100KHz	5.1mΩ	22.0A	15.0A
EMPI0624E-1R0M-□	1.0μH±20%	100KHz	13.5mΩ	16.0A	9.0A
EMPI0624E-1R5M-□	1.5μH±20%	100KHz	20.0mΩ	15.0A	9.0A
EMPI0624E-2R2M-□	2.2μH±20%	100KHz	28.0mΩ	11.0A	6.0A
EMPI0624E-3R3M-□	3.3μH±20%	100KHz	39.0mΩ	10.0A	5.5A
EMPI0624E-4R7M-□	4.7μH±20%	100KHz	50.0mΩ	10.0A	5.0A
EMPI0624E-6R8M-□	6.8μH±20%	100KHz	70.0mΩ	6.0A	4.0A
EMPI0624E-100M-□	10.0μH±20%	100KHz	101.0mΩ	4.0A	3.1A
EMPI0624E-150M-□	15.0μH±20%	100KHz	160.0mΩ	3.3A	2.5A

- Saturation Current for Inductance becomes 30% lower than its initial value
- Temperature Rise Current for a 40°C rise above 25°C ambient

EMPI0624E Series



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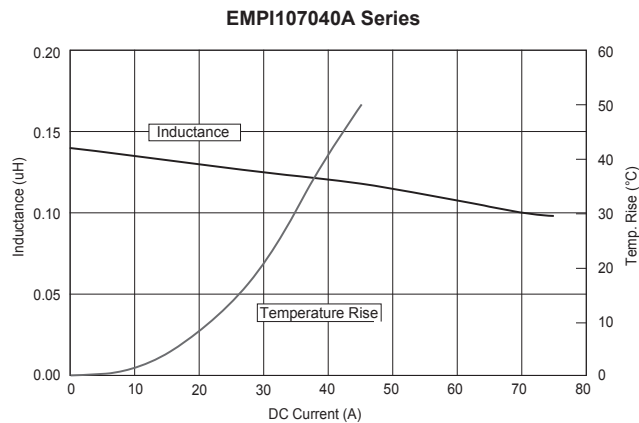
SMD Molding Type Power Inductor

EMPI Series

Electrical Characteristics

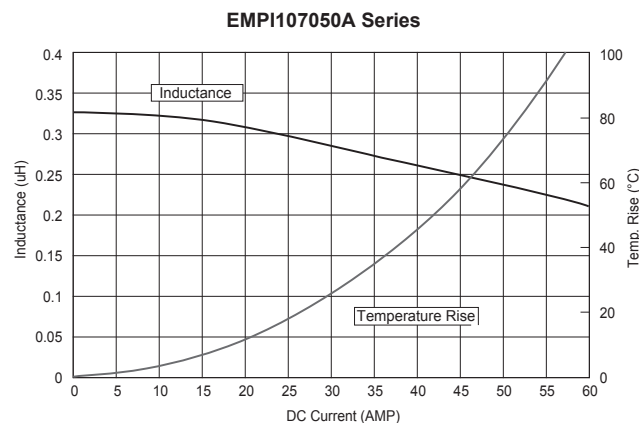
Part Number	Inductance	Test Frequency	DC Resistance (R_{DC}) Max.	Saturation Current (I_{SAT}) Max.	Temperature Rise Current (I_{RMS}) Max.
EMPI107040A Series					
EMPI107040A-R15M-□	0.14 μ H \pm 20%	100KHz	0.69m Ω \pm 10%	70.0A	38.0A

- Saturation Current for Inductance becomes 30% lower than its initial value
- Temperature Rise Current for a 40°C rise above 25°C ambient



Part Number	Inductance	Test Frequency	DC Resistance (R_{DC})	Saturation Current (I_{SAT}) Typ.	Temperature Rise Current (I_{RMS}) Typ.
EMPI107050A Series					
EMPI107050A-R30M-□	0.30 μ H \pm 20%	100KHz	0.78m Ω \pm 10%	55A	36A
EMPI107050A-R33M-□	0.33 μ H \pm 20%	100KHz	0.82m Ω \pm 10%	40A	36A

- Saturation Current for Inductance becomes 30% lower than its initial value
- Temperature Rise Current for a 40°C rise above 25°C ambient



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SMD Molding Type Power Inductor

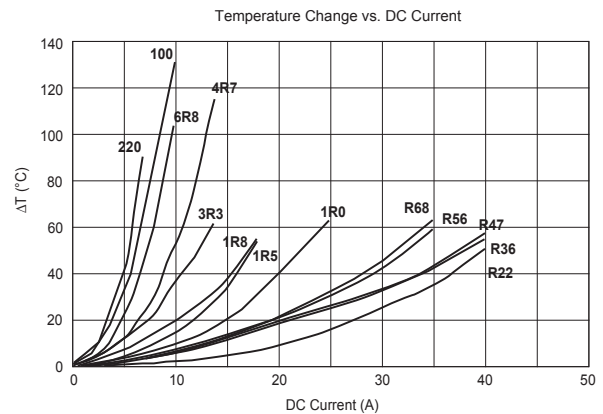
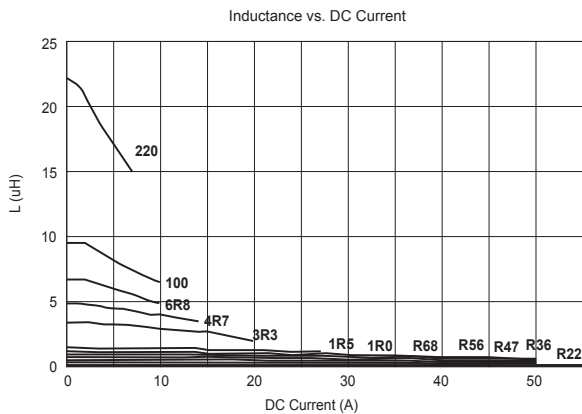
EMPI Series

Electrical Characteristics

Part Number	Inductance	Test Frequency	DC Resistance (R _{DC}) Max.	Saturation Current (I _{SAT}) Typ.	Temperature Rise Current (I _{RMS}) Typ.
EMPI1004E Series					
EMPI1004E-R22M-□	0.22μH±20%	100KHz	0.60mΩ	45.0A	35.0A
EMPI1004E-R36M-□	0.36μH±20%	100KHz	1.20mΩ	42.0A	34.0A
EMPI1004E-R45M-□	0.45μH±20%	100KHz	1.20mΩ	38.0A	33.0A
EMPI1004E-R47M-□	0.47μH±20%	100KHz	1.20mΩ	38.0A	33.0A
EMPI1004E-R56M-□	0.56μH±20%	100KHz	1.55mΩ	32.0A	27.0A
EMPI1004E-R68M-□	0.68μH±20%	100KHz	1.55mΩ	30.0A	27.0A
EMPI1004E-1R0M-□	1.00μH±20%	100KHz	3.10mΩ	26.0A	20.0A
EMPI1004E-1R5M-□	1.50μH±20%	100KHz	4.20mΩ	22.0A	16.0A
EMPI1004E-1R8M-□	1.80μH±20%	100KHz	5.00mΩ	16.0A	15.3A
EMPI1004E-3R3M-□	3.30μH±20%	100KHz	13.20mΩ	12.0A	11.0A
EMPI1004E-4R7M-□	4.70μH±20%	100KHz	16.50mΩ	12.0A	9.0A
EMPI1004E-6R8M-□	6.80μH±20%	100KHz	25.00mΩ	10.0A	6.0A
EMPI1004E-8R2M-□	8.20μH±20%	100KHz	30.00mΩ	9.0A	6.0A
EMPI1004E-100M-□	10.00μH±20%	100KHz	30.00mΩ	7.0A	6.5A
EMPI1004E-150M-□	15.00μH±20%	100KHz	45.00mΩ	6.0A	6.2A
EMPI1004E-220M-□	22.00μH±20%	100KHz	64.00mΩ	4.5A	4.5A

- Saturation Current for Inductance becomes 30% lower than its initial value
- Temperature Rise Current for a 40°C rise above 25°C ambient

EMPI1004E Series



• The specifications are subject to change or our products in it may be discontinued without advance notice. Please check with our sales representatives or product engineers before ordering.
 • The catalog has only typical specifications because there is no space for detailed specifications. Therefore, please approve our product specifications or transact the approval sheet for product specifications before ordering.



SMD Molding Type Power Inductor

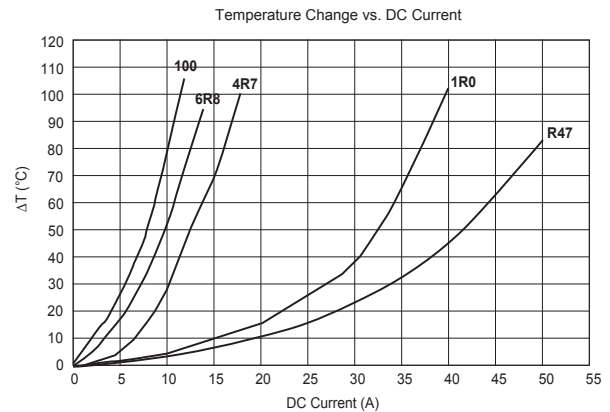
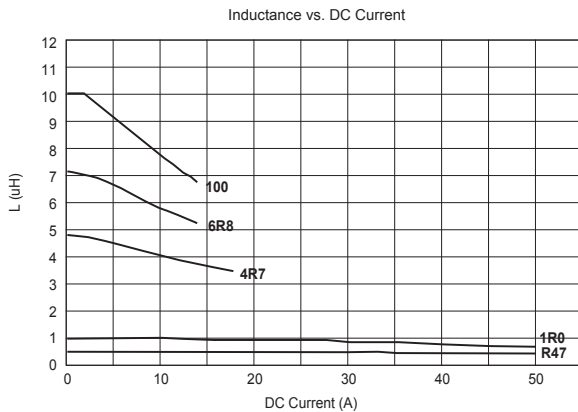
EMPI Series

Electrical Characteristics

Part Number	Inductance	Test Frequency	DC Resistance (R_{DC}) Max.	Saturation Current (I_{SAT}) Typ.	Temperature Rise Current (I_{RMS}) Typ.	Dimension D (mm)
EMPI1205E Series						
EMPI1205E-R47M-□	0.47 μ H \pm 20%	100KHz	1.2m Ω	46.0A	37.0A	3.0 \pm 0.5
EMPI1205E-1R0M-□	1.00 μ H \pm 20%	100KHz	2.5m Ω	37.0A	29.0A	3.0 \pm 0.5
EMPI1205E-1R5M-□	1.50 μ H \pm 20%	100KHz	3.0m Ω	28.0A	28.0A	3.0 \pm 0.5
EMPI1205E-4R7M-□	4.70 μ H \pm 20%	100KHz	11.5m Ω	16.0A	11.0A	2.5 \pm 0.5
EMPI1205E-6R8M-□	6.80 μ H \pm 20%	100KHz	22.0m Ω	14.0A	9.0A	3.5 \pm 0.5
EMPI1205E-100M-□	10.00 μ H \pm 20%	100KHz	35.0m Ω	13.0A	7.0A	3.5 \pm 0.5

- Saturation Current for Inductance becomes 30% lower than its initial value
- Temperature Rise Current for a 40°C rise above 25°C ambient

EMPI1205E Series



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