

Molded SMD Power Inductors - MWSA-S Series



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

FEATURES

- Metal material for large current and low DCR
- Closed magnetic circuit design reduces leakage flux

APPLICATIONS

- TV, graphics, memory
- Notebooks, tablets
- Communication equipments, industrial equipments

PRODUCT IDENTIFICATION

MWSA

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0412S

②

XXX

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Type	
MWSA	Molded SMD Power Inductors

②

External Dimensions(L×W×H) [mm]	
0412	4.2×4.4×1.0
0402	4.2×4.4×1.8
0518	5.2×5.4×1.6
0503	5.2×5.4×2.8
0615	6.6×7.0×1.3
0618	6.6×7.0×1.6
0602	6.6×7.0×1.8
0624	6.6×7.0×2.2
0603	6.6×7.0×2.8
0604	6.6×7.0×3.8
0605	6.6×7.0×4.8
0804	8.2×8.8×3.8
1003	10.0×11.5×2.8
1004	10.0×11.0×3.8
1005	10.0×11.5×4.8
1204	12.8×13.45×4.0
1205	12.6×13.45×4.8
1206	12.6×13.45×5.8
1265	12.6×13.45×6.5
1707	17.15×17.15×6.7
2213	23.5×22.0×12.6

③

Nominal Inductance[μH]	
Example	Nominal Value[μH]
R15	0.15μH
1R0	1.0μH

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Inductance Tolerance	
M	±20%

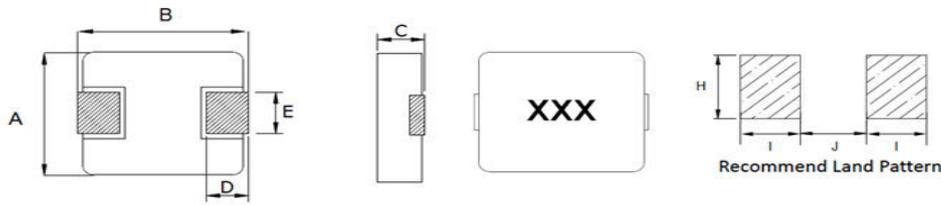
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Packing	
T	Tape & Reel

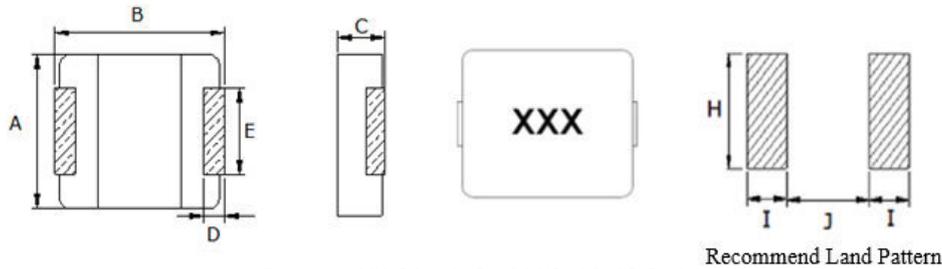
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Design Code	
□□□	Design Code
* Conventional product is blank	

SHAPE AND DIMENSIONS



Remark: MWSA0412S ~ MWSA1265S Series



Remark: MWSA1707S ~ MWSA2213S Series

Unit: mm

Series	A	B	C	D	E	I Typ.	J Typ.	H Typ.
MWSA0412S	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
MWSA0402S	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
MWSA0518S	5.2±0.2	5.4±0.35	1.6±0.2	1.2±0.2	2.2±0.3	1.9	2.2	2.5
MWSA0503S	5.2±0.2	5.4±0.35	2.8±0.2	1.2±0.2	2.2±0.3	1.9	2.2	2.5
MWSA0615S	6.6±0.2	7.0±0.3	1.3±0.2	1.6±0.3	3.0±0.3	2.35	3.7	3.5
MWSA0618S	6.6±0.2	7.0±0.3	1.6±0.2	1.6±0.3	3.0±0.3	2.35	3.7	3.5
MWSA0602S	6.6±0.2	7.0±0.3	1.8±0.2	1.6±0.3	3.0±0.3	2.35	3.7	3.5
MWSA0624S	6.6±0.2	7.0±0.3	2.2±0.2	1.6±0.3	3.0±0.3	2.35	3.7	3.5
MWSA0603S	6.6±0.2	7.0±0.3	2.8±0.2	1.6±0.3	3.0±0.3	2.35	3.7	3.5
MWSA0604S	6.6±0.2	7.0±0.3	3.8±0.2	1.6±0.3	3.0±0.3	2.35	3.7	3.5
MWSA0605S	6.6±0.2	7.0±0.3	4.8±0.2	1.6±0.3	3.0±0.3	2.35	3.7	3.5
MWSA0804S	8.8±0.4	8.2±0.3	3.8±0.2	1.4±0.3	5.0±0.3	2.75	4.0	5.5
MWSA1003S	10.0±0.3	11.5 Max	2.8±0.2	2.0±0.5	3.0±0.3	4.1	5.4	4.1
MWSA1004S	10.0±0.3	11.0±0.5	3.8±0.2	2.0±0.5	3.0±0.5	4.1	5.4	4.1
MWSA1005S	10.0±0.3	11.5 Max	4.8±0.2	2.0±0.5	3.0±0.5	4.1	5.4	4.1
MWSA1204S	12.8±0.5	13.45±0.35	4.0Max.	2.0±0.5	See Remarks	3.25	8.0	5.5
MWSA1205S	12.6±0.3	13.45±0.35	4.8±0.2	2.0±0.5	See Remarks	3.25	8.0	5.5
MWSA1206S	12.6±0.3	13.45±0.35	5.8±0.2	2.0±0.5	See Remarks	3.25	8.0	5.5
MWSA1265S	12.6±0.3	13.45±0.35	6.5Max.	2.0±0.5	5.0±0.3	3.25	8.0	5.5
MWSA1707S	17.15Max	17.15±0.35	6.7±0.3	2.5±0.5	12.0±0.3	3.50	11.2	12.8
MWSA2213S	22.0±0.3	23.5±0.5	12.6±0.4	5.0±0.4	19.0±0.3	5.75	12.5	19.6

SHAPE AND DIMENSIONS

Remarks:

Series	E(mm)	Dimensions
MWSA1204S	3.85±0.5	R22/R47
	5.0±0.3	R68/R82/1R0/1R5/2R2/3R3/4R7/6R8/100/150/220
MWSA1205S	3.85±0.5	R22/R36/R50/R68/R82/1R0/1R5/2R2
	5.0±0.3	3R3/4R7/6R8/100/150/220/330/470
MWSA1206S	3.85±0.5	R68/1R5/2R2
	5.0±0.3	3R3/4R7/5R6/6R8/8R2/100/120/150/180/220/270/330/470/680/101/121/151

SPECIFICATIONS

MWSA0412S Series

Part Number	Inductance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V	Max.	Max.	Typ.	Max.	Typ.
Units	μH	mΩ	A		A	
Symbol	L	DCR	Isat		Irms	
MWSA0412S-R15MT	0.15±20%	9	12.0	15.0	6.80	7.50
MWSA0412S-R22MT	0.22±20%	11	8.80	11.0	6.50	7.00
MWSA0412S-R33MT	0.33±20%	19	6.70	8.40	5.70	6.50
MWSA0412S-R47MT	0.47±20%	21	5.40	6.80	5.20	6.00
MWSA0412S-R68MT	0.68±20%	36	4.80	6.00	4.20	4.70
MWSA0412S-1R0MT	1.0±20%	47	4.40	5.50	3.80	4.50
MWSA0412S-1R5MT	1.5±20%	75	3.20	4.00	2.70	3.25
MWSA0412S-2R2MT	2.2±20%	83.5	2.40	3.00	2.20	2.75
MWSA0412S-3R3MT	3.3±20%	160	2.38	2.70	1.77	2.00
MWSA0412S-4R7MT	4.7±20%	195	1.80	2.20	1.45	1.80

MWSA0402S Series

Part Number	Inductance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V	Max.	Max.	Typ.	Max.	Typ.
Units	μH	mΩ	A		A	
Symbol	L	DCR	Isat		Irms	
MWSA0402S-R10MT	0.10±20%	4	17.6	22.0	11.2	13.0
MWSA0402S-R22MT	0.22±20%	6.6	10.0	12.5	8.20	9.50
MWSA0402S-R33MT	0.33±20%	11	9.60	12.0	8.60	10.0
MWSA0402S-R47MT	0.47±20%	14	7.60	9.50	6.65	7.50
MWSA0402S-R56MT	0.56±20%	16	7.20	9.00	6.10	7.00
MWSA0402S-R68MT	0.68±20%	18	6.40	8.00	6.15	7.00
MWSA0402S-1R0MT	1.0±20%	27	5.60	7.00	5.40	6.00
MWSA0402S-1R0MTB01	1.0±20%	27	8.00	9.00	5.40	6.00
MWSA0402S-1R2MT	1.2±20%	27	5.20	6.50	5.40	6.00
MWSA0402S-1R5MT	1.5±20%	46	4.40	5.50	4.30	5.00
MWSA0402S-2R2MT	2.2±20%	58	4.00	5.00	3.80	4.50
MWSA0402S-3R3MT	3.3±20%	87	2.80	3.50	2.80	3.30
MWSA0402S-4R7MT	4.7±20%	105	2.40	3.00	2.20	2.80
MWSA0402S-6R8MT	6.8±20%	175	2.00	2.50	1.90	2.40
MWSA0402S-100MT	10±20%	282	1.60	2.00	1.30	1.60
MWSA0402S-220MT	22±20%	363	1.12	1.40	0.90	1.20