

Wire Wound SMD Power Inductors – WCMPI Series

Operating Temp. : -40°C~+125°C (Including self-heating)



FEATURES

- High temperature, up to 125 °C
- Shielded construction, low EMI
- Excellent DC/DC energy storage up to 5 MHz.
- High current carrying capacity, low core loss.
- Handles high transient current spikes without saturation
- Ultra low buzz noise, due to composite construction

APPLICATIONS

- Voltage Regulator Module
- DC/DC converters for entertainment / navigation systems
- LED drivers
- SSD Modules
- Battery power systems
- Notebook regulators Voltage Regulator Module
- DC/DC converters for entertainment / navigation systems
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- Notebook regulators

PRODUCT IDENTIFICATION

WCMPI

①

0630

②

2R2

③

M

④

①	Type
WCMPI	Product Series

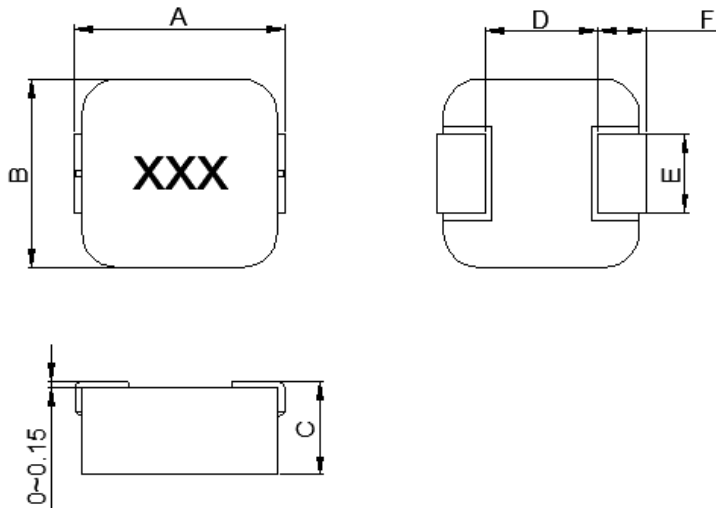
③	Nominal Inductance
Ex mple	Ex mple
1R0	1.0uH
100	10uH
101	100uH

Inductance Tolerance	
N	± 30%
M	± 20%

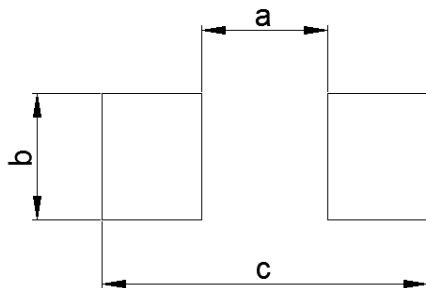
②	External Dimensions(L×W×H) 【mm】
0412	4.4×4.2×1.2
0420	4.4×4.2×2.0
0518	5.4×5.2×2.0
0530	5.4×5.2×3.0
0618	7.0×6.6×1.8
0624	7.0×6.6×2.4
0630	7.0×6.6×3.0
0640	7.0×6.6×4.0
1030	11.0×10.0×3.0
1040	11.0×10.0×4.0
1350	13.4×12.6×5.0
1360	13.4×12.6×6.0

SH PE ND DIMENSIONS

Fig.1



Recommended L nd P ttern



Unit: mm

Series	Sh pe	A	B	C	D	E	F	a Typ.	b Typ.	c Typ.
WCMP10412	Fig.1	4.4±0.35	4.2±0.25	1.0 ±0.2.	2.8Typ.	2.0±0.3	0.8±0.3	2.2	2.5	5.2
WCMP10420	Fig.1	4.4±0.35	4.2±0.25	1.8 ±0.2.	2.8Typ.	2.0±0.3	0.8±0.3	2.2	2.5	5.2
WCMP10518	Fig.1	5.4±0.3	5.2±0.2	2.0M x.	3.0Typ.	2.2±0.3	1.2±0.3	2.2	2.5	6.0
WCMP10530	Fig.1	5.4±0.3	5.2±0.2	2.8 ±0.2.	3.0Typ.	2.2±0.3	1.2±0.3	2.2	2.5	6.0
WCMP10618	Fig.1	7.0±0.3	6.6±0.2	1.6 ±0.2	3.8Typ.	3.0±0.3	1.6±0.3	3.7	3.5	8.4
WCMP10624	Fig.1	7.0±0.3	6.6±0.2	2.2±0.2	3.8Typ.	3.0±0.3	1.6±0.3	3.7	3.5	8.4
WCMP10630	Fig.1	7.0±0.3	6.6±0.2	2.8±0.2	3.8Typ.	3.0±0.3	1.6±0.3	3.7	3.5	8.4
WCMP11030D	Fig.1	11.5Ma x	10.0±0.3	2.8±0.2	6.85 Typ.	3.0±0.5	2.0±0.5	5.4	4.1	13.6
WCMP11040D	Fig.1	11.5Ma x	10.0±0.3	3.8±0.2	6.85 Typ.	3.0±0.5	2.0±0.5	5.4	4.1	13.6
WCMP11350	Fig.1	13.45±0.35	12.6±0.3	4.8±0.2	9.49 Typ.	3.85±0.5	2.0±0.5	8.0	5.0	14.5

SPECIFICATIONS

WCMPI0412 Series

Part Number	Inductance	DC Resistance @25°C		Heating Rating Current	Saturation Current	Marking
	L0(uH)	DCR(mΩ)		Irms(Amp)	Isat(Amp)	
	±20%	Typ.	Max.	Typ.	Typ.	
WCMPI0412 -R33M	0.33	17.0	19.0	6.5	8.4	R33
WCMPI0412 -R47M	0.47	19.0	21.0	6.0	6.8	R47
WCMPI0412 -R68M	0.68	32.0	36.0	4.7	6.0	R68
WCMPI0412 -1R0M	1.0	43.0	47.0	4.5	5.5	1R0
WCMPI0412 -1R5M	1.5	68.0	75.0	3.25	4.0	1R5
WCMPI0412 -2R2M	2.2	79.4	83.5	3.0	4.2	2R2
WCMPI0412 -3R3M	3.3	101	112.0	2.0	3.5	3R3
WCMPI0412 -4R7M	4.7	175	195.0	1.8	2.8	4R7

WCMPI0420 Series

Part Number	L0(uH) ±20%	DCR(mΩ) @25°C		Isat(Amp) Typ.	Irms(Amp) Typ.	Marking
		Max.	Typ.			
WCMPI0420-R47M	0.47	14	12.5	9.5	7.0	R47
WCMPI0420-R68M	0.68	21	18	9.0	6.0	R68
WCMPI0420-1R0M	1.0	27	24	7.0	4.5	1R0
WCMPI0420-1R5M	1.5	46	40	6.0	4.0	1R5
WCMPI0420-2R2M	2.2	60	52	5.0	3.0	2R2
WCMPI0420-3R3M	3.3	87	74	4.0	2.5	3R3
WCMPI0420-4R7M	4.7	105	92	3.0	2.2	4R7
WCMPI0420-6R8M	6.8	175	140	2.5	2.0	6R8
WCMPI0420-100M	10	258	220	2.0	1.4	100

WCMPI0518 Series

Part Number	L0(uH) ±20%	DCR(mΩ) @25°C		Isat(Amp) Typ.	Irms(Amp) Typ.	Marking
		Max.	Typ.			
WCMPI0518-R47M	0.47	9.0	7.7	15.5	10.5	R47
WCMPI0518-R56M	0.56	10	8.0	15.0	9.5	R56
WCMPI0518-1R0M	1.0	17	15	9.0	8.0	1R0
WCMPI0518-1R5M	1.5	26	21	9.0	7.5	1R5
WCMPI0518-2R2M	2.2	35	30	6.5	5.0	2R2
WCMPI0518-3R3M	3.3	58	52	5.0	4.5	3R3
WCMPI0518-4R7M	4.7	85.0	78	4.0	3.5	4R7
WCMPI0518-6R8M	6.8	120	107	3.4	2.8	6R8
WCMPI0518-100M	10	155	140	3.0	2.5	100

WCMPI0530 Series

Part Number	L0(uH)	DCR(mΩ) @25°C		Isat(Amp) Typ.	Irms(Amp) Typ.	Marking
		Max.	Typ.			
WCMPI0530-R10N	0.10 ± 30%	3.0	2.4	33	25	R10
WCMPI0530-R47M	0.47 ± 20%	8.5	7.4	12.0	11	R47
WCMPI0530-R68M	0.68 ± 20%	12.0	11.0	11.5	9.0	R68
WCMPI0530-1R0M	1.0 ± 20%	15.0	13.0	11.0	8.5	1R0
WCMPI0530-1R5M	1.5 ± 20%	25.0	20.0	8.5	8.2	1R5
WCMPI0530-2R2M	2.2 ± 20%	30.0	25.0	7.5	6.0	2R2
WCMPI0530-3R3M	3.3 ± 20%	40.0	32.0	6.0	5.5	3R3
WCMPI0530-4R7M	4.7 ± 20%	65.0	50.0	5.0	4.5	4R7
WCMPI0530-6R8M	6.8 ± 20%	90.0	75	4.0	3.5	6R8
WCMPI0530-100M	10 ± 20%	126	110	3.5	3.0	100

SPECIFICATIONS**WCMPI0618 Series**

Part Number	Inductance(uH) ±20%	DCR(mΩ)		Isat (A) Typ.	Irms (A) Typ.	Marking
		Max	Typ.			
WCMPI0618-R10M	0.10	3.1	2.3	40	18	R10
WCMPI0618-R22M	0.22	5.0	3.5	27	16	R22
WCMPI0618-R47M	0.47	8.5	7.8	18	11	R47
WCMPI0618-R68M	0.68	12	10	17	9.5	R68
WCMPI0618-1R0M	1.0	17	14.5	14	7.8	1R0
WCMPI0618-1R5M	1.5	26	22	10	7.3	1R5
WCMPI0618-2R2M	2.2	36	31	8.0	6.0	2R2
WCMPI0618-3R3M	3.3	60	53	6.5	4.5	3R3
WCMPI0618-4R7M	4.7	78	62	5.0	4.0	4R7
WCMPI0618-6R8M	6.8	110	101	4.5	3.0	6R8
WCMPI0618-100M	10	155	140	2.5	2.3	100

WCMPI0624 Series

Part Number	L0(uH) ±20%	DCR(mΩ) @25°C		Isat(Amp) Typ.	Irms(Amp) Typ.	Marking
		Max.	Typ.			
WCMPI0624-R22M	0.22	3.0	2.5	34.0	21.0	R22
WCMPI0624-R33M	0.33	4.1	3.5	24.5	18.0	R33
WCMPI0624-R47M	0.47	5.1	4.5	22.0	15.0	R47
WCMPI0624-R56M	0.56	6.5	5.5	17.0	13.0	R56
WCMPI0624-R68M	0.68	7.0	6.2	16.0	12.0	R68
WCMPI0624-1R0M	1.0	15.0	13.5	16.0	9.0	1R0
WCMPI0624-1R5M	1.5	20	17	13.5	9.0	1R5
WCMPI0624--2R2M	2.2	28	23	11.0	7.0	2R2
WCMPI0624-3R3M	3.3	39	32	8.5	5.5	3R3
WCMPI0624-4R7M	4.7	63	52	7.5	5.0	4R7
WCMPI0624-6R8M	6.8	70	62	6.0	4.0	6R8
WCMPI0624-100M	10	101	92	4.0	3.1	100
WCMPI0624-150M	15	160	145	3.3	2.5	150

SPECIFICATIONS
WCMPI0630 Series

Part Number	L0(uH)	DCR(mΩ) @25°C		Isat (Amp) Typ.	Irms (Amp) Typ.	Marking
		Max.	Typ.			
WCMPI0630-R10N	0.10 ± 30%	1.2	0.9	56	32	R10
WCMPI0630-R15N	0.15 ± 30%	2.5	1.5	38	25	R15
WCMPI0630-R22M	0.22 ± 20%	3.0	2.5	34	23	R22
WCMPI0630-R36M	0.36 ± 20%	4.5	3.0	24	20	R36
WCMPI0630-R47M	0.47 ± 20%	5.0	4.0	20	18	R47
WCMPI0630-R56M	0.56 ± 20%	5.5	4.5	18	16.5	R56
WCMPI0630-R68M	0.68 ± 20%	5.5	4.8	17.0	14.0	R68
WCMPI0630-1R0M	1.0 ± 20%	10.0	8.2	15.0	12.0	1R0
WCMPI0630-1R5M	1.5 ± 20%	15.0	11.2	14.0	9.0	1R5
WCMPI0630-2R2M	2.2 ± 20%	20.0	15.2	10.0	8.0	2R2
WCMPI0630-3R3M	3.3 ± 20%	35.8	27.5	9.5	6.5	3R3
WCMPI0630-4R7M	4.7 ± 20%	39.7	30.5	6.5	5.5	4R7
WCMPI0630-5R6M	5.6 ± 20%	44.5	36.5	6.0	5.5	5R6
WCMPI0630-6R8M	6.8 ± 20%	63.6	53.0	6.0	5.0	6R8
WCMPI0630-8R2M	8.2 ± 20%	63.6	53.0	5.5	4.5	8R2
WCMPI0630-100M	10 ± 20%	75.0	62.0	5.0	4.0	100
WCMPI0630-150M	15 ± 20%	125	101	4.0	3.5	150
WCMPI0630-220M	22 ± 20%	200	150	3.0	2.3	220
WCMPI0630-330M	33 ± 20%	310	250	2.6	2.0	330

SPECIFICATIONS

WCMPI1040D Series

Part Number	L0(uH) ± 20%	DCR(mΩ) @25°C	Isat(Amp)	Irms(Amp)	Marking
		Max.	Typ.	Typ.	
WCMPI1040D-R15M	0.15	0.70	74.6	44.8	R15
WCMPI1040D-R22M	0.22	1.10	50.2	34.9	R22
WCMPI1040D-R30M	0.30	1.20	44.3	34.9	R30
WCMPI1040D-R36M	0.36	1.30	44.3	29.8	R36
WCMPI1040D-R47M	0.47	1.80	41.0	29.8	R47
WCMPI1040D-R56M	0.56	1.90	32.6	24.6	R56
WCMPI1040D-R68M	0.68	2.50	29.6	22.8	R68
WCMPI1040D-R80M	0.80	2.80	28.8	22.8	R80
WCMPI1040D-1R0M	1.0	3.40	27.8	18.8	1R0
WCMPI1040D-1R5M	1.5	4.30	23.8	15.8	1R5
WCMPI1040D-2R2M	2.2	7.20	16.0	11.6	2R2
WCMPI1040D-3R3M	3.3	12.0	15.8	10.8	3R3
WCMPI1040D-4R7M	4.7	20.5	12.8	8.80	4R7
WCMPI1040D-6R8M	6.8	25.5	11.8	8.40	6R8
WCMPI1040D-8R2M	8.2	27.5	8.80	7.90	8R2
WCMPI1040D-100M	10	31.0	8.30	7.70	100
WCMPI1040D-150M	15	45.6	6.80	6.40	150
WCMPI1040D-220M	22	66.8	5.30	4.80	220
WCMPI1040D-330M	33	92.6	4.60	4.30	330
WCMPI1040D-470M	47	145.6	3.40	3.20	470
WCMPI1040D-680M	68	195.6	2.90	2.40	680
WCMPI1040D-101M	100	340.6	2.20	1.90	101

SPECIFICATIONS

WCMP1030D Series

Part Number	L0(uH) ±20%	DCR(mΩ) @25°C	Isat(Amp)	Irms(Amp)	Marking
		Max.	Typ.	Typ.	
CMPI1030D-R22M	0.22	1.26	48	31.3	R22
CMPI1030D-R33M	0.33	1.68	30	21.8	R33
CMPI1030D-R36M	0.36	1.68	26.5	21.8	R36
CMPI1030D-R47M	0.47	2.63	24.8	20.9	R47
CMPI1030D-R82M	0.82	3.9	21.8	17.1	R82
CMPI1030D-1R0M	1.0	6.3	20	14.3	1R0
CMPI1030D-2R2M	2.2	9.5	13.3	10.5	2R2
CMPI1030D-3R3M	3.3	16.8	11.4	8.5	3R3
CMPI1030D-4R7M	4.7	25.2	9.5	6.65	4R7
CMPI1030D-8R2M	8.2	47.2	6.65	4.75	8R2
CMPI1030D-330M	33	168	3.8	2.47	330

WCMP11350 Series

Part Number	L0(uH) ±20%	DCR(mΩ) @25°C		Isat(Amp) Typ.	Irms(Amp) Typ.	Marking
		Max.	Typ.			
WCMP11350-R36M	0.36	0.85	0.74	50.0	42.0	R36
WCMP11350-R47M	0.47	1.15	1.1	48.0	38.0	R47
WCMP11350-R68M	0.68	1.55	1.35	46.0	33.0	R68
WCMP11350-1R0M	1.0	2.2	1.9	35.0	26.0	1R0
WCMP11350-1R5M	1.5	3.2	2.8	33.0	23.0	1R5
WCMP11350-2R2M	2.2	5.0	4.0	24.0	15.0	2R2
WCMP11350-3R3M	3.3	7.0	5.9	22.0	14.0	3R3
WCMP11350-100M	10.0	22.0	19.0	12.0	9.0	100
WCMP11350-220M	22.0	58.0	51.0	6.5	4.5	220
WCMP11350-330M	33.0	84.0	75.0	6.0	3.5	330
WCMP11350-470M	47.0	130.0	116.0	5.0	3.0	470

Notes:

1. Initial Inductance (L0) Test Parameters:100KHz,1V,Idc=0.0A,+25°C
2. Irms(A): DC current that causes the temperature rise ($\Delta T = 40^{\circ} \text{C}$) from 25°C ambient.
3. Isat(A): DC current at which the inductance drops approximate 30% from its value without current;

The part temperature (ambient + temp rise) should not exceed 125 °C under worst case operating conditions. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.