

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

①

0412S

②

XXX

③



④



⑤



⑥

①

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

④

Inductance Tolerance	
M	±20%

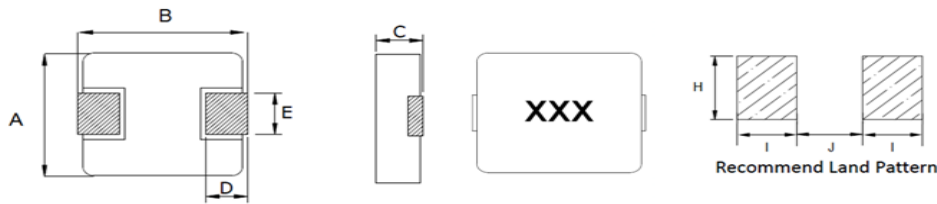
⑤

Packing	
T	Tape & Reel

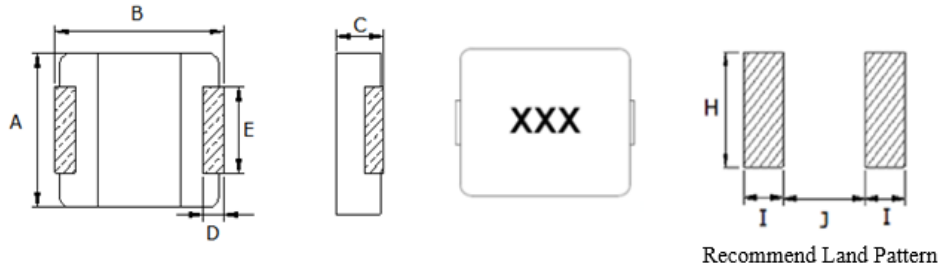
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Design Code	
□□□	Design Code
* Conventional product is blank	

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

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

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

MWSA0604S Series

Part Number	Inductance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz, 1V	Max.	Max.	Typ.	Max.	Typ.
Units	μ H	m Ω	A		A	
Symbol	L	DCR	Isat		Irms	
MWSA0604S-R68MT	0.68 \pm 20%	4.8	17.0	19.0	16.0	17.0
MWSA0604S-1R0MT	1.0 \pm 20%	6.6	15.0	16.0	12.5	13.5
MWSA0604S-1R5MT	1.5 \pm 20%	10	12.0	12.5	11.0	12.4
MWSA0604S-2R2MT	2.2 \pm 20%	14	10.0	11.0	8.50	10.0
MWSA0604S-3R3MT	3.3 \pm 20%	20	8.70	9.50	7.80	8.50
MWSA0604S-4R7MT	4.7 \pm 20%	30	8.00	9.00	6.00	6.50
MWSA0604S-6R8MT	6.8 \pm 20%	45	6.00	6.50	5.00	5.50
MWSA0604S-100MT	10 \pm 20%	65	5.00	6.00	4.00	4.80
MWSA0604S-100MTB01	10 \pm 20%	63	5.50	6.50	4.10	5.00
MWSA0604S-150MT	15 \pm 20%	95	4.00	4.50	3.20	3.70
MWSA0604S-220MT	22 \pm 20%	125	3.50	4.00	3.00	3.30
MWSA0604S-330MT	33 \pm 20%	240	2.50	3.00	2.00	2.20
MWSA0604S-470MT	47 \pm 20%	320	2.00	2.50	1.60	1.80

SPECIFICATIONS

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

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-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

SPECIFICATIONS

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-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
MWSA1004S-R30MT	0.30±20%	1.1	36.0	45.0	30.0	35.0
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-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

SPECIFICATIONS

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

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

SPECIFICATIONS

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-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
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

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MWSA1265S Series

Part Number	Inductance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.
Units	μH	mΩ	A		A	
Symbol	L	DCR	Isat		Irms	
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.
Units	μH	mΩ	A		A	
Symbol	L	DCR	Isat		Irms	
MWSA1707S-1R5MT	1.5±20%	2.1	-	40.0	-	33.0
MWSA1707S-2R2MT	2.2±20%	2.5	-	34.0	-	29.0
MWSA1707S-3R3MT	3.3±20%	3.95	-	30.0	-	24.0
MWSA1707S-4R7MT	4.7±20%	4.75	-	24.0	-	21.0
MWSA1707S-6R8MT	6.8±20%	7.5	-	22.0	-	17.0
MWSA1707S-8R2MT	8.2±20%	8.7	-	20.0	-	13.0
MWSA1707S-100MT	10±20%	9.9	-	19.0	-	12.0
MWSA1707S-150MT	15±20%	17	-	14.5	-	11.0
MWSA1707S-220MT	22±20%	23	-	11.5	-	8.50
MWSA1707S-330MT	33±20%	37	-	10.0	-	8.00
MWSA1707S-470MT	47±20%	47	-	7.50	-	6.00
MWSA1707S-680MT	68±20%	85	-	6.50	-	5.20
MWSA1707S-101MT	100±20%	130	-	5.00	-	3.70

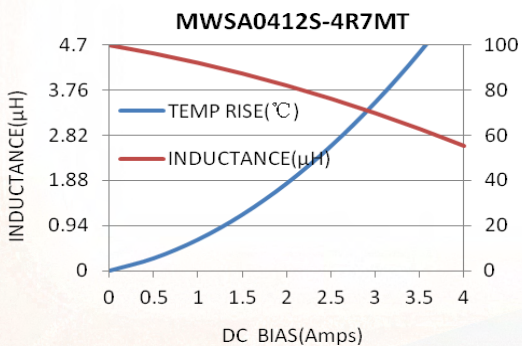
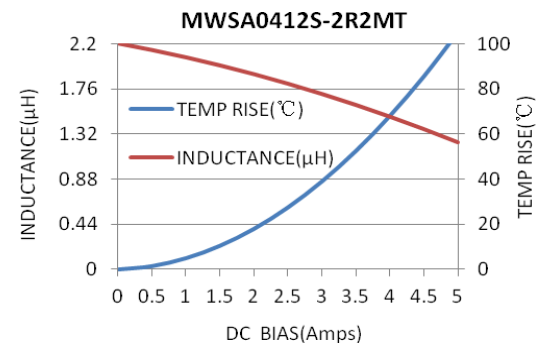
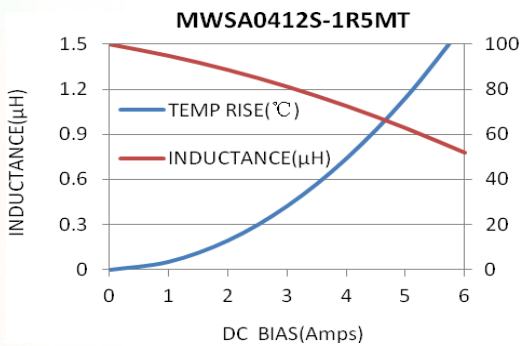
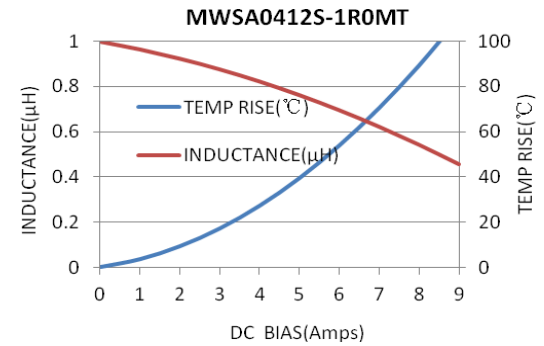
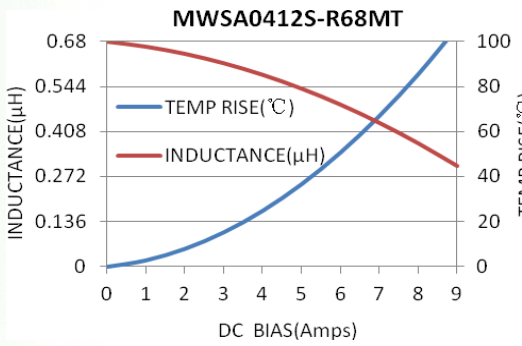
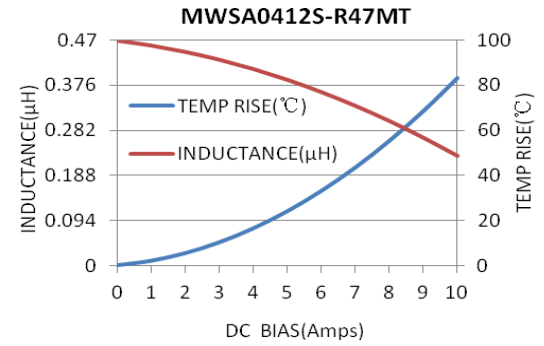
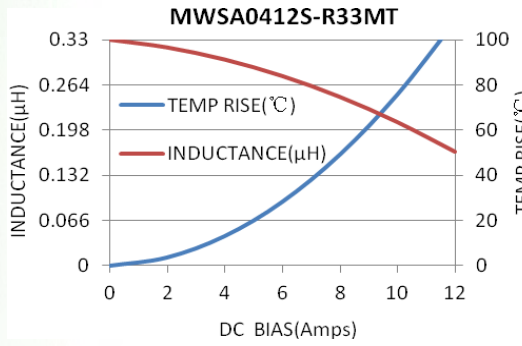
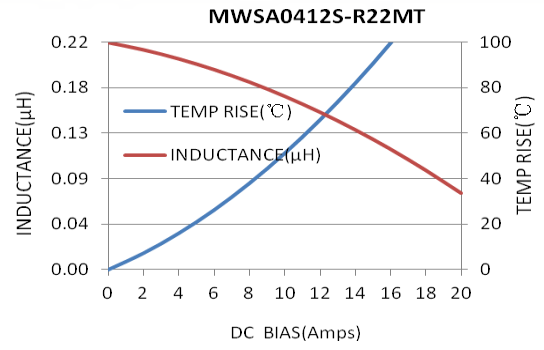
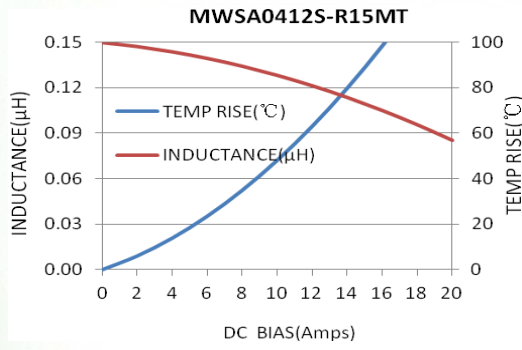
MWSA2213 Series

Part Number	Inductance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.
Units	μH	mΩ	A		A	
Symbol	L	DCR	Isat		Irms	
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-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-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

- ※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 20% from its value without current;
- ※5: Irms(Typ): DC current that causes the temperature rise (Δ T =40°C) from 20°C ambient.
- ※6: Irms(Max): DC current that causes the temperature rise (Δ T =20°C) from 20°C ambient.
- ※7: Absolute maximum voltage 30VDC

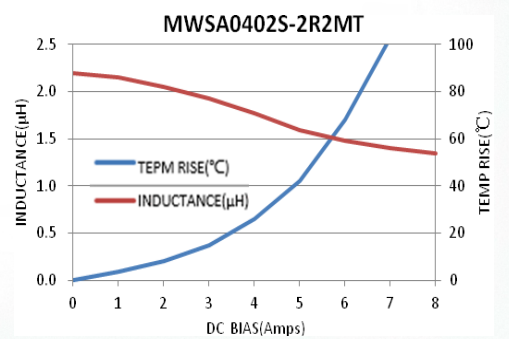
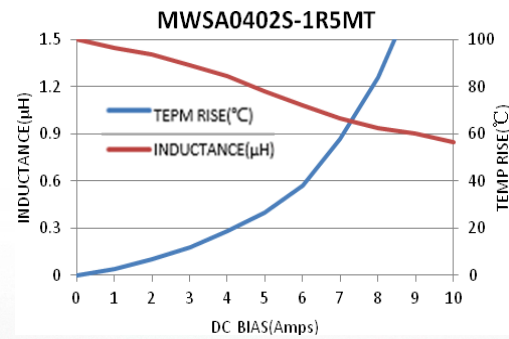
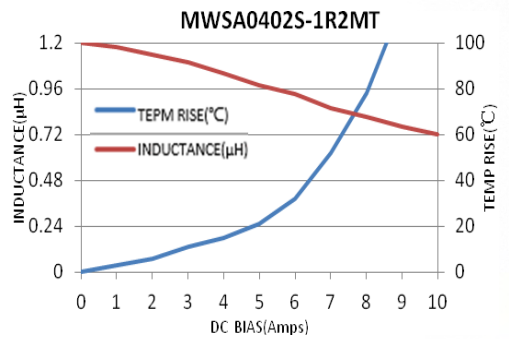
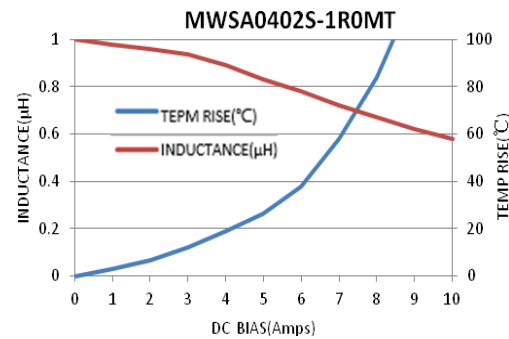
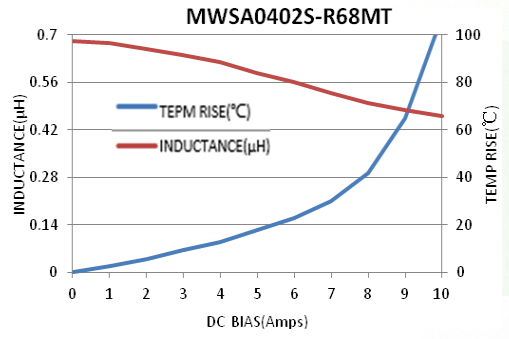
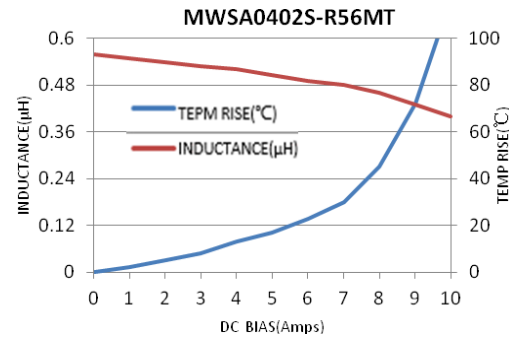
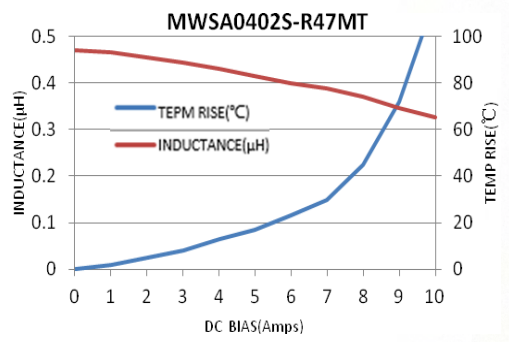
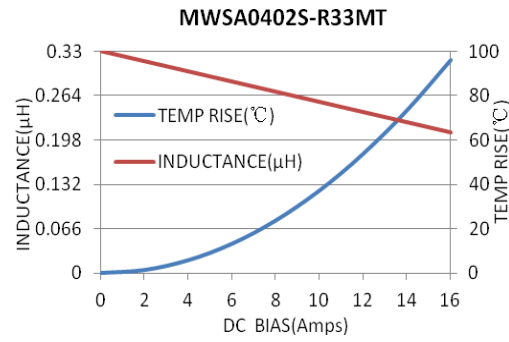
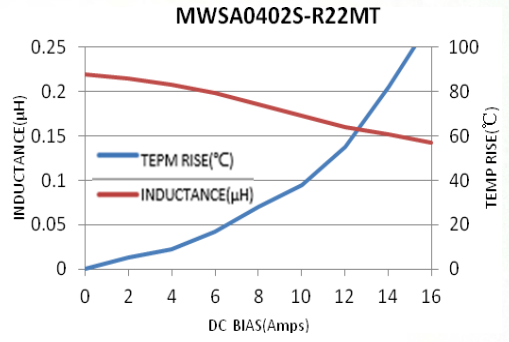
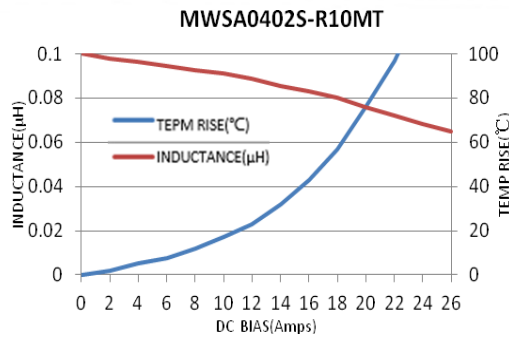
TYPICAL ELECTRICAL CHARACTERISTICS

MWSA0412S Series



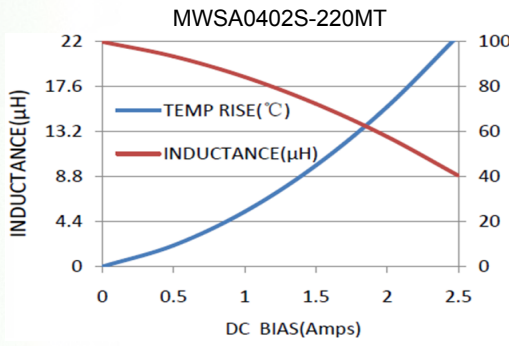
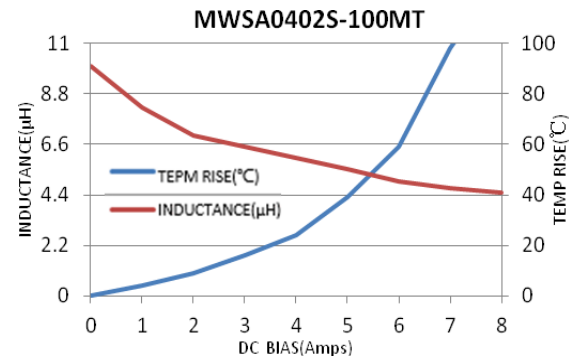
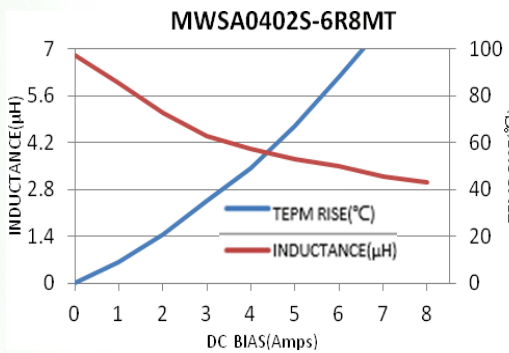
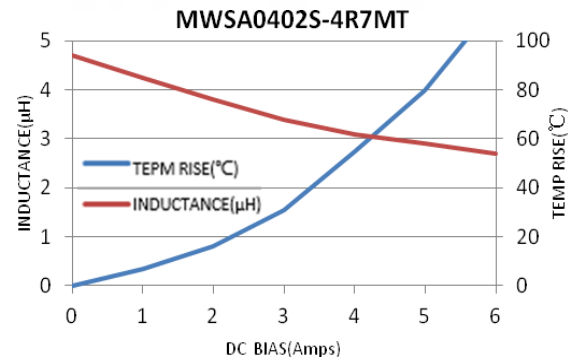
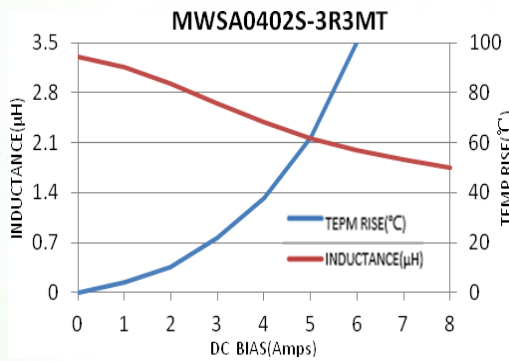
TYPICAL ELECTRICAL CHARACTERISTICS

MWSA0402S Series

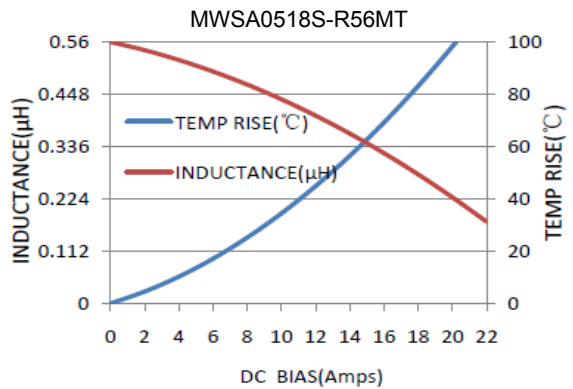
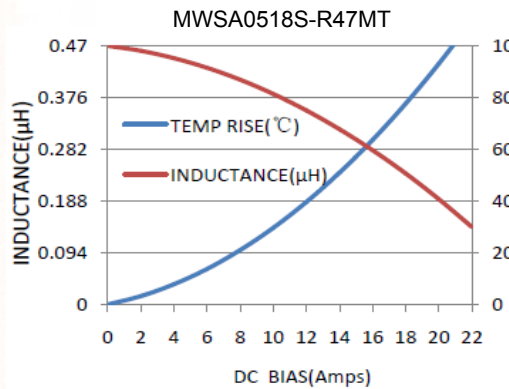


TYPICAL ELECTRICAL CHARACTERISTICS

MWSA0402S Series

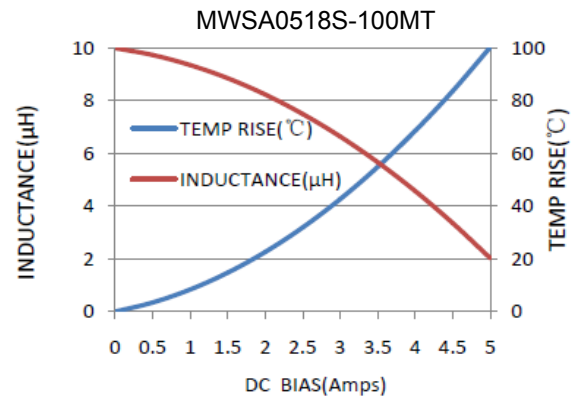
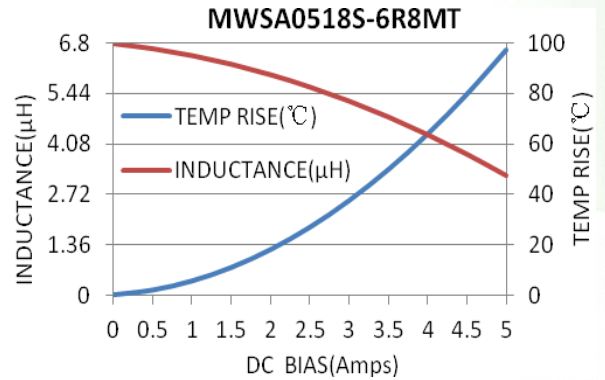
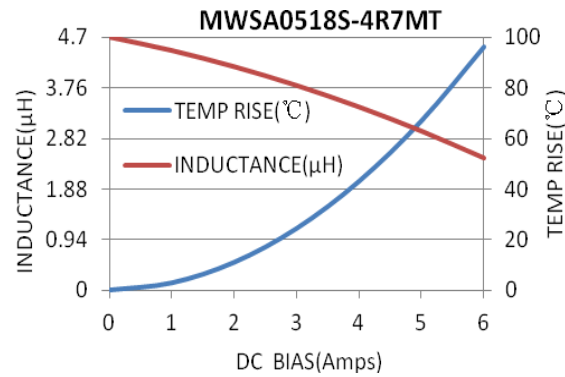
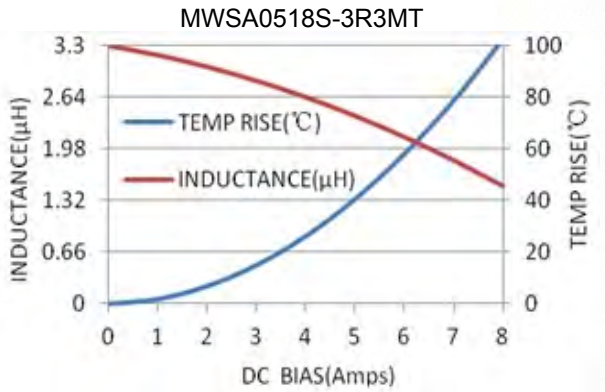
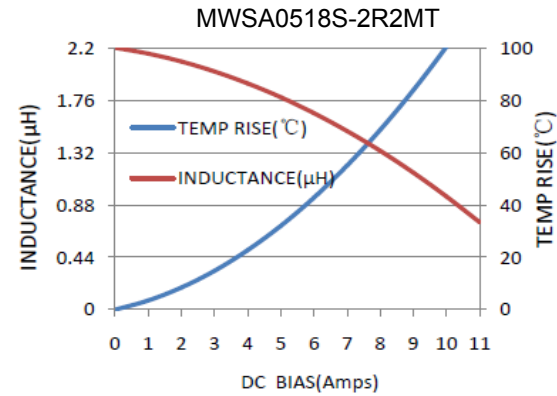
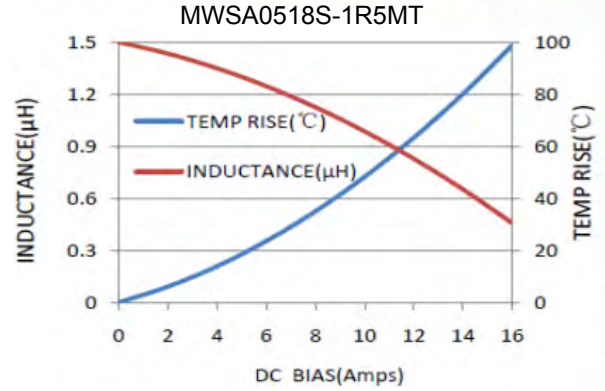
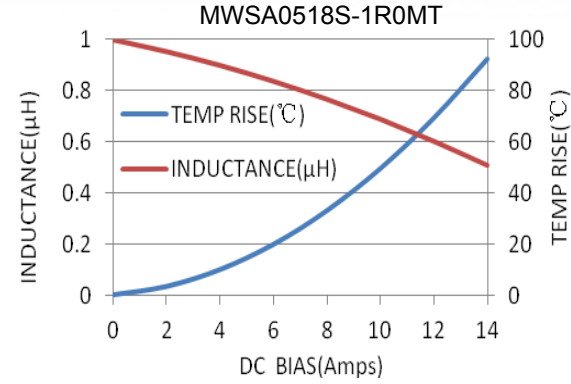


MWSA0518S Series



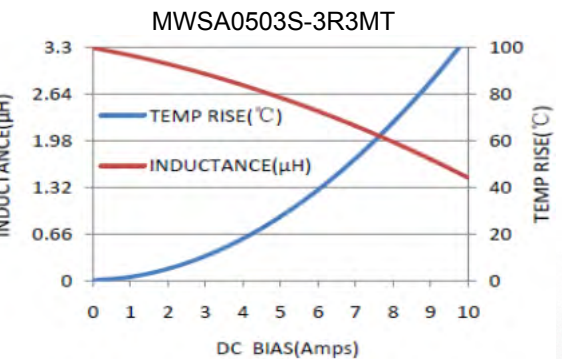
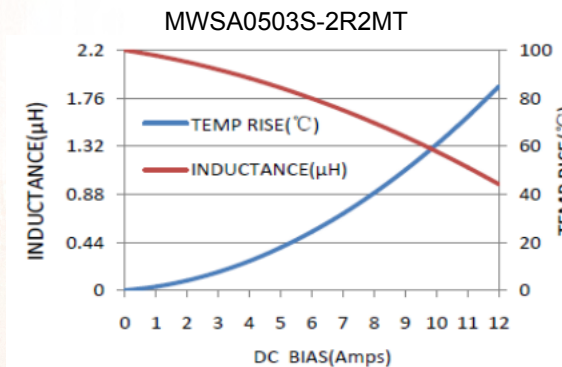
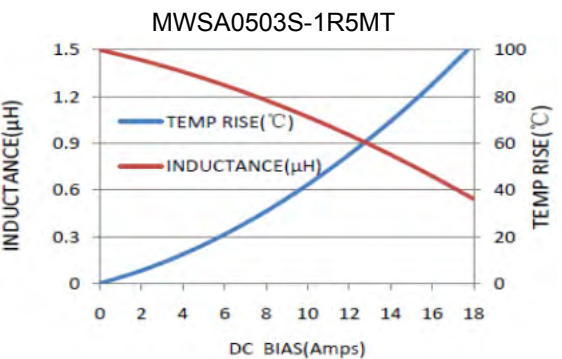
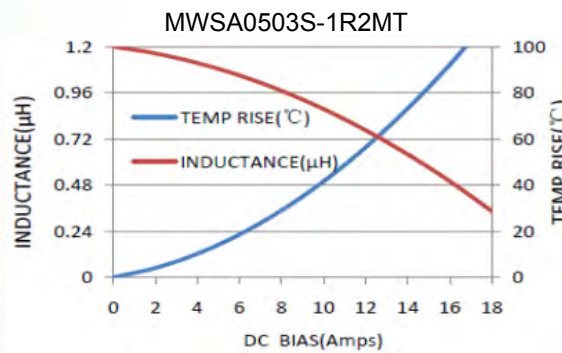
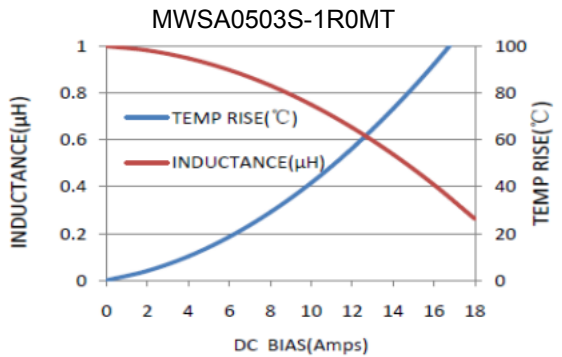
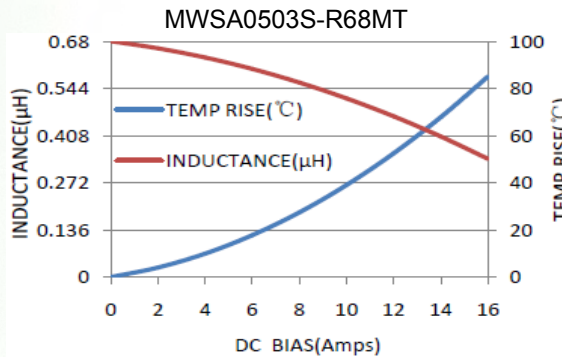
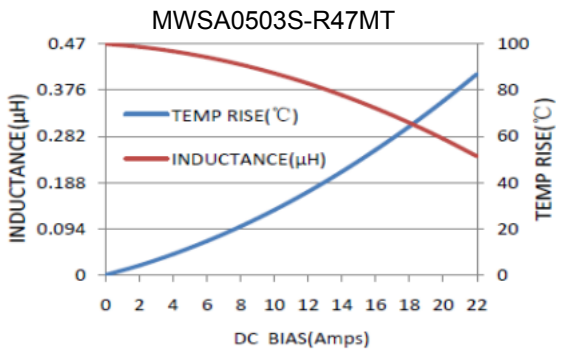
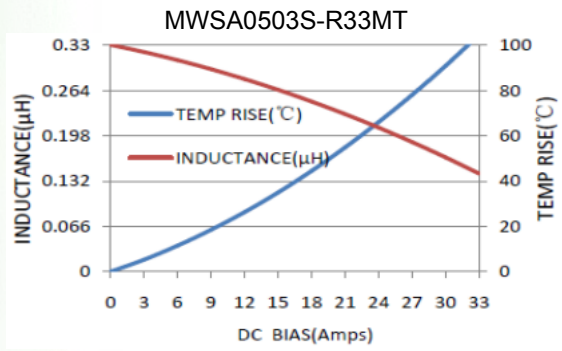
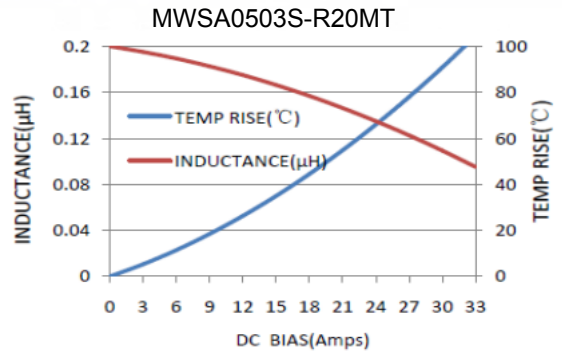
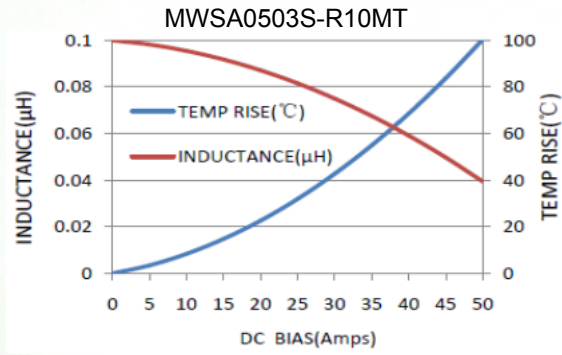
TYPICAL ELECTRICAL CHARACTERISTICS

MWSA0518S Series



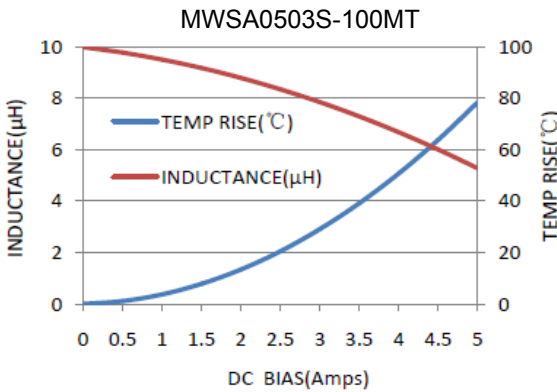
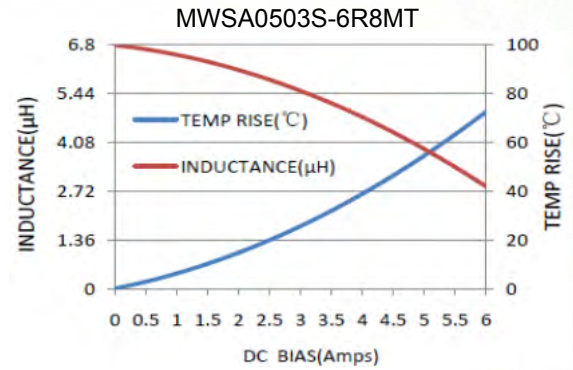
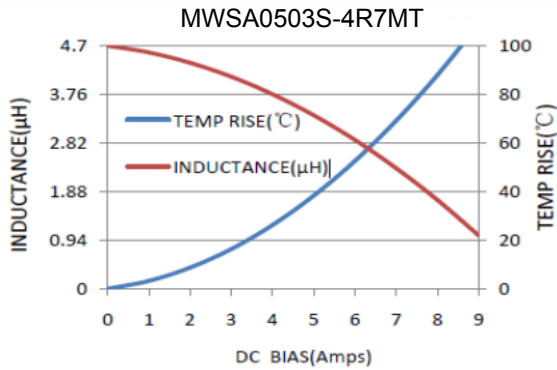
TYPICAL ELECTRICAL CHARACTERISTICS

MWSA0503S Series

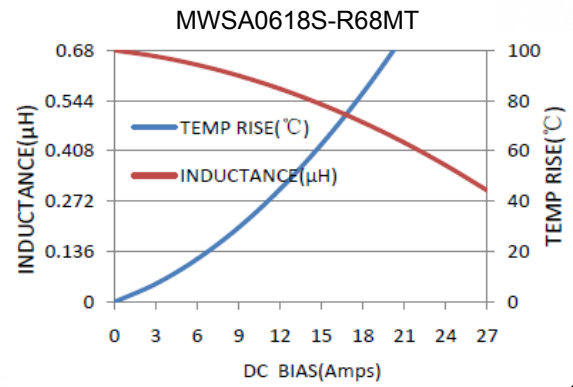
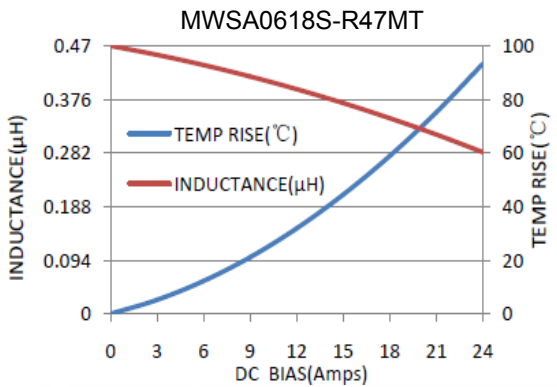
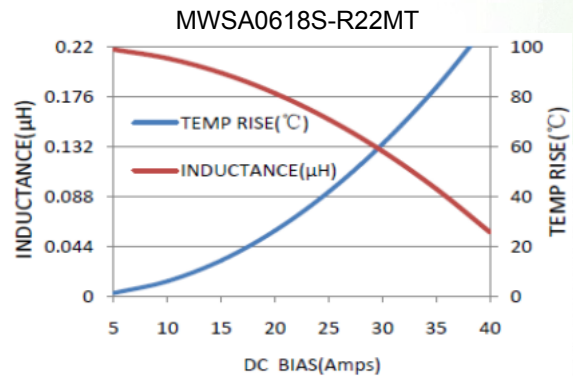
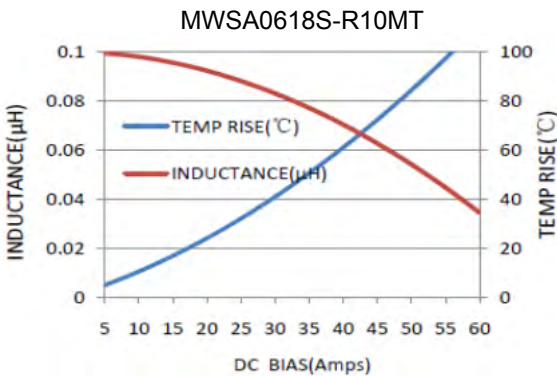


TYPICAL ELECTRICAL CHARACTERISTICS

MWSA0503S Series

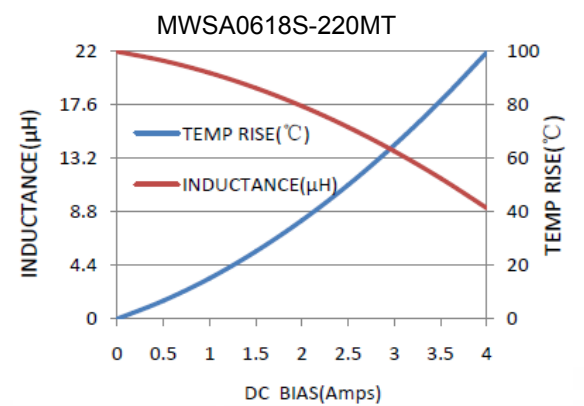
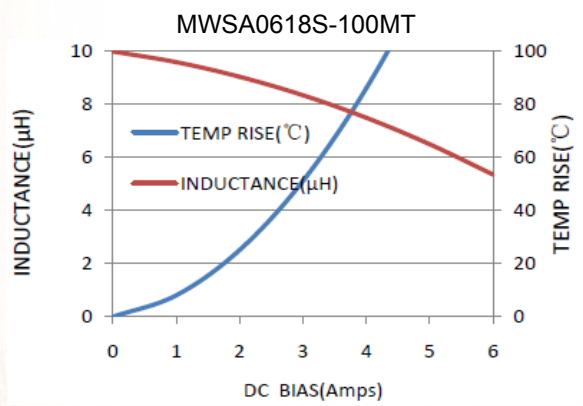
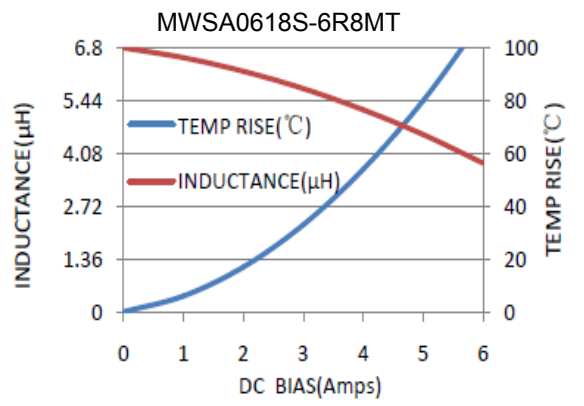
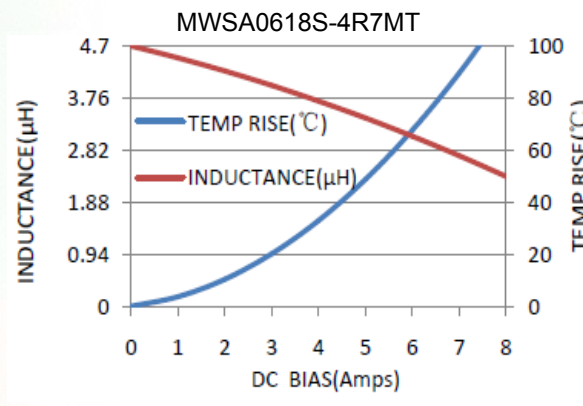
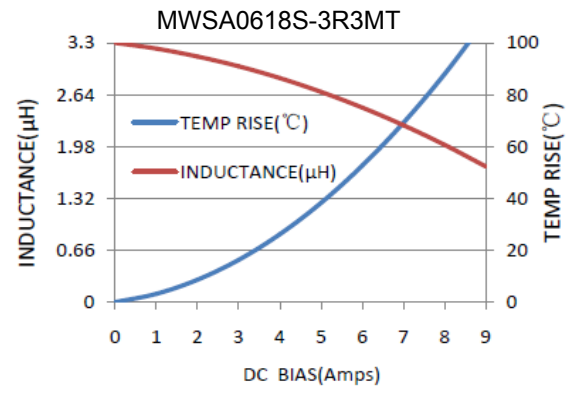
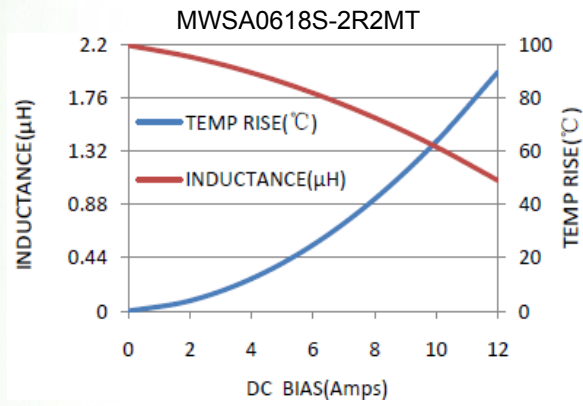
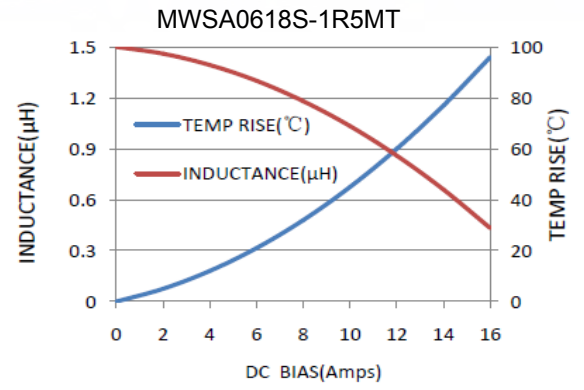
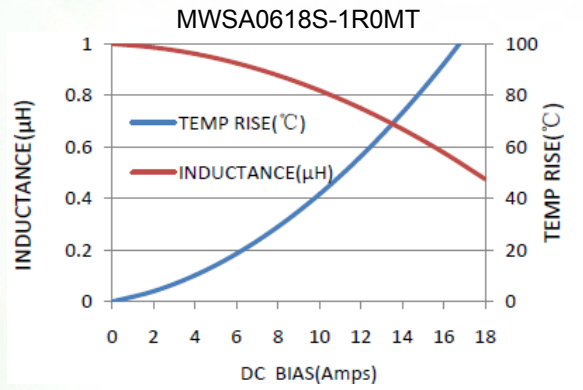


MWSA0618S Series



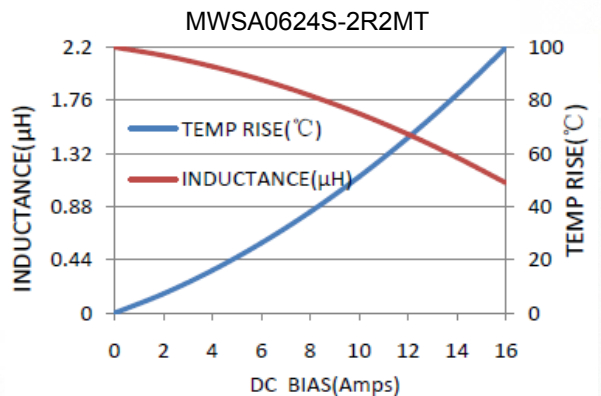
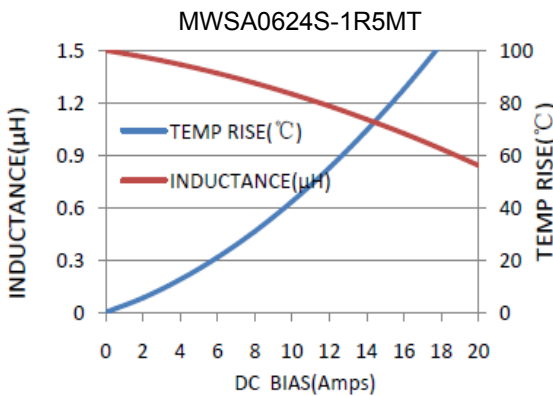
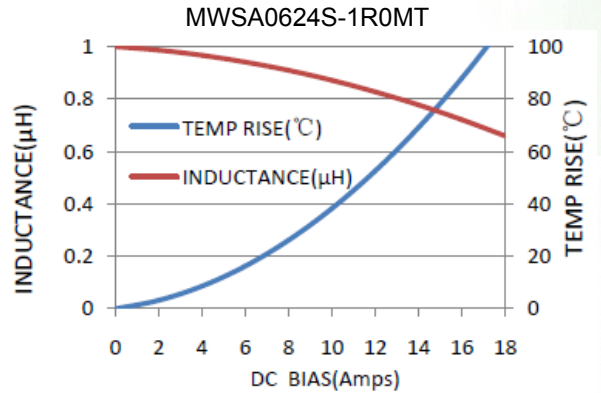
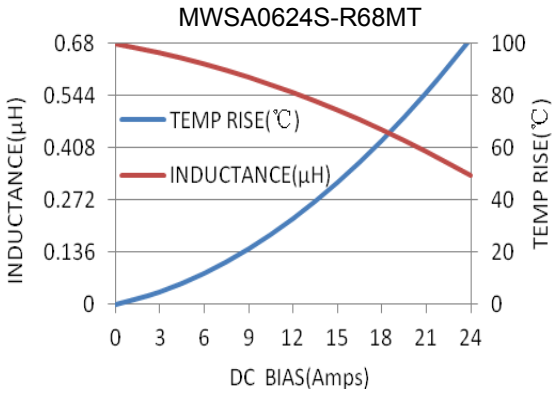
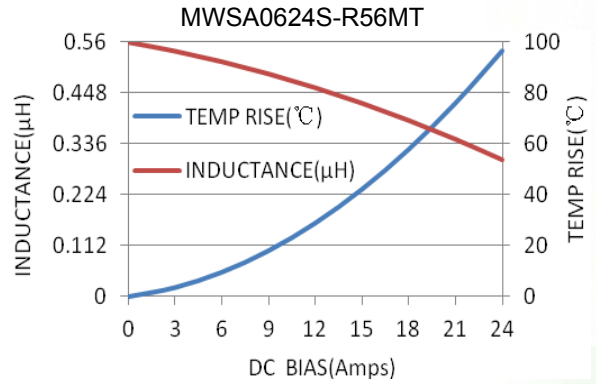
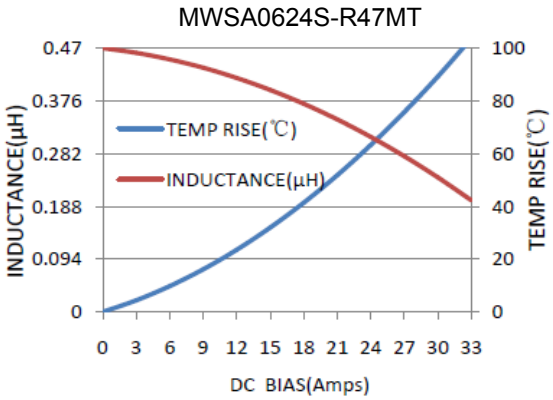
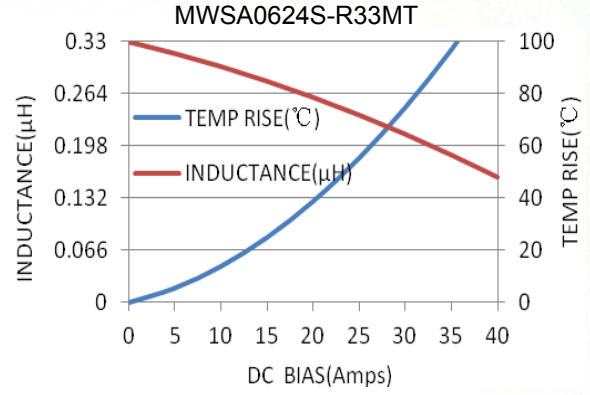
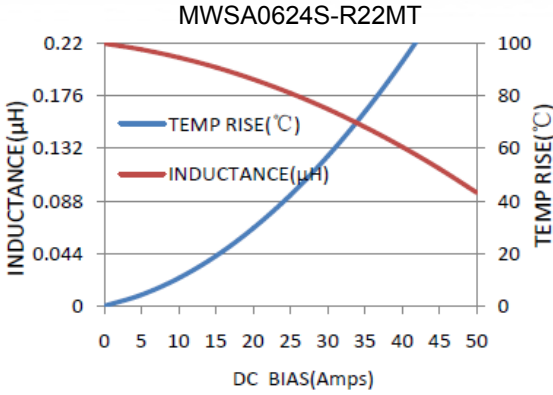
TYPICAL ELECTRICAL CHARACTERISTICS

MWSA0618S Series



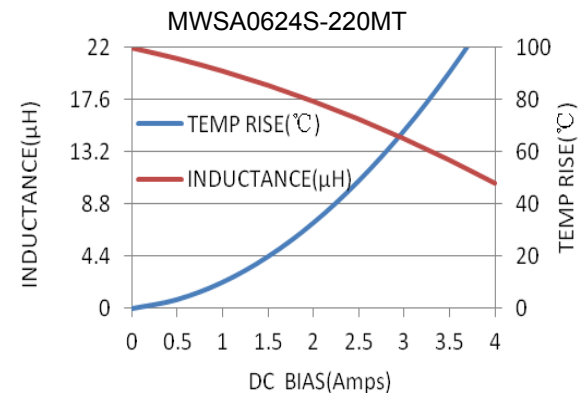
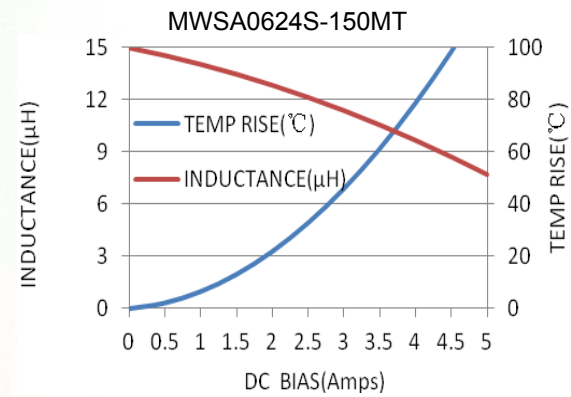
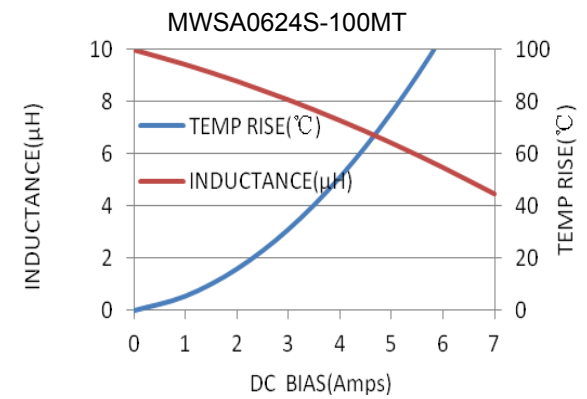
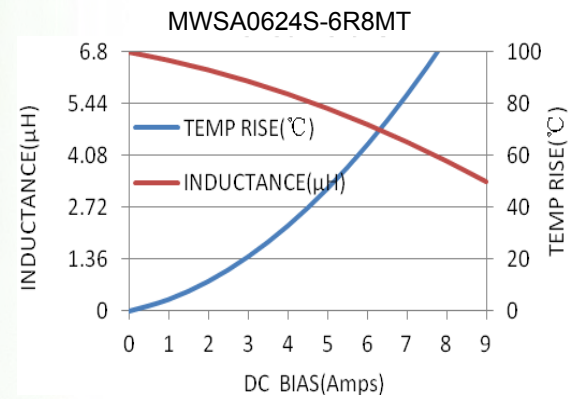
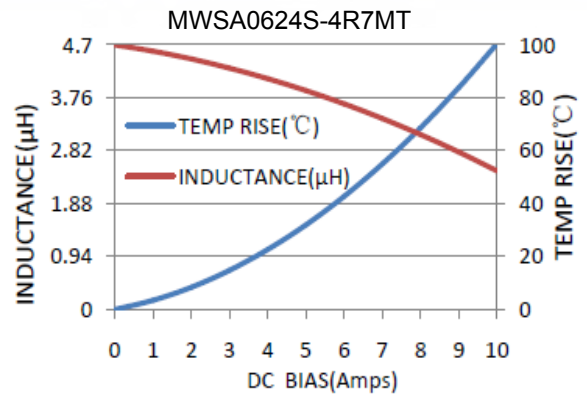
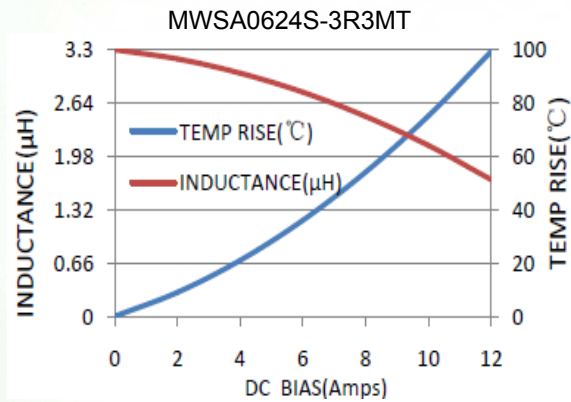
TYPICAL ELECTRICAL CHARACTERISTICS

MWSA0624S Series

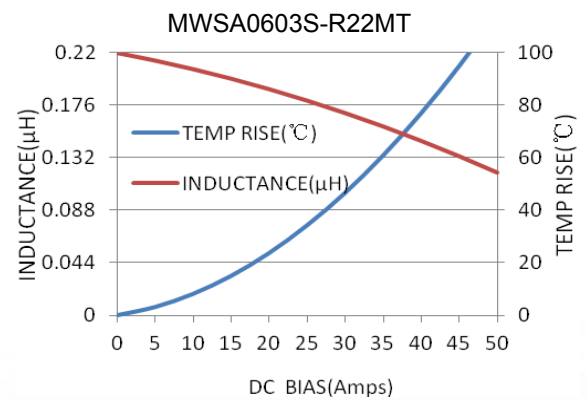
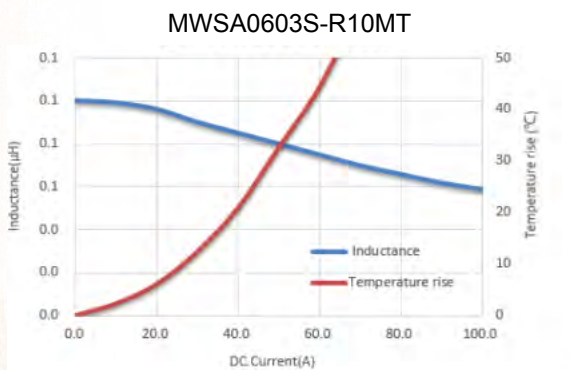


TYPICAL ELECTRICAL CHARACTERISTICS

MWSA0624S Series

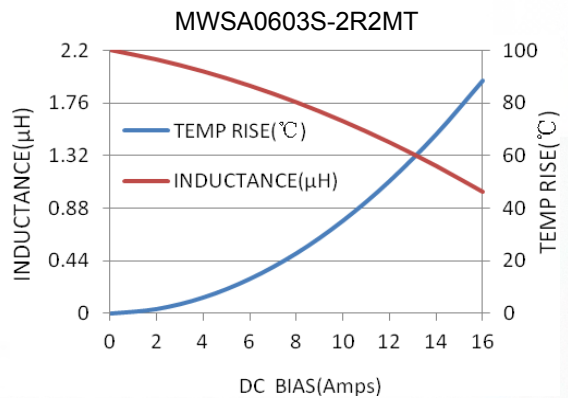
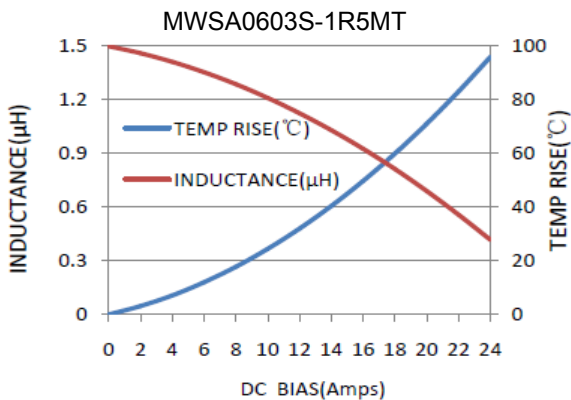
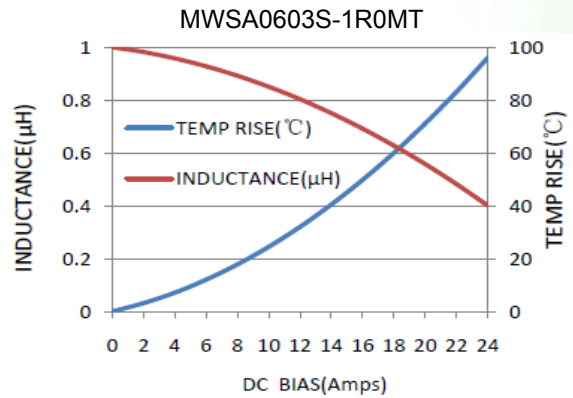
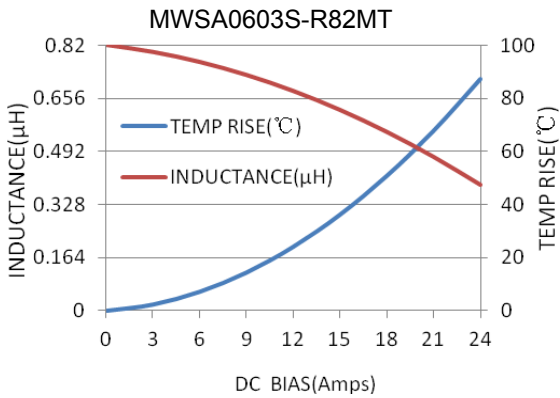
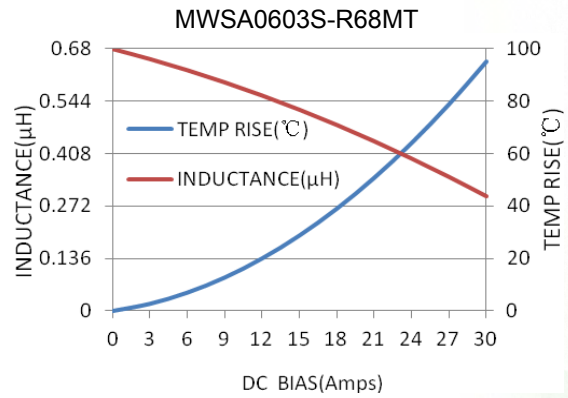
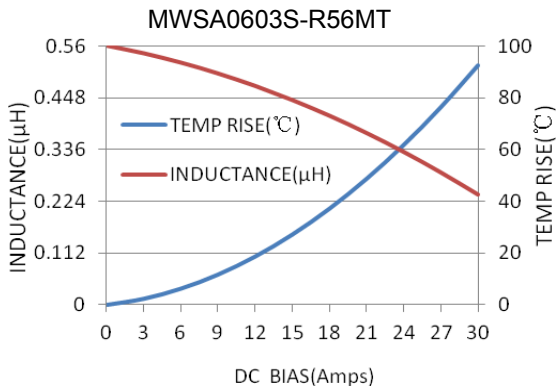
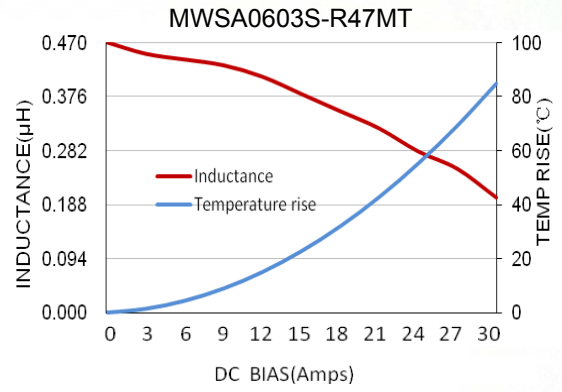
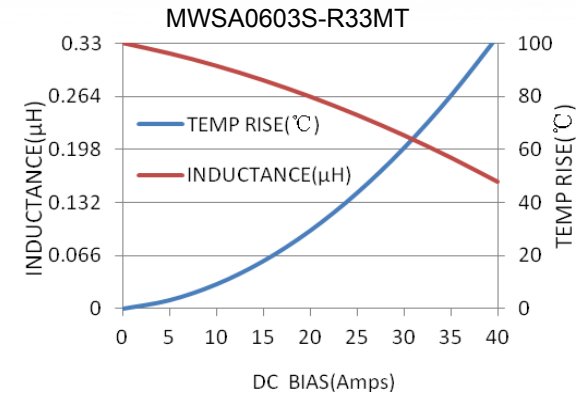


MWSA0603S Series



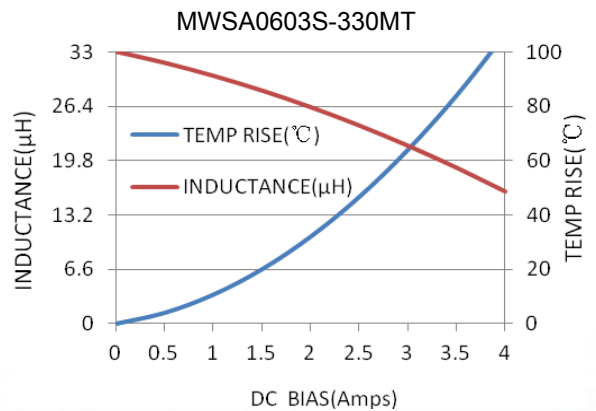
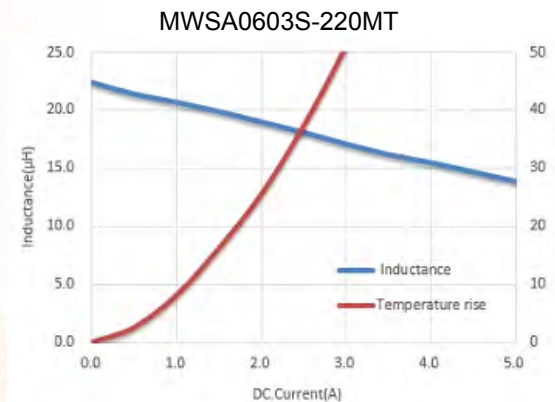
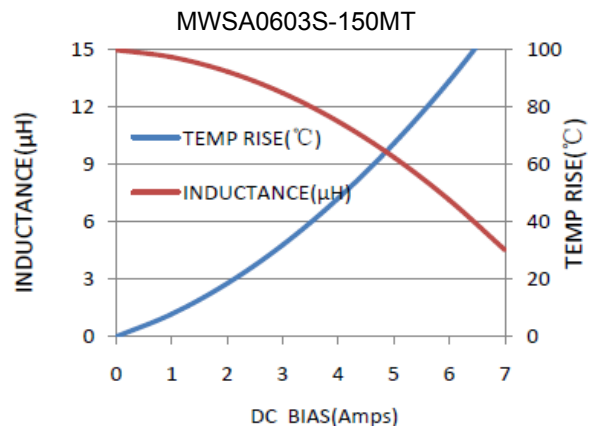
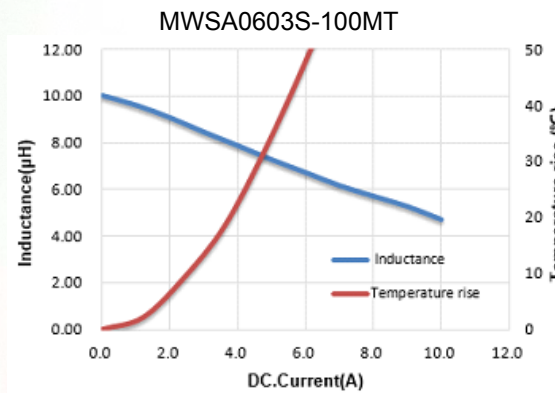
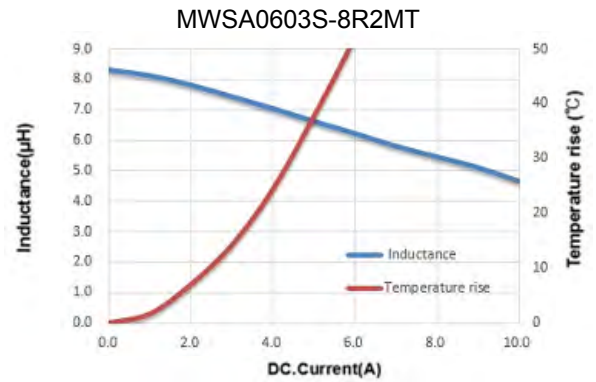
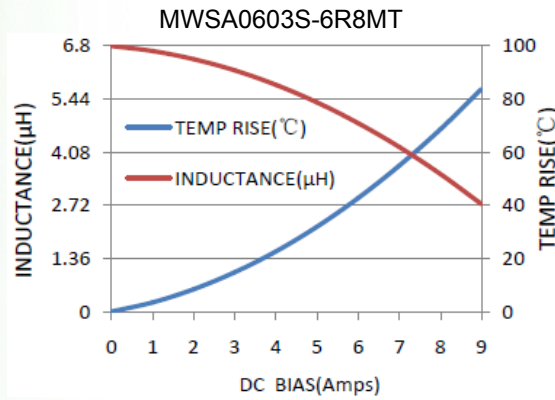
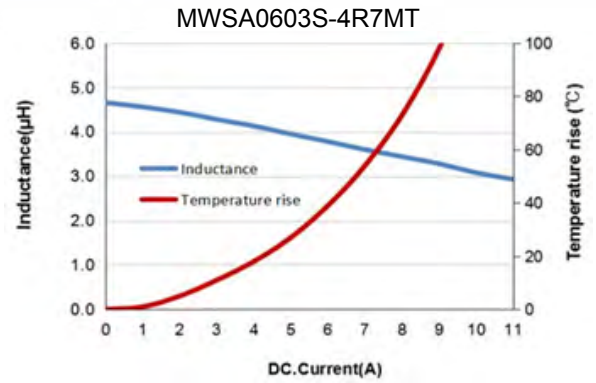
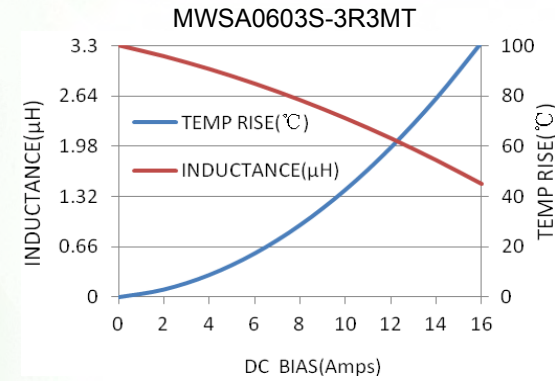
TYPICAL ELECTRICAL CHARACTERISTICS

MWSA0603S Series



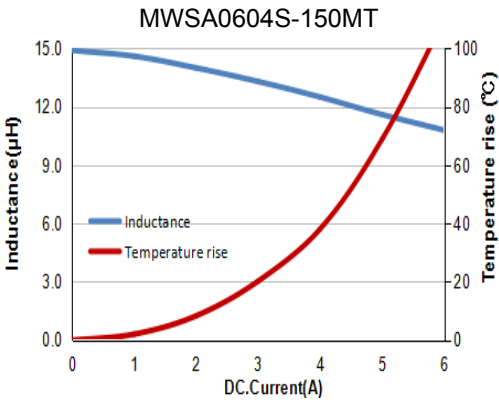
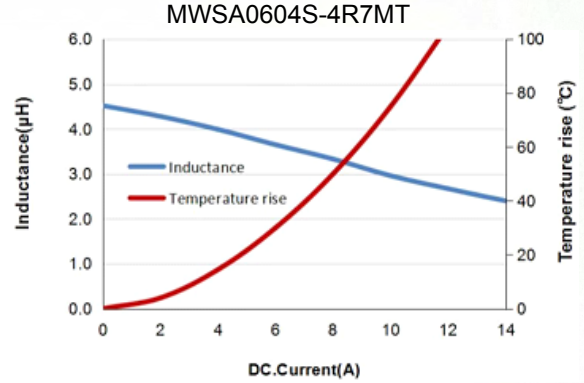
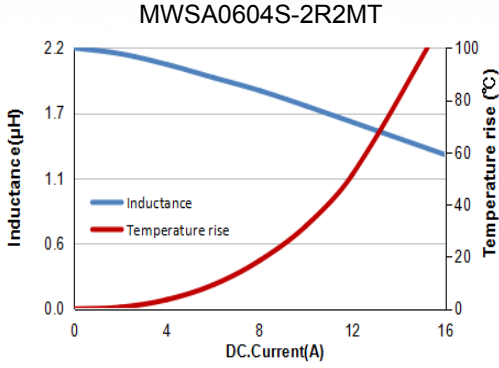
TYPICAL ELECTRICAL CHARACTERISTICS

MWSA0603S Series

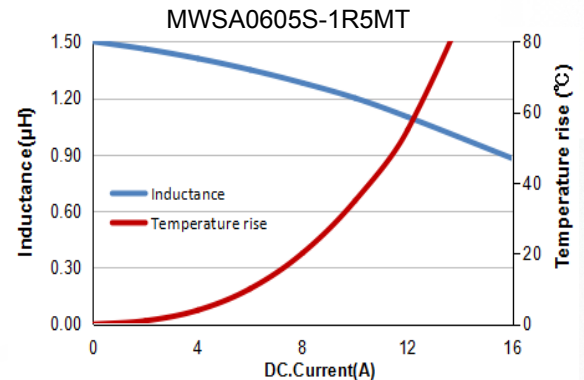
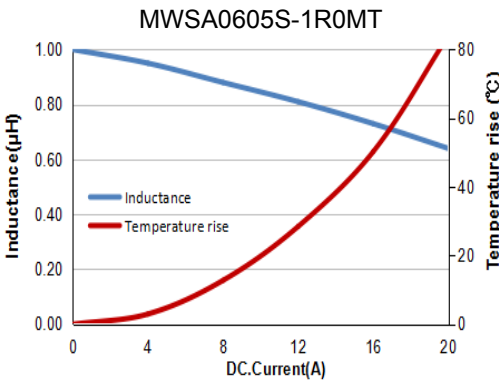
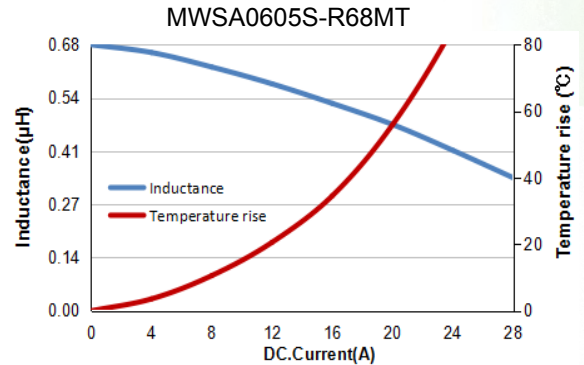
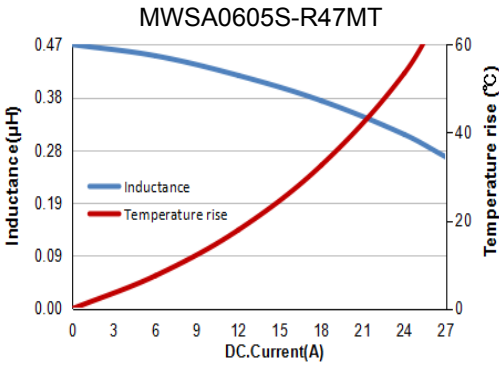


TYPICAL ELECTRICAL CHARACTERISTICS

MWSA0604S Series

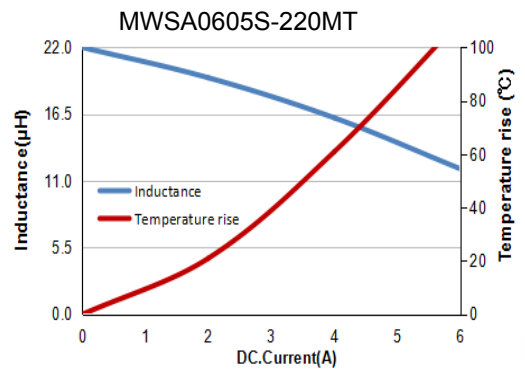
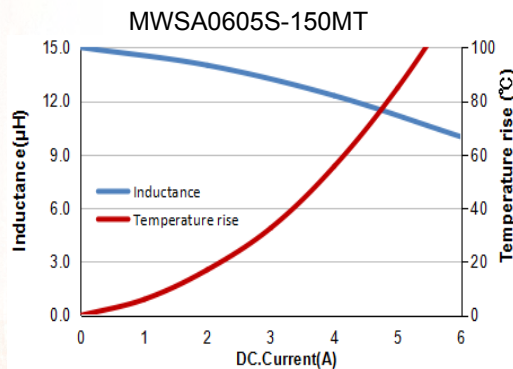
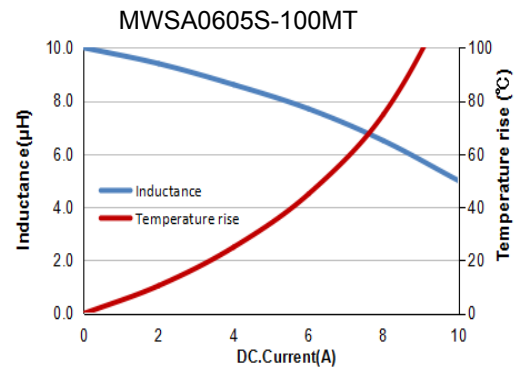
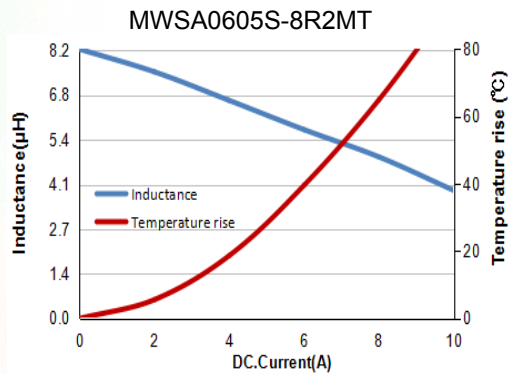
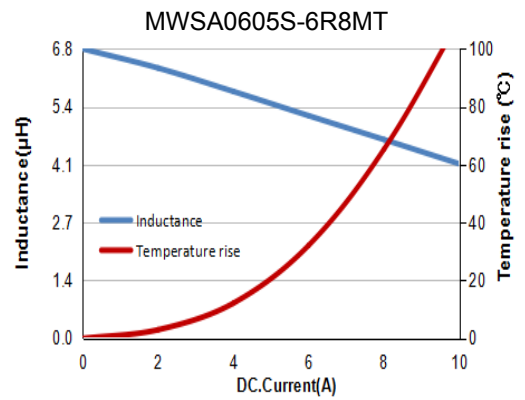
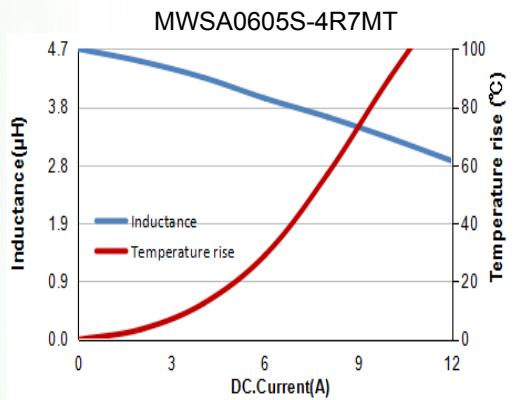
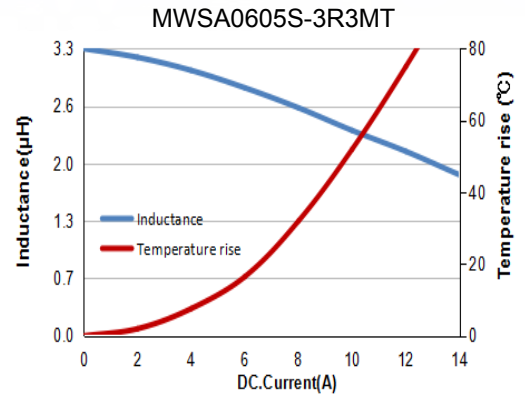
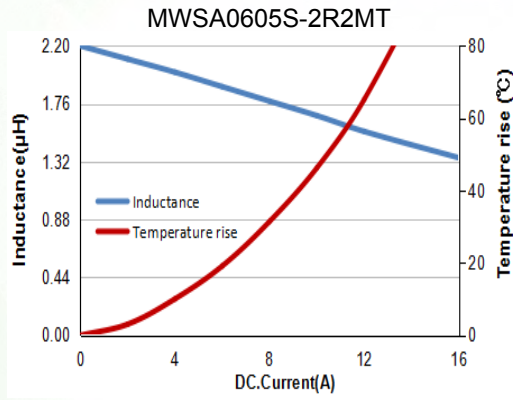


MWSA0605S Series



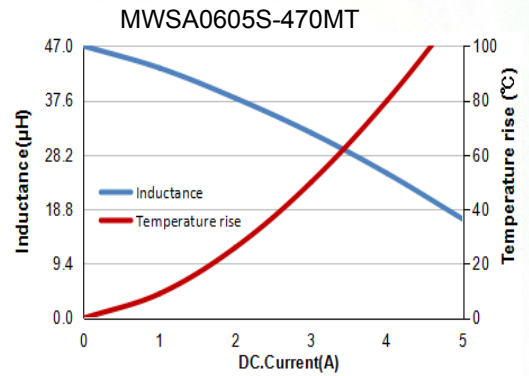
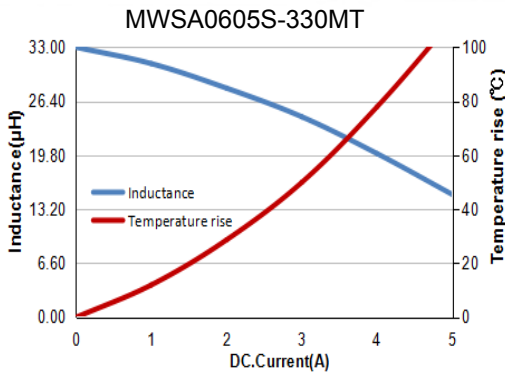
TYPICAL ELECTRICAL CHARACTERISTICS

MWSA0605S Series

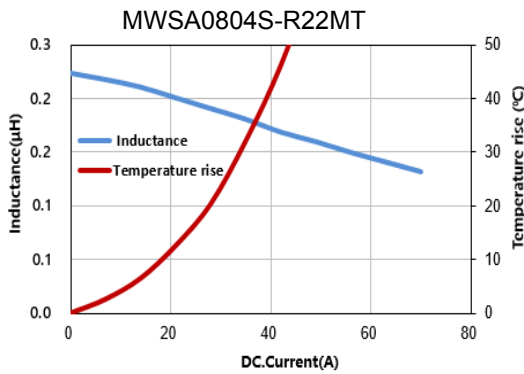


TYPICAL ELECTRICAL CHARACTERISTICS

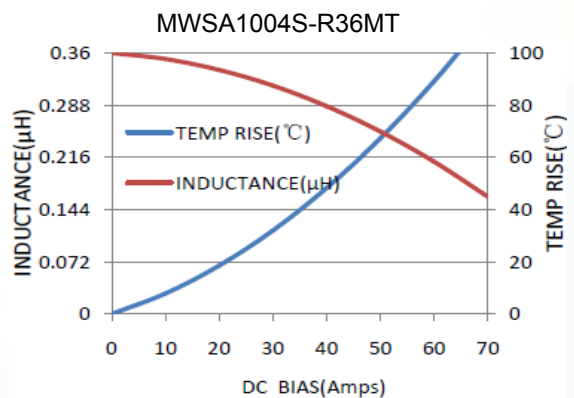
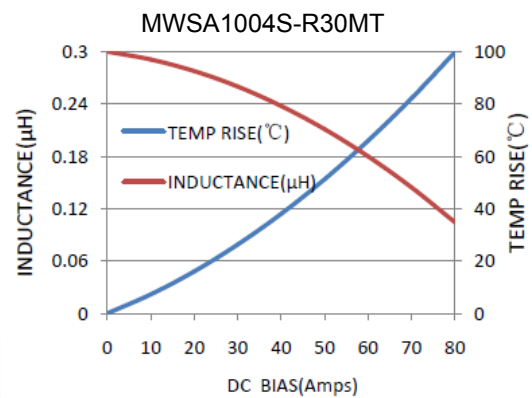
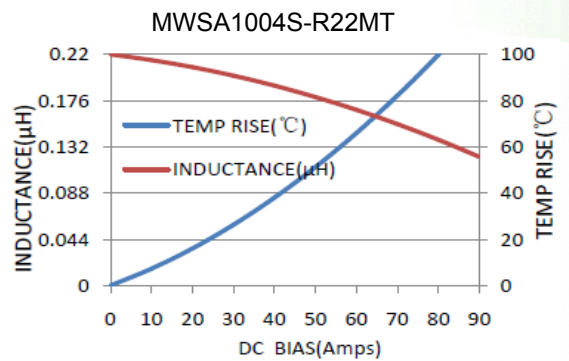
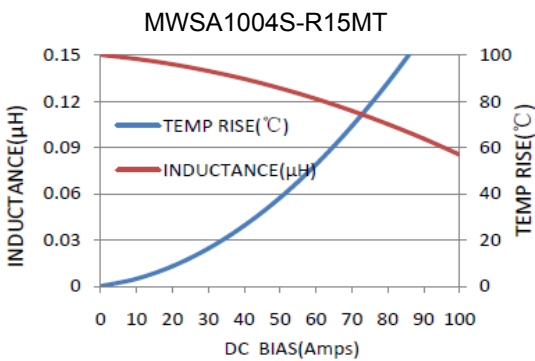
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MWSA0804S Series

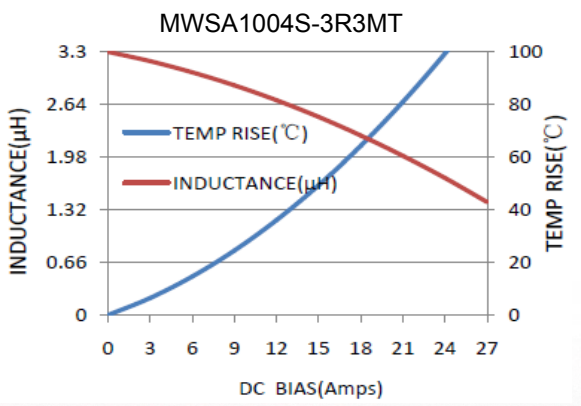
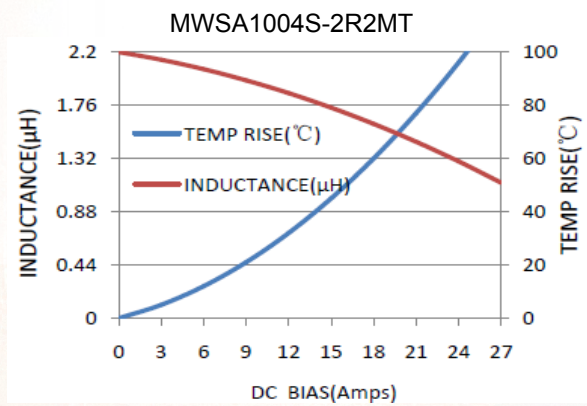
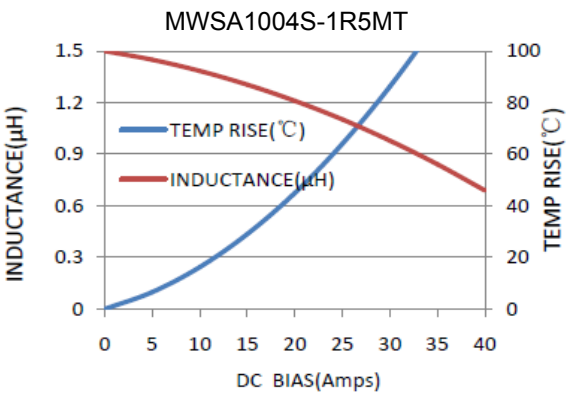
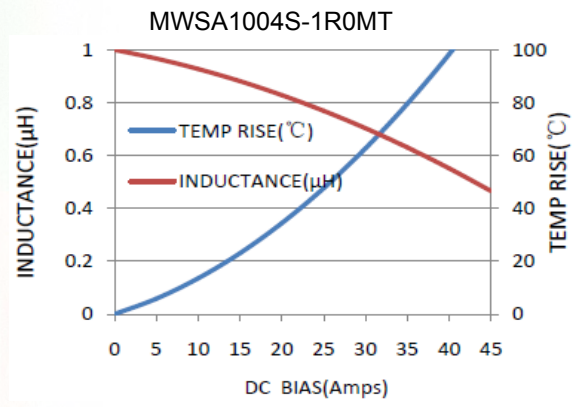
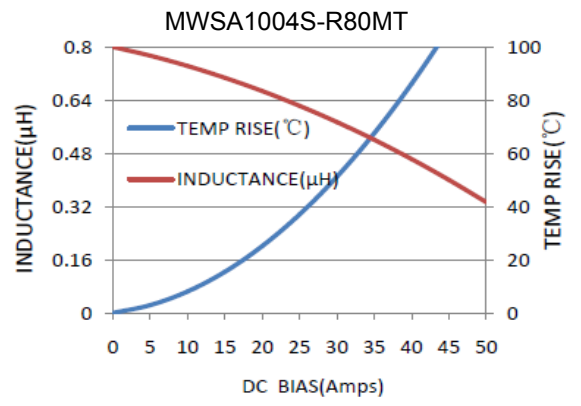
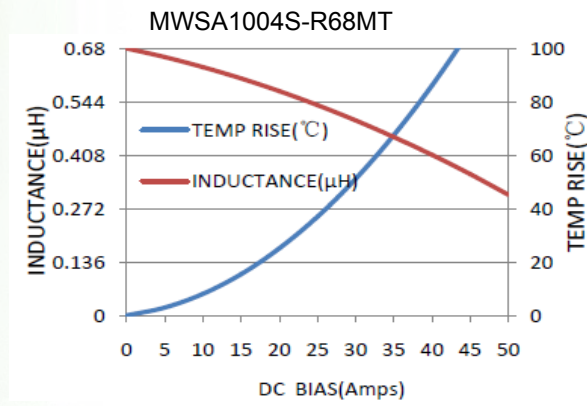
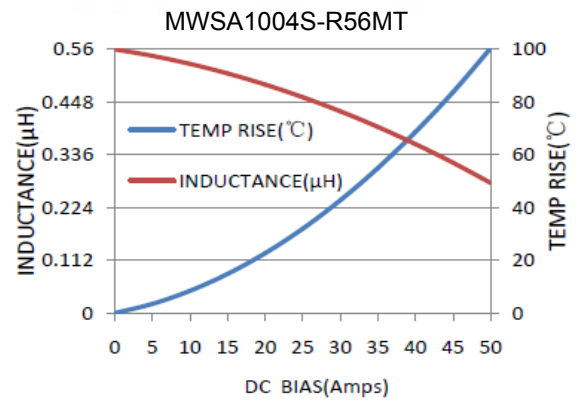
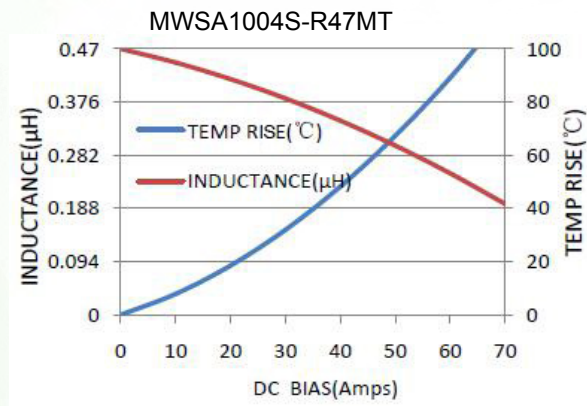


MWSA1004S Series



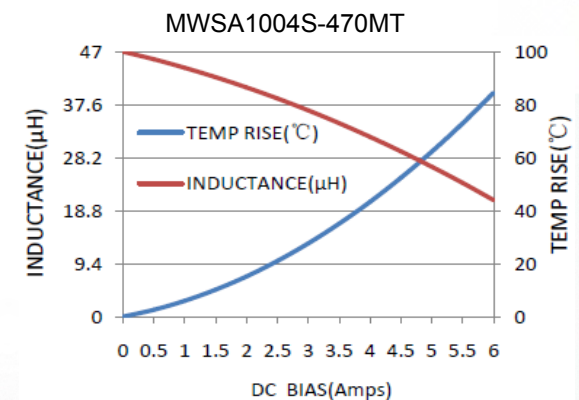
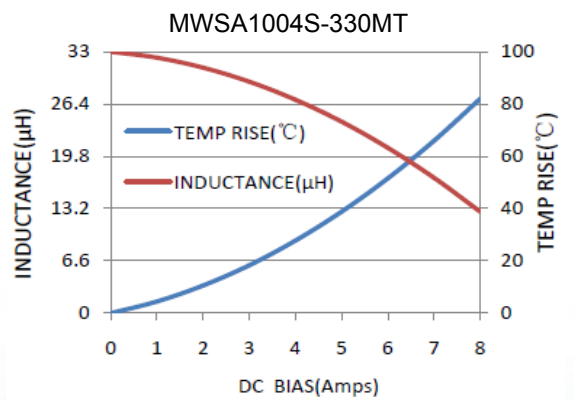
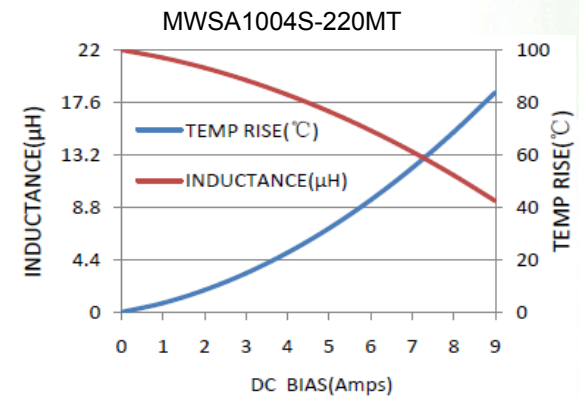
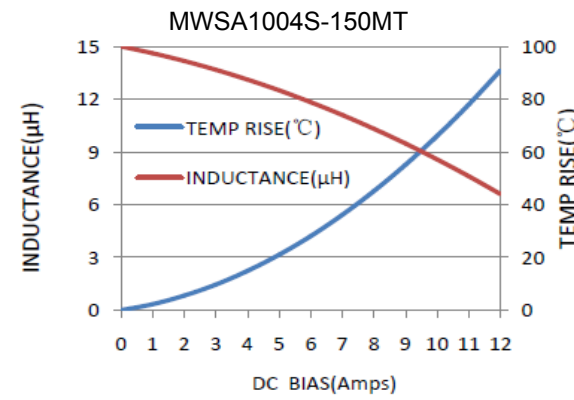
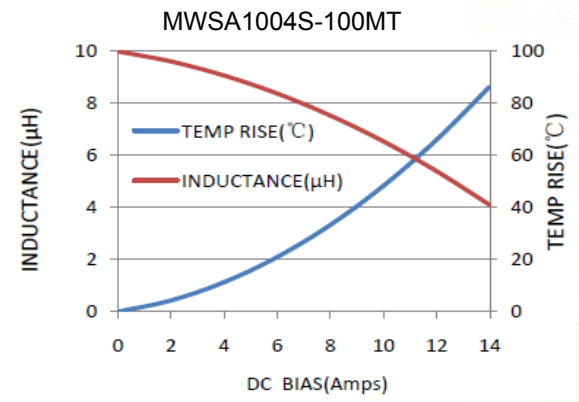
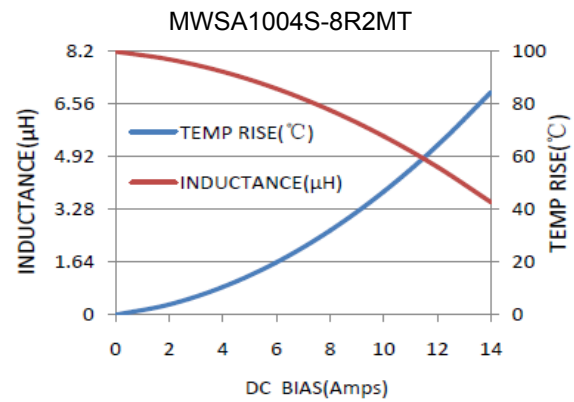
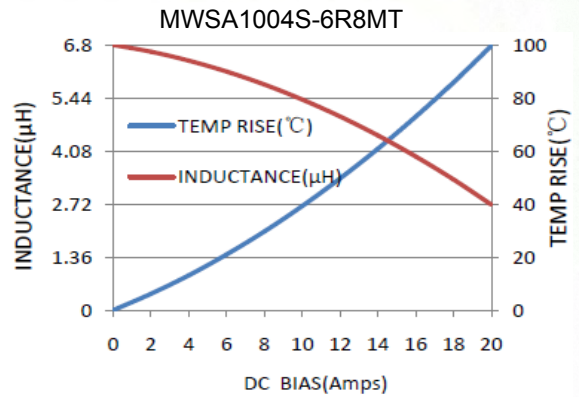
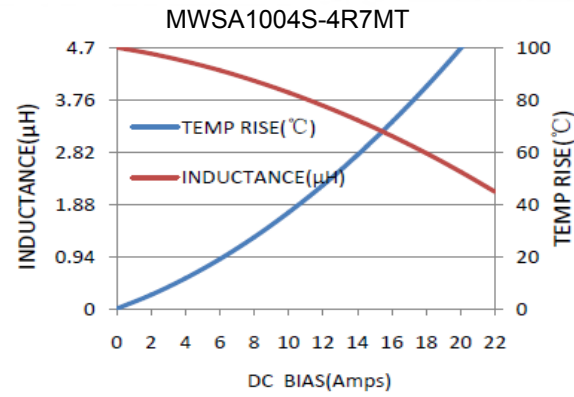
TYPICAL ELECTRICAL CHARACTERISTICS

MWSA1004S Series



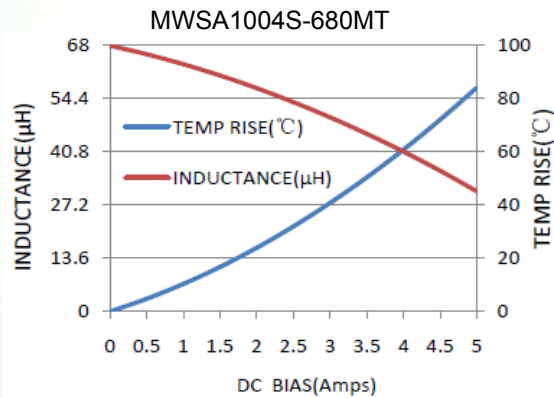
TYPICAL ELECTRICAL CHARACTERISTICS

MWSA1004S Series

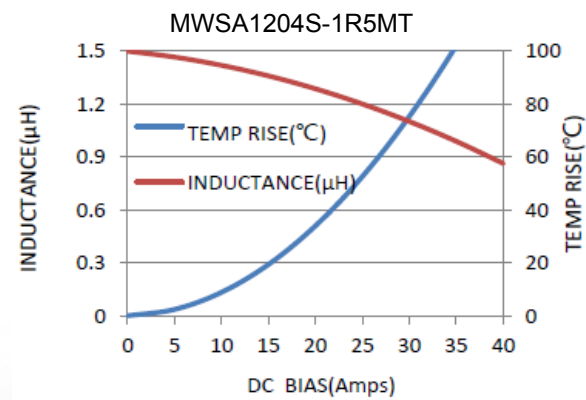
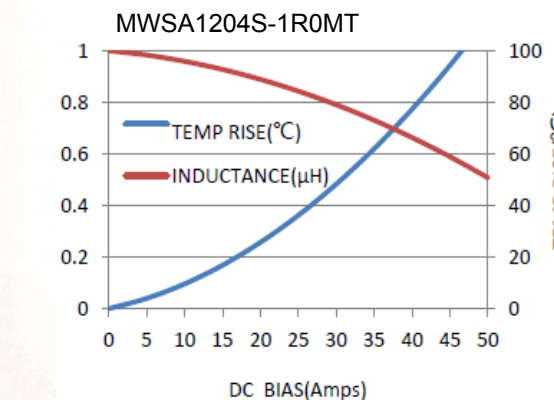
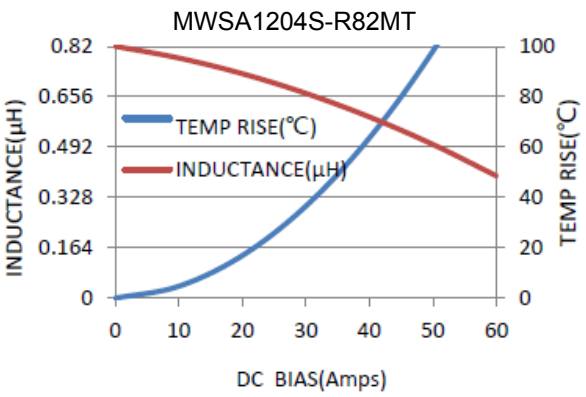
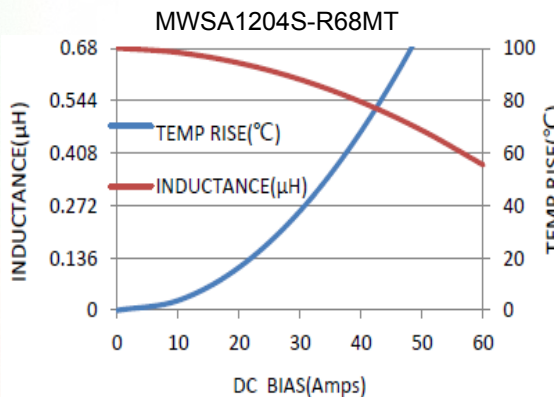
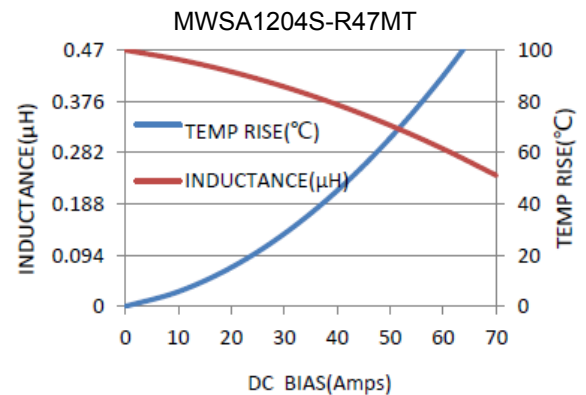
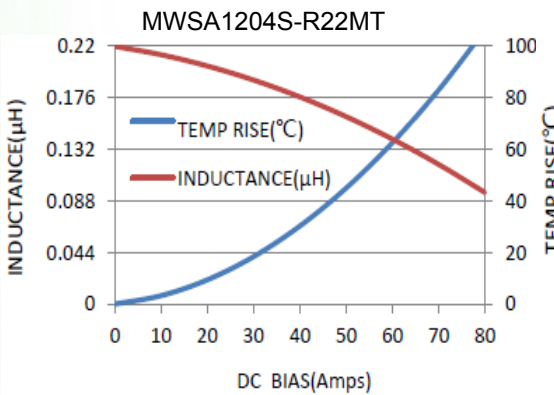


TYPICAL ELECTRICAL CHARACTERISTICS

MWSA1004S Series

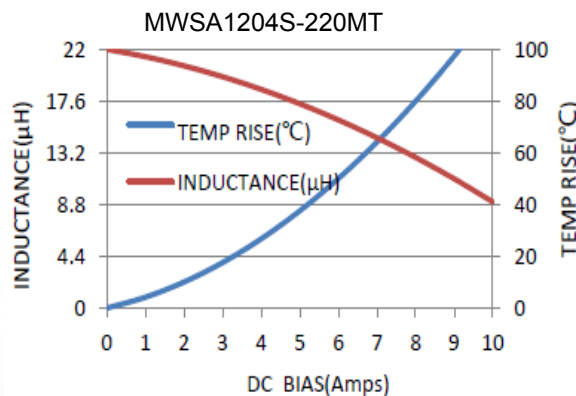
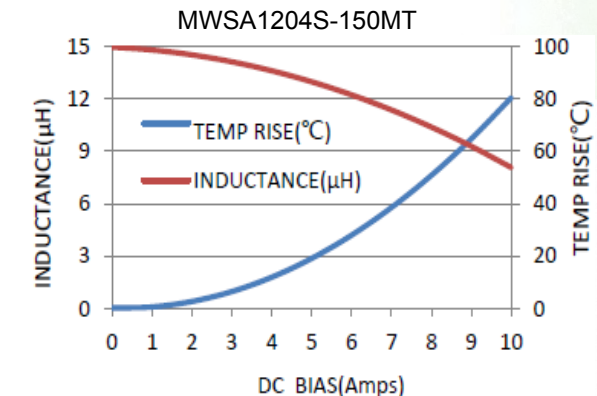
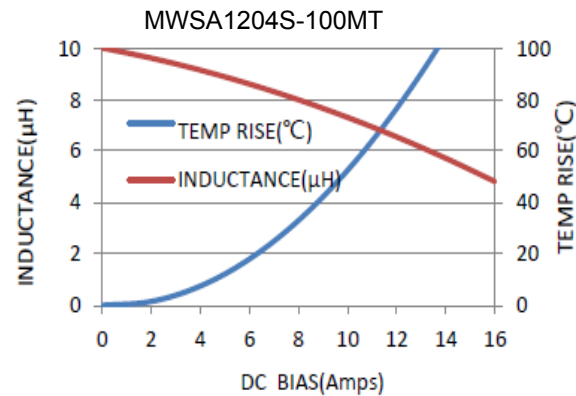
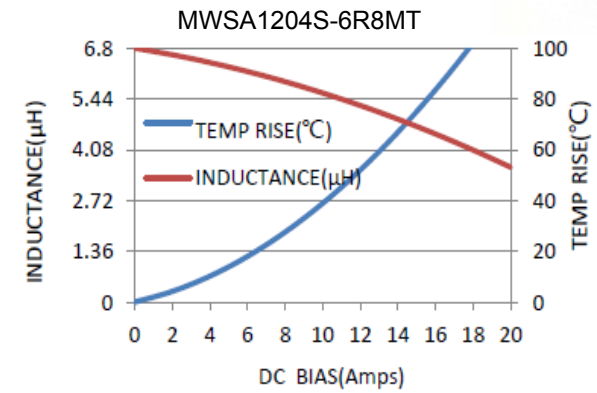
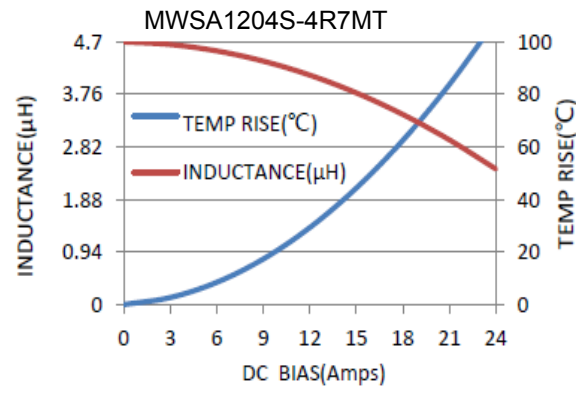
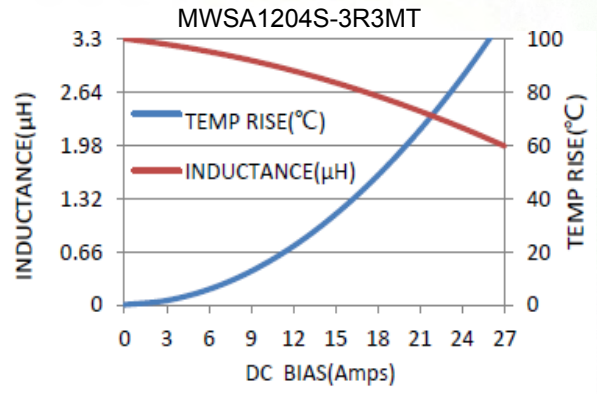
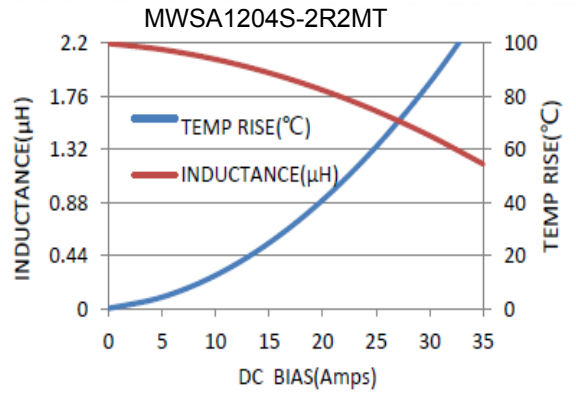


MWSA1204S Series



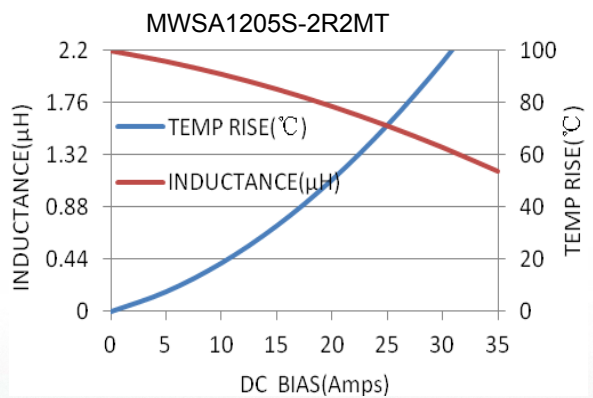
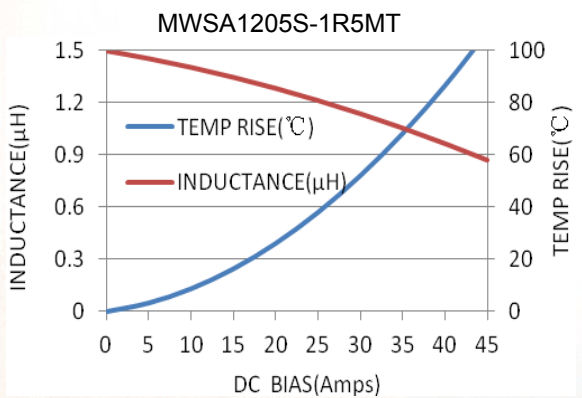
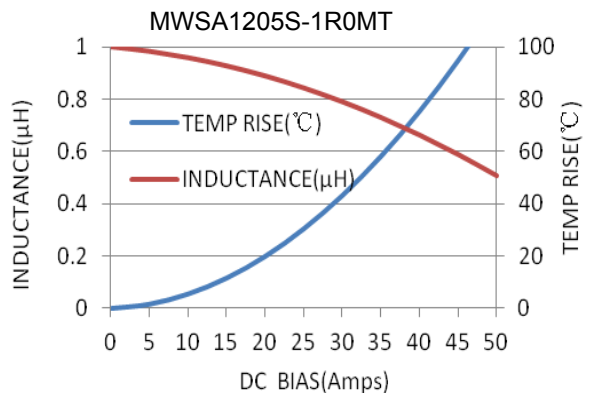
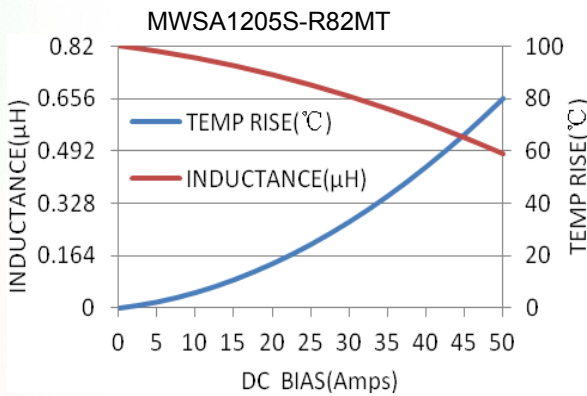
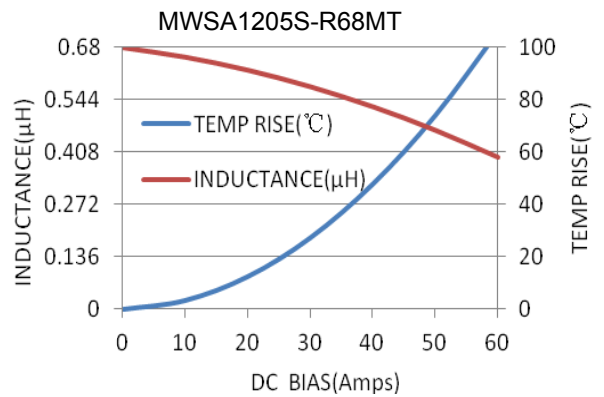
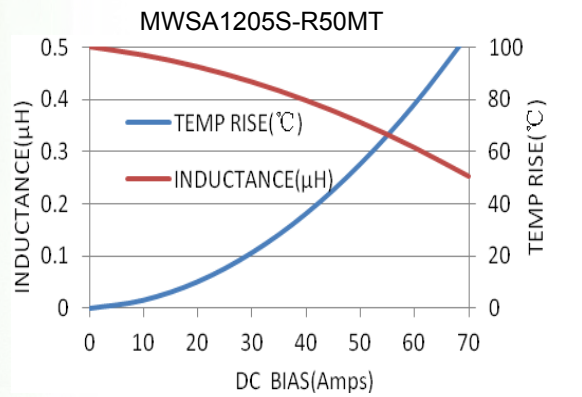
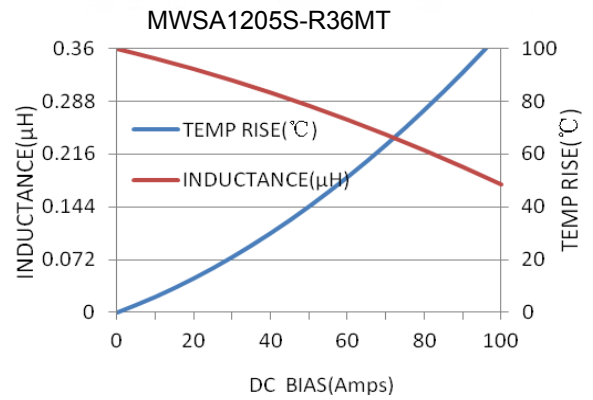
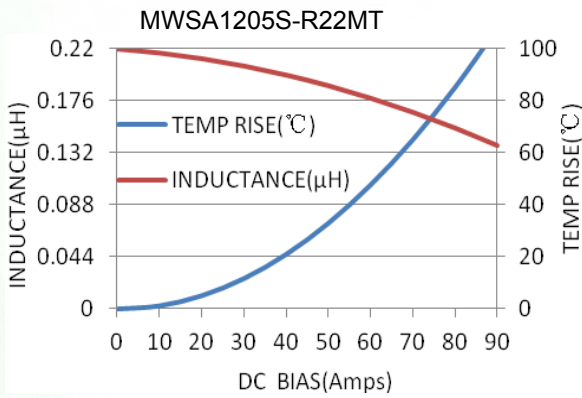
TYPICAL ELECTRICAL CHARACTERISTICS

MWSA1204S Series



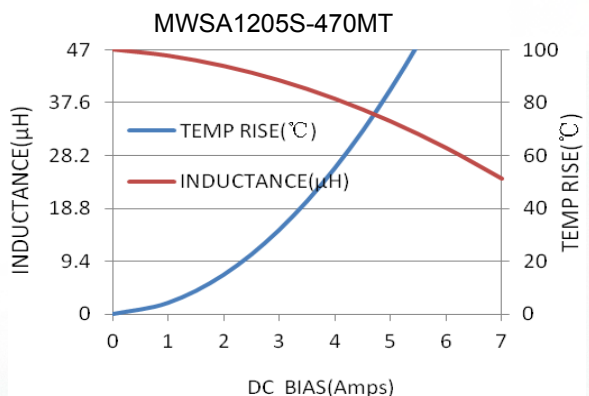
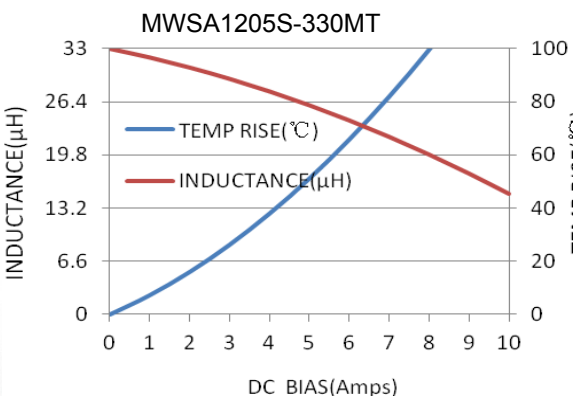
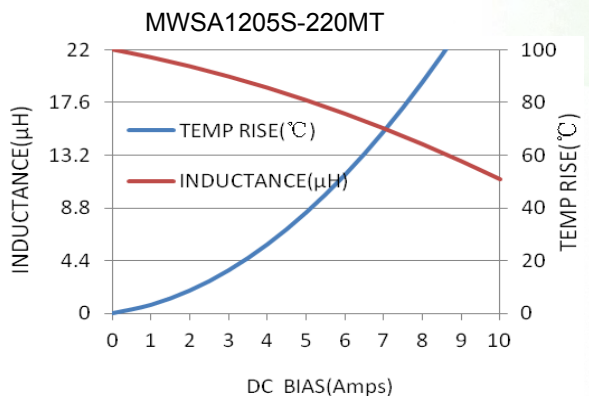
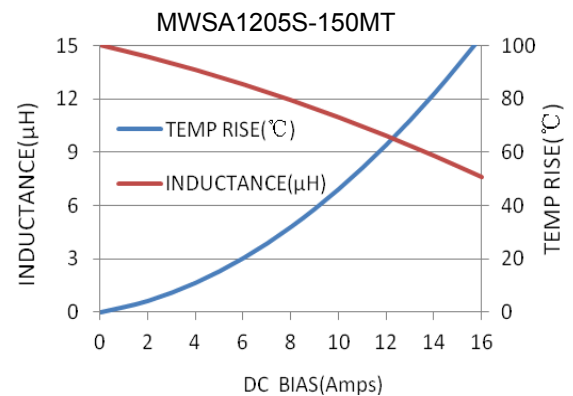
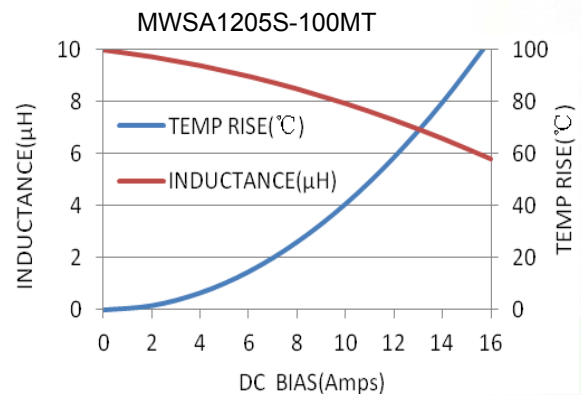
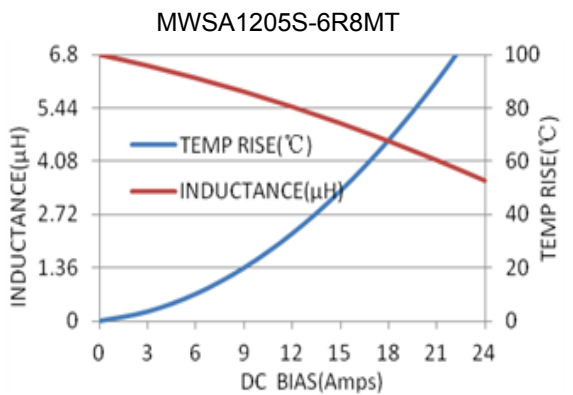
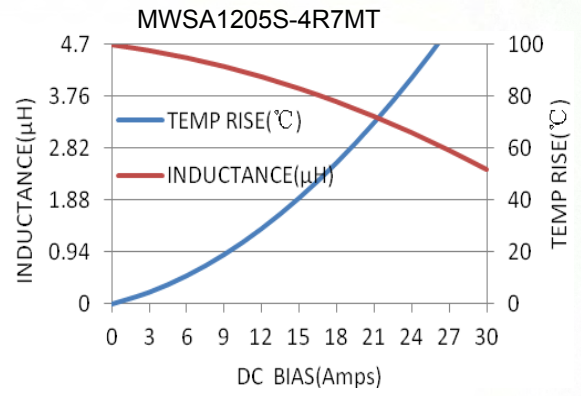
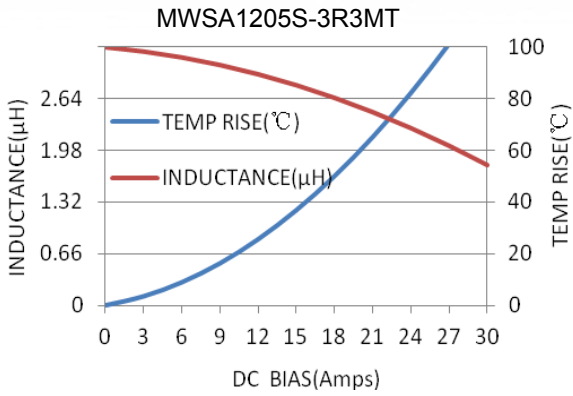
TYPICAL ELECTRICAL CHARACTERISTICS

MWSA1205S Series



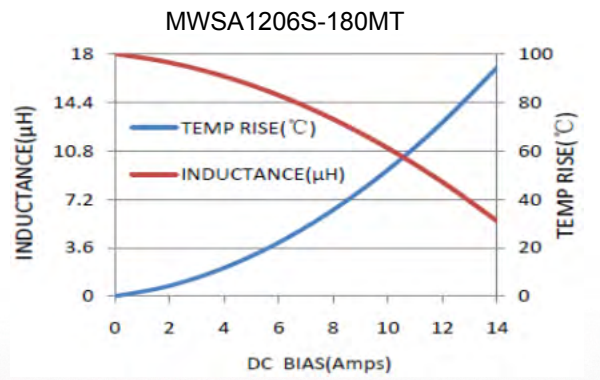
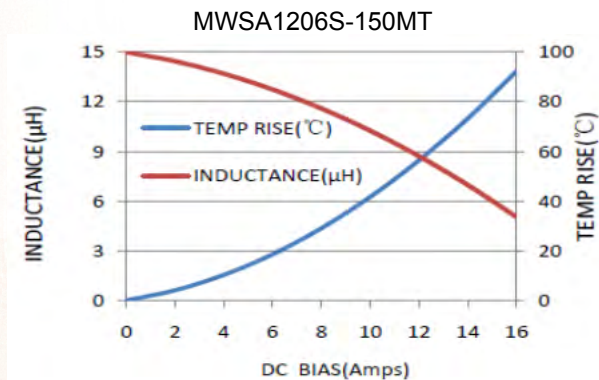
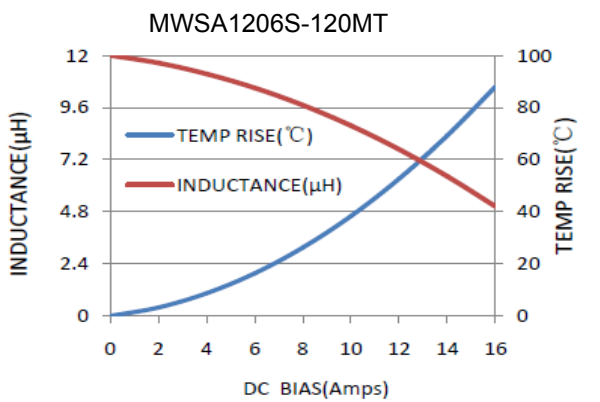
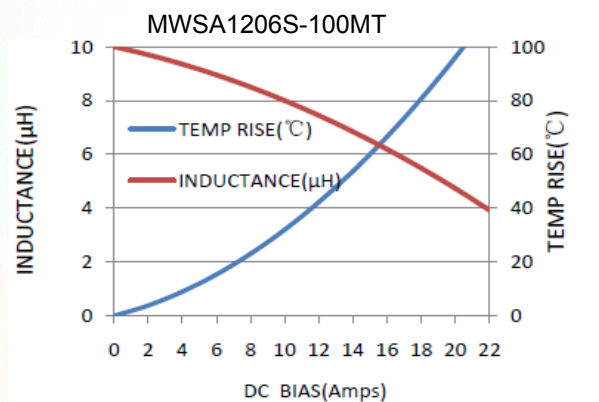
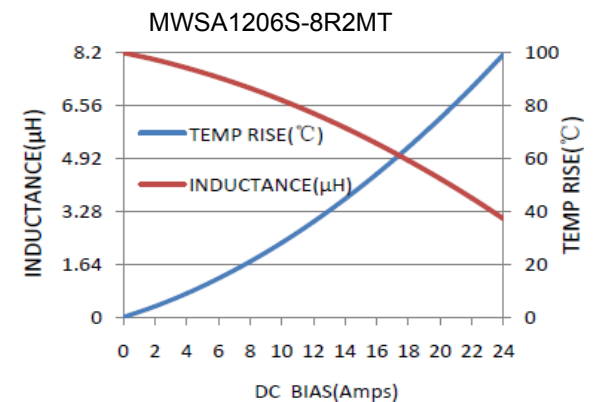
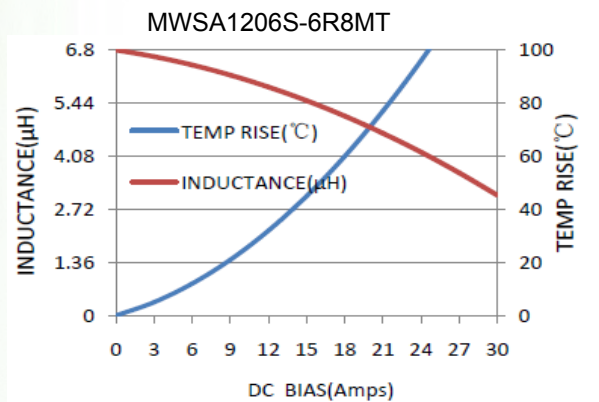
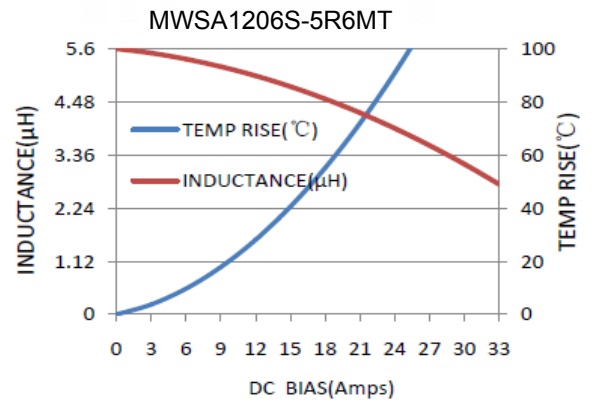
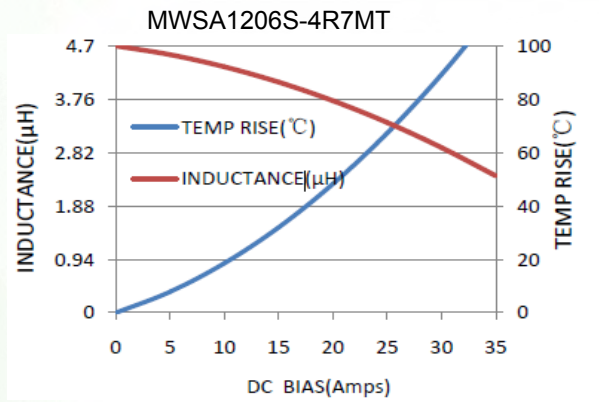
TYPICAL ELECTRICAL CHARACTERISTICS

MWSA1205S Series



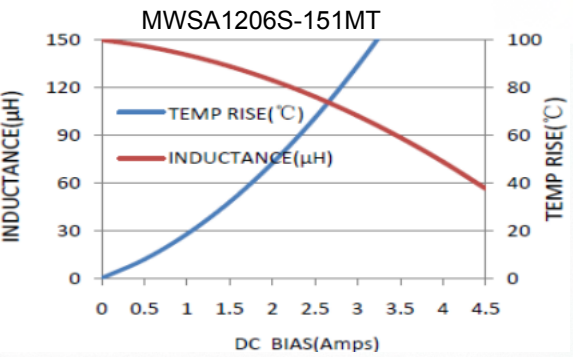
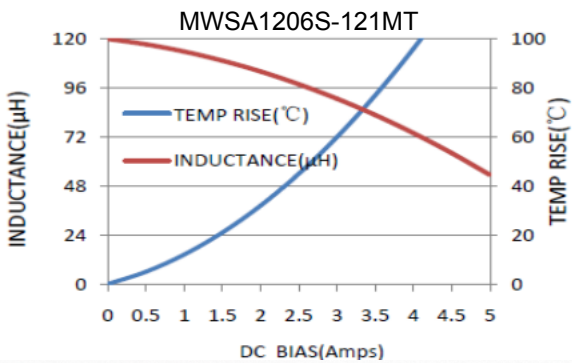
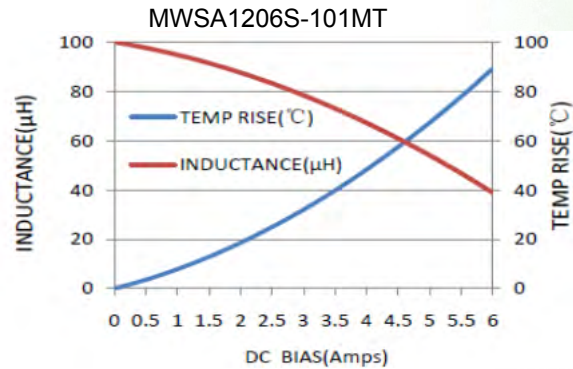
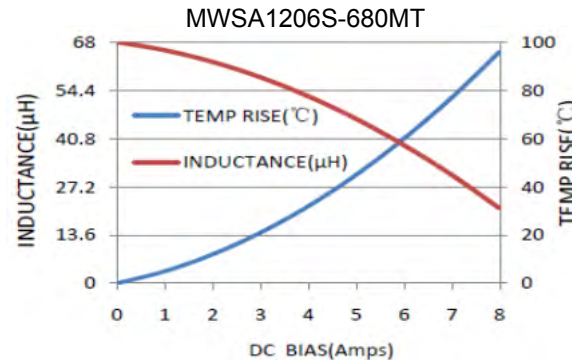
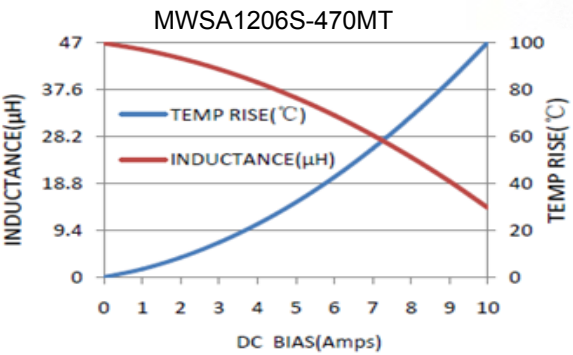
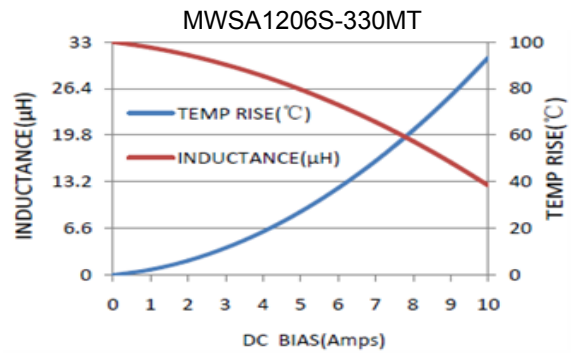
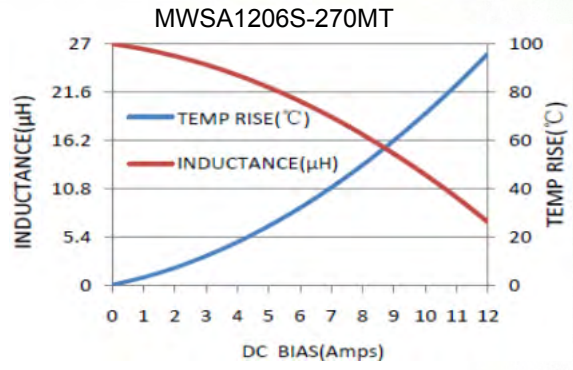
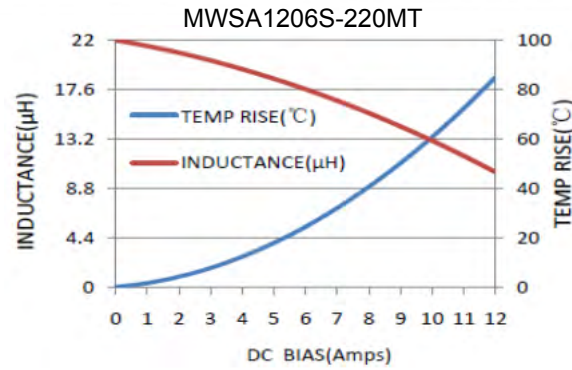
TYPICAL ELECTRICAL CHARACTERISTICS

MWSA1206S Series



TYPICAL ELECTRICAL CHARACTERISTICS

MWSA1206S Series



TYPICAL ELECTRICAL CHARACTERISTICS

MWSA1265S Series

