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
- Halogen free, RoHS compliant

APPLICATIONS

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

PRODUCT IDENTIFICATION

1	2	3	4	5	6
MWSA	0412S	XXX	□	T	□□□

1

Type	
MWSA	Molded SMD Power Inductors

3

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

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Inductance Tolerance	
M	±20%

5

Packing	
T	Tape & Reel

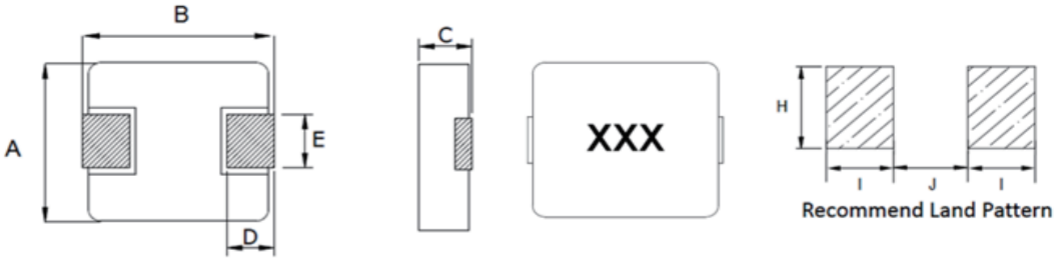
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Design Code	
□□□	Design Code
* Standard product is blank	

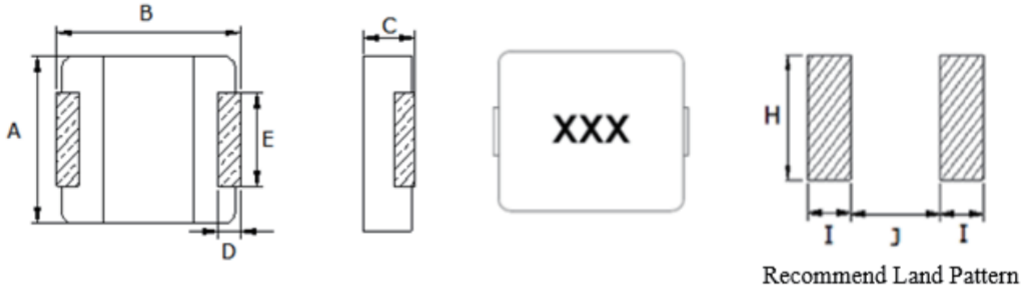
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External Dimensions (L×W×H) [mm]	
0412	4.2×4.4×1.0
0402	4.2×4.4×1.8
0515	5.2×5.4×1.3
0518	5.2×5.4×1.6
0503	5.2×5.4×2.8
0615	6.6×7.0×1.3
0618	6.6×7.0×1.6
0602	6.6×7.0×1.8
0624	6.6×7.0×2.2
0603	6.6×7.0×2.8
0605	6.6×7.0×4.8
0804	8.2×8.8×3.8
1003	10.0×11.5×2.8
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

SHAPE AND DIMENSIONS



Remark:MWSA0412S ~ MWSA1265S Series



Remark:MWSA1707S ~ MWSA2213S Series

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
MWSA0515S	5.2±0.2	5.4±0.35	1.3±0.2	1.2±0.2	2.2±0.3	1.9	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
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	4.0 Max.	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	6.5 Max.	2.0±0.5	5.0±0.3	3.25	8.0	5.5
MWSA1707S	17.15 Max.	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

Unit: mm

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

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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-5R6MT	5.6±20%	150	2.24	2.80	2.00	2.50
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

MWSA0515S 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	
MWSA0515S-R47MT	0.47±20%	13	12.0	13.0	8.70	9.50
MWSA0515S-R68MT	0.68±20%	15.5	9.50	11.2	8.10	9.00
MWSA0515S-1R0MT	1.0±20%	23	8.00	9.50	5.80	6.50
MWSA0515S-2R2MT	2.2±20%	52	4.80	5.80	4.00	5.00
MWSA0515S-3R3MT	3.3±20%	72	4.00	4.50	3.00	3.30
MWSA0515S-4R7MT	4.7±20%	106	3.70	4.20	2.60	3.00

SPECIFICATIONS

MWSA0518S 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	
MWSA0518S-R47MT	0.47±20%	9	9.60	12.0	9.50	10.5
MWSA0518S-R56MT	0.56±20%	10	8.80	11.0	8.20	9.50
MWSA0518S-R68MT	0.68±20%	13.8	9.30	10.5	7.70	8.70
MWSA0518S-1R0MT	1.0±20%	17	7.20	9.00	7.20	8.00
MWSA0518S-1R5MT	1.5±20%	26	6.40	8.00	6.60	7.50
MWSA0518S-2R2MT	2.2±20%	35	4.80	6.00	4.20	5.00
MWSA0518S-3R3MT	3.3±20%	58	3.84	4.80	3.80	4.50
MWSA0518S-4R7MT	4.7±20%	85	3.20	4.00	3.00	3.50
MWSA0518S-6R8MT	6.8±20%	120	2.72	3.40	2.40	2.80
MWSA0518S-100MT	10±20%	155	2.00	2.50	2.20	2.50

MWSA0503S 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	
MWSA0503S-R10MT	0.10±20%	3	24.0	30.0	23.0	25.0
MWSA0503S-R20MT	0.20±20%	3.9	16.0	20.0	13.0	14.0
MWSA0503S-R33MT	0.33±20%	5.5	14.4	18.0	13.1	14.0
MWSA0503S-R47MT	0.47±20%	8.5	12.0	15.0	10.0	11.0
MWSA0503S-R68MT	0.68±20%	12	9.20	11.5	8.20	9.00
MWSA0503S-R82MT	0.82±20%	10.4	9.20	10.5	9.00	10.5
MWSA0503S-1R0MT	1.0±20%	14	8.00	10.0	7.80	8.50
MWSA0503S-1R2MT	1.2±20%	16	7.60	9.50	7.85	8.50
MWSA0503S-1R5MT	1.5±20%	25	7.20	9.00	7.60	8.20
MWSA0503S-2R2MT	2.2±20%	29	5.60	7.00	6.40	7.00
MWSA0503S-3R3MT	3.3±20%	38	4.80	6.00	5.00	5.50
MWSA0503S-4R7MT	4.7±20%	60	3.68	4.60	4.00	4.50
MWSA0503S-6R8MT	6.8±20%	90	2.88	3.60	2.90	3.50
MWSA0503S-100MT	10±20%	125	2.80	3.50	2.80	3.20
MWSA0503S-150MT	15±20%	170	2.00	2.20	1.60	1.80

MWSA0615S 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	
MWSA0615S-R47MT	0.47±20%	8.5	14.16	16.0	8.85	10.0
MWSA0615S-R56MT	0.56±20%	11	12.38	14.0	7.96	9.00
MWSA0615S-R68MT	0.68±20%	12	10.62	12.0	7.52	8.50
MWSA0615S-R82MT	0.82±20%	17	8.85	10.0	7.08	8.00
MWSA0615S-1R0MT	1.0±20%	21	7.96	9.00	5.30	6.00
MWSA0615S-1R5MT	1.5±20%	40	7.00	8.00	4.40	5.00
MWSA0615S-2R2MT	2.2±20%	54	6.19	7.00	3.36	3.80
MWSA0615S-3R3MT	3.3±20%	63	4.87	5.50	3.10	3.50
MWSA0615S-4R7MT	4.7±20%	85	4.42	5.00	2.83	3.20
MWSA0615S-6R8MT	6.8±20%	135	3.54	4.00	2.21	2.50
MWSA0615S-100MT	10±20%	175	2.65	3.00	1.77	2.00
MWSA0615S-220MT	22±20%	510	2.20	2.50	1.32	1.40

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SPECIFICATIONS

MWSA0618S 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	
MWSA0618S-R10MT	0.10±20%	2.3	30.4	38.0	23.0	25.0
MWSA0618S-R22MT	0.22±20%	3.5	19.2	24.0	20.0	22.0
MWSA0618S-R47MT	0.47±20%	8.4	16.0	18.0	10.0	11.5
MWSA0618S-R68MT	0.68±20%	12	13.2	16.5	8.40	9.50
MWSA0618S-1R0MT	1.0±20%	16	9.60	12.0	7.60	8.50
MWSA0618S-1R5MT	1.5±20%	26	7.36	9.20	7.10	8.00
MWSA0618S-2R2MT	2.2±20%	35	6.40	8.00	6.20	7.00
MWSA0618S-3R3MT	3.3±20%	50	4.80	6.00	3.80	4.50
MWSA0618S-4R7MT	4.7±20%	62	4.00	5.00	3.50	4.00
MWSA0618S-6R8MT	6.8±20%	110	3.60	4.50	2.40	3.00
MWSA0618S-8R2MT	8.2±20%	135	2.90	3.60	2.10	2.40
MWSA0618S-100MT	10±20%	155	3.20	4.00	1.95	2.30
MWSA0618S-220MT	22±20%	350	1.84	2.30	1.40	1.80

MWSA0602S 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	
MWSA0602S-1R5MT	1.5±20%	18	10.0	12.0	7.00	8.00
MWSA0602S-4R7MT	4.7±20%	60	-	5.50	-	4.30
MWSA0602S-100MT	10±20%	145	-	4.00	-	2.80

MWSA0624S 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	
MWSA0624S-R22MT	0.22±20%	3	24.0	30.0	19.0	21.0
MWSA0624S-R33MT	0.33±20%	4.1	19.6	24.5	16.0	18.0
MWSA0624S-R47MT	0.47±20%	5.1	16.0	20.0	13.5	15.0
MWSA0624S-R56MT	0.56±20%	6.5	13.6	17.0	11.5	13.0
MWSA0624S-R68MT	0.68±20%	7	12.8	16.0	10.5	12.0
MWSA0624S-1R0MT	1.0±20%	13.5	12.0	15.0	8.00	9.00
MWSA0624S-1R5MT	1.5±20%	20	10.8	13.5	7.00	8.20
MWSA0624S-2R2MT	2.2±20%	28	8.00	10.0	6.20	7.00
MWSA0624S-3R3MT	3.3±20%	39	6.40	8.00	4.80	5.50
MWSA0624S-4R7MT	4.7±20%	50	5.20	6.50	4.30	5.00
MWSA0624S-6R8MT	6.8±20%	70	4.80	6.00	3.20	4.00
MWSA0624S-100MT	10±20%	101	3.20	4.00	2.40	3.10
MWSA0624S-150MT	15±20%	160	2.64	3.30	2.00	2.50
MWSA0624S-220MT	22±20%	230	2.00	2.50	1.60	2.00

SPECIFICATIONS MWSA0603S 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	
MWSA0603S-R10MT	0.10±20%	1.7	53.0	60.0	28.5	32.5
MWSA0603S-R12MT	0.12±20%	0.77±7%	30.0	40.0	32.0	38.0
MWSA0603S-R22MT	0.22±20%	3	27.2	34.0	21.0	24.0
MWSA0603S-R24MT	0.24±20%	3.1	22.4	28.0	18.4	23.0
MWSA0603S-R24MTY02	0.24±20%	1.19±7%	30.0	35.0	26.0	30.0
MWSA0603S-R33MT	0.33±20%	3.5	20.0	25.0	19.0	21.0
MWSA0603S-R47MT	0.47±20%	4.1	16.0	20.0	16.5	18.0
MWSA0603S-R56MT	0.56±20%	4.5	14.4	18.0	15.0	16.5
MWSA0603S-R68MT	0.68±20%	5.3	13.6	17.0	14.5	16.0
MWSA0603S-R82MT	0.82±20%	6.0	12.8	16.0	12.5	14.0
MWSA0603S-1R0MT	1.0±20%	7.4	12.0	15.0	10.5	12.0
MWSA0603S-1R5MT	1.5±20%	12.1	9.60	12.0	10.5	12.0
MWSA0603S-1R5MTB01	1.5±20%	11	-	14.0	-	10.5
MWSA0603S-1R8MT	1.8±20%	12.6	9.40	11.8	8.20	9.30
MWSA0603S-2R2MT	2.2±20%	15	8.00	10.0	8.50	9.50
MWSA0603S-3R3MT	3.3±20%	22	7.60	9.50	7.50	8.50
MWSA0603S-4R7MT	4.7±20%	33	7.20	9.00	5.00	6.00
MWSA0603S-5R6MT	5.6±20%	42	5.20	6.50	4.80	5.50
MWSA0603S-6R8MT	6.8±20%	48	4.80	6.00	4.20	5.00
MWSA0603S-8R2MT	8.2±20%	60	4.40	5.50	4.20	5.00
MWSA0603S-100MT	10±20%	68	4.40	5.50	3.80	4.50
MWSA0603S-150MT	15±20%	113	3.20	4.00	2.30	3.00
MWSA0603S-220MT	22±20%	170	2.40	3.00	2.00	2.50
MWSA0603S-330MT	33±20%	270	2.00	2.50	1.60	2.00
MWSA0603S-330MTB01	33±20%	210	2.00	2.50	1.70	2.20
MWSA0603S-470MT	47±20%	385	1.60	2.00	1.20	1.50

MWSA0605S 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	
MWSA0605S-R47MT	0.47±20%	3.9	16.8	21.0	17.0	20.0
MWSA0605S-R68MT	0.68±20%	4.5	14.4	18.0	14.5	16.5
MWSA0605S-1R0MT	1.0±20%	6.6	12.8	16.0	10.0	12.0
MWSA0605S-1R5MT	1.5±20%	10	10.4	13.0	8.20	9.50
MWSA0605S-2R2MT	2.2±20%	12.5	8.80	11.0	8.00	9.00
MWSA0605S-3R3MT	3.3±20%	22	8.00	10.0	7.60	8.50
MWSA0605S-4R7MT	4.7±20%	29	6.40	8.00	5.00	6.00
MWSA0605S-6R8MT	6.8±20%	41	5.04	6.30	4.00	5.80
MWSA0605S-8R2MT	8.2±20%	48	4.40	5.50	4.80	5.50
MWSA0605S-100MT	10±20%	60	4.24	5.30	3.80	4.50
MWSA0605S-150MT	15±20%	90	3.20	4.00	2.60	3.10
MWSA0605S-220MT	22±20%	140	2.80	3.50	2.00	2.60
MWSA0605S-330MT	33±20%	190	2.40	3.00	1.80	2.30
MWSA0605S-470MT	47±20%	230	2.08	2.60	1.50	2.00

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SPECIFICATIONS MWSA0804S 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	
MWSA0804S-R10MT	0.10±20%	1.6	68.0	72.0	35.0	40.0
MWSA0804S-R15MT	0.15±20%	1.65	65.0	70.0	33.0	39.0
MWSA0804S-R22MT	0.22±20%	1.8	55.0	60.0	30.0	36.0
MWSA0804S-R33MT	0.33±20%	2.4	40.0	45.0	25.0	30.0
MWSA0804S-R47MT	0.47±20%	2.8	36.0	42.0	25.0	28.0
MWSA0804S-R56MT	0.56±20%	3.2	23.0	26.0	22.0	24.0
MWSA0804S-R68MT	0.68±20%	3.8	22.0	24.0	21.0	23.0
MWSA0804S-R82MT	0.82±20%	4.4	19.0	21.0	19.0	21.0
MWSA0804S-1R0MT	1.0±20%	4.62	17.0	19.0	17.0	19.0
MWSA0804S-1R5MT	1.5±20%	7.6	15.0	17.0	15.0	17.0
MWSA0804S-1R8MT	1.8±20%	11	13.5	15.0	12.5	15.0
MWSA0804S-2R2MT	2.2±20%	11.4	12.0	14.0	12.0	14.0
MWSA0804S-3R3MT	3.3±20%	15	11.0	12.5	10.0	12.0
MWSA0804S-4R7MT	4.7±20%	26.5	10.5	11.5	8.50	9.50
MWSA0804S-5R6MT	5.6±20%	30	10.0	11.0	8.00	9.00
MWSA0804S-6R8MT	6.8±20%	36.8	8.00	9.00	7.00	8.00
MWSA0804S-8R2MT	8.2±20%	46	7.70	8.70	6.00	7.00
MWSA0804S-100MT	10±20%	59	7.00	8.00	5.50	6.50
MWSA0804S-150MT	15±20%	71	4.90	5.50	4.80	5.40
MWSA0804S-220MT	22±20%	113	4.50	5.00	4.20	4.80
MWSA0804S-330MT	33±20%	156	3.30	3.50	3.00	3.50
MWSA0804S-470MT	47±20%	225	2.90	3.10	2.50	2.90

MWSA1003S 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	
MWSA1003S-R22MT	0.22±20%	1.2	44.24	50.0	29.2	33.0
MWSA1003S-R33MT	0.33±20%	1.6	28.3	32.0	20.35	23.0
MWSA1003S-R36MT	0.36±20%	1.6	24.8	28.0	20.35	23.0
MWSA1003S-R47MT	0.47±20%	2.5	23.0	26.0	19.47	22.0
MWSA1003S-R82MT	0.82±20%	3.7	20.35	23.0	15.93	18.0
MWSA1003S-1R0MT	1.0±20%	6	18.58	21.0	13.27	15.0
MWSA1003S-1R5MT	1.5±20%	7.5	17.69	20.0	11.5	13.0
MWSA1003S-2R2MT	2.2±20%	9	12.38	14.0	9.73	11.0
MWSA1003S-3R3MT	3.3±20%	16	10.61	12.0	7.96	9.00
MWSA1003S-4R7MT	4.7±20%	22.5	8.84	10.0	6.19	7.00
MWSA1003S-8R2MT	8.2±20%	45	6.20	7.00	4.42	5.00
MWSA1003S-100MT	10±20%	55	5.75	6.50	3.98	4.50
MWSA1003S-150MT	15±20%	65	5.30	6.00	3.50	4.00
MWSA1003S-220MT	22±20%	99	4.40	5.00	2.65	3.00
MWSA1003S-330MT	33±20%	160	3.53	4.00	2.30	2.60

MWSA1004S 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	
MWSA1004S-R13MT	0.13±20%	0.52±5%	63.0	92.0	63.0	72.0
MWSA1004S-R15MT	0.15±20%	0.65	60.0	75.0	40.0	45.0
MWSA1004S-R22MT	0.22±20%	1	48.0	60.0	30.0	35.0

SPECIFICATIONS MWSA1004S 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	
MWSA1004S-R30MT	0.30±20%	1.1	36.0	45.0	30.0	35.0
MWSA1004S-R33MT	0.33±20%	1.15	36.0	45.0	28.0	32.0
MWSA1004S-R36MT	0.36±20%	1.2	36.0	45.0	25.0	30.0
MWSA1004S-R45MT	0.45±20%	1.5	34.0	43.0	25.0	30.0
MWSA1004S-R47MT	0.47±20%	1.7	32.0	40.0	25.0	30.0
MWSA1004S-R56MT	0.56±20%	1.8	26.4	33.0	20.0	25.0
MWSA1004S-R68MT	0.68±20%	2.4	24.0	30.0	19.0	23.0
MWSA1004S-R80MT	0.80±20%	2.7	23.2	29.0	19.0	23.0
MWSA1004S-1R0MT	1.0±20%	3.3	22.4	28.0	16.0	19.0
MWSA1004S-1R5MT	1.5±20%	4.2	19.2	24.0	14.0	16.0
MWSA1004S-1R8MT	1.8±20%	4.5	16.0	20.0	14.0	16.0
MWSA1004S-2R2MT	2.2±20%	7	13.2	16.5	10.0	12.0
MWSA1004S-3R3MT	3.3±20%	11.8	12.8	16.0	9.50	11.0
MWSA1004S-4R7MT	4.7±20%	20	10.4	13.0	7.50	9.00
MWSA1004S-6R8MT	6.8±20%	25	9.60	12.0	7.00	8.50
MWSA1004S-8R2MT	8.2±20%	27	7.20	9.00	6.80	8.00
MWSA1004S-100MT	10±20%	30	6.80	8.50	6.90	7.80
MWSA1004S-150MT	15±20%	45	5.60	7.00	5.60	6.50
MWSA1004S-220MT	22±20%	66	4.40	5.50	4.20	5.00
MWSA1004S-330MT	33±20%	92	3.84	4.80	3.80	4.40
MWSA1004S-470MT	47±20%	145	3.10	3.50	2.80	3.30
MWSA1004S-680MT	68±20%	195	2.40	3.00	2.00	2.50
MWSA1004S-820MT	82±20%	285	2.30	2.80	2.10	2.30
MWSA1004S-101MT	100±20%	340	2.10	2.30	1.80	2.00

MWSA1005S 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	
MWSA1005S-R22MT	0.22±20%	0.8	57.5	65.0	32.5	37.0
MWSA1005S-R68MT	0.68±20%	1.95	34.0	37.0	21.0	23.0
MWSA1005S-1R0MT	1.0±20%	3	28.0	30.0	20.3	23.0
MWSA1005S-1R5MT	1.5±20%	3.8	22.0	25.0	18.5	21.0
MWSA1005S-2R2MT	2.2±20%	6	16.8	19.0	13.2	15.0
MWSA1005S-3R3MT	3.3±20%	10	14.0	16.0	11.5	13.0
MWSA1005S-4R7MT	4.7±20%	14	13.2	15.0	9.70	11.0
MWSA1005S-5R6MT	5.6±20%	17	12.3	14.0	8.50	9.50
MWSA1005S-6R8MT	6.8±20%	18.5	12.3	14.0	8.00	9.00
MWSA1005S-100MT	10±20%	28	8.80	10.0	7.00	8.00
MWSA1005S-150MT	15±20%	42	6.50	7.50	5.70	6.50
MWSA1005S-220MT	22±20%	50	5.30	6.00	5.00	5.50
MWSA1005S-330MT	33±20%	86	4.60	5.20	4.20	4.80
MWSA1005S-470MT	47±20%	127	4.00	4.50	3.20	3.70
MWSA1005S-680MT	68±20%	185	2.80	3.20	2.40	2.70
MWSA1005S-820MT	82±20%	280	3.00	3.50	1.70	2.00
MWSA1005S-101MT	100±20%	290	2.50	2.80	1.80	2.10

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SPECIFICATIONS

MWSA1204S 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	
MWSA1204S-R22MT	0.22±20%	0.9	40.0	50.0	38.0	42.0
MWSA1204S-R47MT	0.47±20%	2	38.4	48.0	29.0	33.0
MWSA1204S-R68MT	0.68±20%	3.5	37.6	47.0	24.0	28.0
MWSA1204S-R82MT	0.82±20%	4.5	32.0	40.0	24.0	28.0
MWSA1204S-1R0MT	1.0±20%	7.5	28.0	35.0	20.0	24.0
MWSA1204S-1R5MT	1.5±20%	9.5	24.4	30.5	17.0	20.0
MWSA1204S-2R2MT	2.2±20%	11.5	20.8	26.0	15.0	18.0
MWSA1204S-3R3MT	3.3±20%	13	16.8	21.0	13.0	15.0
MWSA1204S-4R7MT	4.7±20%	14.5	14.4	18.0	11.0	13.0
MWSA1204S-6R8MT	6.8±20%	20	11.2	14.0	8.00	9.00
MWSA1204S-100MT	10±20%	25	8.00	10.0	7.00	8.00
MWSA1204S-150MT	15±20%	39	6.00	7.50	5.80	6.50
MWSA1204S-220MT	22±20%	51	4.80	6.00	3.80	4.50

MWSA1205S 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	
MWSA1205S-R22MT	0.22±20%	0.7	60.0	75.0	45.0	50.0
MWSA1205S-R36MT	0.36±20%	0.85	40.0	50.0	37.0	42.0
MWSA1205S-R50MT	0.50±20%	1.15	38.4	48.0	33.0	38.0
MWSA1205S-R68MT	0.68±20%	1.55	36.8	46.0	29.0	33.0
MWSA1205S-R82MT	0.82±20%	1.67	31.2	39.0	26.0	30.0
MWSA1205S-1R0MT	1.0±20%	2.2	28.0	35.0	22.0	26.0
MWSA1205S-1R5MT	1.5±20%	3.2	26.4	33.0	19.0	23.0
MWSA1205S-2R2MT	2.2±20%	5	19.2	24.0	13.0	15.0
MWSA1205S-3R3MT	3.3±20%	7	17.6	22.0	12.0	14.0
MWSA1205S-4R7MT	4.7±20%	9	16.0	20.0	11.0	13.0
MWSA1205S-6R8MT	6.8±20%	18	12.8	16.0	10.0	12.0
MWSA1205S-100MT	10±20%	22	9.60	12.0	8.00	9.00
MWSA1205S-150MT	15±20%	30	8.00	10.0	7.00	8.00
MWSA1205S-220MT	22±20%	58	5.20	6.50	3.80	4.50
MWSA1205S-330MT	33±20%	84	4.80	6.00	2.80	3.50
MWSA1205S-330MTY01	33±20%	63	4.80	6.00	2.80	3.50
MWSA1205S-470MT	47±20%	130	4.00	5.00	2.60	3.00

MWSA1206S 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	
MWSA1206S-1R5MT	1.5±20%	2.9	27.0	30.0	23.0	27.0
MWSA1206S-2R2MT	2.2±20%	4.2	24.0	28.0	18.0	22.0
MWSA1206S-3R3MT	3.3±20%	6.8	21.0	25.0	14.0	17.0
MWSA1206S-4R7MT	4.7±20%	9	19.2	24.0	12.0	15.0
MWSA1206S-5R6MT	5.6±20%	11	18.0	22.5	11.0	13.0
MWSA1206S-6R8MT	6.8±20%	13.5	15.2	19.0	10.0	12.0
MWSA1206S-8R2MT	8.2±20%	16	10.8	13.5	9.00	11.0

SPECIFICATIONS

MWSA1206S 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	
MWSA1206S-100MT	10±20%	20.7	11.1	12.5	8.50	10.0
MWSA1206S-120MT	12±20%	23	8.00	10.0	7.80	9.00
MWSA1206S-150MT	15±20%	29	7.20	9.00	7.50	8.50
MWSA1206S-180MT	18±20%	35	6.40	8.00	6.50	7.50
MWSA1206S-220MT	22±20%	39.5	6.00	7.50	6.00	7.00
MWSA1206S-270MT	27±20%	56	5.20	6.50	5.00	6.00
MWSA1206S-330MT	33±20%	75	4.80	6.00	4.80	5.50
MWSA1206S-470MT	47±20%	90	4.40	5.50	4.20	5.00
MWSA1206S-680MT	68±20%	140	3.60	4.50	3.20	4.00
MWSA1206S-101MT	100±20%	200	2.80	3.50	2.50	3.00
MWSA1206S-121MT	120±20%	235	2.56	3.20	1.70	2.00
MWSA1206S-151MT	150±20%	350	2.16	2.70	1.20	1.50

MWSA1265S 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	
MWSA1265S-4R7MT	4.7±20%	8.5	-	24.0	-	16.0
MWSA1265S-5R6MT	5.6±20%	10.5	-	22.5	-	14.0
MWSA1265S-6R8MT	6.8±20%	12	-	19.0	-	13.0
MWSA1265S-8R2MT	8.2±20%	14	-	16.0	-	12.0
MWSA1265S-100MT	10±20%	16.5	-	15.0	-	11.0
MWSA1265S-150MT	15±20%	26	-	11.0	-	9.50
MWSA1265S-220MT	22±20%	36	-	9.00	-	8.00
MWSA1265S-330MT	33±20%	65	-	8.00	-	6.50
MWSA1265S-470MT	47±20%	70	-	6.80	-	5.50
MWSA1265S-470MTB01	47±20%	67	-	7.60	-	8.00
MWSA1265S-680MT	68±20%	120	-	5.20	-	4.80
MWSA1265S-820MT	82±20%	135	-	4.50	-	4.00
MWSA1265S-101MT	100±20%	170	-	4.00	-	3.50

MWSA1707S 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	
MWSA1707S-1R5MT	1.5±20%	2.1	35.0	40.0	29.0	33.0
MWSA1707S-2R2MT	2.2±20%	2.5	30.0	34.0	25.5	29.0
MWSA1707S-3R3MT	3.3±20%	3.95	26.0	30.0	21.0	24.0
MWSA1707S-4R7MT	4.7±20%	4.75	21.0	24.0	18.5	21.0
MWSA1707S-6R8MT	6.8±20%	7.5	19.5	22.0	15.0	17.0
MWSA1707S-8R2MT	8.2±20%	8.7	17.5	20.0	11.5	13.0
MWSA1707S-100MT	10±20%	9.9	16.5	19.0	10.5	12.0
MWSA1707S-150MT	15±20%	17	12.5	14.5	9.50	11.0
MWSA1707S-220MT	22±20%	23	10.0	11.5	7.50	8.50
MWSA1707S-330MT	33±20%	37	8.50	10.0	7.00	8.00
MWSA1707S-470MT	47±20%	47	6.50	7.50	5.30	6.00
MWSA1707S-560MT	56±20%	66	6.30	7.20	5.10	5.80
MWSA1707S-680MT	68±20%	85	5.50	6.50	4.50	5.20
MWSA1707S-820MT	82±20%	110	5.30	6.00	4.00	4.50
MWSA1707S-101MT	100±20%	130	4.40	5.00	3.20	3.70

MWSA2213 Series

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SPECIFICATIONS

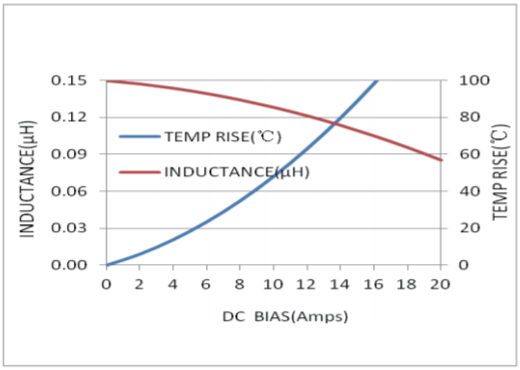
Part Number	Inductance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V	Max.	Max.	Typ.	Max.	Typ.
Units	μH	mΩ	A		A	
Symbol	L	DCR	Isat		Irms	
MWSA2213S-1R0MT	1.0±20%	0.95	54.0	60.0	65.0	70.0
MWSA2213S-1R5MT	1.5±20%	1.15	48.0	52.0	57.0	62.0
MWSA2213S-2R2MT	2.2±20%	1.25	43.0	48.0	52.0	58.0
MWSA2213S-3R3MT	3.3±20%	1.75	37.0	41.0	47.0	49.0
MWSA2213S-4R7MT	4.7±20%	2.2	34.0	38.0	44.0	47.0
MWSA2213S-6R8MT	6.8±20%	3.1	32.0	36.0	36.0	40.0
MWSA2213S-100MT	10±20%	4.15	20.0	28.0	30.0	33.0
MWSA2213S-150MT	15±20%	6.12	18.0	23.0	23.0	26.0
MWSA2213S-220MT	22±20%	11	14.0	15.0	18.0	22.0
MWSA2213S-330MT	33±20%	15.4	10.5	12.0	16.0	19.0
MWSA2213S-470MT	47±20%	20.8	10.0	12.0	14.0	17.0
MWSA2213S-680MT	68±20%	29.5	9.00	12.0	12.0	14.0
MWSA2213S-820MT	82±20%	34.2	7.70	9.00	10.0	12.0
MWSA2213S-101MT	100±20%	40	7.50	9.00	9.50	11.0

※1: All test data is referenced to 20°C ambient;
※2: Rated current: Isat or Irms, whichever is smaller;
※3: Isat(Typ): DC current at which the inductance drops approximate 30% from its value without current;
※4: Isat(Max): DC current at which the inductance drops approximate 30% from its value without current;
※5: Irms(Typ): DC current that causes the temperature rise (ΔT=40°C) from 20°C ambient.
※6: Irms(Max): DC current that causes the temperature rise (ΔT=20°C) from 20°C ambient.
※7: Absolute maximum voltage 30VDC

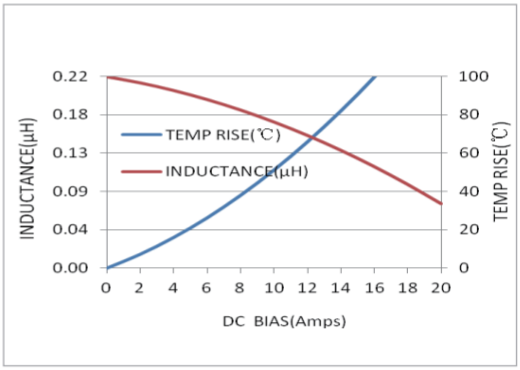
TYPICAL ELECTRICAL CHARACTERISTICS

MWSA0412S Series

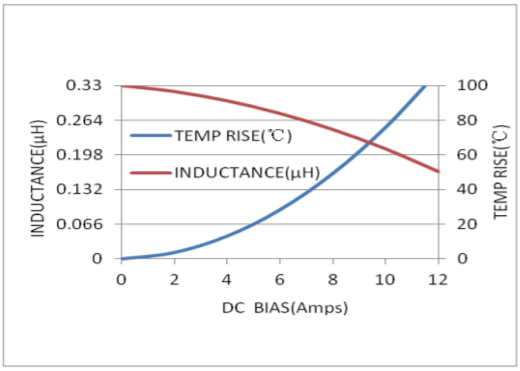
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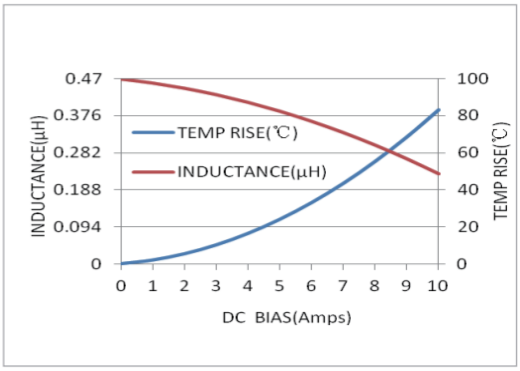
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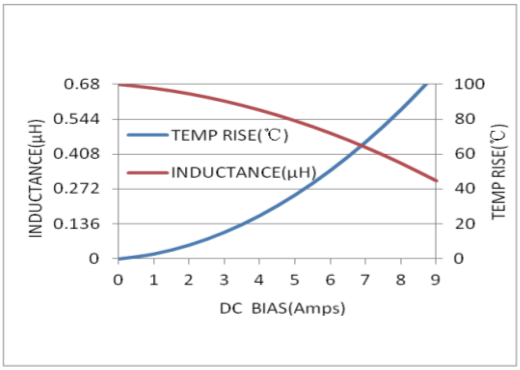
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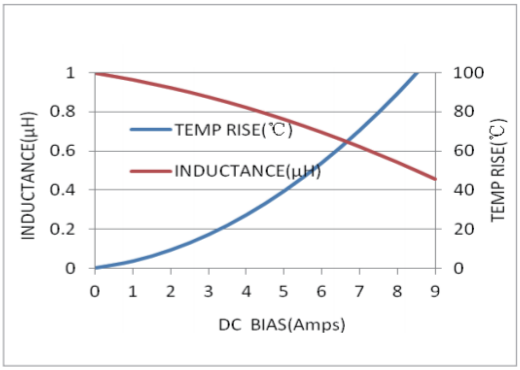
TYPICAL ELECTRICAL CHARACTERISTICS

MWSA0412S Series

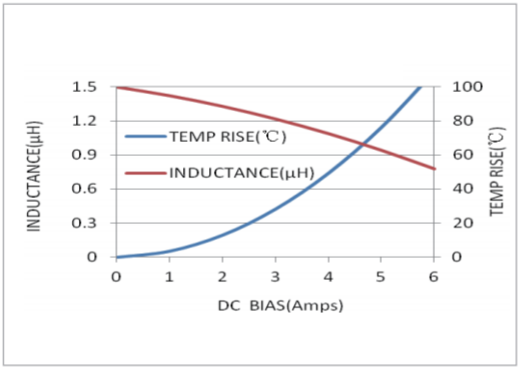
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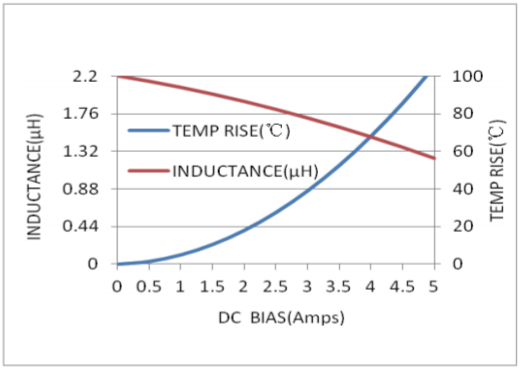
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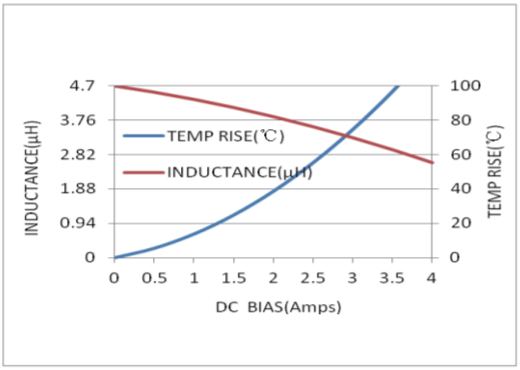
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MWSA0412S-2R2MT

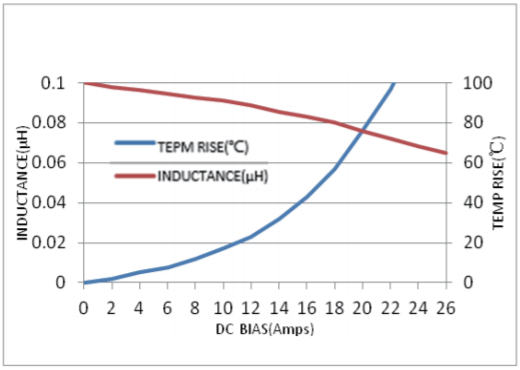


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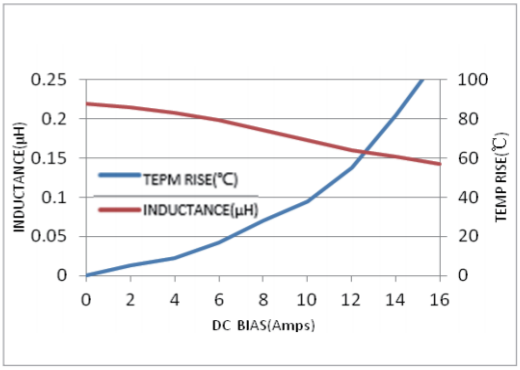


MWSA0402S Series

MWSA0402S-R10MT



MWSA0402S-R22MT

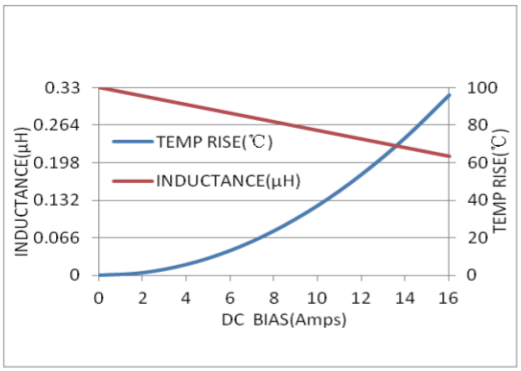


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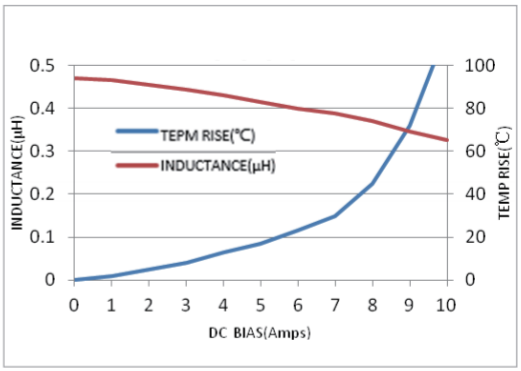
TYPICAL ELECTRICAL CHARACTERISTICS

MWSA0402S Series

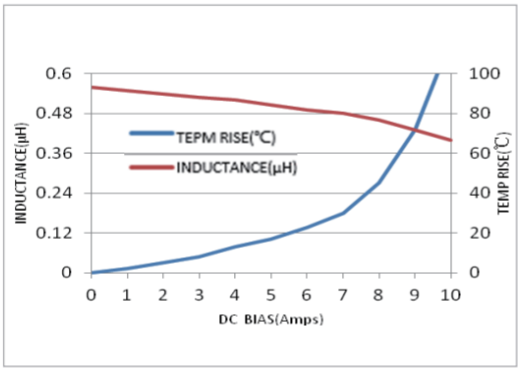
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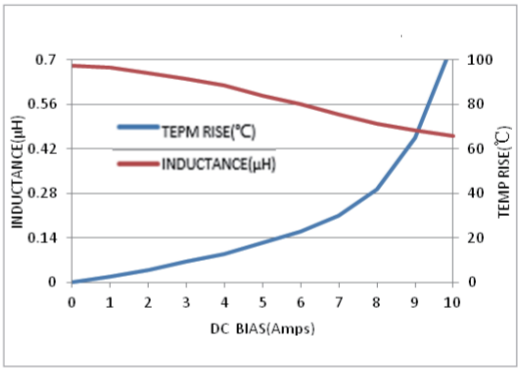
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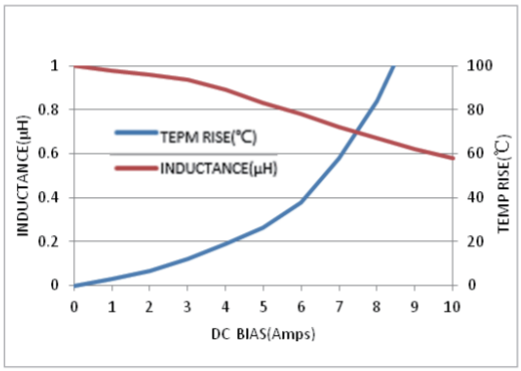
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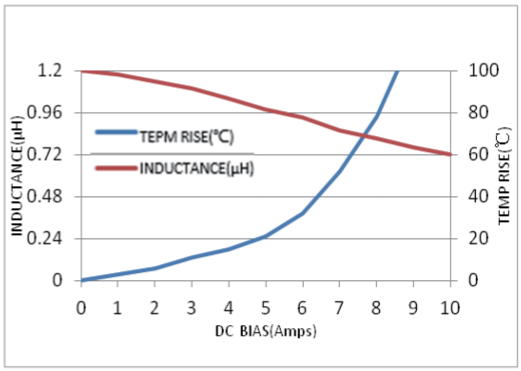
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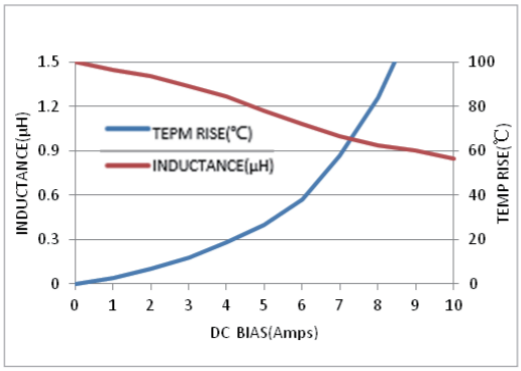
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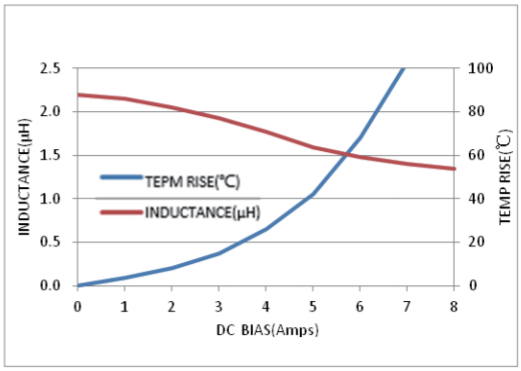
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MWSA0402S-1R5MT



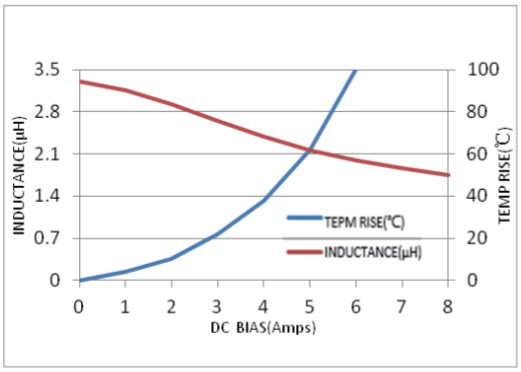
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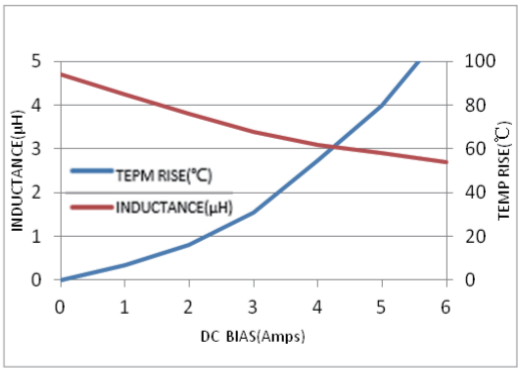
TYPICAL ELECTRICAL CHARACTERISTICS

MWSA0402S Series

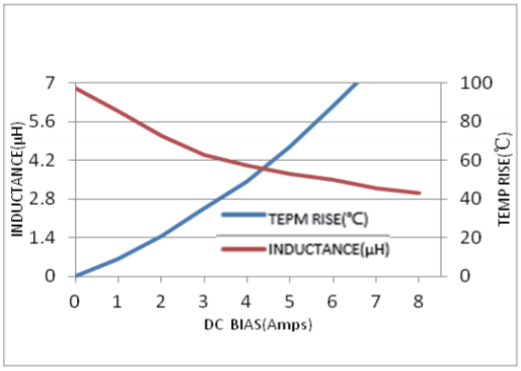
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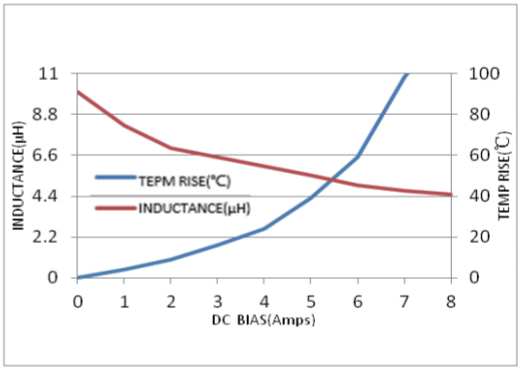
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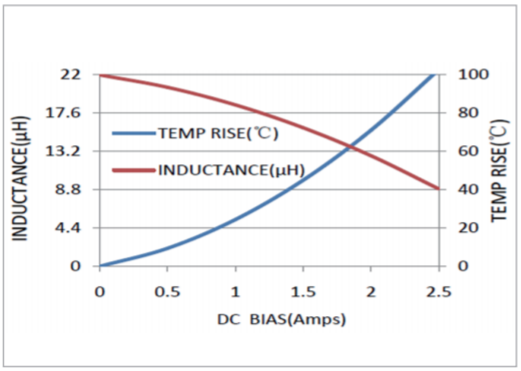
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MWSA0402S-100MT

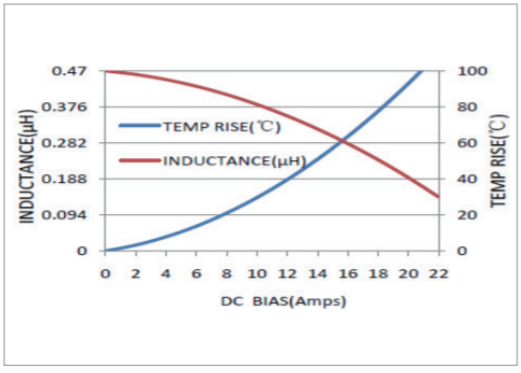


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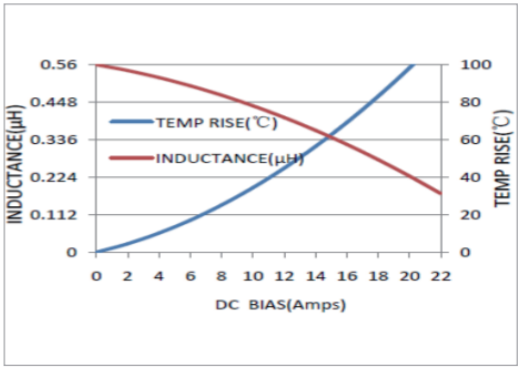


MWSA0518S Series

MWSA0518S-R47MT



MWSA0518S-R56MT

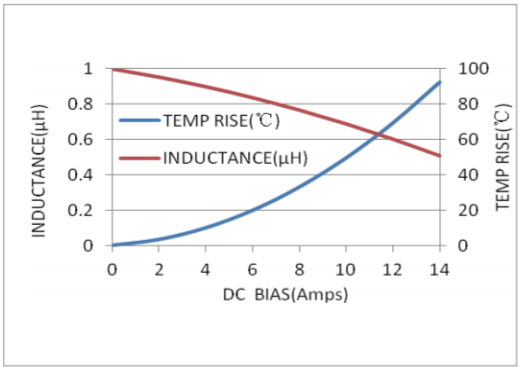


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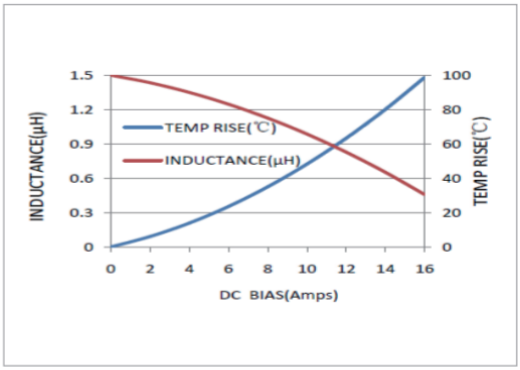
TYPICAL ELECTRICAL CHARACTERISTICS

MWSA0518S Series

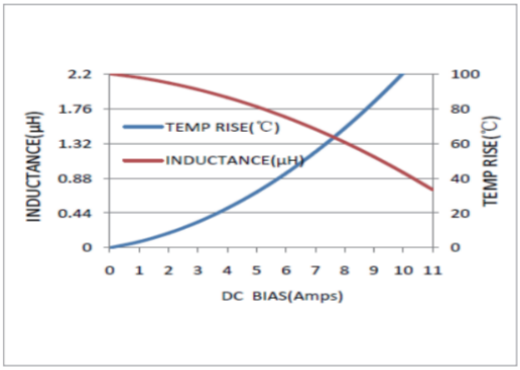
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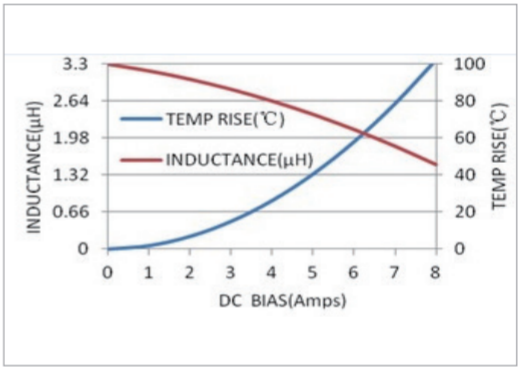
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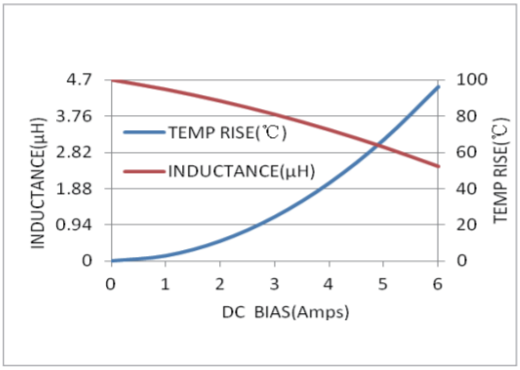
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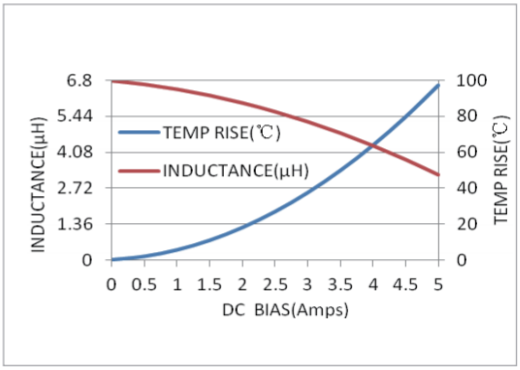
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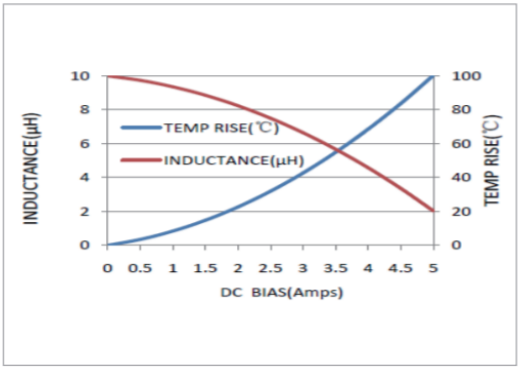
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MWSA0518S-6R8MT



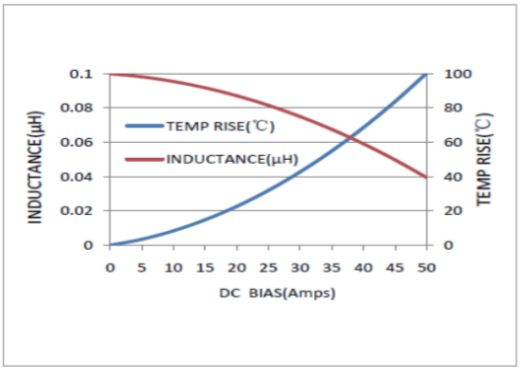
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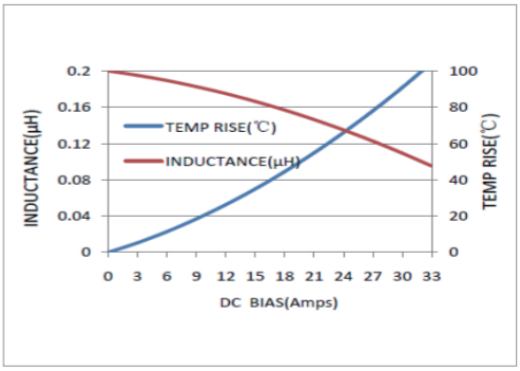
TYPICAL ELECTRICAL CHARACTERISTICS

MWSA0503S Series

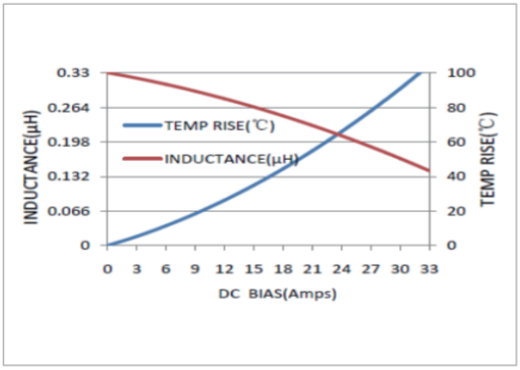
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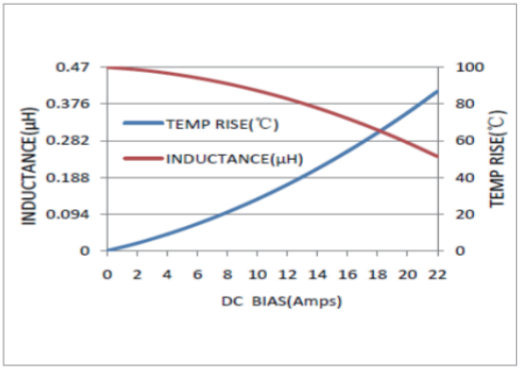
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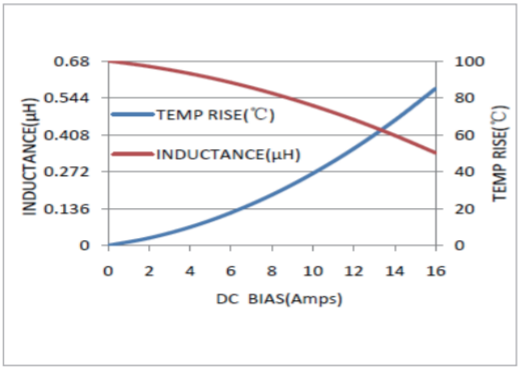
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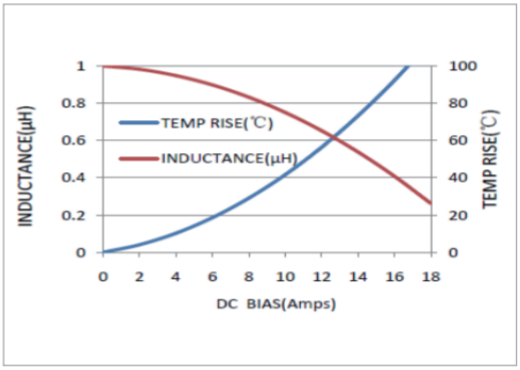
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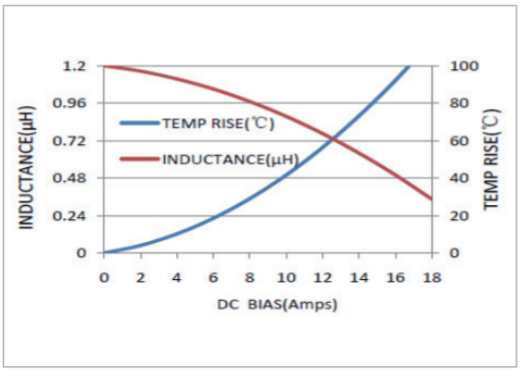
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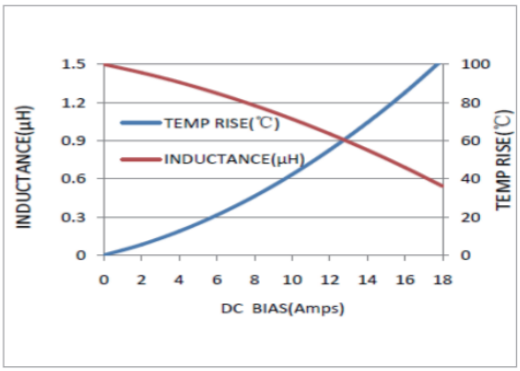
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MWSA0503S-1R2MT



MWSA0503S-1R5MT

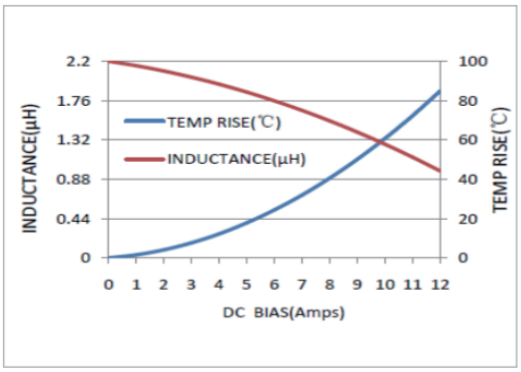


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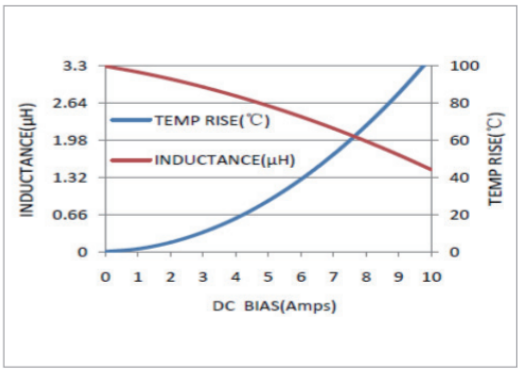
TYPICAL ELECTRICAL CHARACTERISTICS

MWSA0503S Series

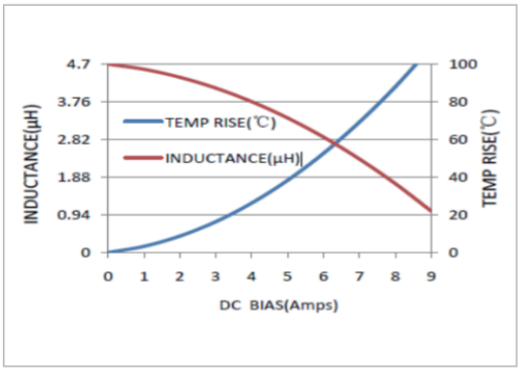
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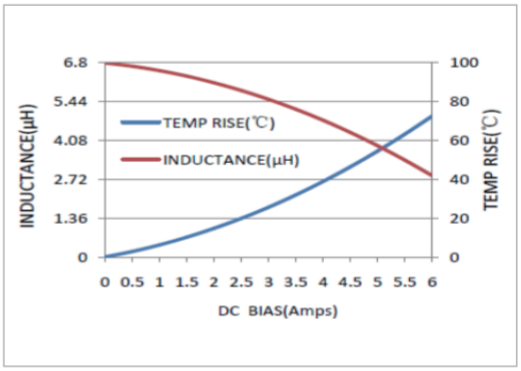
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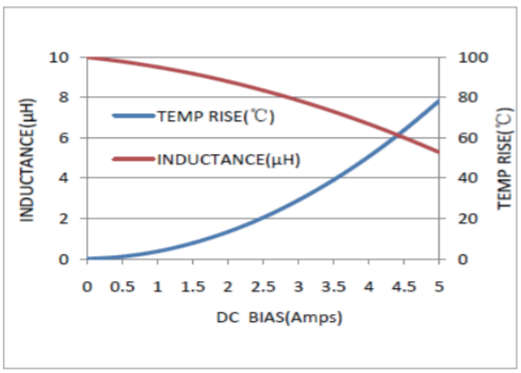
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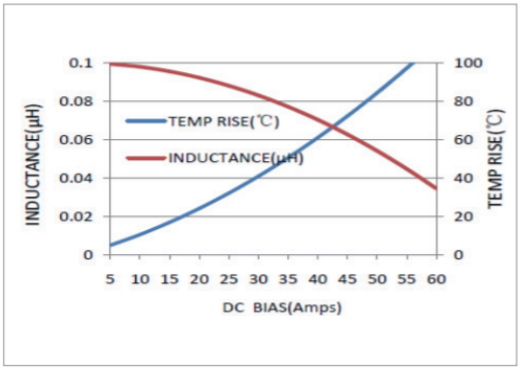


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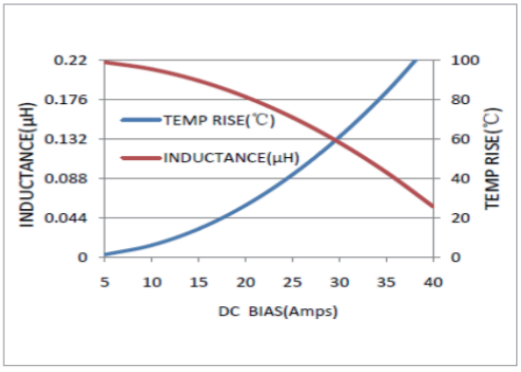


MWSA0618S Series

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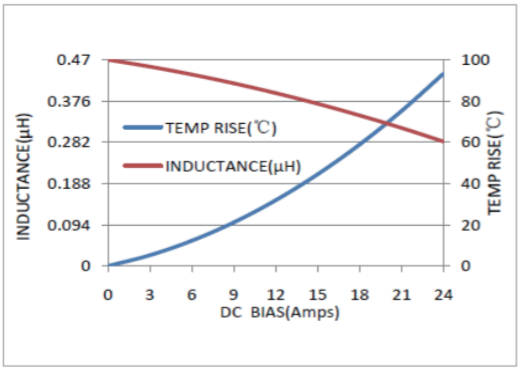
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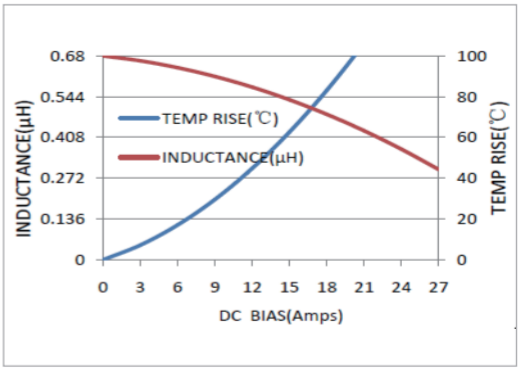
TYPICAL ELECTRICAL CHARACTERISTICS

MWSA0618S Series

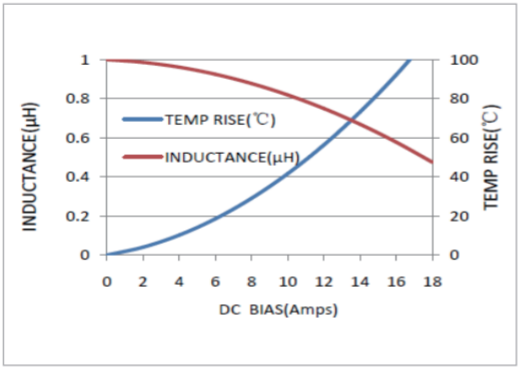
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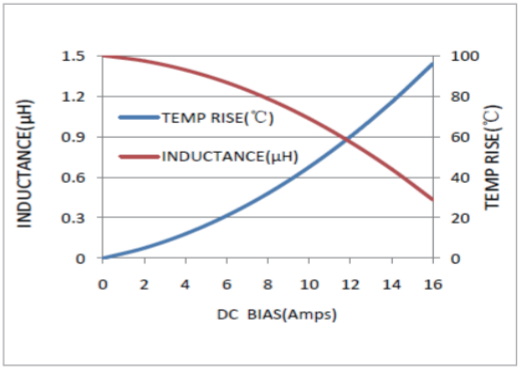
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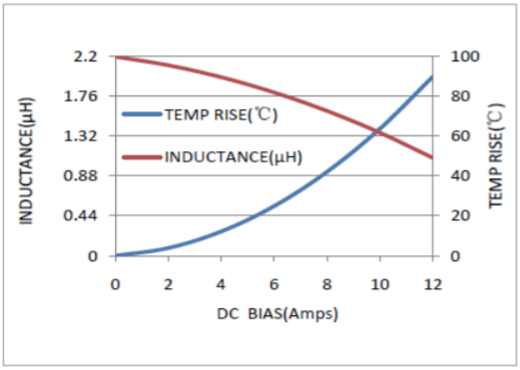
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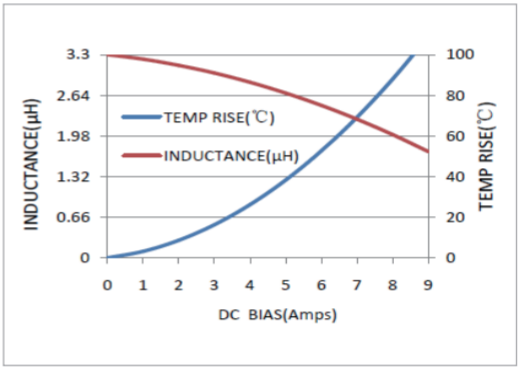
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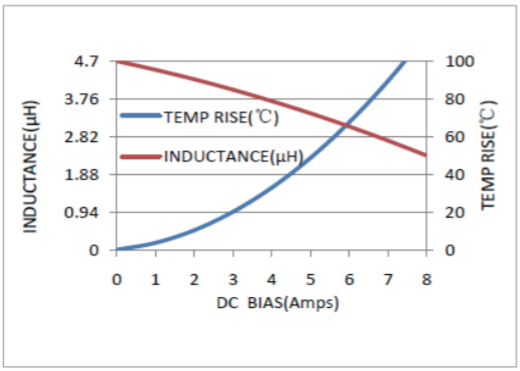
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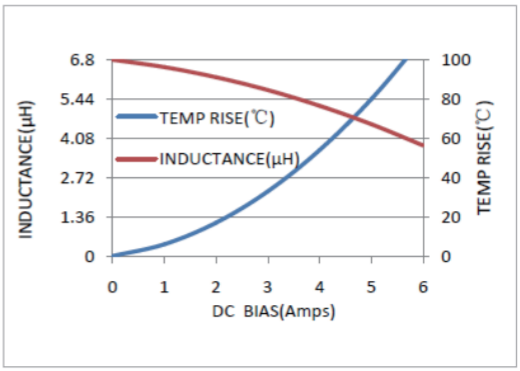
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MWSA0618S-4R7MT



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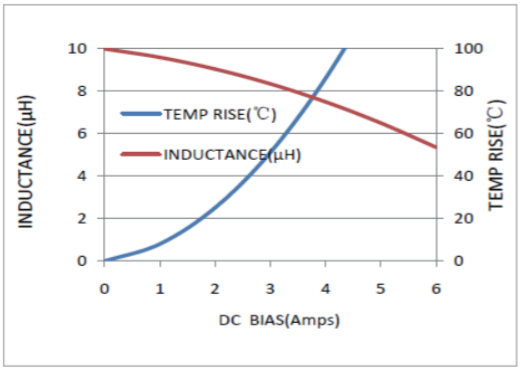


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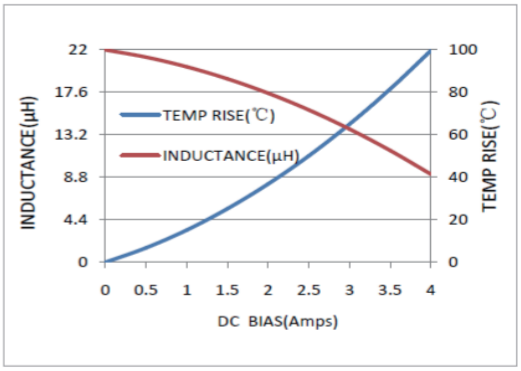
TYPICAL ELECTRICAL CHARACTERISTICS

MWSA0618S Series

MWSA0618S-100MT

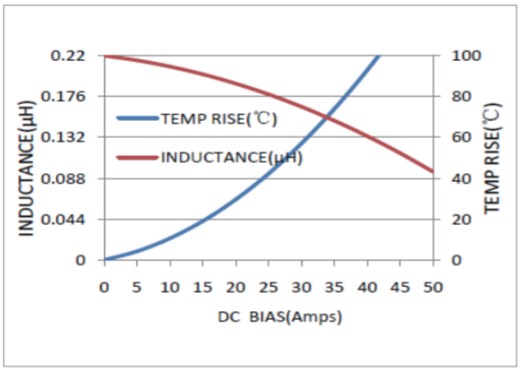


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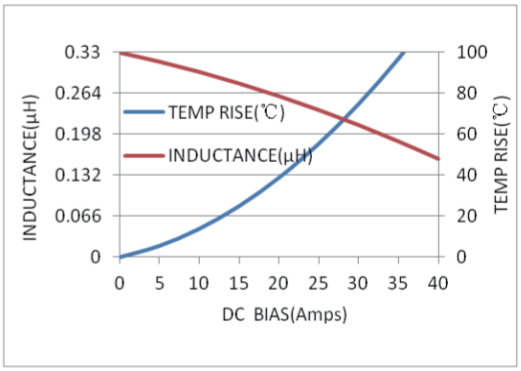


MWSA0624S Series

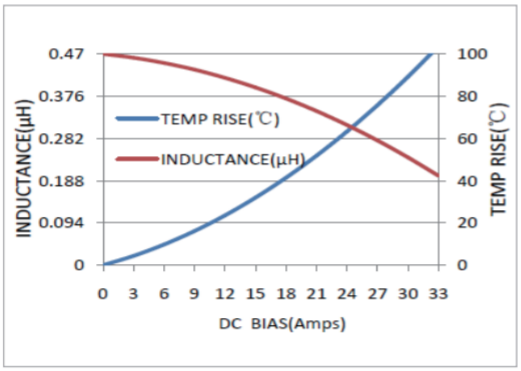
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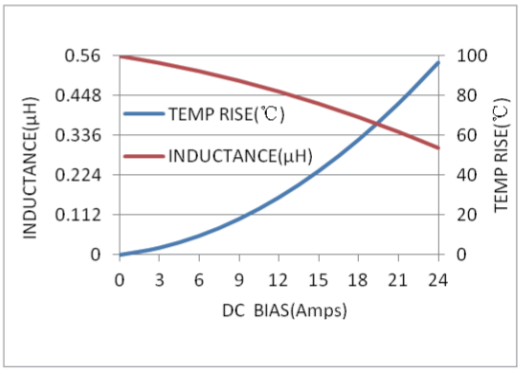
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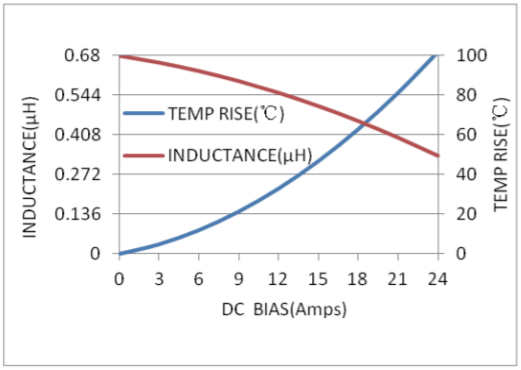
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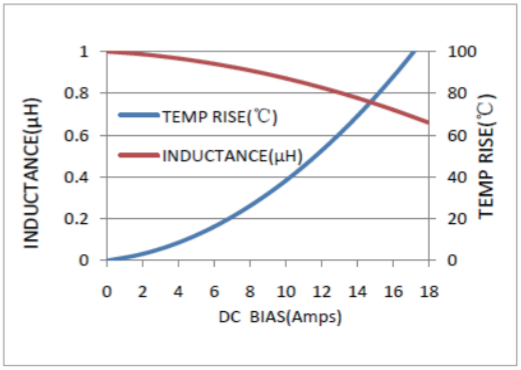
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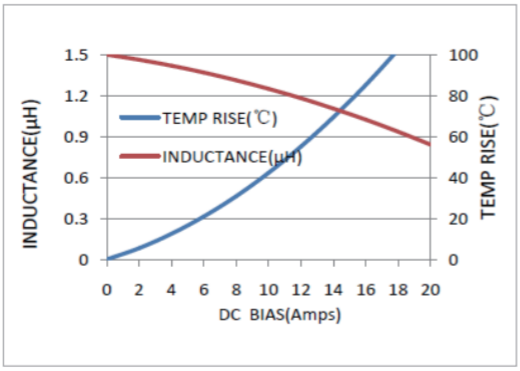
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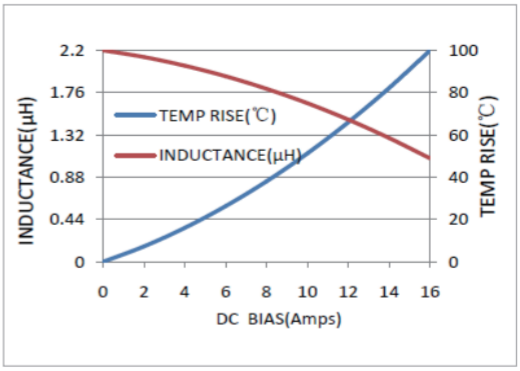
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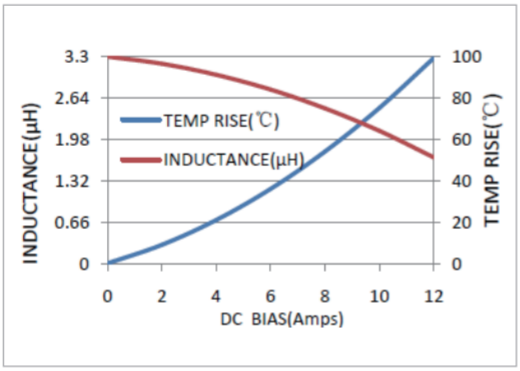
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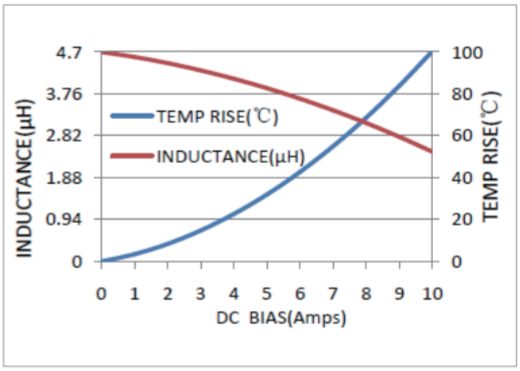
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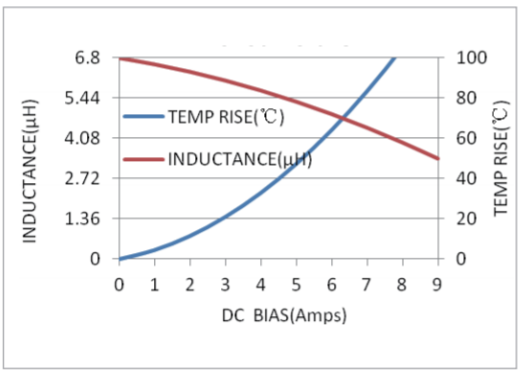
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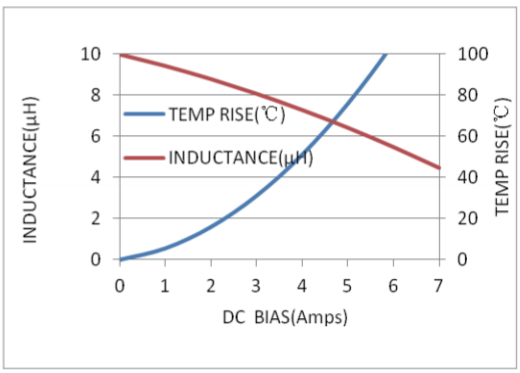
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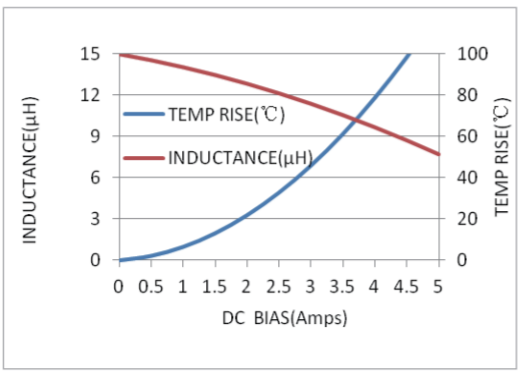
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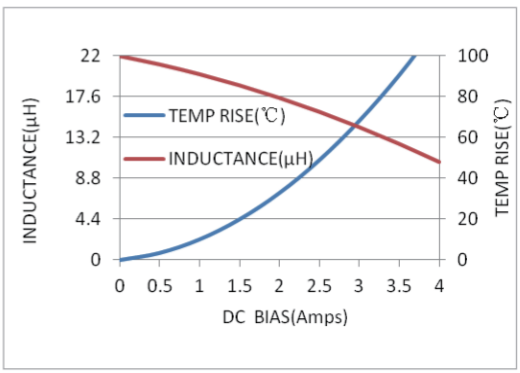
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MWSA0624S-150MT



MWSA0624S-220MT

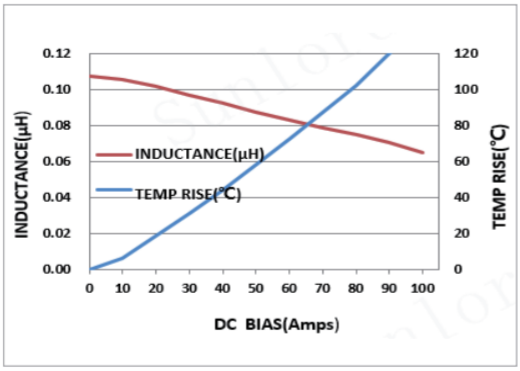


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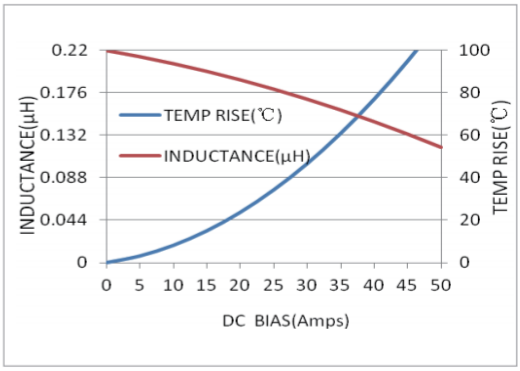
TYPICAL ELECTRICAL CHARACTERISTICS

MWSA0603S Series

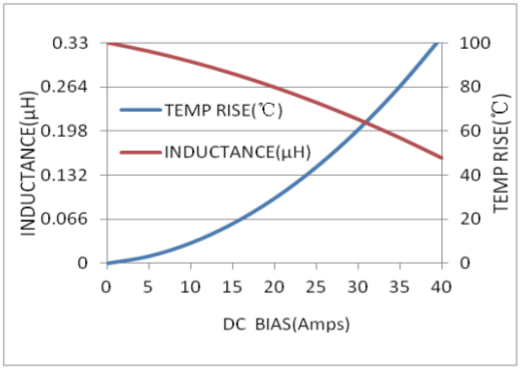
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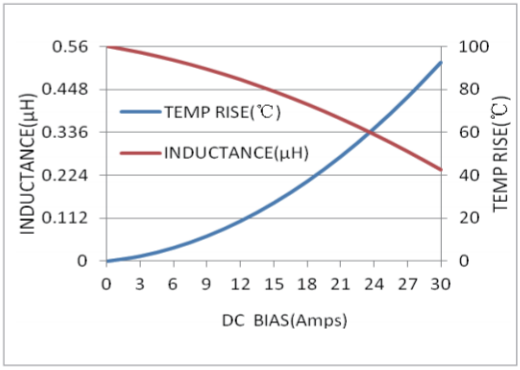
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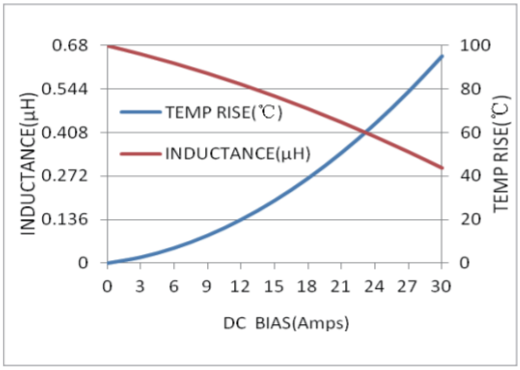
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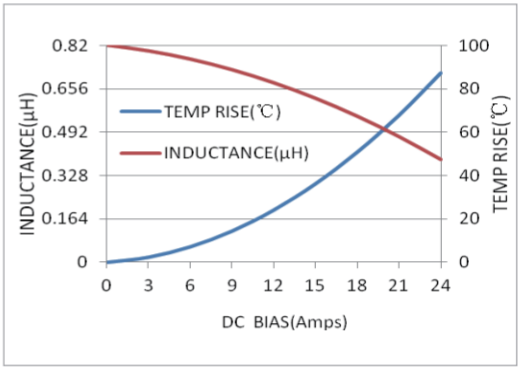
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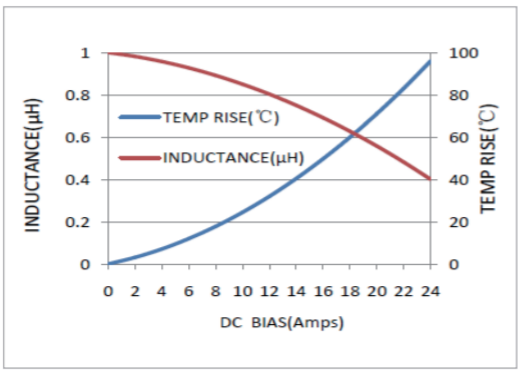
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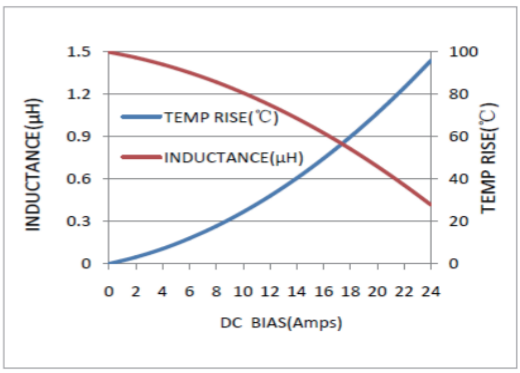
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MWSA0603S-1R0MT



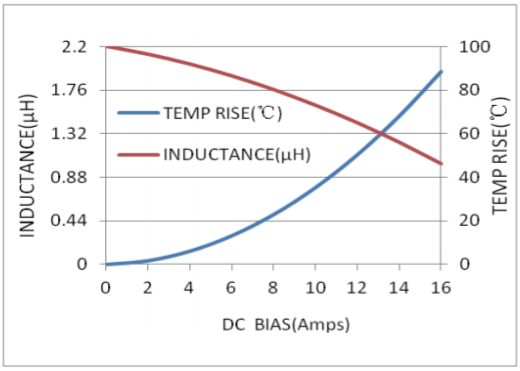
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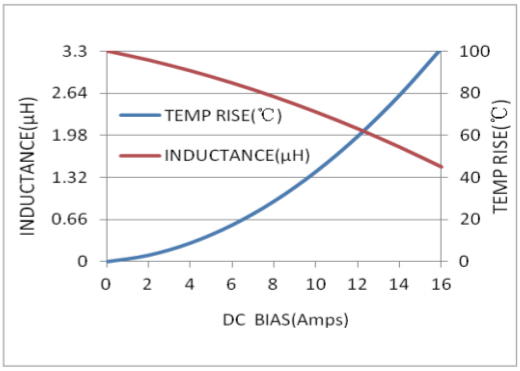
TYPICAL ELECTRICAL CHARACTERISTICS

MWSA0603S Series

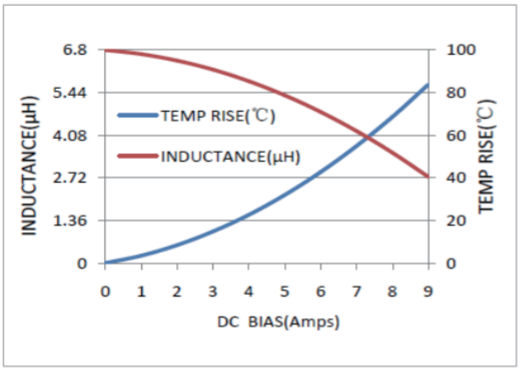
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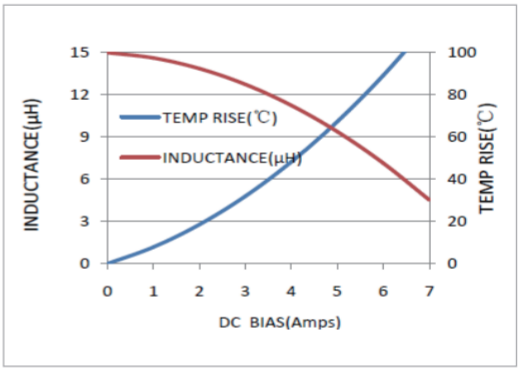
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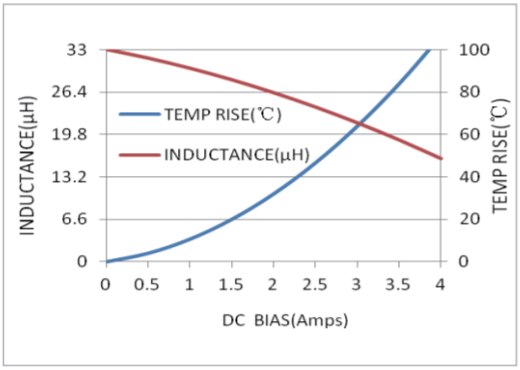
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MWSA0603S-150MT

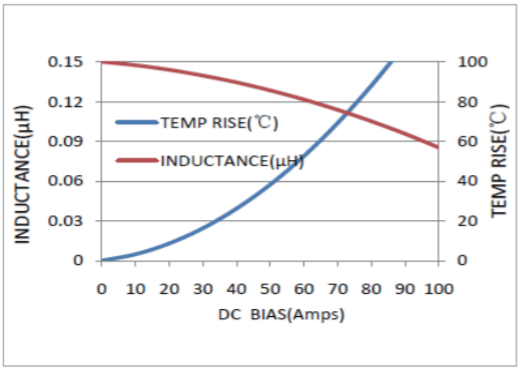


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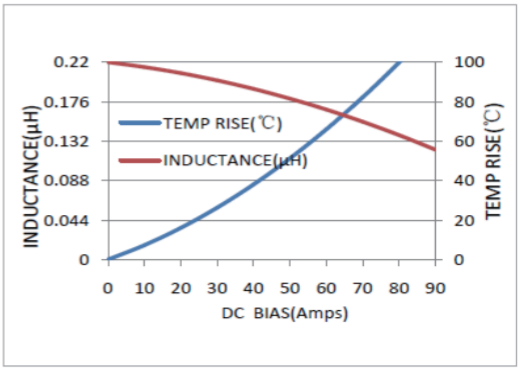


MWSA1004S Series

MWSA1004S-R15MT



MWSA1004S-R22MT

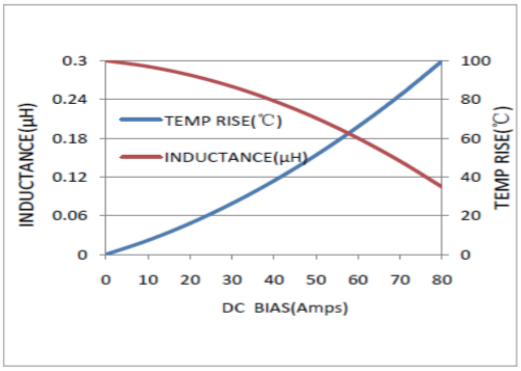


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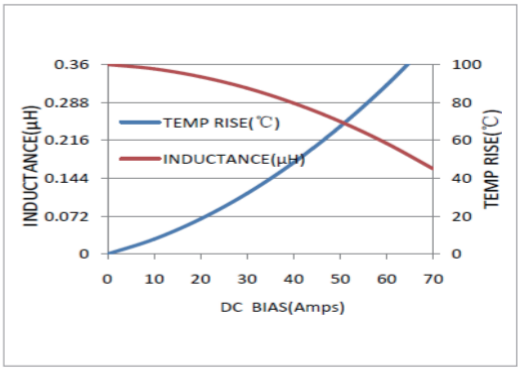
TYPICAL ELECTRICAL CHARACTERISTICS

MWSA1004S Series

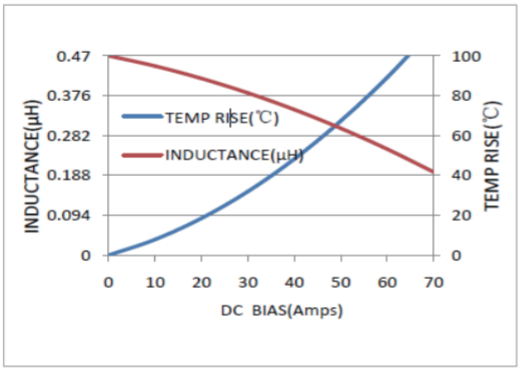
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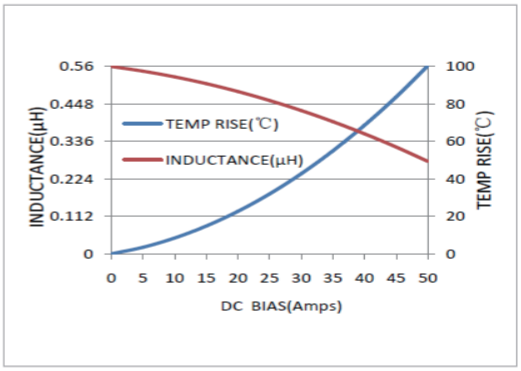
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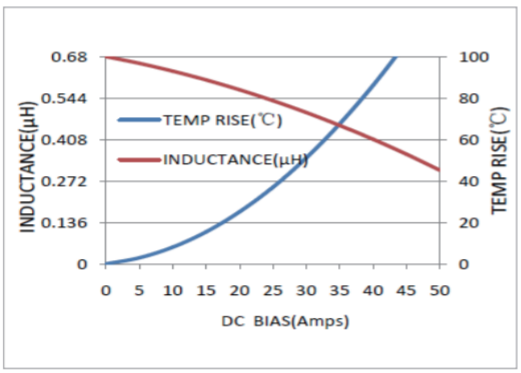
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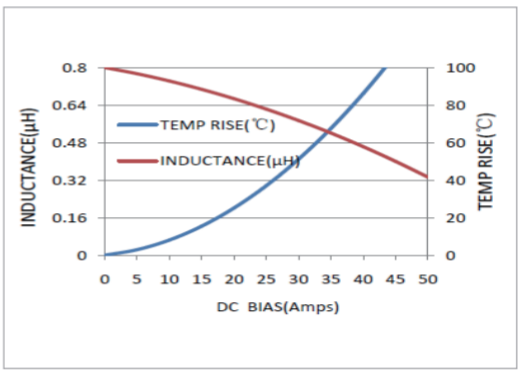
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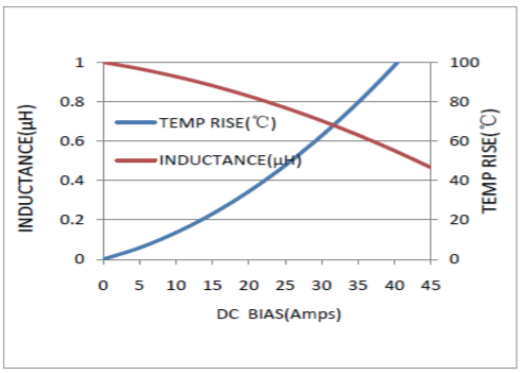
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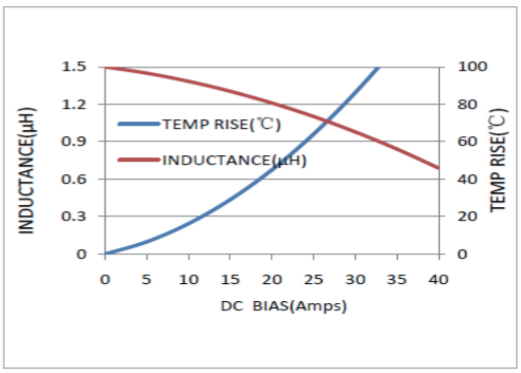
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MWSA1004S-1R0MT



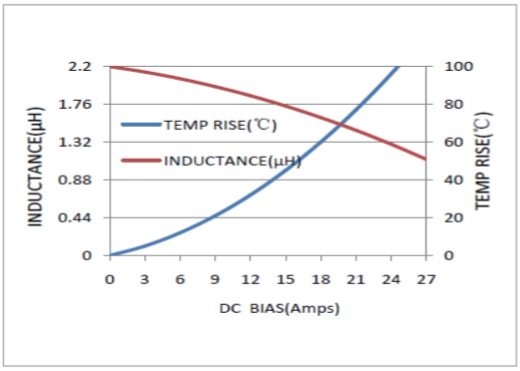
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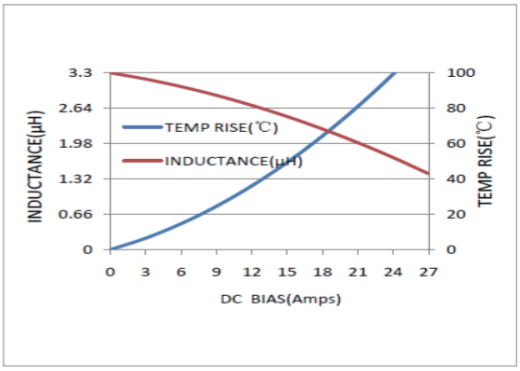
TYPICAL ELECTRICAL CHARACTERISTICS

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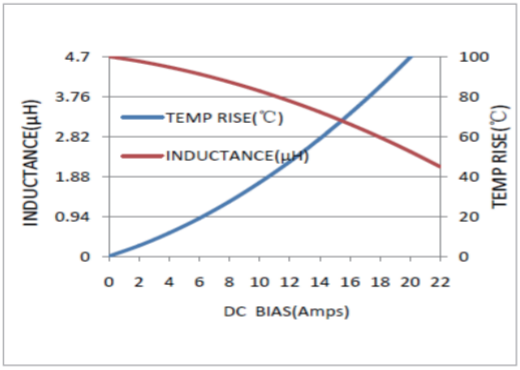
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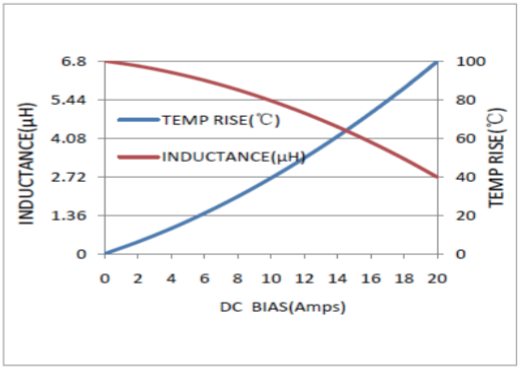
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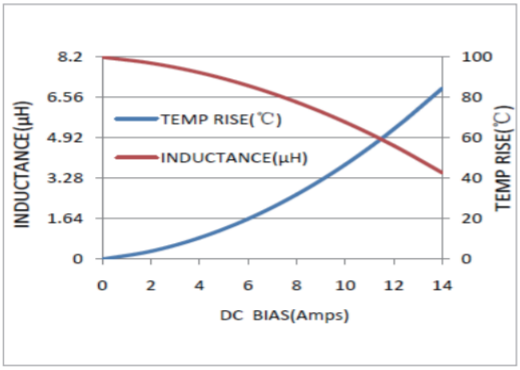
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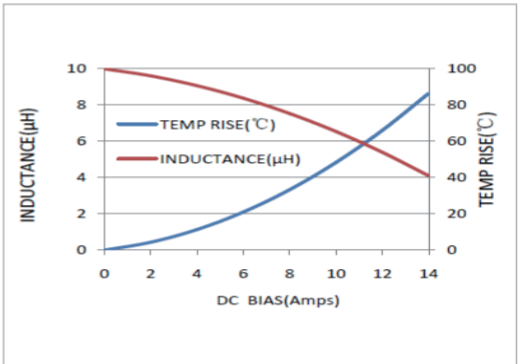
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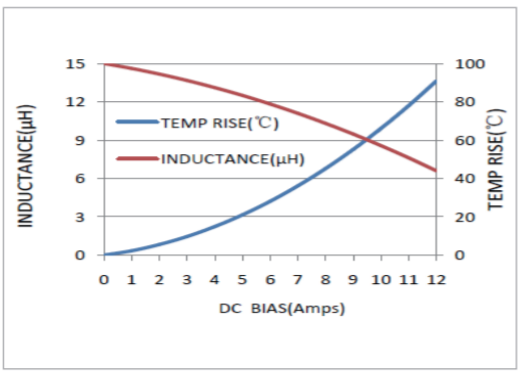
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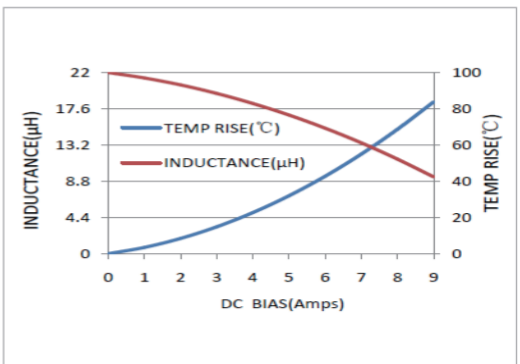
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MWSA1004S-150MT



MWSA1004S-220MT

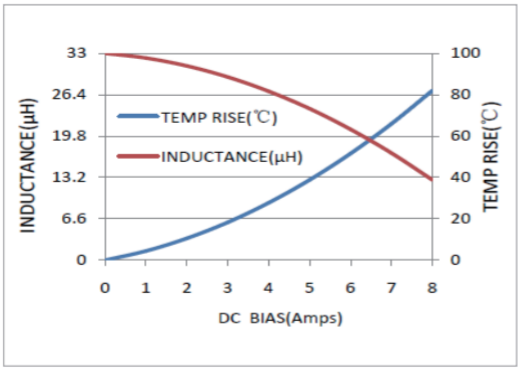


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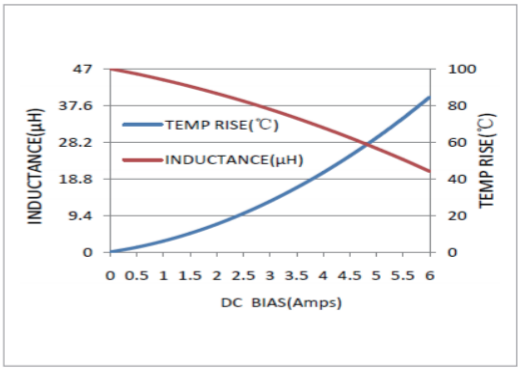
TYPICAL ELECTRICAL CHARACTERISTICS

MWSA1004S Series

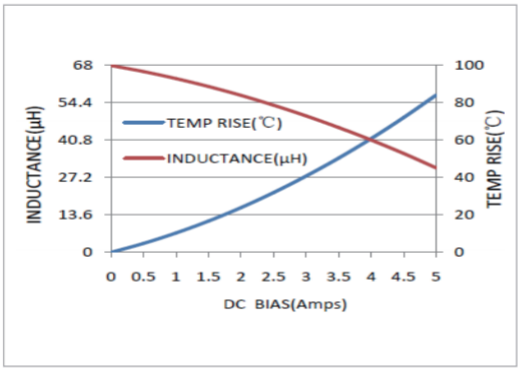
MWSA1004S-330MT



MWSA1004S-470MT

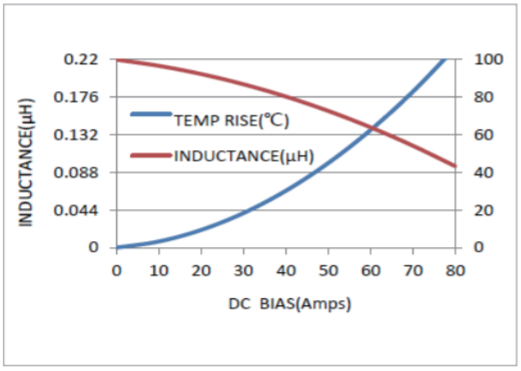


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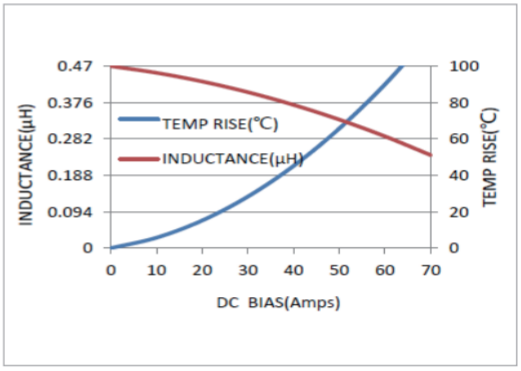


MWSA1204S Series

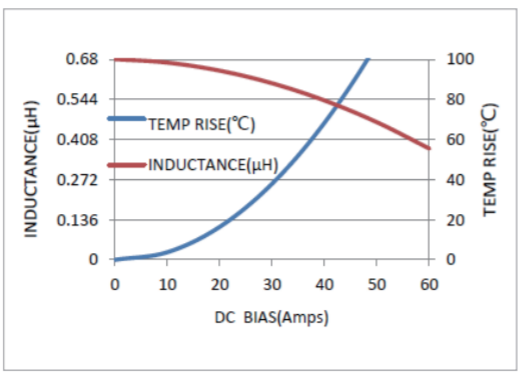
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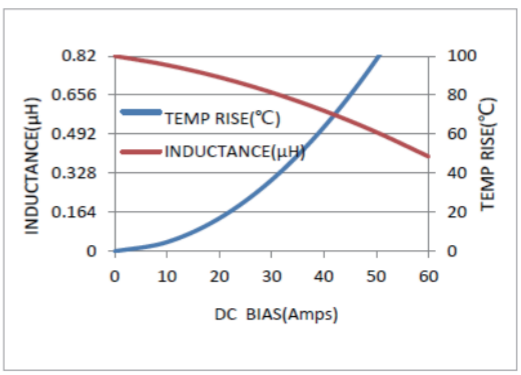
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MWSA1204S-R68MT



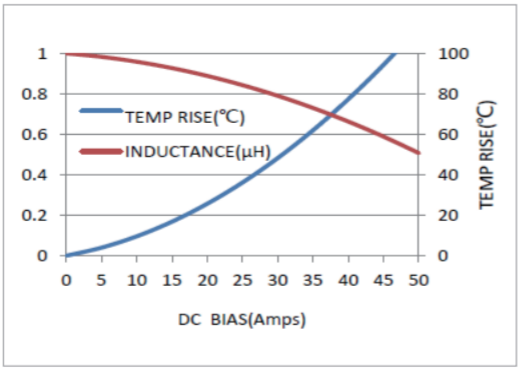
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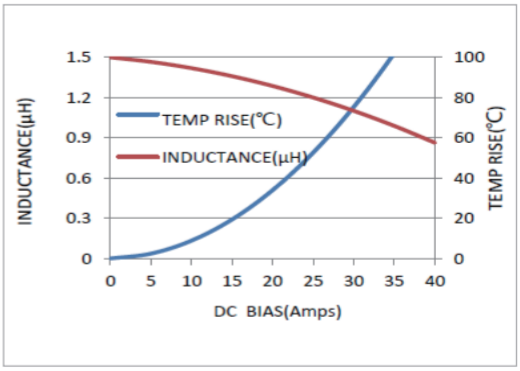
TYPICAL ELECTRICAL CHARACTERISTICS

MWSA1204S Series

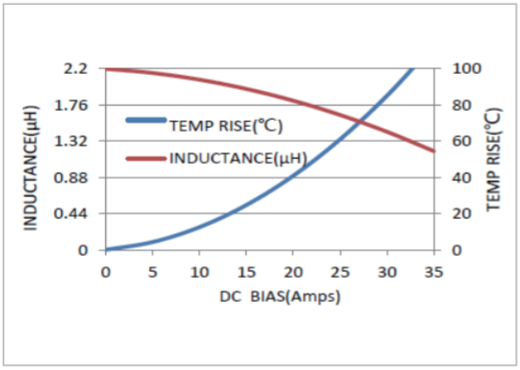
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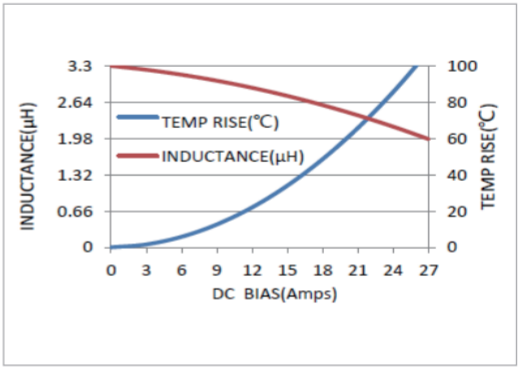
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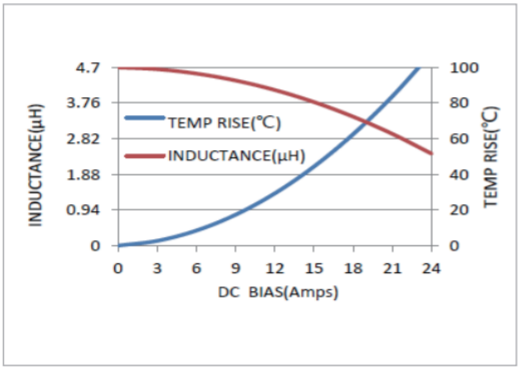
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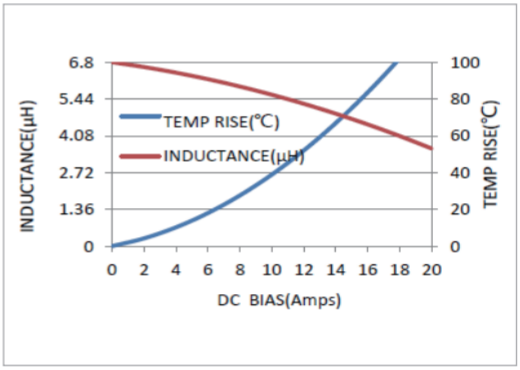
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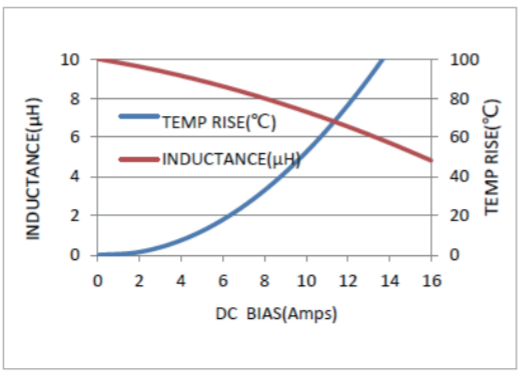
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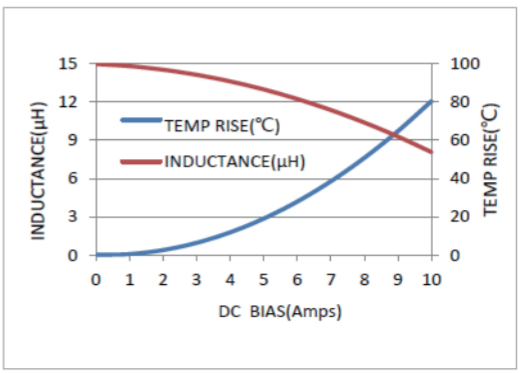
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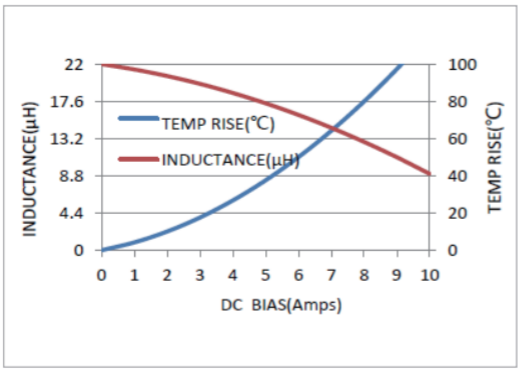


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TYPICAL ELECTRICAL CHARACTERISTICS

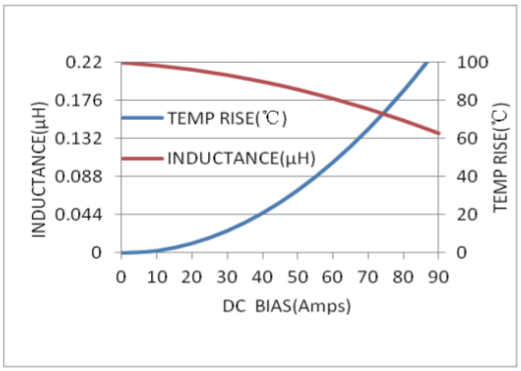
MWSA1204S Series

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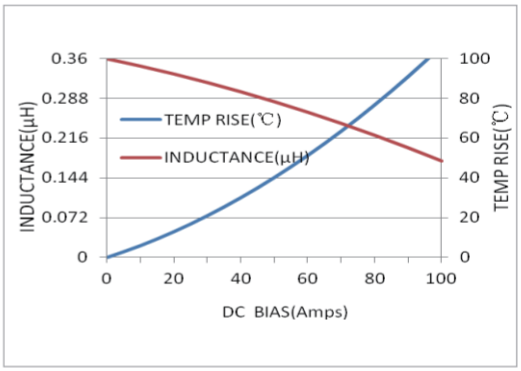


MWSA1205S Series

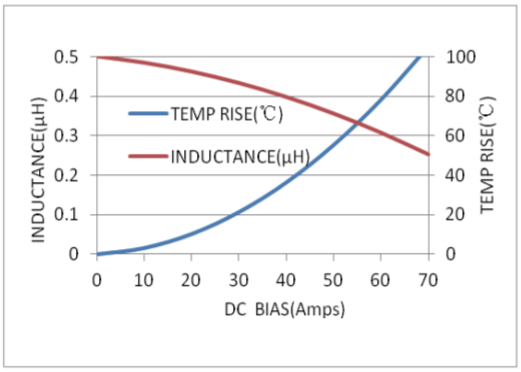
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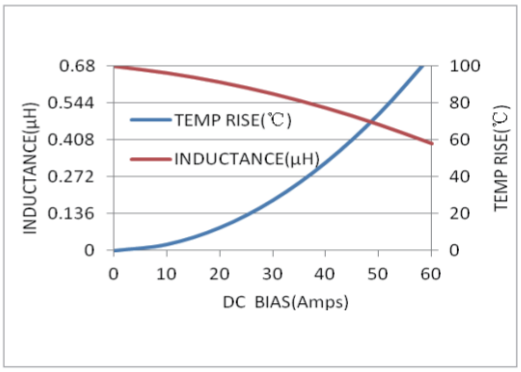
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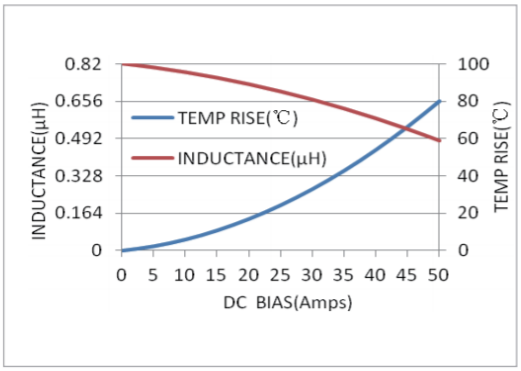
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MWSA1205S-1R0MT

