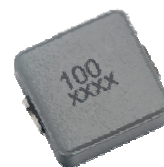


Molded SMD Power Inductors – MWSA Series

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



FEATURES

- Metal material for large current and low loss
- Closed magnetic circuit design reduces leakage flux
- Halogen free, RoSH compliant

APPLICATIONS

- Server, desktop computer, notebook
- Graphics, memory
- Industrial equipment, telecomm base station

PRODUCT IDENTIFICATION

MWSA

①

0410

②



③

-

1R0

④

M

⑤

T

⑥

①	Type
MWSA	Molded SMD Power Inductor

③	Feature Type
	Design Code or Blank

②	External Dimensions(L×W×H) [mm]
0412	4.2×4.4×1.2
0402	4.2×4.4×2.0
0518	5.2×5.4×1.8
0503	5.2×5.4×3.0
0618	6.6×7.1×1.8
0624	6.6×7.1×2.4
0603	6.6×7.1×3.0
1004	10.5×11.5×4.0
1205	12.8×13.5×5.0

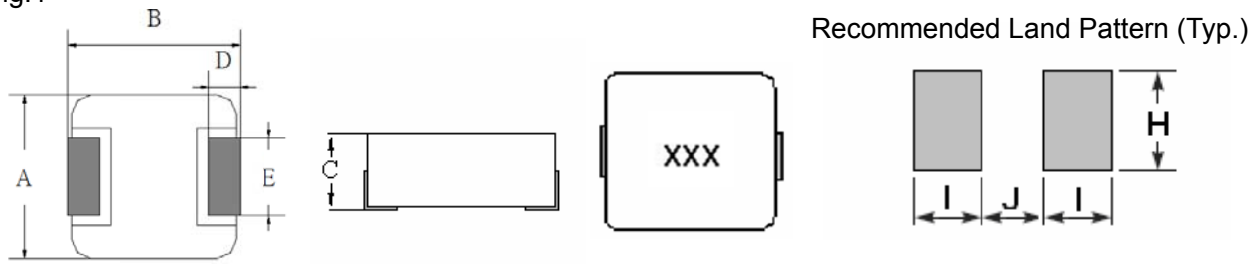
④	Nominal Inductance
Example	Nominal Value
R15	0.15μH
1R0	1.0μH

⑤	Inductance Tolerance
M	±20%

⑥	Packing
T	Tape & Reel

SHAPE AND DIMENSIONS

Fig.1



Unit:mm

Series	A	B	C	D	E	I Typ.	J Typ.	H Typ.
MWSA0412	4.2±0.25	4.4±0.35	1.0±0.2	0.8±0.3	2.0±0.3	1.5.	2.2	2.5
MWSA0402	4.2±0.25	4.4±0.35	1.8±0.2	0.8±0.3	2.0±0.3	1.5.	2.2	2.5
MWSA0518	5.2±0.2	5.4±0.3	1.6±0.2	1.20±0.2	2.2±0.3	1.9	2.2	2.5
MWSA0503	5.2±0.2	5.4±0.3	2.8±0.2	1.20±0.2	2.2±0.3	1.9.	2.2	2.5
MWSA0618	6.6±0.2	7.0±0.3	1.6±0.2	1.60±0.3	3.0±0.3	2.35	3.7	3.5
MWSA0624	6.6±0.2	7.0±0.3	2.2±0.2	1.60±0.3	3.0±0.3	2.35	3.7	3.5
MWSA0603	6.6±0.2	7.0±0.3	2.8±0.2	1.60±0.3	3.0±0.3	2.35	3.7	3.5
MWSA1004	10.0±0.3	11.5Max	3.8±0.2	2.0±0.5	3.0±0.5	4.1	6.0	4.0
MWSA1205	12.6±0.3	13.45±0.35	4.8±0.2	2.0±0.5	See Remarks	3.25	6.0	5.0

SPECIFICATIONS

MWSA0412 Series

Part Number	Inductance	L Test Condition	Max. DC Resistance	Typ. Saturation Current	Typ. Heat Rating Current
Units	μH	Hz, V	mΩ	A	A
Symbol	L	-	DCR	Isat	Irms
MWSA0412-R15MT	0.15	100k, 1.0V	9.0	15.0	7.5
MWSA0412-R22MT	0.22	100k, 1.0V	11.0	11.0	7.0
MWSA0412-R33MT	0.33	100k, 1.0V	19.0	8.4	6.5
MWSA0412-R47MT	0.47	100k, 1.0V	21.0	6.8	6.0
MWSA0412-R68MT	0.68	100k, 1.0V	36.0	6.0	4.7
MWSA0412-1R0MT	1.0	100k, 1.0V	47.0	5.5	4.5
MWSA0412-1R5MT	1.5	100k, 1.0V	75.0	4.0	3.25
MWSA0412-2R2MT	2.2	100k, 1.0V	83.5	3.0	2.75
MWSA0412-4R7MT	4.7	100k, 1.0V	195.0	2.2	1.8

MWSA0402 Series

Part Number	Inductance	L Test Condition	Max. DC Resistance	Typ. Saturation Current	Typ. Heat Rating Current
Units	μH	Hz, V	mΩ	A	A
Symbol	L	-	DCR	Isat	Irms
MWSA0402-R10MT	0.10	100k, 1.0V	4.0	22.0	13.0
MWSA0402-R22MT	0.22	100k, 1.0V	6.6	12.5	9.5
MWSA0402-R33MT	0.33	100k, 1.0V	11.0	12.0	10.0
MWSA0402-R47MT	0.47	100k, 1.0V	14.0	9.5	7.5
MWSA0402-R56MT	0.56	100k, 1.0V	16.0	9.0	7.0
MWSA0402-R68MT	0.68	100k, 1.0V	18.0	8.0	7.0
MWSA0402-1R0MT	1.0	100k, 1.0V	27.0	7.0	6.0
MWSA0402-1R2MT	1.2	100k, 1.0V	27.0	6.5	6.0
MWSA0402-1R5MT	1.5	100k, 1.0V	46.0	5.5	5.0
MWSA0402-2R2MT	2.2	100k, 1.0V	58.0	5.0	4.5
MWSA0402-3R3MT	3.3	100k, 1.0V	87.0	3.5	3.3

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SPECIFICATIONS

MWSA0402 Series

Part Number	Inductance	L Test Condition	Max. DC Resistance	Typ. Saturation Current	Typ. Heat Rating Current
Units	μH	Hz, V	mΩ	A	A
Symbol	L	-	DCR	Isat	Irms
MWSA0402-4R7MT	4.7	100k, 1.0V	105.0	3.0	2.8
MWSA0402-6R8MT	6.8	100k, 1.0V	175.0	2.5	2.4
MWSA0402-100MT	10.0	100k, 1.0V	282.0	2.0	1.6
MWSA0402-220MT	22.0	100k, 1.0V	363.0	1.4	1.2

MWSA0518 Series

Part Number	Inductance	L Test Condition	Max. DC Resistance	Typ. Saturation Current	Typ. Heat Rating Current
Units	μH	Hz, V	mΩ	A	A
Symbol	L	-	DCR	Isat	Irms
MWSA0518-R47MT	0.47	100k, 1.0V	9.0	12.0	10.5
MWSA0518-R56MT	0.56	100k, 1.0V	10.0	11.0	9.5
MWSA0518-1R0MT	1.0	100k, 1.0V	17.0	9.0	8.0
MWSA0518-1R5MT	1.5	100k, 1.0V	26.0	8.0	7.5
MWSA0518-2R2MT	2.2	100k, 1.0V	35.0	6.0	5.0
MWSA0518-3R3MT	3.3	100k, 1.0V	58.0	4.8	4.5
MWSA0518-4R7MT	4.7	100k, 1.0V	85.0	4.0	3.5
MWSA0518-6R8MT	6.8	100k, 1.0V	120.0	3.4	2.8
MWSA0518-100MT	10.0	100k, 1.0V	155.0	2.5	2.5

MWSA0503 Series

Part Number	Inductance	L Test Condition	Max. DC Resistance	Typ. Saturation Current	Typ. Heat Rating Current
Units	μH	Hz, V	mΩ	A	A
Symbol	L	-	DCR	Isat	Irms
MWSA0503-R10MT	0.1	100k, 1.0V	3.0	33.0	25.0
MWSA0503-R20MT	0.2	100k, 1.0V	3.9	20.0	14.0
MWSA0503-R33MT	0.33	100k, 1.0V	5.5	18.0	14.0
MWSA0503-R47MT	0.47	100k, 1.0V	8.5	15.0	11.0
MWSA0503-R68MT	0.68	100k, 1.0V	12.0	11.5	9.0
MWSA0503-1R0MT	1.0	100k, 1.0V	14.0	11.0	8.5
MWSA0503-1R2MT	1.2	100k, 1.0V	16.0	11.0	8.5
MWSA0503-1R5MT	1.5	100k, 1.0V	25.0	9.0	8.2
MWSA0503-2R2MT	2.2	100k, 1.0V	29.0	7.5	7.0
MWSA0503-3R3MT	3.3	100k, 1.0V	38.0	6.0	5.5
MWSA0503-4R7MT	4.7	100k, 1.0V	60.0	5.0	4.5
MWSA0503-6R8MT	6.8	100k, 1.0V	90.0	4.0	3.5
MWSA0503-100MT	10.0	100k, 1.0V	125.0	3.5	3.2

MWSA0618 Series

Part Number	Inductance	L Test Condition	Max. DC Resistance	Typ. Saturation Current	Typ. Heat Rating Current
Units	μH	Hz, V	mΩ	A	A
Symbol	L	-	DCR	Isat	Irms
MWSA0618-R10MT	0.10	100k, 1.0V	2.3	38.0	25.0
MWSA0618-R22MT	0.22	100k, 1.0V	3.5	24.0	22.0
MWSA0618-R47MT	0.47	100k, 1.0V	8.4	18.0	11.5
MWSA0618-R68MT	0.68	100k, 1.0V	12.0	16.5	9.5
MWSA0618-1R0MT	1.0	100k, 1.0V	16.0	12.0	8.5
MWSA0618-1R5MT	1.5	100k, 1.0V	26.0	9.2	8.0
MWSA0618-2R2MT	2.2	100k, 1.0V	35.0	8.0	7.0
MWSA0618-3R3MT	3.3	100k, 1.0V	50.0	6.0	4.5



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SPECIFICATIONS

MWSA0618 Series

Part Number	Inductance	L Test Condition	Max. DC Resistance	Typ. Saturation Current	Typ. Heat Rating Current
Units	μH	Hz, V	mΩ	A	A
Symbol	L	-	DCR	Isat	Irms
MWSA0618-4R7MT	4.7	100k, 1.0V	62.0	5.0	4.0
MWSA0618-6R8MT	6.8	100k, 1.0V	110.0	4.5	3.0
MWSA0618-100MT	10	100k, 1.0V	155.0	4.0	2.3
MWSA0618-220MT	22	100k, 1.0V	350.0	2.3	1.8

MWSA0624 Series

Part Number	Inductance	L Test Condition	Max. DC Resistance	Typ. Saturation Current	Typ. Heat Rating Current
Units	μH	Hz, V	mΩ	A	A
Symbol	L	-	DCR	Isat	Irms
MWSA0624-R22MT	0.22	100k, 1.0V	3.0	30.0	21.0
MWSA0624-R33MT	0.33	100k, 1.0V	4.1	24.5	18.0
MWSA0624-R47MT	0.47	100k, 1.0V	5.1	20.0	15.0
MWSA0624-R56MT	0.56	100k, 1.0V	6.5	17.0	13.0
MWSA0624-R68MT	0.68	100k, 1.0V	7.0	16.0	12.0
MWSA0624-1R0MT	1.0	100k, 1.0V	13.5	15.0	9.0
MWSA0624-1R5MT	1.5	100k, 1.0V	20.0	13.5	8.2
MWSA0624-2R2MT	2.2	100k, 1.0V	28.0	10	7.0
MWSA0624-3R3MT	3.3	100k, 1.0V	39.0	8	5.5
MWSA0624-4R7MT	4.7	100k, 1.0V	50.0	6.5	5.0
MWSA0624-6R8MT	6.8	100k, 1.0V	70.0	6.0	4.0
MWSA0624-100MT	10.0	100k, 1.0V	101.0	4.0	3.1
MWSA0624-150MT	15.0	100k, 1.0V	160.0	3.3	2.5
MWSA0624-220MT	22.0	100k, 1.0V	230.0	2.5	2.0

MWSA0603 Series

Part Number	Inductance	L Test Condition	Max. DC Resistance	Typ. Saturation Current	Typ. Heat Rating Current
Units	μH	Hz, V	mΩ	A	A
Symbol	L	-	DCR	Isat	Irms
MWSA0603-R22MT	0.22	100k, 1.0V	3.0	26	24.0
MWSA0603-R24MT	0.24	100k, 1.0V	3.1	25	23.0
MWSA0603-R33MT	0.33	100k, 1.0V	3.5	19	21.0
MWSA0603-R47MT	0.47	100k, 1.0V	4.1	18	18.0
MWSA0603-R56MT	0.56	100k, 1.0V	4.5	17	16.5
MWSA0603-R68MT	0.68	100k, 1.0V	5.3	16	16.0
MWSA0603-R82MT	0.82	100k, 1.0V	6.0	14	14.0
MWSA0603-1R0MT	1.0	100k, 1.0V	7.4	12	12.0
MWSA0603-1R5MT	1.5	100k, 1.0V	12.1	10	12.0
MWSA0603-2R2MT	2.2	100k, 1.0V	15.0	9.5	9.5
MWSA0603-3R3MT	3.3	100k, 1.0V	22.0	6.2	8.5
MWSA0603-4R7MT	4.7	100k, 1.0V	33.0	5.5	6.0
MWSA0603-6R8MT	6.8	100k, 1.0V	48.0	5.5	5.0
MWSA0603-8R2MT	8.2	100k, 1.0V	60.0	5.2	5.0
MWSA0603-100MT	10	100k, 1.0V	67.0	4.0	4.5
MWSA0603-150MT	15	100k, 1.0V	115.0	3.0	3.0
MWSA0603-220MT	22	100k, 1.0V	200.0	2.5	2.3
MWSA0603-330MT	33	100k, 1.0V	310.0	2.6	2.0

SPECIFICATIONS

MWSA1004 Series

Part Number	Inductance	L Test Condition	Max. DC Resistance	Typ. Saturation Current	Typ. Heat Rating Current
Units	μH	Hz, V	mΩ	A	A
Symbol	L	-	DCR	Isat	Irms
MWSA1004-R15MT	0.15	100k, 1.0V	0.65	75	45
MWSA1004-R22MT	0.22	100k, 1.0V	1.0	60	35
MWSA1004-R30MT	0.30	100k, 1.0V	1.1	45	35
MWSA1004-R36MT	0.36	100k, 1.0V	1.2	45	30
MWSA1004-R47MT	0.47	100k, 1.0V	1.7	40	30
MWSA1004-R56MT	0.56	100k, 1.0V	1.8	33	25
MWSA1004-R68MT	0.68	100k, 1.0V	2.4	30	23
MWSA1004-R80MT	0.80	100k, 1.0V	2.7	29	23
MWSA1004-1R0MT	1.0	100k, 1.0V	3.3	28	19
MWSA1004-1R5MT	1.5	100k, 1.0V	4.2	24	16
MWSA1004-2R2MT	2.2	100k, 1.0V	7.0	16.5	12
MWSA1004-3R3MT	3.3	100k, 1.0V	11.8	16	11
MWSA1004-4R7MT	4.7	100k, 1.0V	20	13	9.0
MWSA1004-6R8MT	6.8	100k, 1.0V	25	12	8.5
MWSA1004-8R2MT	8.2	100k, 1.0V	27	9	8.0
MWSA1004-100MT	10	100k, 1.0V	30	8.5	7.8
MWSA1004-150MT	15	100k, 1.0V	45	7	6.5
MWSA1004-220MT	22	100k, 1.0V	66	5.5	5.0
MWSA1004-330MT	33	100k, 1.0V	92	4.8	4.4
MWSA1004-470MT	47	100k, 1.0V	145	3.5	3.3
MWSA1004-680MT	68	100k, 1.0V	195	3	2.5

MWSA1205 Series

Part Number	Inductance	L Test Condition	Max. DC Resistance	Typ. Saturation Current	Typ. Heat Rating Current
Units	μH	Hz, V	mΩ	A	A
Symbol	L	-	DCR	Isat	Irms
MWSA1205-R10MT	0.10	100k, 1.0V	0.6	118.0	55.0
MWSA1205-R22MT	0.22	100k, 1.0V	0.8	110.0	51.0
MWSA1205-R33MT	0.33	100k, 1.0V	1.1	60.0	42.0
MWSA1205-R36MT	0.36	100k, 1.0V	0.85	50.0	42.0
MWSA1205-R47MT	0.47	100k, 1.0V	1.3	48.0	38.0
MWSA1205-R50MT	0.50	100k, 1.0V	1.15	48.0	38.0
MWSA1205-R56MT	0.56	100k, 1.0V	1.5	47.0	36.0
MWSA1205-R68MT	0.68	100k, 1.0V	1.55	46.0	33.0
MWSA1205-R82MT	0.82	100k, 1.0V	1.67	40.0	30.0
MWSA1205-1R0MT	1.0	100k, 1.0V	2.2	35.0	26.0
MWSA1205-1R2MT	1.2	100k, 1.0V	3.5	34.0	25.0
MWSA1205-1R5MT	1.5	100k, 1.0V	3.2	33.0	23.0
MWSA1205-1R8MT	1.8	100k, 1.0V	4.9	30.0	19.0
MWSA1205-2R2MT	2.2	100k, 1.0V	5.5	24.0	15.0
MWSA1205-3R3MT	3.3	100k, 1.0V	7.0	22.0	14.0
MWSA1205-4R7MT	4.7	100k, 1.0V	9.0	21.0	13.0
MWSA1205-5R6MT	5.6	100k, 1.0V	16.5	20.0	11.5
MWSA1205-6R8MT	6.8	100k, 1.0V	18.0	19.0	12.0
MWSA1205-7R8MT	7.8	100k, 1.0V	20.5	18.0	10.0
MWSA1205-8R2MT	8.2	100k, 1.0V	22.5	16.0	9.5
MWSA1205-100MT	10	100k, 1.0V	22.0	12.0	9.0
MWSA1205-150MT	15	100k, 1.0V	30.0	10.0	8.0
MWSA1205-220MT	22	100k, 1.0V	58.0	6.5	4.5
MWSA1205-330MT	33	100k, 1.0V	84.0	6.0	3.5
MWSA1205-470MT	47	100k, 1.0V	130.0	5.0	3.0



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