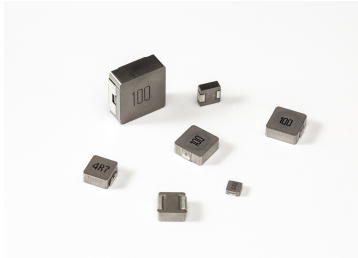


SMHPI Series



Features

- High rated current
- Frequency up to 3 MHz
- 125°C maximum total temperature operation
- Low core loss
- Ultra low buzz noise due to molding construction
- Halogen Free & ROHS compliant

Applications

- Laptops and PCs
- Switch and servers
- Base stations
- DC/DC converters
- Battery powered devices
- SSD modules

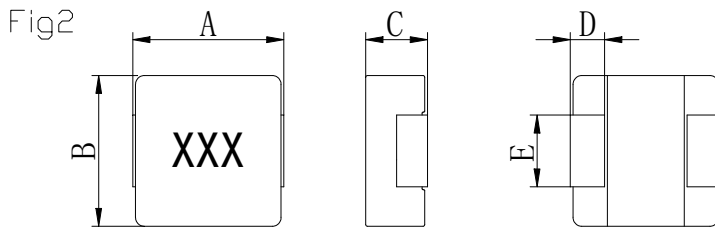
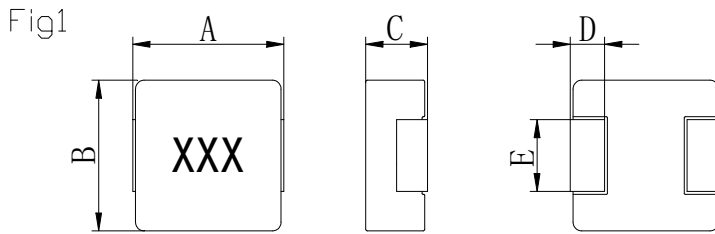
Product Identification

SMHPI XXXX TL - XXXX
For example: SMHPI0630TL-1R0M

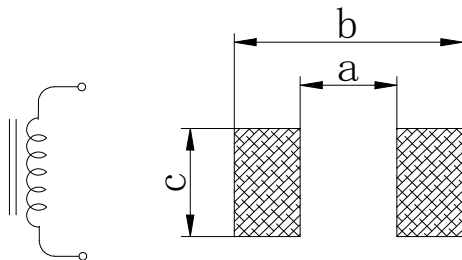
General Specifications

Test Frequency.....	100KHz
Test Voltage.....	1.0V
Parameters Test Temp.....	20°C
Operation Temp.....	-55°C to +125°C
(Including temperature Rise)	
Storage Temp.....	0~40°C
Storage Humidity.....	<70% RH
Resistance to Soldering Heat.....	260°C for 10 sec
Rated Current.....	Ind. drops of 30% typ at Isat
Temperature Rise.....	40°C typ. at Irms

Shape And Dimensions



Electrical Schematic & PAD Layout



Dimensions In mm

TYPE	A	B	C	D	E	a	b	c	
						Typ.	Typ.	Typ.	
0410	4.1±0.20	4.1±0.20	0.8±0.2	0.8±0.2	1.8±0.2	2.2	4.4	2.2	Fig2
0420	4.4±0.35	4.2±0.25	1.8±0.2	0.8±0.3	2.0±0.3	2.2	5.2	2.5	Fig1
0518	5.4±0.35	5.2±0.2	1.6±0.2	1.2±0.2	2.2±0.3	2.2	6.0	2.5	Fig1
0530	5.4±0.35	5.2±0.2	2.8±0.2	1.2±0.2	2.2±0.3	2.2	6.0	2.5	Fig1
0615	7.0±0.3	6.6±0.2	1.3±0.2	1.6±0.3	3.0±0.3	3.7	8.4	3.5	Fig1
0618	7.0±0.3	6.6±0.2	1.6±0.2	1.6±0.3	3.0±0.3	3.7	8.4	3.5	Fig1
0624	7.0±0.3	6.6±0.2	2.2±0.2	1.6±0.3	3.0±0.3	3.7	8.4	3.5	Fig1
0630	7.0±0.3	6.6±0.2	2.8±0.2	1.6±0.3	3.0±0.3	3.7	8.4	3.5	Fig1
0640	7.0±0.3	6.6±0.2	3.8±0.2	1.6±0.3	3.0±0.3	3.7	8.4	3.5	Fig1
0650	7.0±0.3	6.6±0.2	4.8±0.2	1.6±0.3	3.0±0.3	3.7	8.4	3.5	Fig1
0840	8.8±0.4	8.2±0.3	3.8±0.2	1.4±0.3	5.0±0.3	4.0	9.5	5.5	Fig1
1030	11.5Max	10.0±0.3	2.8±0.2	2.0±0.5	3.0±0.5	5.4	13.6	4.1	Fig1
1040	11.5Max	10.0±0.3	3.8±0.2	2.0±0.5	3.0±0.5	5.4	13.6	4.1	Fig1
1050	11.5Max	10.0±0.3	4.8±0.2	2.0±0.5	3.0±0.5	5.4	13.6	4.1	Fig1
1240	13.45±0.35	12.8±0.3	3.8±0.2	2.0±0.5	See Remarks	8.0	14.5	5.5	Fig1
1250	13.45±0.35	12.6±0.3	4.8±0.2	2.0±0.5	See Remarks	8.0	14.5	5.5	Fig1
1260	13.45±0.35	12.6±0.3	5.8±0.2	2.0±0.5	5.0±0.5	8.0	14.5	5.5	Fig1
1265	13.45±0.35	12.6±0.3	6.5Max	2.0±0.5	5.0±0.3	8.0	14.5	5.5	Fig1
1770	17.15±0.35	17.15Max	7.0Max	2.5±0.5	12.0±0.3	11.2	18.2	12.8	Fig2

Remarks:

series	E	Dimensions
1240	3.85 Ref	R22 / R47
	5.00 Ref	R68 / R82 / 1R0 / 1R5 / 2R2 / 3R3 / 4R7 / 6R8 / 100 / 150 / 220
1250	3.85±0.3	R22 / R36 / R50 / R68 / R82 / 1R0 / 1R5 / 2R2
	5.00±0.3	3R3 / 4R7 / 6R8 / 8R2 / 100 / 150 / 220 / 330 / 470

Standard Specifications

Stamp	Inductance (uH)	SMHPI0410			SMHPI0412			SMHPI0420			SMHPI0518			SMHPI0530		
		DCR (mΩ) Max.	Isat (A) Typ.	Irms (A) Typ.	DCR (mΩ) Max.	Isat (A) Typ.	Irms (A) Typ.	DCR (mΩ) Max.	Isat (A) Typ.	Irms (A) Typ.	DCR (mΩ) Max.	Isat (A) Typ.	Irms (A) Typ.	DCR (mΩ) Max.	Isat (A) Typ.	Irms (A) Typ.
R10	0.1							4	22	13				3.00	30.0	25.0
R15	0.15				9	15	7.5									
R20	0.2													3.90	20.0	14.0
R22	0.22				11	11	7	6.6	12.5	9.5						
R33	0.33				19	8.4	6	11	12	10				5.50	18.0	14.0
R47	0.47				21	6.8	6	14	9.5	7.5	9	15.5	10.5	8.50	15.0	11.0
R56	0.56							16	9	7	10	15	9.5			
R68	0.68				36	6	4.7	18	8	7	13.8	11.2	8.9	12.0	11.5	9.00
1R0	1.0				47	5.5	4.5	27	7	6	17	9	8	14.0	10.0	8.50
1R2	1.2							27	6.5	6				16.0	9.50	8.50
1R5	1.5				75	4	3.25	46	5.5	5	26	8	7.5	25.0	9.00	8.20
2R2	2.2	100	4.3	3.4	83.5	3	2.75	58	5	4.5	35	6.5	5	29.0	7.00	7.00
3R3	3.3							87	3.5	3.3	58	5	4.5	38.0	6.00	5.50
4R7	4.7	160	2.5	2.6	195	2.2	1.8	105	3	2.8	85	4	3.5	60.0	4.60	4.50
6R8	6.8							175	2.5	2.4	120	3.4	2.8	90.0	3.60	3.50
100	10	336	1.8	1.5				282	2	1.6	155	3	2.5	125	3.50	3.20
220	22							363	1.4	1.2						

Note: When ordering, please specify tolerance code. Tolerance: K=±10%, M=±20%, N=±30%

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Standard Specifications

Stamp	Inductance (uH)	SMHPI0615			SMHPI0618			SMHPI0624			SMHPI0630			SMHPI0640		
		DCR (mΩ) Max	Isat (A) Typ	Irms (A) Typ	DCR (mΩ) Max	Isat (A) Typ	Irms (A) Typ	DCR (mΩ) Max	Isat (A) Typ	Irms (A) Typ	DCR (mΩ) Max	Isat (A) Typ	Irms (A) Typ	DCR (mΩ) Max	Isat (A) Typ	Irms (A) Typ
R10	0.1				2.3	38	25									
R22	0.22				3.5	24	22	3	34	21	3	34	24			
R33	0.33							4.1	24.5	18	3.5	25	21			
R47	0.47	8.5	16	10	8.4	18.	11.5	5.1	22	15	4.1	20	18			
R56	0.56	11	14	9				6.5	17	13	4.5	18	16.5			
R68	0.68	12	12	8.5	12	16.5	9.5	7	16	12	5.3	17	16	4.8	19	17
R82	0.82	17	10	8							6	16	14			
1R0	1.0	21	9	6	16	12	8.5	13.5	15	9	7.4	15	12	6.6	16	13.5
1R5	1.5				26	9.2	8	20	13.5	8.2	12.1	12	12	10	12.5	12.4
2R2	2.2	54	7	3.8	35	8	7	28	10	7	15	10	9.5	14	11	10
3R3	3.3	63	5.5	3.5	50	6	4.5	39	8	5.5	22	9.5	8.5	20	9.5	8.5
4R7	4.7	85	5	3.2	62	5	4	50	6.5	5	33	9	6	30	9	6.5
5R6	5.6										42	6.5	5.5			
6R8	6.8	135	4	2.5	110	4.5	3	70	6	4	48	6	5	45	6.5	5.5
8R2	8.2										60	5.5	5			
100	10	175	3	2	155	4	2.3	101	4	3.1	68	5.5	4.5	65	6	4.8
150	15							160	3.3	2.5	113	4	3	95	4.5	3.7
220	22				350	2.3	1.8	230	2.5	2	170	3	2.5	125	4	3.3
330	33										270	2.5	2	240	3	2.2
470	47										385	2	1.5	320	2.5	1.8

Note: When ordering, please specify tolerance code. Tolerance: K=±10%, M=±20%, N=±30%

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Standard Specifications

Stamp	Inductance (uH)	SMHPI0650			SMHPI0840			SMHPI1030			SMHPI1040			SMHPI1050		
		DCR (mΩ) Max	Isat (A) Typ	Irms (A) Typ	DCR (mΩ) Max	Isat (A) Typ	Irms (A) Typ	DCR (mΩ) Max	Isat (A) Typ	Irms (A) Typ	DCR (mΩ) Max	Isat (A) Typ	Irms (A) Typ	DCR (mΩ) Max	Isat (A) Typ	Irms (A) Typ
R15	0.15										0.65	75	45			
R22	0.22				1.8	60	36	1.2	50	33	1	60	35	0.8	65	37
R22-RD89	0.22							0.89±7%	50	33						
R30	0.3										1.1	45	35			
R33	0.33				2.4	45	30	1.6	32	23						
R36	0.36							1.6	28	23	1.2	45	30			
R47	0.47	3.9	21	20	2.8	42	28	2.5	26	22	1.7	40	30			
R56	0.56				3.2	26	24				1.8	33	25			
R68	0.68	4.5	18	16.5	3.8	24	23				2.4	30	23			
R80	0.8										2.7	29	23			
R82	0.82				4.4	21	21	3.7	23	18						
1R0	1.0	6.6	16	12	4.62	19	19	6	21	15	3.3	28	19	3	30	23
1R5	1.5	10	13	9.5	7.6	17	17				4.2	24	16	3.8	25	21
1R8	1.8				11	15	15									
2R2	2.2	12.5	11	9	11.4	14	14	9	14	11	7	16.5	12	6	19	15
3R3	3.3	22	10	8.5	15	12.5	12	16	12	9	11.8	16	11	10	16	13
4R7	4.7	29	8	6	26.5	11.5	9.5	24	10	7	20	13	9	14	15	11
5R6	5.6				30	11	9							17	14	9.5
6R8	6.8	41	6.3	5.8	36.8	9	8				25	12	8.5	18.5	14	9
8R2	8.2	48	5.5	5.5	46	8.7	7	45	7	5	27	9	8			
100	10	60	5.3	4.5	59	8	6.5				30	8.5	7.8	28	10	8
120	12															
150	15	90	4	3.1	71	5.5	5.4				45	7	6.5	42	7.5	6.5
180	18															
220	22	140	3.5	2.6	113	5	4.8				66	5.5	5	50	6	5.5
330	33	190	3	2.3	156	3.5	3.5	160	4	2.6	92	4.8	4.4	86	5.2	4.8
470	47	230	2.6	2	225	3.1	2.9				145	3.5	3.3	127	4.5	3.7
680	68										195	3	2.5			
101	100										340	2.3	2	290	2.8	2.1

Note: When ordering, please specify tolerance code. Tolerance: K=±10%, M=±20%, N=±30%

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Standard Specifications

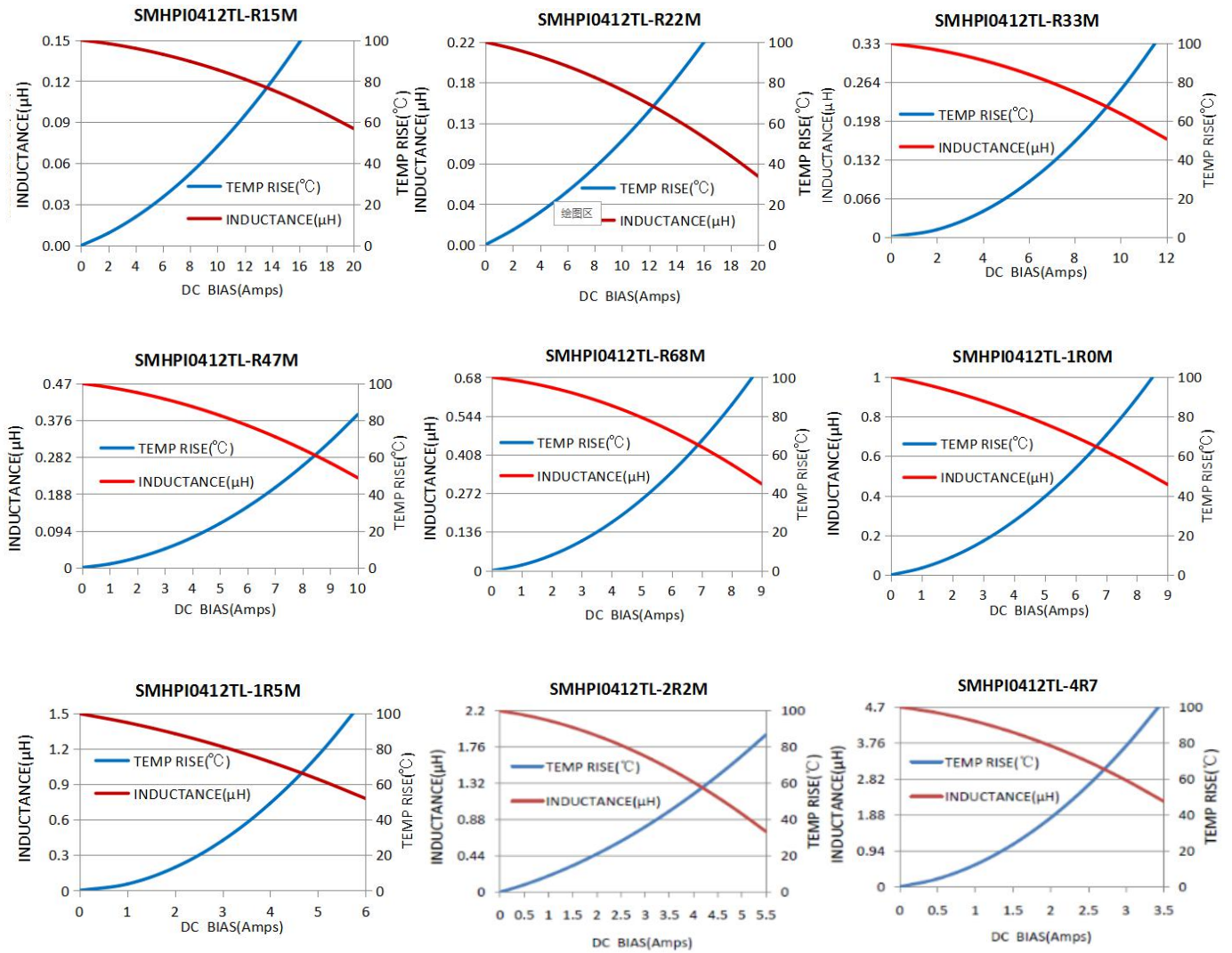
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		DCR (mΩ) Max	Isat (A) Typ	Irms (A) Typ	DCR (mΩ) Max	Isat (A) Typ	Irms (A) Typ	DCR (mΩ) Max	Isat (A) Typ	Irms (A) Typ	DCR (mΩ) Max	Isat (A) Typ	Irms (A) Typ	DCR (mΩ) Max	Isat (A) Typ	Irms (A) Typ
R22	0.22	0.9	50	42	0.7	75	50									
R36	0.36				0.85	50	42									
R47	0.47	2	48	33												
R50	0.5				1.15	48	38									
R68	0.68	3.5	47	28	1.55	46	33									
R82	0.82	4.5	40	28	1.67	39	30									
1R0	1	7.5	35	24	2.2	35	26									
1R5	1.5	9.5	30.5	20	3.2	33	23									
2R2	2.2	11.5	26	18	5	24	15							2.5	34	29
3R3	3.3	13	21	15	7	22	14							3.95	30	24
4R7	4.7	14.5	18	13	9	20	13	9	24	15	8.5	24	16	4.75	24	21
5R6	5.6							11	22.5	13	10.5	22.5	14			
6R8	6.8	20	14	9	18	16	12	13.5	19	12	12	19	13	7.5	22	17
8R2	8.2				20	13	9.5	16	13.5	11	14	16	12	8.7	20	13
100	10	25	10	8	22	12	9	20.7	12.5	10	16.5	15	11	9.9	19	12
120	12							23	10	9						
150	15	39	7.5	6.5	30	10	8	29	9	8.5	26	11	9.5	17	14.5	11
180	18							35	8	7.5						
220	22	51	6	4.5	58	6.5	4.5	39.5	7.5	7	36	9	8	23	11.5	8.5
270	27							56	6.5	6						
330	33				84	6	3.5	75	6	5.5	65	8	6.5	37	10	8
470	47				130	5	3	90	5.5	5.5	70	6.8	5.5	47	7.5	6
680	68							140	4.5	4	120	5.2	4.8	85	6.5	5.2
820	82										135	4.5	4			
101	100							200	3.5	3	170	4	3.5	130	5	3.7
121	120							235	3.2	2						
151	150							350	2.7	1.5						

Note: When ordering, please specify tolerance code. Tolerance: K=±10%, M=±20%, N=±30%

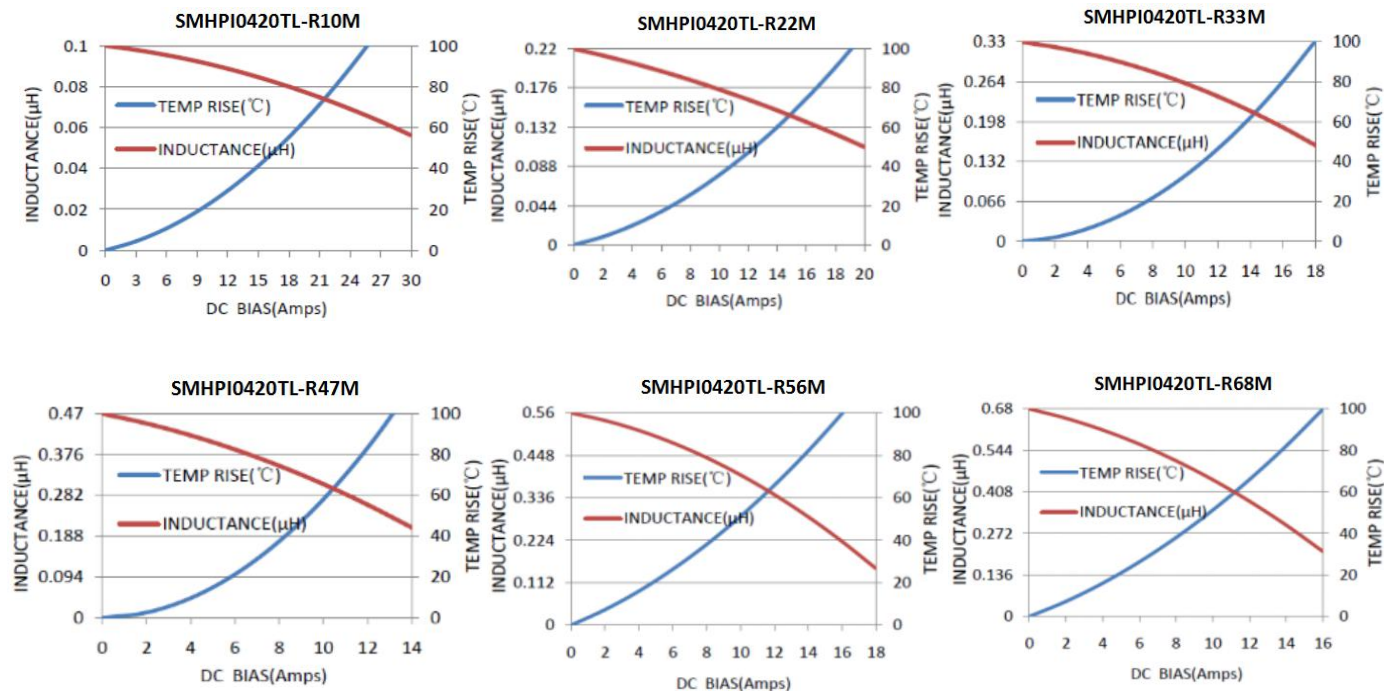
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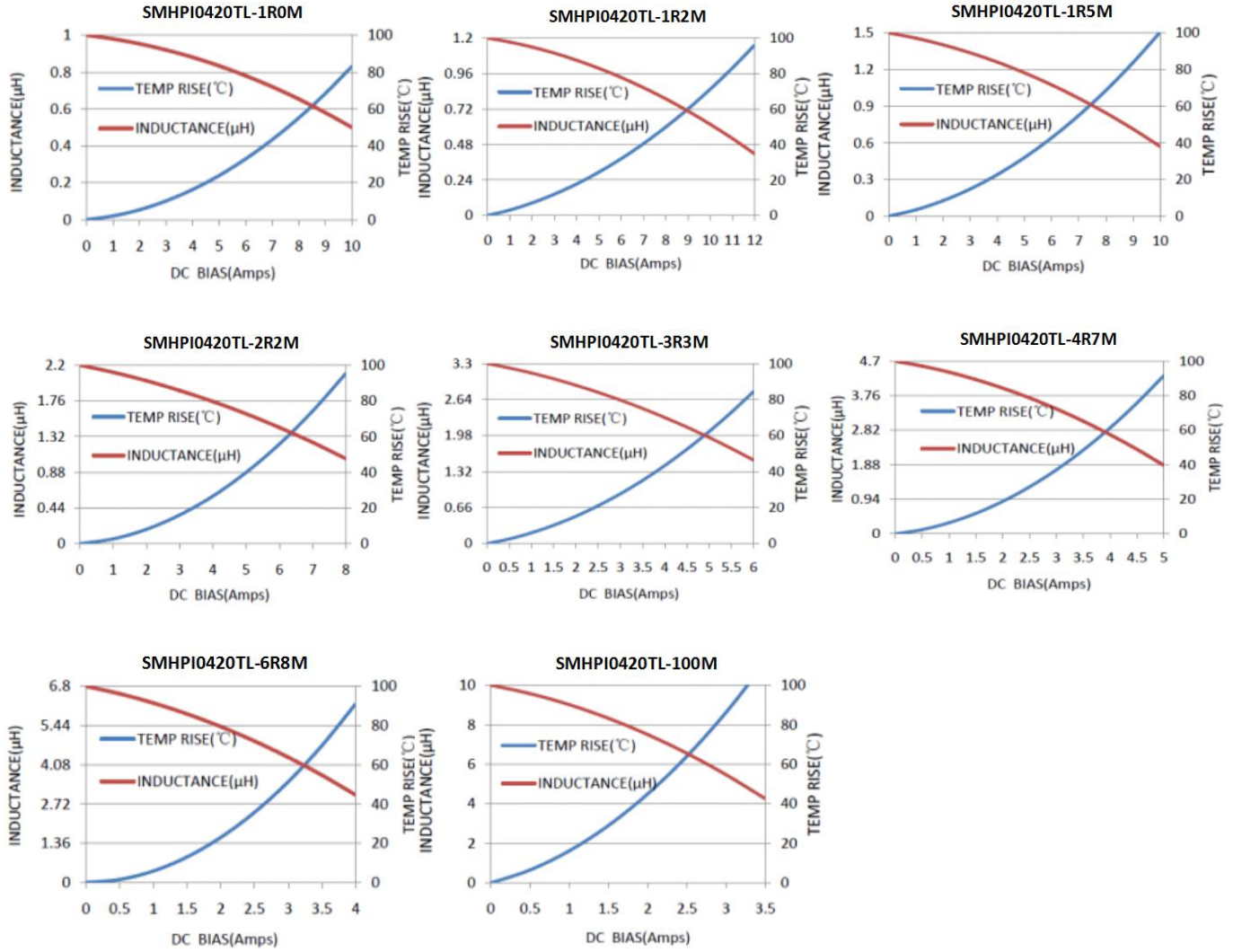
SMHPI0412-SERIES



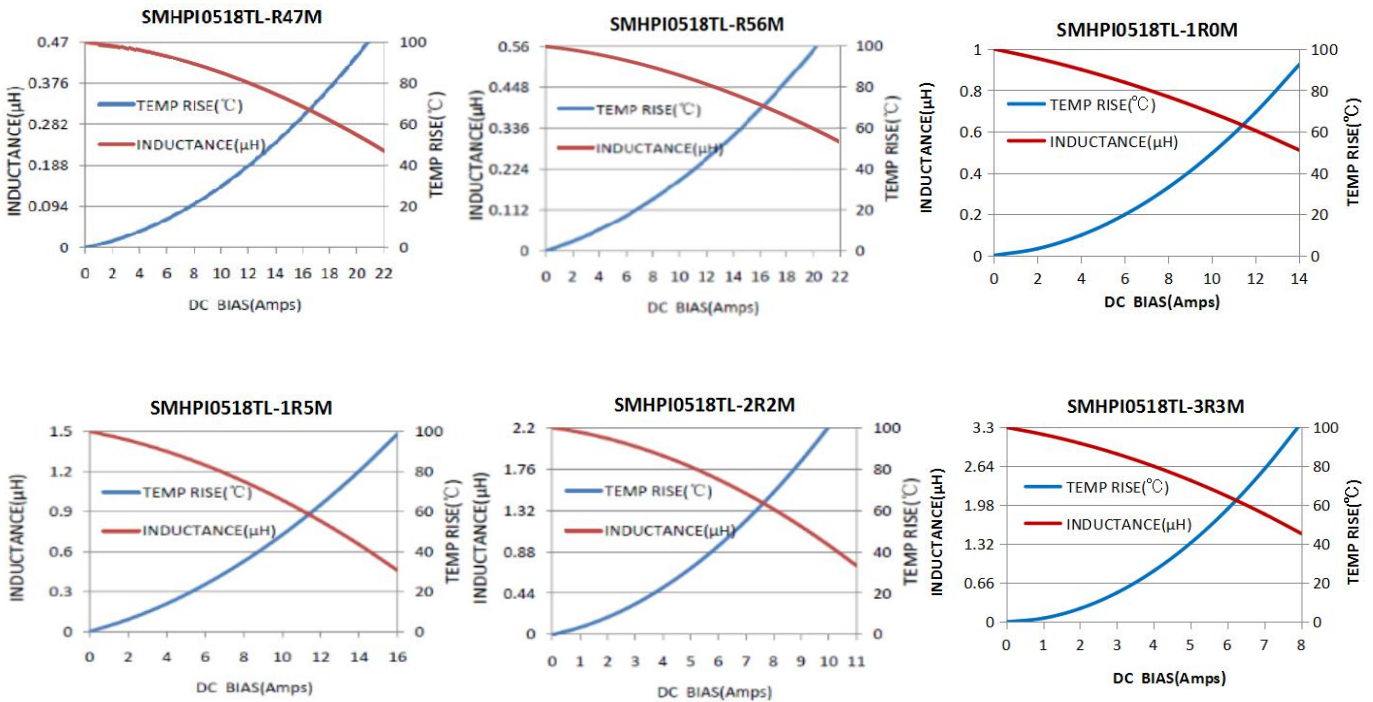
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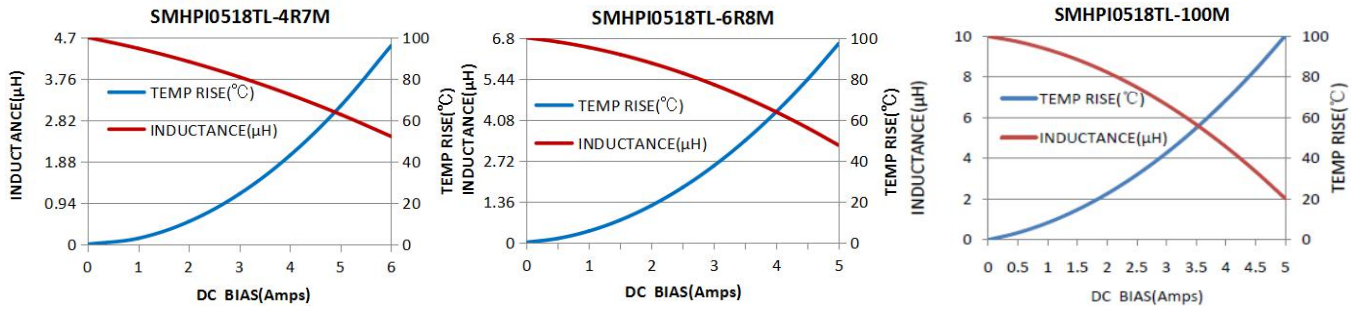


SMHPI0420-SERIES

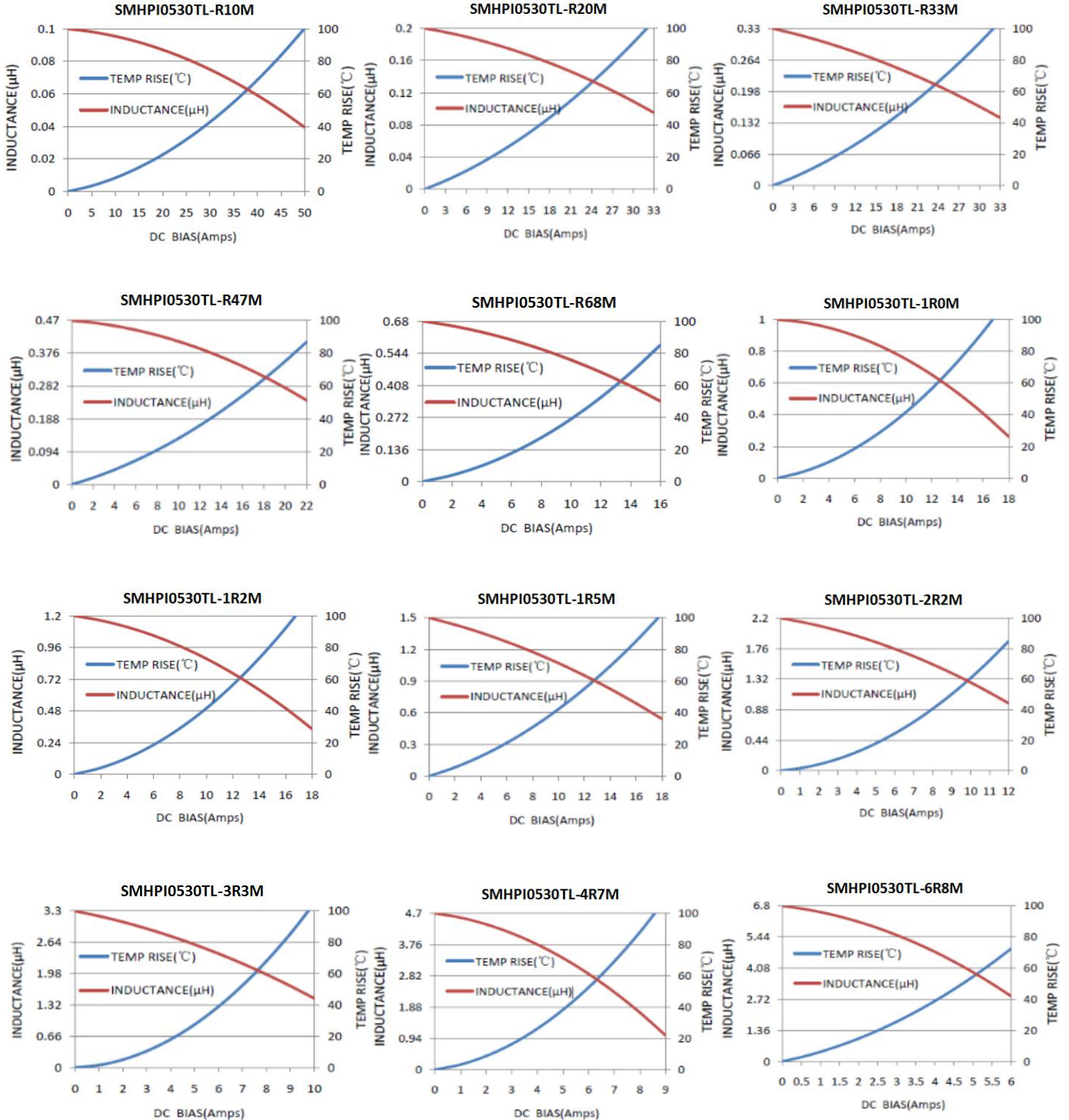


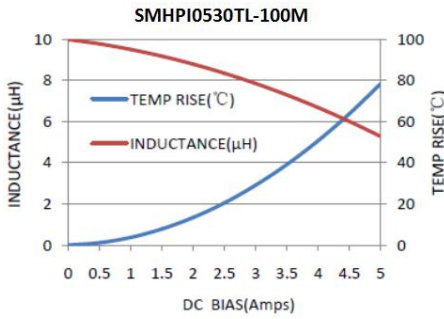
SMHPI0518-SERIES





SMHPI0530-SERIES





SMHPI0624-SERIES

