

※ Features

- High performance (Isat) realized by metal dust core.
- Low profile: Thickness max. 2.4/3.0/3.5/4.0/5.0/6.0/7.0mm
- Low loss and low resistance
- Capable of corresponding high frequency (1MHz)
- 100% lead (Pb) free meet RoHS standards



※ Application

- DC/DC converters for laptop motherboards/CPU

Thin type of on-board power supply module for
Voltage regulator VRM for server

※ Regulation of Part number

MC □ - 0630 - 2R2 - N 2					
①	②	③	④	⑤	⑥

① Molding Choke;

② Mold Categories:W/F;

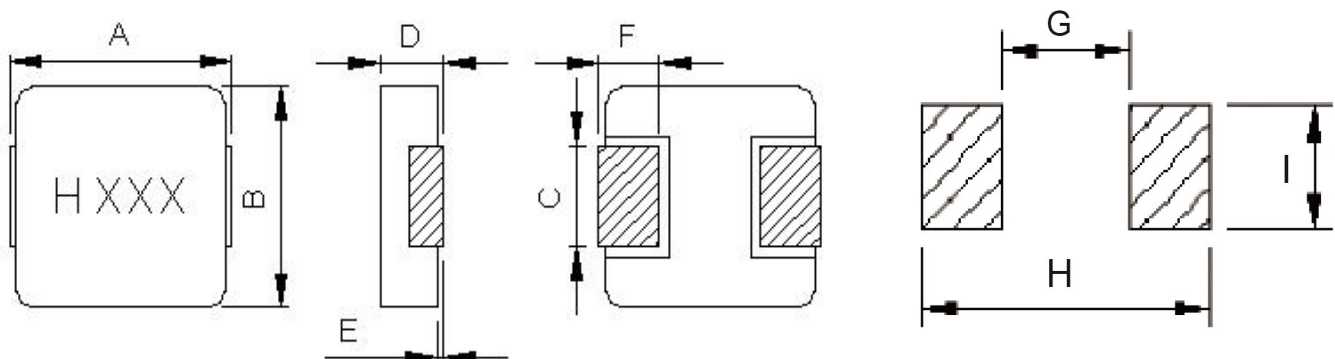
③ Dimensions(unit:mm):6.0x6.0x3.0;

④ Inductance Value:2R2=2.2μH;

⑤ The Material Code;

⑥ Material Type;

※ Shapes And Dimensions (unit:mm)



Product Presentation



Unit:mm

Series	A	B	C	D	E	F	I	G	H
MCW-0630-XXX-N2	6.95±0.35	6.6±0.2	3.0±0.3	2.8±0.2	0~+0.15	1.6±0.3	3.5	3.7	8.4
MCW-0650-XXX-N2	7.05±0.35	6.6±0.2	3.0±0.3	4.8±0.2	0~+0.15	1.6±0.3	3.5	3.7	8.4
MCF-1040-XXX-N2	11.15±0.35	10.0±0.3	3.0±0.5/ 3.5±0.5	3.8±0.2	0~+0.15	2.0±0.5	4.1	5.4	13.6
MCF-1350-XXX-N2	13.45±0.35	12.6±0.2	4.0±0.5/ 3.0±0.5	4.8±0.2	0~+0.15	2.0±0.5	5.0	8.0	14.5
MCF-1360-XXX-N2	13.45±0.35	12.6±0.2	4.0±0.5/ 3.0±0.5	5.8±0.2	0~+0.15	2.0±0.5	5.0	8.0	14.5
MCF-1770-XXX-N2	17.45±0.35	17.0±0.3	11.9±0.3	6.8±0.2	0~+0.30	2.5±0.5	12.8	11.2	18.7



MCW-0630-XXX-N2 Series

Part Number	L0(μH) Inductance (μH)@(0A)	Rdc (mΩ) @25°C		Heat Rating Current DC Amps. Idc (A)	Saturation Current DC Amps. Isat (A)
		Typical	Maximum	Typical	Typical
MCW-0630-R10-N2	0.10±20%	1.50	1.70	32.50	60.00
MCW-0630-R15-N2	0.15±20%	1.90	2.50	30.00	40.00
MCW-0630-R20-N2	0.20±20%	2.40	3.00	21.00	34.00
MCW-0630-R22-N2	0.22±20%	2.50	3.00	21.00	34.00
MCW-0630-R33-N2	0.33±20%	3.00	3.50	21.00	25.00
MCW-0630-R36-N2	0.36±20%	3.30	3.90	19.00	22.00
MCW-0630-R47-N2	0.47±20%	3.50	4.10	18.00	20.00
MCW-0630-R56-N2	0.56±20%	4.25	4.90	15.00	18.00
MCW-0630-R68-N2	0.68±20%	5.00	5.70	14.00	17.00
MCW-0630-R82-N2	0.82±20%	6.00	6.90	12.00	16.00
MCW-0630-1R0-N2	1.00±20%	7.00	7.50	11.00	15.00
MCW-0630-1R2-N2	1.20±20%	8.00	10.50	10.00	14.00
MCW-0630-1R5-N2	1.50±20%	10.60	12.10	9.00	14.00
MCW-0630-1R8-N2	1.80±20%	14.00	16.00	7.50	13.00
MCW-0630-2R2-N2	2.20±20%	15.50	17.50	7.00	10.00
MCW-0630-2R5-N2	2.50±20%	16.00	18.00	6.50	10.00
MCW-0630-3R3-N2	3.30±20%	23.00	26.00	6.00	9.50
MCW-0630-4R7-N2	4.70±20%	34.50	38.00	5.00	6.50
MCW-0630-5R6-N2	5.60±20%	36.00	42.00	5.00	6.25
MCW-0630-6R8-N2	6.80±20%	50.00	54.00	4.50	6.00
MCW-0630-8R2-N2	8.20±20%	58.50	65.00	4.00	6.00
MCW-0630-100-N2	10.0±20%	64.00	68.00	4.00	5.00
MCW-0630-120-N2	12.0±20%	85.00	98.00	3.00	4.50
MCW-0630-150-N2	15.0±20%	98.00	115.00	2.80	3.80
MCW-0630-220-N2	22.0±20%	165.00	189.00	1.50	3.10
MCW-0630-330-N2	33.0±20%	225.00	257.00	1.00	2.90

※Note:

All test data is reference to 25°C ambient.

Test Condition: 100KHz, 1.0Vrms

- Idc: DC current (A) that will cause an approximate ΔT of 40°C
- Isat : DC current (A) that will cause L0 to drop approximately 30%
- Operat between temperature range -55°C to +125°C
- The part temperature (ambient + temp rise) should not exceed 125°C under the worst case operating conditions.Circuit design, component.
- PWB trace size and thickness, airflow and other cooling provision all affect the part temperature.Part temperature should be verified in the end application.
- The rated current as listed is either the saturation current or the heating current depending on which value is lower.



MCW-0650-XXX-N2 Series

Part Number	L0(μH) Inductance (μH)@(0A)	Rdc (mΩ) @25°C		Heat Rating Current DC Amps. Idc (A)	Saturation Current DC Amps. Isat (A)
		Typical	Maximum	Typical	Typical
MCW-0650-R13-N2	0.13±20%	1.00	1.20	42.00	48.00
MCW-0650-R22-N2	0.22±20%	1.10	1.30	30.00	35.00
MCW-0650-R36-N2	0.36±20%	2.70	3.10	21.00	25.00
MCW-0650-R40-N2	0.40±20%	3.20	3.50	20.00	23.00
MCW-0650-R47-N2	0.47±20%	3.25	3.75	20.00	21.00
MCW-0650-R56-N2	0.56±20%	3.40	3.60	18.00	20.00
MCW-0650-R68-N2	0.68±20%	3.90	4.20	16.50	18.00
MCW-0650-R82-N2	0.82±20%	4.60	4.90	16.00	17.00
MCW-0650-1R0-N2	1.00±20%	5.60	6.50	12.50	13.00
MCW-0650-1R2-N2	1.20±20%	6.00	7.50	12.00	13.00
MCW-0650-1R5-N2	1.50±20%	8.50	10.00	9.50	12.00
MCW-0650-2R2-N2	2.20±20%	11.20	12.50	9.00	10.00
MCW-0650-3R3-N2	3.30±20%	19.90	20.90	8.50	9.00
MCW-0650-4R7-N2	4.70±20%	26.00	29.00	6.00	8.00
MCW-0650-5R6-N2	5.60±20%	31.50	34.40	6.00	7.00
MCW-0650-6R8-N2	6.80±20%	36.50	41.00	5.50	6.00
MCW-0650-8R2-N2	8.20±20%	40.00	43.00	5.50	5.50
MCW-0650-100-N2	10.0±20%	54.00	60.00	4.50	5.30
MCW-0650-120-N2	12.0±20%	58.00	65.00	4.00	5.00
MCW-0650-150-N2	15.0±20%	78.00	90.00	3.10	4.00
MCW-0650-180-N2	18.0±20%	83.00	105.00	3.00	3.50
MCW-0650-220-N2	22.0±20%	120.00	140.00	2.60	3.50
MCW-0650-330-N2	33.0±20%	165.00	190.00	2.30	3.00
MCW-0650-470-N2	47.0±20%	250.00	290.00	2.00	2.80

If you require another part number please contact with us.

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- All test data is reference to 25°C ambient.
- Test Condition: 100KHz, 1.0Vrms
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- Isat : DC current (A) that will cause L0 to drop approximately 30%
- Operat between temperature range -55°C to +125°C
- The part temperature (ambient + temp rise) should not exceed 125°C under the worst case operating conditions.Circuit design, component. PWB trace size and thickness, airflow and other cooling provision all affect the part temperature.Part temperature should be verified in the end application.
- The rated current as listed is either the saturation current or the heating current depending on which value is lower.



MCF-1040-XXX-N2 Series

Part Number	L0(μH) Inductance (μH)@(0A)	Rdc (mΩ) @25°C		Heat Rating Current DC Amps. Idc (A)	Saturation Current DC Amps. Isat (A)
		Typical	Maximum	Typical	Typical
MCF-1040-R22-N2	0.22±20%	0.90	1.00	35.00	50.00
MCF-1040-R36-N2	0.36±20%	1.05	1.20	30.00	50.00
MCF-1040-R39-N2	0.39±20%	1.10	1.20	26.00	45.00
MCF-1040-R45-N2	0.45±20%	1.10	1.30	26.00	42.00
MCF-1040-R47-N2	0.47±20%	1.53	1.68	25.00	40.00
MCF-1040-R56-N2	0.56±20%	1.60	1.80	25.00	33.00
MCF-1040-R68-N2	0.68±20%	2.10	2.40	23.00	30.00
MCF-1040-1R0-N2	1.00±20%	3.00	3.30	18.00	28.00
MCF-1040-1R5-N2	1.50±20%	3.80	4.20	15.00	26.00
MCF-1040-1R8-N2	1.80±20%	5.00	5.80	13.00	23.00
MCF-1040-2R0-N2	2.00±20%	6.00	6.90	12.00	20.00
MCF-1040-2R2-N2	2.20±20%	6.00	7.00	12.00	18.00
MCF-1040-3R3-N2	3.30±20%	10.80	11.80	10.00	16.00
MCF-1040-4R7-N2	4.70±20%	17.00	20.00	8.50	13.00
MCF-1040-5R6-N2	5.60±20%	20.00	23.00	8.00	11.00
MCF-1040-6R8-N2	6.80±20%	22.50	25.00	7.00	10.00
MCF-1040-8R2-N2	8.20±20%	25.00	27.00	7.00	9.00
MCF-1040-100-N2	10.0±20%	27.00	30.00	6.50	8.50
MCF-1040-150-N2	15.0±20%	40.00	45.00	6.25	7.00
MCF-1040-220-N2	22.0±20%	60.00	66.00	5.00	5.50
MCF-1040-330-N2	33.0±20%	85.00	92.00	4.00	4.50
MCF-1040-470-N2	47.0±20%	130.00	145.00	3.30	3.50
MCF-1040-680-N2	68.0±20%	195.00	210.00	2.00	3.00

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- Idc: DC current (A) that will cause an approximate ΔT of 40°C
- Isat : DC current (A) that will cause L0 to drop approximately 30%
- Operat between temperature range -55°C to +125°C
- The part temperature (ambient + temp rise) should not exceed 125°C under the worst case operating conditions.Circuit design, component. PWB trace size and thickness, airflow and other cooling provision all affect the part temperature.Part temperature should be verified in the end application.
- The rated current as listed is either the saturation current or the heating current depending on which value is lower.



MCF-1350-XXX-N2 Series

Part Number	L0(μH) Inductance (μH)@(0A)	Rdc (mΩ) @25°C		Heat Rating Current DC Amps. Idc (A)	Saturation Current DC Amps. Isat (A)
		Typical	Maximum	Typical	Typical
MCF-1350-R36-N2	0.36±20%	0.77	1.10	41.00	60.00
MCF-1350-R47-N2	0.47±20%	1.00	1.40	35.00	56.00
MCF-1350-1R0-N2	1.00±20%	1.90	2.20	26.00	35.00
MCF-1350-1R5-N2	1.50±20%	2.70	3.20	23.00	32.00
MCF-1350-2R2-N2	2.20±20%	4.00	5.00	15.00	25.00
MCF-1350-3R3-N2	3.30±20%	7.50	9.00	12.00	23.00
MCF-1350-4R7-N2	4.70±20%	12.00	14.00	11.00	17.00
MCF-1350-5R6-N2	5.60±20%	13.00	15.00	10.50	15.00
MCF-1350-6R8-N2	6.80±20%	15.00	18.00	10.00	14.00
MCF-1350-8R2-N2	8.20±20%	17.00	20.00	9.00	13.00
MCF-1350-100-N2	10.0±20%	22.00	25.00	8.00	12.00

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- Isat : DC current (A) that will cause L0 to drop approximately 30%
- Operat between temperature range -55°C to +125°C
- The part temperature (ambient + temp rise) should not exceed 125°C under the worst case operating conditions.Circuit design, component. PWB trace size and thickness, airflow and other cooling provision all affect the part temperature.Part temperature should be verified in the end application.
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MCF-1360-XXX-N2 Series

Part Number	L0(μH) Inductance (μH)@(0A)	Rdc (mΩ) @25°C		Heat Rating Current DC Amps. Idc (A)	Saturation Current DC Amps. Isat (A)
		Typical	Maximum	Typical	Typical
MCF-1360-6R8-N2	6.80±20%	10.00	13.80	11.50	15.00
MCF-1360-8R2-N2	8.20±20%	13.60	16.00	11.00	13.50
MCF-1360-100-N2	10.0±20%	18.00	20.70	10.00	12.50
MCF-1360-120-N2	12.0±20%	20.00	23.00	7.00	10.00
MCF-1360-150-N2	15.0±20%	25.00	29.00	6.00	9.00
MCF-1360-180-N2	18.0±20%	30.00	35.00	5.00	8.00
MCF-1360-220-N2	22.0±20%	34.00	39.50	5.00	7.50
MCF-1360-270-N2	27.0±20%	49.00	56.00	4.00	6.50
MCF-1360-330-N2	33.0±20%	65.00	75.00	4.00	6.00
MCF-1360-470-N2	47.0±20%	80.00	90.00	3.50	5.50
MCF-1360-680-N2	68.0±20%	115.00	130.00	3.25	4.50
MCF-1360-820-N2	82.0±20%	120.00	140.00	3.00	4.00
MCF-1360-101-N2	100.0±20%	180.00	200.00	2.50	3.50
MCF-1360-121-N2	120.0±20%	210.00	235.00	2.30	3.20
MCF-1360-151-N2	150.0±20%	300.00	350.00	2.00	2.70

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MCF-1770-XXX-N2 Series

Part Number	L0(μH) Inductance (μH)@(0A)	Rdc (mΩ) @25°C		Heat Rating Current DC Amps. Idc (A)	Saturation Current DC Amps. Isat (A)
		Typical	Maximum	Typical	Typical
MCF-1770-1R5-N2	1.50±20%	1.85	2.15	40.00	40.00
MCF-1770-2R2-N2	2.20±20%	2.15	2.50	37.00	34.00
MCF-1770-4R7-N2	4.70±20%	4.12	4.72	27.00	24.00
MCF-1770-6R8-N2	6.80±20%	6.55	7.55	20.00	22.00
MCF-1770-8R2-N2	8.20±20%	8.10	8.70	16.00	20.00
MCF-1770-100-N2	10.0±20%	9.30	10.00	14.00	18.00
MCF-1770-150-N2	15.0±20%	14.50	15.00	12.00	13.00
MCF-1770-200-N2	20.0±20%	19.50	21.90	9.70	12.00
MCF-1770-220-N2	22.0±20%	20.50	23.00	9.50	11.00
MCF-1770-330-N2	33.0±20%	35.10	37.00	9.00	10.00
MCF-1770-470-N2	47.0±20%	41.00	47.00	6.80	7.50
MCF-1770-680-N2	68.0±20%	74.00	85.00	5.20	6.50

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