

FEATURES

- Magnetic shielding structure,Excellent resistance to electromagnetic interference.
- Low loss,high efficiency,wide application frequency.
- Low impedance Parasitic capacitance is small.



APPLICATIONS

- PDA,notebook,desktop,and server applications
- Battery powered devices and DC/DC converters.

PRODUCT IDENTIFICATION

SMPC 0402 - 4R7 M - I
a b C d e

a:Series name

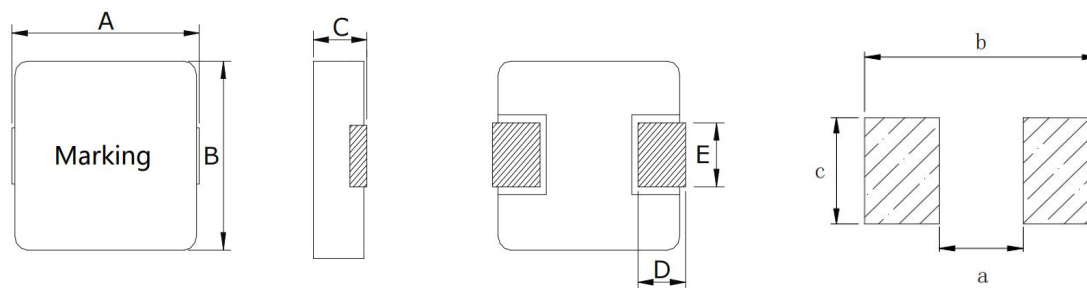
b:Product dimensions

c:Inductance Value(1R0:1.0uH;100:10uH;101:100uH)

d:Inductance Tolerance(K:10%;M:20%;N:30%)

e:Packaging style(T:Taping;B:bulk)

SHAPES AND DIMENSIONS Unit:mm



Series	Dimensions(mm)							
	A	B	C	D	E	a	b	c
SMPA0402	4.4±0.35	4.2±0.25	1.8±0.2	0.8±0.3	2.0±0.3	2.2 Typ	5.2 Typ	2.5 Typ
SMPA0412	4.4±0.35	4.2±0.25	1.0±0.2	0.8±0.3	2.0±0.3	2.2 Typ	5.2 Typ	2.5 Typ
SMPA0503	5.0±0.35	5.2±0.2	2.8±0.2	1.2±0.2	2.2±0.3	2.2 Typ	6.0 Typ	2.5 Typ
SMPA0518	5.4±0.35	5.2±0.2	1.6±0.2	1.2±0.2	2.2±0.3	2.2 Typ	6.0 Typ	2.5 Typ
SMPA0603	7.0±0.3	6.6±0.2	2.8±0.2	1.6±0.3	3.0±0.3	3.7 Typ	8.4 Typ	3.5 Typ
SMPA0604	7.0±0.3	6.6±0.2	3.8±0.2	1.6±0.3	3.0±0.3	3.7 Typ	8.4 Typ	3.5 Typ
SMPA0605	7.0±0.3	6.6±0.2	4.8±0.2	1.6±0.3	3.0±0.3	3.7 Typ	8.4 Typ	3.5 Typ
SMPA0615	7.0±0.3	6.6±0.2	1.3±0.2	1.6±0.3	3.0±0.3	3.7 Typ	8.4 Typ	3.5 Typ
SMPA0618	7.0±0.3	6.6±0.2	1.6±0.2	1.6±0.3	3.0±0.3	3.7 Typ	8.4 Typ	3.5 Typ
SMPA0624	7.0±0.3	6.6±0.2	2.2±0.2	1.6±0.3	3.0±0.3	3.7 Typ	8.4 Typ	3.5 Typ
SMPA1003	11.5 Max	10.0±0.3	2.8±0.2	2.0±0.5	3.0±0.5	5.4 Typ	13.6 Typ	4.1 Typ
SMPA1004	11.5 Max	10.0±0.3	3.8±0.2	2.0±0.5	3.0±0.5	5.4 Typ	13.6 Typ	4.1 Typ
SMPA1005	11.5 Max	10.0±0.3	4.8±0.2	2.0±0.5	3.0±0.5	5.4 Typ	13.6 Typ	4.1 Typ
SMPA1204	13.45±0.35	12.8±0.5	4.0 Max	2.0±0.5	5.0±0.3	8.0 Typ	14.5 Typ	5.5 Typ
SMPA1205	13.45±0.35	12.6±0.3	4.8±0.2	2.0±0.5	5.0±0.3	8.0 Typ	14.5 Typ	5.5 Typ
SMPA1206	13.45±0.35	12.6±0.3	5.8±0.2	2.0±0.5	5.0±0.3	8.0 Typ	14.5 Typ	5.5 Typ
SMPA1265	13.45±0.35	12.6±0.3	6.5 Max	2.0±0.5	5.0±0.3	8.0 Typ	14.5 Typ	5.5 Typ
SMPA1707	17.15±0.35	17.15 Max	7.0 Max	2.5±0.5	12.0±0.3	11.2 Typ	18.2 Typ	12.8 Typ

► Molding Type High Current Power Inductors ► SMPC Series

ELECTRICAL CHARACTERISTICS

Part Number	L(uH)	Test Freq.(KHz)	DCR max.(Ω)	Isat.(A)	Irms.(A)
SMPA0402-R10M	0.1	100	4	22	13
SMPA0402-R22M	0.22	100	6.6	12.5	9.5
SMPA0402-R33M	0.33	100	11	12	10
SMPA0402-R47M	0.47	100	14	9.5	7.5
SMPA0402-R56M	0.56	100	16	9	7
SMPA0402-R68M	0.68	100	18	8	7
SMPA0402-1R0M	1.0	100	27	7	6
SMPA0402-1R2M	1.2	100	27	6.5	6
SMPA0402-1R5M	1.5	100	46	5.5	5
SMPA0402-2R2M	2.2	100	58	5	4.5
SMPA0402-3R3M	3.3	100	87	3.5	3.3
SMPA0402-4R7M	4.7	100	105	3	2.8
SMPA0402-6R8M	6.8	100	175	2.5	2.4
SMPA0402-100M	10	100	282	2	1.6

Part Number	L(uH)	Test Freq.(KHz)	DCR max.(Ω)	Isat.(A)	Irms.(A)
SMPA0412-R15M	0.15	100	9	15	7.5
SMPA0412-R22M	0.22	100	11	11	7
SMPA0412-R33M	0.33	100	19	8.4	6.5
SMPA0412-R47M	0.47	100	21	6.8	6
SMPA0412-R68M	0.68	100	36	6	4.7
SMPA0412-1R0M	1.0	100	47	5.5	4.5
SMPA0412-1R5M	1.5	100	75	4	3.25
SMPA0412-2R2M	2.2	100	83.5	3	2.75
SMPA0412-4R7M	4.7	100	195	2.2	1.8

Part Number	L(uH)	Test Freq.(KHz)	DCR max.(Ω)	Isat.(A)	Irms.(A)
SMPA0503-R10M	0.1	100	3.0	30	25
SMPA0503-R20M	0.2	100	3.9	20	14
SMPA0503-R33M	0.33	100	5.5	18	14
SMPA0503-R47M	0.47	100	8.5	15	11
SMPA0503-R68M	0.68	100	12	11.5	9.0
SMPA0503-1R0M	1.0	100	14	10	8.5
SMPA0503-1R2M	1.2	100	16	9.5	8.5
SMPA0503-1R5M	1.5	100	25	9	8.2
SMPA0503-2R2M	2.2	100	29	7.0	7.0
SMPA0503-3R3M	3.3	100	38	6.0	5.5
SMPA0503-4R7M	4.7	100	60	4.6	4.5
SMPA0503-6R8M	6.8	100	90	3.6	3.5
SMPA0503-100M	10	100	125	3.5	3.2

Note:

Isat: DC current at which the inductance drops 30%from its value without current.

Irms: DC current that causes the temperature rise($\Delta T=40^{\circ}\text{C}$)from 20°C ambient

► **Molding Type High Current Power Inductors** ► **SMPC Series**
ELECTRICAL CHARACTERISTICS

Part Number	L(uH)	Test Freq.(KHz)	DCR max.(Ω)	Isat.(A)	Irms.(A)
SMPA0518-R47M	0.47	100	9	15.5	10.5
SMPA0518-R56M	0.56	100	10	15	9.5
SMPA0518-R68M	0.68	100	13.8	11.2	8.9
SMPA0518-1R0M	1.0	100	17	9.0	8.0
SMPA0518-1R5M	1.5	100	26	8	7.5
SMPA0518-2R2M	2.2	100	35	6.5	5.0
SMPA0518-3R3M	3.3	100	58	5	4.5
SMPA0518-4R7M	4.7	100	85	4.0	3.5
SMPA0518-6R8M	6.8	100	120	3.4	2.8
SMPA0518-100M	10	100	155	3	2.5

Part Number	L(uH)	Test Freq.(KHz)	DCR max.(Ω)	Isat.(A)	Irms.(A)
SMPA0603-R10M	0.1	100	0.99	48	35
SMPA0603-R15M	0.15	100	2.4	35	25
SMPA0603-R22M	0.22	100	3	32	21
SMPA0603-R33M	0.33	100	3.5	22	20
SMPA0603-R47M	0.47	100	4.1	18	16
SMPA0603-R56M	0.56	100	4.5	16	15
SMPA0603-R68M	0.68	100	5.3	15	14.5
SMPA0603-R82M	0.82	100	6.0	14	13
SMPA0603-1R0M	1.0	100	7.4	13.5	11.2
SMPA0603-1R5M	1.5	100	12.1	12	9.5
SMPA0603-2R2M	2.2	100	15	10.5	8.5
SMPA0603-2R7M	2.7	100	20	9	8.2
SMPA0603-3R3M	3.3	100	22	8.7	8
SMPA0603-4R7M	4.7	100	33	7.5	5.5
SMPA0603-5R6M	5.6	100	42	5.5	5
SMPA0603-6R8M	6.8	100	48	5.2	4.5
SMPA0603-8R2M	8.2	100	60	5	4
SMPA0603-100M	10	100	68	4.9	3.8
SMPA0603-150M	15	100	113	3.5	2.6
SMPA0603-220M	22	100	170	2.5	2.2
SMPA0603-330M	33	100	270	2.1	1.8
SMPA0603-470M	47	100	385	1.8	1.3

Note:

Isat: DC current at which the inductance drops 30%from its value without current.

Irms: DC current that causes the temperature rise($\Delta T=40^{\circ}\text{C}$)from 20°C ambient

ELECTRICAL CHARACTERISTICS

Part Number	L(uH)	Test Freq.(KHz)	DCR max.(Ω)	Isat.(A)	Irms.(A)
SMPA0604-R68M	0.68	100	4.8	19	17
SMPA0604-1R0M	1.0	100	6.6	16	13.5
SMPA0604-1R5M	1.5	100	10	12.5	12.4
SMPA0604-2R2M	2.2	100	14	11	10
SMPA0604-3R3M	3.3	100	20	9.5	8.5
SMPA0604-4R7M	4.7	100	30	9	6.5
SMPA0604-6R8M	6.8	100	45	6.5	5.5
SMPA0604-100M	10	100	65	6	4.8
SMPA0604-150M	15	100	95	4.5	3.7
SMPA0604-220M	22	100	125	4	3.3
SMPA0604-330M	33	100	240	3	2.2
SMPA0604-470M	47	100	320	2.5	1.8

Part Number	L(uH)	Test Freq.(KHz)	DCR max.(Ω)	Isat.(A)	Irms.(A)
SMPA0605-R47M	0.47	100	3.9	21	20
SMPA0605-R68M	0.68	100	4.5	18	16.5
SMPA0605-1R0M	1.0	100	6.6	16	12
SMPA0605-1R5M	1.5	100	10	13	9.5
SMPA0605-2R2M	2.2	100	12.5	11	9
SMPA0605-3R3M	3.3	100	22	10	8.5
SMPA0605-4R7M	4.7	100	29	8	6
SMPA0605-6R8M	6.8	100	41	6.3	5.8
SMPA0605-8R2M	8.2	100	48	5.5	5.5
SMPA0605-100M	10	100	60	5.3	4.5
SMPA0605-150M	15	100	90	4	3.1
SMPA0605-220M	22	100	140	3.5	2.6
SMPA0605-330M	33	100	190	3	2.3
SMPA0605-470M	47	100	230	2.6	2

Part Number	L(uH)	Test Freq.(KHz)	DCR max.(Ω)	Isat.(A)	Irms.(A)
SMPA0615-R47M	0.47	100	8.5	16	10
SMPA0615-R56M	0.56	100	11	14	9
SMPA0615-R68M	0.68	100	12	12	8.5
SMPA0615-R82M	0.82	100	17	10	8
SMPA0615-1R0M	1.0	100	21	9	6
SMPA0615-2R2M	2.2	100	54	7	3.8
SMPA0615-3R3M	3.3	100	63	5.5	3.5
SMPA0615-4R7M	4.7	100	85	5	3.2
SMPA0615-6R8M	6.8	100	135	4	2.5
SMPA0615-100M	10	100	175	3	2

Note:

Isat: DC current at which the inductance drops 30%from its value without current.

Irms: DC current that causes the temperature rise($\Delta T=40^{\circ}\text{C}$)from 20°C ambient

ELECTRICAL CHARACTERISTICS

Part Number	L(uH)	Test Freq.(KHz)	DCR max.(Ω)	Isat.(A)	Irms.(A)
SMPA0618-R10M	0.1	100	2.3	38	25
SMPA0618-R22M	0.22	100	3.5	24	22
SMPA0618-R47M	0.47	100	8.4	18	11.5
SMPA0618-R68M	0.68	100	12	16.5	9.5
SMPA0618-1R0M	1.0	100	16	12	8.5
SMPA0618-1R5M	1.5	100	26	9.2	8
SMPA0618-2R2M	2.2	100	35	8	7
SMPA0618-3R3M	3.3	100	50	6	4.5
SMPA0618-4R7M	4.7	100	62	5	4
SMPA0618-6R8M	6.8	100	110	4.5	3
SMPA0618-100M	10	100	155	4	2.3
SMPA0618-220M	22		350	2.3	1.8

Part Number	L(uH)	Test Freq.(KHz)	DCR max.(Ω)	Isat.(A)	Irms.(A)
SMPA0624-R22M	0.22	100	3	34	21
SMPA0624-R33M	0.33	100	4.1	24.5	18
SMPA0624-R47M	0.47	100	5.1	22	15
SMPA0624-R56M	0.56	100	6.5	17	13
SMPA0624-R68M	0.68	100	7	16	12
SMPA0624-1R0M	1.0	100	13.5	15	9
SMPA0624-1R5M	1.5	100	20	13.5	8.2
SMPA0624-2R2M	2.2	100	28	10	7
SMPA0624-3R3M	3.3	100	39	8	5.5
SMPA0624-4R7M	4.7	100	50	6.5	5
SMPA0624-6R8M	6.8	100	70	6	4
SMPA0624-100M	10	100	101	4	3.1
SMPA0624-150M	15	100	160	3.3	2.5
SMPA0624-220M	22	100	230	2.5	2

Part Number	L(uH)	Test Freq.(KHz)	DCR max.(Ω)	Isat.(A)	Irms.(A)
SMPA1003-R22M	0.22	100	1.2	50	33
SMPA1003-R33M	0.33	100	1.6	32	23
SMPA1003-R36M	0.36	100	1.6	28	23
SMPA1003-R47M	0.47	100	2.5	26	22
SMPA1003-R82M	0.82	100	3.7	23	18
SMPA1003-1R0M	1.0	100	6	21	15
SMPA1003-2R2M	2.2	100	9	14	11
SMPA1003-3R3M	3.3	100	16	12	9
SMPA1003-4R7M	4.7	100	24	10	7
SMPA1003-8R2M	8.2	100	45	7	5
SMPA1003-330M	33	100	160	4	2.6

Note:

Isat: DC current at which the inductance drops 30%from its value without current.

Irms: DC current that causes the temperature rise($\Delta T=40^{\circ}\text{C}$)from 20°C ambient

► Molding Type High Current Power Inductors ► SMPC Series

ELECTRICAL CHARACTERISTICS

Part Number	L(uH)	Test Freq.(KHz)	DCR max.(Ω)	Isat(A)	Irms(A)
SMPA1004-R15M	0.15	100	0.65	75	45
SMPA1004-R22M	0.22	100	1	60	35
SMPA1004-R30M	0.3	100	1.1	45	35
SMPA1004-R36M	0.36	100	1.2	45	30
SMPA1004-R47M	0.47	100	1.7	40	30
SMPA1004-R56M	0.56	100	1.8	33	25
SMPA1004-R68M	0.68	100	2.4	30	23
SMPA1004-R80M	0.8	100	2.7	29	23
SMPA1004-1R0M	1.0	100	3.3	28	19
SMPA1004-1R5M	1.5	100	4.2	24	16
SMPA1004-2R2M	2.2	100	7	16.5	12
SMPA1004-3R3M	3.3	100	11.8	16	11
SMPA1004-4R7M	4.7	100	20	13	9
SMPA1004-6R8M	6.8	100	25	12	8.5
SMPA1004-8R2M	8.2	100	27	9	8
SMPA1004-100M	10	100	30	8.5	7.8
SMPA1004-150M	15	100	45	7	6.5
SMPA1004-220M	22	100	66	5.5	5
SMPA1004-330M	33	100	92	4.8	4.4
SMPA1004-470M	47	100	145	3.5	3.3
SMPA1004-680M	68	100	195	3	2.5
SMPA1004-101M	100	100	340	2.3	2

Part Number	L(uH)	Test Freq.(KHz)	DCR max.(Ω)	Isat(A)	Irms(A)
SMPA1005-R22M	0.22	100	0.8	65	37
SMPA1005-1R0M	1.0	100	3	30	23
SMPA1005-1R5M	1.5	100	3.8	25	21
SMPA1005-2R2M	2.2	100	6	19	15
SMPA1005-3R3M	3.3	100	10	16	13
SMPA1005-4R7M	4.7	100	14	15	11
SMPA1005-5R6M	5.6	100	17	14	9.5
SMPA1005-6R8M	6.8	100	18.5	14	9
SMPA1005-100M	10	100	28	10	8
SMPA1005-150M	15	100	42	7.5	6.5
SMPA1005-220M	22	100	50	6	5.5
SMPA1005-330M	33	100	86	5.2	4.8
SMPA1005-470M	47	100	127	4.5	3.7
SMPA1005-101M	100	100	290	2.8	2.1

Note:

Isat: DC current at which the inductance drops 30%from its value without current.

Irms: DC current that causes the temperature rise($\Delta T=40^{\circ}\text{C}$)from 20°C ambient

► **Molding Type High Current Power Inductors** ► **SMP Series**

ELECTRICAL CHARACTERISTICS

Part Number	L(uH)	Test Freq.(KHz)	DCR max.(Ω)	Isat.(A)	Irms.(A)
SMPA1204-R22M	0.22	100	0.9	50.0	42.0
SMPA1204-R47M	0.47	100	2.0	48.0	33.0
SMPA1204-R68M-E50	0.68	100	3.5	47.0	28.0
SMPA1204-R82M-E50	0.82	100	4.5	40.0	28.0
SMPA1204-1R0M-E50	1.0	100	7.5	35.0	24.0
SMPA1204-1R5M-E50	1.5	100	9.5	30.5	20.0
SMPA1204-2R2M-E50	2.2	100	11.5	26.0	18.0
SMPA1204-3R3M-E50	3.3	100	13.0	21.0	15.0
SMPA1204-4R7M-E50	4.7	100	14.5	18.0	13.0
SMPA1204-6R8M-E50	6.8	100	20.0	14.0	9.0
SMPA1204-100M-E50	10.0	100	25.0	10.0	8.0
SMPA1204-150M-E50	15.0	100	39.0	7.5	6.5
SMPA1204-220M-E50	22.0	100	51.0	6.0	4.5

Part Number	L(uH)	Test Freq.(KHz)	DCR max.(Ω)	Isat.(A)	Irms.(A)
SMPA1205-R22M	0.22	100	0.7	75	50
SMPA1205-R36M	0.36	100	0.85	50	42
SMPA1205-R50M	0.50	100	1.15	48	38
SMPA1205-R68M	0.68	100	1.55	46	33
SMPA1205-R82M	0.82	100	1.67	39	30
SMPA1205-1R0M	1.0	100	2.2	35	26
SMPA1205-1R5M	1.5	100	3.2	33	23
SMPA1205-2R2M	2.2	100	5.0	24	15
SMPA1205-3R3M-E50	3.3	100	7	22	14
SMPA1205-4R7M-E50	4.7	100	9	20	13
SMPA1205-6R8M-E50	6.8	100	18	16	12
SMPA1205-8R2M-E50	8.2	100	20	13	9.5
SMPA1205-100M-E50	10	100	22	12	9
SMPA1205-150M-E50	15	100	30	10	8
SMPA1205-220M-E50	22	100	58	6.5	4.5
SMPA1205-330M-E50	33	100	84	6.0	3.5
SMPA1205-470M-E50	47	100	130	5.0	3.0

Note:

Isat: DC current at which the inductance drops 30% from its value without current.

Irms: DC current that causes the temperature rise($\Delta T=40^{\circ}\text{C}$) from 20°C ambient

ELECTRICAL CHARACTERISTICS

Part Number	L(uH)	Test Freq.(KHz)	DCR max.(Ω)	Isat.(A)	Irms.(A)
SMPA1206-4R7M-E50	4.7	100	9	24	15
SMPA1206-5R6M-E50	5.6	100	11	22.5	13
SMPA1206-6R8M-E50	6.8	100	13.5	19	12
SMPA1206-8R2M-E50	8.2	100	16	13.5	11
SMPA1206-100M-E50	10	100	20.7	12.5	10
SMPA1206-120M-E50	12	100	23	10	9
SMPA1206-150M-E50	15	100	29	9	8.5
SMPA1206-180M-E50	18	100	35	8	7.5
SMPA1206-220M-E50	22	100	39.5	7.5	7
SMPA1206-270M-E50	27	100	56	6.5	6
SMPA1206-330M-E50	33	100	75	6	5.5
SMPA1206-470M-E50	47	100	90	5.5	5
SMPA1206-680M-E50	68	100	140	4.5	4
SMPA1206-101M-E50	100	100	200	3.5	3
SMPA1206-121M-E50	120	100	235	3.2	2
SMPA1206-151M-E50	150	100	350	2.7	1.5

Part Number	L(uH)	Test Freq.(KHz)	DCR max.(Ω)	Isat.(A)	Irms.(A)
SMPA1265-4R7M-E50	4.7	100	8.5	24	16
SMPA1265-5R6M-E50	5.6	100	10.5	22.5	14
SMPA1265-6R8M-E50	6.8	100	12	19	13
SMPA1265-8R2M-E50	8.2	100	14	16	12
SMPA1265-100M-E50	10	100	16.5	15	11
SMPA1265-150M-E50	15	100	26	11	9.5
SMPA1265-220M-E50	22	100	36	9	8
SMPA1265-330M-E50	33	100	65	8	6.5
SMPA1265-470M-E50	47	100	70	6.8	5.5
SMPA1265-680M-E50	68	100	120	5.2	4.8
SMPA1265-820M-E50	82	100	135	4.5	4
SMPA1265-101M-E50	100	100	170	4	3.5

Part Number	L(uH)	Test Freq.(KHz)	DCR max.(Ω)	Isat.(A)	Irms.(A)
SMPA1707-2R2M	2.2	100	2.5	34	29
SMPA1707-3R3M	3.3	100	3.95	30	24
SMPA1707-4R7M	4.7	100	4.75	24	21
SMPA1707-6R8M	6.8	100	7.5	22	17
SMPA1707-8R2M	8.2	100	8.7	20	13
SMPA1707-100M	10	100	9.9	19	12
SMPA1707-150M	15	100	17	14.5	11
SMPA1707-220M	22	100	23	11.5	8.5
SMPA1707-330M	33	100	37	10	8
SMPA1707-470M	47	100	47	7.5	6
SMPA1707-680M	68	100	85	6.5	5.2
SMPA1707-101M	100	100	130	5	3.7

Note:

Isat: DC current at which the inductance drops 30%from its value without current.

Irms: DC current that causes the temperature rise($\Delta T=40^{\circ}\text{C}$)from 20°C ambient