

SMD Power Choke Coil	TMPC-Series(G)
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1. Features

1. Low loss realized with low DCR.
2. High performance realized by metal dust core.
3. Ultra low buzz noise, due to composite construction.
4. 100% Lead(Pb)-Free and RoHS compliant.

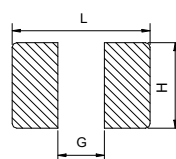
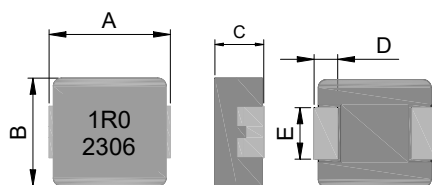


2. Applications

Commercial applications

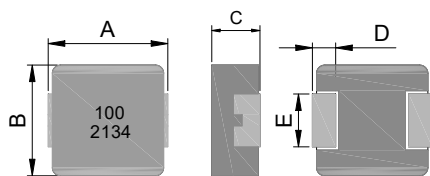
3. Dimensions

Recommend PC Board Pattern

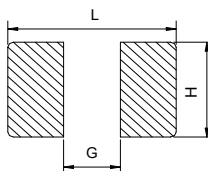


Note (TMPC80XX)
 1. The above PCB layout reference only.
 2. Recommend solder paste thickness at 0.15mm and above.

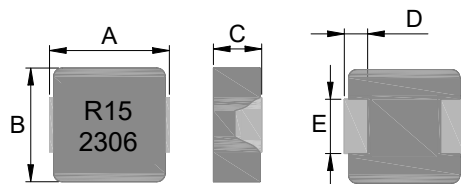
Series	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)	L(mm)	G(mm)	H(mm)
TMPC8030HP	8.8±0.4	8.4±0.3	2.8±0.2	1.6±0.3	5.0±0.3	9.6	4.5	5.5
TMPC8040HP	8.8±0.4	8.4±0.3	3.8±0.2	1.6±0.3	5.0±0.3	9.6	4.5	5.5
TMPC1002H	11.0±0.5	10.0±0.3	1.8±0.2	2.3±0.3	3.0±0.3	12.5	5.4	3.5
TMPC1203HP	13.5±0.5	12.5±0.3	2.8±0.2	2.3±0.3	4.7±0.3	14.5	8.0	5.0
TMPC1235HP	13.5±0.5	12.5±0.3	3.3±0.2	2.3±0.3	4.7±0.3	14.2	8.0	5.0



leadframe

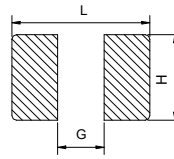
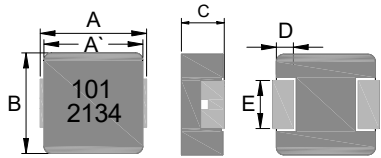


Note
 1. The above PCB layout reference only.
 2. Recommend solder paste thickness at 0.15mm and above.



non-leadframe

Series	Type	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)	L(mm)	G(mm)	H(mm)
TMPC1003H	leadframe	11.0±0.5	10.0±0.3	2.8±0.2	2.3±0.3	3.0±0.3	13.6	5.4	3.5
	non-leadframe								
TMPC1004H	leadframe	11.0±0.5	10.0±0.3	3.8±0.2	2.3±0.3	3.0±0.3	13.6	5.4	3.5
	non-leadframe								
TMPC1005H	leadframe	11.0±0.5	10.0±0.3	4.8±0.2	2.3±0.3	3.0±0.3	13.6	5.4	3.5
	non-leadframe								
TMPC1205HP	leadframe	13.5±0.5	12.5±0.3	4.8±0.2	2.3±0.3	4.7±0.3	14.2	8.0	5.0
	non-leadframe								
TMPC1206HP	leadframe	13.5±0.5	12.5±0.3	5.7±0.3	2.3±0.3	4.7±0.3	14.2	8.0	5.0
	non-leadframe								
TMPC1265HP	leadframe	13.5±0.5	12.5±0.3	6.2±0.3	2.3±0.3	4.7±0.3	14.2	8.0	5.0
	non-leadframe								



Note
 1. The above PCB layout reference only.
 2. Recommend solder paste thickness at 0.17mm and above.

Series	A(mm)	A'(mm)	B(mm)	C(mm)	D(mm)	E(mm)	T(mm)	L(mm)	G(mm)	H(mm)
TMPC1707HP	17.6±0.4	16.9±0.3	16.9±0.3	6.7±0.3	2.1±0.3	11.9±0.3	0~+0.25	18.5	12.2	12.5

4. Part Numbering



A: Series
 B: Dimension
 C: Type
 D: Inductance
 E: Inductance Tolerance
 F: Code

BxC
 Carbonyl powder
 1R0=1.0uH
 M=±20%
 Marking: Black.1R0 and 2134 (21 YY, 34 WW, follow production date).



A: Series
 B: Dimension
 C: Type
 D: Inductance
 E: Inductance Tolerance
 F: Date Code

BxC
 HP:H:Carbonyl Powder,P:PAD broaden.
 2R2=2.20uH
 M=±20%.
 Marking: Black.2R2 and 2134(21 YY, 34 WW, follow production date).

5. Specification

Part Number	Inductance L0 (uH)±20%	I rms (A) Typ	I sat (A) Typ	DCR(mΩ) Typ	DCR(mΩ) Max
TMPC8030HP-R33MG-D	0.33	25.0	47.0	2.2	2.5
TMPC8030HP-R47MG-D	0.47	20.0	36.0	3.0	3.3
TMPC8030HP-1R0MG-D	1.00	14.0	26.0	5.5	6.05
TMPC8030HP-1R5MG-D	1.50	13.0	23.0	9.0	10.4
TMPC8030HP-2R2MG-D	2.20	11.5	21.0	11.7	13
TMPC8030HP-3R3MG-D	3.30	10.0	16.0	19	21.9
TMPC8030HP-4R7MG-D	4.70	9.0	14.0	28	32.2
TMPC8030HP-6R8MG-D	6.80	7.0	13.0	49.5	57
TMPC8030HP-8R2MG-D	8.20	5.5	11.0	56	64.4
TMPC8030HP-100MG-D	10.0	4.8	9.0	65	74.5
TMPC8030HP-150MG-D	15.0	3.8	7.0	102.0	122.0
TMPC8030HP-220MG-D	22.0	3.2	6.5	135.0	162.0

Part Number	Inductance L0 (uH)±20%	I rms (A) Typ	I sat (A) Typ	DCR(mΩ) Typ	DCR(mΩ) Max
TMPC8040HP-R15MG-D	0.15	32	70	1.15	1.30
TMPC8040HP-R22MG-D	0.22	31	60	1.60	1.76
TMPC8040HP-R33MG-D	0.33	30	55	2.0	2.20
TMPC8040HP-R47MG-D	0.47	28	40	2.6	2.86
TMPC8040HP-R56MG-D	0.56	25	38	2.7	2.97
TMPC8040HP-R68MG-D	0.68	23	36	3.1	3.41
TMPC8040HP-R82MG-D	0.82	21	32	3.7	4.10
TMPC8040HP-1R0MG-D	1.0	18	29	4.5	4.95
TMPC8040HP-1R5MG-D	1.5	17	27	6.6	7.30
TMPC8040HP-2R2MG-D	2.2	16	25	10.8	11.9
TMPC8040HP-3R3MG-D	3.3	14	22	15	16.5
TMPC8040HP-4R7MG-D	4.7	8.5	19	26.8	29.5
TMPC8040HP-5R6MG-D	5.6	7.5	17	30	35
TMPC8040HP-6R8MG-D	6.8	6.5	16.5	40	46
TMPC8040HP-8R2MG-D	8.2	6.0	16	44	51
TMPC8040HP-100MG-D	10	5.6	10	53	61
TMPC8040HP-220MG-D	22.0	3.9	8.0	100	120
TMPC8040HP-330MG-D	33.0	3.5	5.0	110	132

Part Number	Inductance L0 (uH)±20%	I rms (A) Typ	I sat (A) Typ	DCR (mΩ) Typ	DCR (mΩ) Max
TMPC1002H-1R0MG-D	1.00	8.5	26.0	15	18
TMPC1002H-1R5MG-D	1.50	8.0	23.0	21	25
TMPC1002H-2R2MG-D	2.20	7.0	19.0	27	32
TMPC1002H-3R3MG-D	3.30	5.5	16.0	44	52
TMPC1002H-4R7MG-D	4.70	5.0	14.0	54	64
TMPC1002H-6R7MG-D	6.70	4.0	11.0	63	73
TMPC1002H-8R2MG-D	8.20	3.2	9.0	90	105
TMPC1002H-100MG-D	10.0	3.0	7.0	100	120

Part Number	Inductance L0 (uH)±20%	I rms (A) Typ	I sat (A) Typ	DCR (mΩ) Typ	DCR (mΩ) Max	Type
TMPC1003H-R15YG-D	0.15±30%	35	60	0.9	1.1	non-leadframe
TMPC1003H-R22MG-D	0.22	30	55	1.1	1.3	non-leadframe
TMPC1003H-R33MG-D	0.33	25	47	1.2	1.5	non-leadframe
TMPC1003H-R47MG-D	0.47	20	33	2.1	2.5	non-leadframe
TMPC1003H-R56MG-D	0.56	16	24	2.6	3.0	leadframe
TMPC1003H-1R0MG-D	1.00	15	20	4.6	6.0	leadframe
TMPC1003H-1R5MG-D	1.50	13	20	6.5	7.5	leadframe
TMPC1003H-2R2MG-D	2.20	12	16	8.0	9.0	leadframe
TMPC1003H-3R3MG-D	3.30	9	14	14.5	16	leadframe
TMPC1003H-4R7MG-D	4.70	7	13	20.5	22.5	leadframe
TMPC1003H-5R6MG-D	5.60	7	12	28	32.5	leadframe
TMPC1003H-6R8MG-D	6.80	6.5	9.5	30.2	35	leadframe
TMPC1003H-8R2MG-D	8.20	6	8.5	42	48	leadframe
TMPC1003H-100MG-D	10.0	5	8	50	55	leadframe
TMPC1003H-150MG-D	15.0	4	7	72	86	leadframe
TMPC1003H-220MG-D	22.0	3	5.5	115	140	leadframe
TMPC1003H-470MG-D	47.0	2	4	216	260	leadframe

Part Number	Inductance L0 (uH)±20%	I rms (A) Typ	I sat (A) Typ	DCR(mΩ) Typ	DCR(mΩ) Max	Type
TMPC1004H-R10YG-D	0.10±30%	46	80.0	0.35	0.41	non-leadframe
TMPC1004H-R15YG-D	0.15±30%	43.0	75.0	0.50	0.60	non-leadframe
TMPC1004H-R22MG-D	0.22	35.0	60.0	0.80	1.00	non-leadframe
TMPC1004H-R33MG-D	0.33	31.0	60.0	1.00	1.20	non-leadframe
TMPC1004H-R47MG-D	0.47	28.0	43.0	1.30	1.50	non-leadframe
TMPC1004H-R56MG-D	0.56	25.0	40.0	1.60	1.80	non-leadframe
TMPC1004H-R68MG-D	0.68	22.0	39.0	2.40	2.70	non-leadframe
TMPC1004H-1R0MG-D	1.00	18.0	36.0	3.00	3.30	non-leadframe
TMPC1004H-1R5MG-D	1.50	16.0	33.0	4.00	4.60	non-leadframe
TMPC1004H-2R2MG-D	2.20	12.0	27.0	6.50	7.00	leadframe
TMPC1004H-3R3MG-D	3.30	11.0	20.0	10.8	11.8	leadframe
TMPC1004H-4R7MG-D	4.70	10.0	17.0	15.0	15.5	leadframe
TMPC1004H-5R6MG-D	5.60	9.00	14.0	17.0	19.3	leadframe
TMPC1004H-6R8MG-D	6.80	8.50	13.5	17.5	23.3	leadframe
TMPC1004H-8R2MG-D	8.20	8.00	12.5	20.0	22.5	leadframe
TMPC1004H-100MG-D	10.0	7.50	12.0	27.0	30.0	leadframe
TMPC1004H-150MG-D	15.0	6.25	10.0	40.0	45.0	leadframe
TMPC1004H-220MG-D	22.0	5.00	7.00	64.0	74.0	leadframe
TMPC1004H-330MG-D	33.0	3.50	5.00	92.0	112	leadframe
TMPC1004H-470MG-D	47.0	3.00	4.50	145	167	leadframe
TMPC1004H-680MG-D	68.0	2.00	3.00	205	240	leadframe
TMPC1004H-820MG-D	82.0	1.5	2.5	265	320	leadframe
TMPC1004H-101MG-D	100.0	1.3	2.4	362	420	leadframe

Part Number	Inductance L0 (uH)±20%	I rms (A) Typ	I sat (A) Typ	DCR(mΩ) Typ	DCR(mΩ) Max	Type
TMPC1005H-R22MG-D	0.22	45	70	0.45	0.5	non-leadframe
TMPC1005H-R47MG-D	0.47	28	50	1.15	1.38	non-leadframe
TMPC1005H-R56MG-D	0.56	26.5	43	1.3	1.5	non-leadframe
TMPC1005H-R68MG-D	0.68	25	35	1.7	1.9	non-leadframe
TMPC1005H-1R0MG-D	1.00	22	30	2.8	3.5	non-leadframe
TMPC1005H-1R5MG-D	1.50	19	27	3.5	4.1	non-leadframe
TMPC1005H-2R2MG-D	2.20	16	24	5.4	6.0	leadframe
TMPC1005H-3R3MG-D	3.30	14	22	9.0	10.4	leadframe
TMPC1005H-4R7MG-D	4.70	13	19	10	12.5	leadframe
TMPC1005H-5R6MG-D	5.60	10	16	14	16.8	leadframe
TMPC1005H-6R8MG-D	6.80	9.5	15	16.5	21	leadframe
TMPC1005H-8R2MG-D	8.20	9.0	14.5	18.5	24	leadframe
TMPC1005H-100MG-D	10.0	8.0	13.5	25	29	leadframe
TMPC1005H-150MG-D	15.0	5.5	9.5	37	45	leadframe
TMPC1005H-220MG-D	22.0	5.0	9.0	50	60	leadframe
TMPC1005H-330MG-D	33.0	4.3	7.5	80	92	leadframe
TMPC1005H-470MG-D	47.0	3.8	6.5	125	145	leadframe
TMPC1005H-680MG-D	68.0	2.5	4.0	176	205	leadframe
TMPC1005H-820MG-D	82.0	2.3	3.6	245	294	leadframe
TMPC1005H-101MG-D	100	2.0	3.0	315	380	leadframe

Part Number	Inductance L0 (uH)±20%	I rms (A) Typ	I sat (A) Typ	DCR(mΩ) Typ	DCR(mΩ) Max
TMPC1203HP-R36MG-D	0.36	30	50	2.2	2.6
TMPC1203HP-R56MG-D	0.56	27	42	2.9	3.5
TMPC1203HP-R68MG-D	0.68	25	40	4.6	5.1
TMPC1203HP-1R0MG-D	1.00	22	35	6.2	8.0
TMPC1203HP-1R5MG-D	1.50	18	30	8.0	9.5
TMPC1203HP-2R2MG-D	2.20	14	25	12	17
TMPC1203HP-3R3MG-D	3.30	10	20	20	24
TMPC1203HP-4R7MG-D	4.70	8.5	18	29	35
TMPC1203HP-100MG-D	10.0	7.5	12	55	66
TMPC1203HP-150MG-D	15.0	6	9	83	92
TMPC1203HP-220MG-D	22.0	4	6.5	115	140
TMPC1203HP-330MG-D	33.0	3	5	150	180
TMPC1203HP-470MG-D	47.0	2.5	4.5	230	280

Part Number	Inductance L0 (uH)±20%	I rms (A) Typ	I sat (A) Typ	DCR(mΩ) Typ	DCR(mΩ) Max
TMPC1235HP-1R0MG-D	1.00	24	40	2.7	3.5
TMPC1235HP-1R5MG-D	1.50	19	35	4.8	5.5
TMPC1235HP-2R2MG-D	2.20	16	29	6.3	8.0
TMPC1235HP-3R3MG-D	3.30	12	27	11	13.5
TMPC1235HP-4R7MG-D	4.70	10	24	15.3	18.5
TMPC1235HP-5R6MG-D	5.60	9.5	19	18	22
TMPC1235HP-6R8MG-D	6.80	9	18	20	24
TMPC1235HP-8R2MG-D	8.20	8.5	16	23	28
TMPC1235HP-100MG-D	10.0	7.0	14	29	34
TMPC1235HP-150MG-D	15.0	6.5	10	55	65
TMPC1235HP-220MG-D	22.0	4.5	7	83	99
TMPC1235HP-330MG-D	33.0	3.5	6	132	160
TMPC1235HP-470MG-D	47.0	3	5.5	181	218

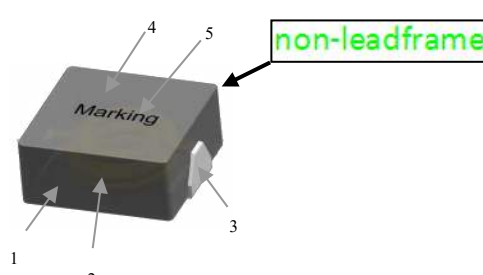
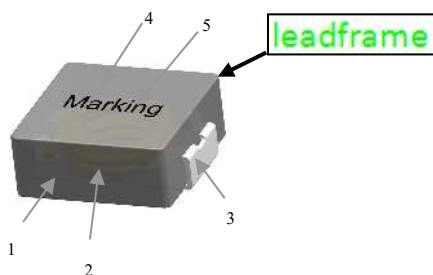
Part Number	Inductance L0 (uH)±20%	I rms (A) Typ	I sat (A) Typ	DCR(mΩ) Typ	DCR(mΩ) Max	Type
TMPC1205HP-R10MG-D	0.10	55	120	0.35	0.45	non-leadframe
TMPC1205HP-R22MG-D	0.22	52	110	0.5	0.7	non-leadframe
TMPC1205HP-R33MG-D	0.33	42	80	0.7	0.9	non-leadframe
TMPC1205HP-R47MG-D	0.47	38	65	0.86	1.1	non-leadframe
TMPC1205HP-R56MG-D	0.56	36	55	1.0	1.5	non-leadframe
TMPC1205HP-R68MG-D	0.68	34	54	1.4	1.7	non-leadframe
TMPC1205HP-R82MG-D	0.82	31	52	1.7	2.1	non-leadframe
TMPC1205HP-1R0MG-D	1.00	29	50	1.85	2.5	non-leadframe
TMPC1205HP-1R5MG-D	1.50	27	48	2.8	3.3	non-leadframe
TMPC1205HP-2R2MG-D	2.20	20	32	4.2	5.5	leadframe
TMPC1205HP-3R3MG-D	3.30	15	32	6.8	9.2	leadframe
TMPC1205HP-4R7MG-D	4.70	12	27	11.4	15.0	leadframe
TMPC1205HP-5R6MG-D	5.60	11.5	22	12.3	16.5	leadframe
TMPC1205HP-6R8MG-D	6.80	11	21	14.5	18.5	leadframe
TMPC1205HP-8R2MG-D	8.20	9.5	18	16.8	22.5	leadframe
TMPC1205HP-100MG-D	10.0	9.0	16	21.4	25.5	leadframe
TMPC1205HP-150MG-D	15.0	8.2	13	32	38	leadframe
TMPC1205HP-220MG-D	22.0	6.5	10	50	58	leadframe
TMPC1205HP-330MG-D	33.0	5.0	8.0	73	88	leadframe
TMPC1205HP-470MG-D	47.0	4.0	6.5	100	120	leadframe
TMPC1205HP-560MG-D	56.0	3.7	6.0	120	144	leadframe
TMPC1205HP-680MG-D	68.0	3.5	5.5	135	162	leadframe
TMPC1205HP-820MG-D	82.0	3.0	4.8	198	238	leadframe

Part Number	Inductance L0 (uH) ±20%	I rms (A) Typ	I sat 1 (A) Typ	I sat 2 (A) Typ	DCR(mΩ) Typ	DCR(mΩ) Max	Type
TMPC1206HP-R22YG-D	0.22±30%	55	100	120	0.48	0.65	non-leadframe
TMPC1206HP-R47MG-D	0.47	38	60	64	0.92	1.3	non-leadframe
TMPC1206HP-R56MG-D	0.56	35	56	60	1.15	1.5	non-leadframe
TMPC1206HP-R68MG-D	0.68	33	53	57	1.33	1.7	non-leadframe
TMPC1206HP-1R0MG-D	1.00	29	45	53	1.8	2.4	non-leadframe
TMPC1206HP-1R5MG-D	1.50	26	43	50	2.7	3.2	non-leadframe
TMPC1206HP-2R2MG-D	2.20	21	34	43	4.0	4.7	leadframe
TMPC1206HP-3R3MG-D	3.30	17	28	35	5.8	7.1	leadframe
TMPC1206HP-4R7MG-D	4.70	16	25	30	9.5	11.5	leadframe
TMPC1206HP-5R6MG-D	5.60	15.5	22	28	10.8	12.6	leadframe
TMPC1206HP-6R8MG-D	6.80	15	19	25	12	13.8	leadframe
TMPC1206HP-8R2MG-D	8.20	11	17	23	13.6	16	leadframe
TMPC1206HP-100MG-D	10.0	11	15.5	21	18	20.7	leadframe
TMPC1206HP-150MG-D	15.0	9.0	13	16	25	29	leadframe
TMPC1206HP-220MG-D	22.0	8.0	11	14	34	39.5	leadframe
TMPC1206HP-330MG-D	33.0	6.0	8.0	12.0	65	75	leadframe
TMPC1206HP-470MG-D	47.0	5.5	7.0	11.0	80	90	leadframe
TMPC1206HP-560MG-D	56.0	5.3	6.5	10	101	118	leadframe
TMPC1206HP-680MG-D	68.0	5.0	6.0	9.0	120	140	leadframe
TMPC1206HP-820MG-D	82.0	4.5	5.5	8.5	138	161	leadframe
TMPC1206HP-101MG-D	100	4.0	5.0	8.0	180	200	leadframe
TMPC1206HP-151MG-D	150	3.0	4.0	6.0	300	350	leadframe
TMPC1206HP-221MG-D	220	2.0	3.0	4.0	480	550	leadframe

Part Number	Inductance L0 (uH)±20%	I rms (A) Typ	I sat (A) Typ	DCR(mΩ) Typ	DCR(mΩ) Max	Type
TMPC1265HP-R15MG-D	0.15	55	118	0.49	0.60	non-leadframe
TMPC1265HP-R22MG-D	0.22	53	112	0.47	0.60	non-leadframe
TMPC1265HP-R33MG-D	0.33	46	68	0.65	0.8	non-leadframe
TMPC1265HP-R47MG-D	0.47	41	63	0.9	1.2	non-leadframe
TMPC1265HP-R56MG-D	0.56	37	58	1.05	1.2	non-leadframe
TMPC1265HP-R68MG-D	0.68	35	55	1.25	1.5	non-leadframe
TMPC1265HP-R82MG-D	0.82	33	50	1.5	1.9	non-leadframe
TMPC1265HP-1R0MG-D	1.00	30	48	1.7	2.3	non-leadframe
TMPC1265HP-1R5MG-D	1.50	27	45	2.5	3.0	non-leadframe
TMPC1265HP-2R2MG-D	2.20	22	37	3.8	4.2	leadframe
TMPC1265HP-3R3MG-D	3.30	18	30	5.7	6.8	leadframe
TMPC1265HP-4R7MG-D	4.70	13.5	28	7.0	8.4	leadframe
TMPC1265HP-5R6MG-D	5.60	12.5	23	8.5	10	leadframe
TMPC1265HP-6R8MG-D	6.80	11.5	18	9.5	11.5	leadframe
TMPC1265HP-8R2MG-D	8.20	10.5	16	12	15.5	leadframe
TMPC1265HP-100MG-D	10.0	10.0	15.5	13.2	16.5	leadframe
TMPC1265HP-150MG-D	15.0	9	13	23.2	28	leadframe
TMPC1265HP-220MG-D	22.0	9	12	32.5	37	leadframe
TMPC1265HP-330MG-D	33.0	8	11	48	58	leadframe
TMPC1265HP-470MG-D	47.0	6.5	9.5	76	90	leadframe
TMPC1265HP-560MG-D	56.0	5.5	8.6	90	108	leadframe
TMPC1265HP-680MG-D	68.0	4.8	7.8	110	130	leadframe
TMPC1265HP-820MG-D	82.0	4.5	6.5	135	155	leadframe
TMPC1265HP-101MG-D	100	4.2	5.5	145	165	leadframe
TMPC1265HP-151MG-D	150	3.2	5.0	220	250	leadframe
TMPC1265HP-221MG-D	220	2.1	3.5	340	408	leadframe
TMPC1265HP-331MG-D	330	1.8	3	650	780	leadframe

Part Number	Inductance L0 (uH)±20%	I rms (A) Typ	I sat 1 (A) Typ	I sat2 (A) Typ	DCR (mΩ) Typ	DCR (mΩ) Max
TMPC1707HP-R22MG-D	0.22	80	120	135	0.63	0.75
TMPC1707HP-R33MG-D	0.33	70	90	130	0.75	0.90
TMPC1707HP-R47MG-D	0.47	62	80	123	0.95	1.03
TMPC1707HP-R68MG-D	0.68	55	70	90	1.2	1.5
TMPC1707HP-R82MG-D	0.82	53	65	75	1.4	1.8
TMPC1707HP-1R0MG-D	1.00	52	60	70	1.6	2.0
TMPC1707HP-1R5MG-D	1.50	47	52	65	2.0	2.5
TMPC1707HP-2R2MG-D	2.20	43.5	47	62	2.4	2.7
TMPC1707HP-3R3MG-D	3.30	28	45	54	3.5	3.9
TMPC1707HP-4R7MG-D	4.70	25	41	50	4.8	5.5
TMPC1707HP-5R6MG-D	5.60	21	40	45	5.8	7.05
TMPC1707HP-6R8MG-D	6.80	19	32	39	8.4	9.2
TMPC1707HP-8R2MG-D	8.20	18	25	31	9.6	10.8
TMPC1707HP-100MG-D	10.0	16.5	24	29	11.8	13.0
TMPC1707HP-150MG-D	15.0	12.5	23	27	17.8	20.5
TMPC1707HP-220MG-D	22.0	12	18	23	25.1	26.5
TMPC1707HP-330MG-D	33.0	10.7	15	20	38.0	44.0
TMPC1707HP-470MG-D	47.0	8.7	9.5	16	48.0	55.0
TMPC1707HP-560MG-D	56.0	7.8	9.0	15	54.0	62.0
TMPC1707HP-680MG-D	68.0	7.0	8.0	13	68.0	80.0
TMPC1707HP-820MG-D	82.0	5.7	7.0	12	87.0	100.0
TMPC1707HP-101MG-D	100	5.3	6.5	12	102.0	118.0
TMPC1707HP-151MG-D	150	4.6	6.0	10	140	168

6. Material List

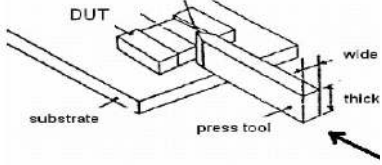


NO	Items	Materials
1	Core	Carbonyl Powder.
2	Wire	Polyester Wire or equivalent.
3	Clip	100% Pb free solder(Ni+Sn)
4	Ink	Halogen-free ketone
5	paint	Epoxy resin

NO	Items	Materials
1	Core	Carbonyl Powder.
2	Wire	Polyester Wire or equivalent.
3	Solder	100% Pb free solder
4	Ink	Halogen-free ketone
5	paint	Epoxy resin

7. Reliability and Test Condition

Item	Performance	Test Condition
Operating temperature	-40~+125℃ (Including self - temperature rise)	
Storage temperature	1. -10~+40℃,50~60%RH (Product with taping) 2. -40~+125℃(on board)	
Electrical Performance Test		
Inductance	Refer to standard electrical characteristics list.	HP4284A,CH11025,CH3302,CH1320,CH1320S LCR Meter.
DCR		CH16502,Agilent33420A Micro-Ohm Meter.
Saturation Current (Isat)	Approximately ΔL20%. Approximately ΔL30%.	Saturation DC Current (Isat) will cause L0 to drop ΔL(%)
Heat Rated Current (Irms)	Approximately ΔT40℃	Heat Rated Current (Irms) will cause the coil temperature rise ΔT(℃). 1.Applied the allowed DC current 2.Temperature measured by digital surface thermometer
Reliability Test		
Life Test	Appearance: No damage. Inductance: within±10% of initial value Q: Shall not exceed the specification value. RDC: within ±15% of initial value and shall not exceed the specification value	Preconditioning: Run through IR reflow for 3times. (IPC/JEDECJ-STD-020E Classification Reflow Profiles) Temperature: 125±2℃(Inductor, ambient + temp rise) Applied current: rated current Duration: 1000±12hrs Measured at room temperature after placing for 24±2 hrs.
Load Humidity		Preconditioning: Run through IR reflow for 3times. (IPC/JEDECJ-STD-020E Classification Reflow Profiles) Humidity: 85±2% R.H, Temperature: 85℃±2℃ Duration: 1000hrs Min. Bead:with 100% rated current, Inductance: with 100% rated current Measured at room temperature after placing for 24±2 hrs.
Moisture Resistance		Preconditioning: Run through IR reflow for 3 times. (IPC/JEDECJ-STD-020E Classification Reflow Profiles) 1. Baked at50℃ for 25hrs, measured at room temperature after placing for 4 hrs. 2. Raise temperature to 65±2℃ 90-100%RH in 2.5hrs, and keep 3 hours, cool down to 25℃ in 2.5hrs. 3. Raise temperature to 65±2℃ 90-100%RH in 2.5hrs, and keep 3 hours, cool down to 25℃ in 2.5hrs,keep at 25℃ for 2 hrs then keep at -10℃ for 3 hrs 4. Keep at 25℃ 80-100%RH for 15min and vibrate at the frequency of 10 to 55 Hz to 10 Hz, measure at room temperature after placing for 1~2 hrs.
Thermal shock		Preconditioning: Run through IR reflow for 3 times. (IPC/JEDECJ-STD-020E Classification Reflow Profiles) Condition for 1 cycle Step1: -40±2℃ 30±5min Step2: 125±2℃ ≅0.5min Step3: 125±2℃ 30±5minNumber of cycles: 500 Measured at room femperaturc after placing for 24±2 hrs.
Vibration		Preconditioning: Run through IR reflow for 3 times. (IPC/JEDECJ-STD-020E Classification Reflow Profiles) Oscillation Frequency: 10Hz~2KHz~10Hz for 20 minutes Equipment: Vibration checker Total Amplitude: 10g Testing Time : 12 hours(20 minutes, 12 cycles each of 3 orientations).

Item	Performance	Test Condition															
Bending	Appearance: No damage.	Shall be mounted on a FR4 substrate of the following dimensions: ≥ 0.805 inch(2012mm):40x100x1.2mm < 0.805 inch(2012mm):40x100x0.8mm Bending depth: ≥ 0.805 inch(2012mm):1.2mm < 0.805 inch(2012mm):0.8mm duration of 10 sec.															
Shock	Inductance: within $\pm 10\%$ of initial value Q: Shall not exceed the specification value. RDC: within $\pm 15\%$ of initial value and shall not exceed the specification value	<table border="1" data-bbox="979 338 1417 472"> <thead> <tr> <th>Type</th> <th>Peak value (g's)</th> <th>Normal duration (D) (ms)</th> <th>Wave form</th> <th>Velocity change (V)/ft/sec</th> </tr> </thead> <tbody> <tr> <td>SMD</td> <td>50</td> <td>11</td> <td>Half-sine</td> <td>11.3</td> </tr> <tr> <td>Lead</td> <td>50</td> <td>11</td> <td>Half-sine</td> <td>11.3</td> </tr> </tbody> </table> 3 shocks in each direction along 3 perpendicular axes(18 shocks).	Type	Peak value (g's)	Normal duration (D) (ms)	Wave form	Velocity change (V)/ft/sec	SMD	50	11	Half-sine	11.3	Lead	50	11	Half-sine	11.3
Type	Peak value (g's)	Normal duration (D) (ms)	Wave form	Velocity change (V)/ft/sec													
SMD	50	11	Half-sine	11.3													
Lead	50	11	Half-sine	11.3													
Solderability	More than 95% of the terminal electrode should be covered with solder.	a. Method B1, 4 hrs @155°C dry heat @255°C $\pm 5^\circ$ C Test time:5 +0/-0.5 seconds. b. Method D category 3. (steam aging 8hours ± 15 min)@260°C $\pm 5^\circ$ C Test time: 30 +0/-0.5 seconds.															
Resistance to Soldering Heat		Depth: completely cover the termination <table border="1" data-bbox="979 674 1407 786"> <thead> <tr> <th>Temperature(°C)</th> <th>Time(s)</th> <th>Temperature ramp/immersion and emersion rate</th> <th>Number of heat cycles</th> </tr> </thead> <tbody> <tr> <td>260 ± 5 (solder temp)</td> <td>10 ± 1</td> <td>25mm/s ± 6 mm/s</td> <td>1</td> </tr> </tbody> </table>	Temperature(°C)	Time(s)	Temperature ramp/immersion and emersion rate	Number of heat cycles	260 ± 5 (solder temp)	10 ± 1	25mm/s ± 6 mm/s	1							
Temperature(°C)	Time(s)	Temperature ramp/immersion and emersion rate	Number of heat cycles														
260 ± 5 (solder temp)	10 ± 1	25mm/s ± 6 mm/s	1														
Terminal Strength	Appearance: No damage. Inductance: within $\pm 10\%$ of initial value Q: Shall not exceed the specification value. RDC: within $\pm 15\%$ of initial value and shall not exceed the specification value e	Preconditioning: Run through IR reflow for 3 times.(IPC/JEDEC J-STD-020E Classification Reflow Profiles With the component mounted on a PCB with the device to be tested,apply a force(> 0.805 inch(2012mm):1kg, ≤ 0.805 inch(2012mm):0.5kg)to the side of a device being tested. This force shall be applied for 60 +1 seconds. Also the force shall be applied gradually as not to apply a shock to the component being tested. 															

Note : When there are questions concerning measurement result : measurement shall be made after 48 ± 2 hours of recovery under the standard condition.

8.Soldering Specifications

(1) Soldering

Mildly activated rosin fluxes are preferred. TAI-TECH terminations are suitable for re-flow soldering systems. If hand soldering cannot be avoided, the preferred technique is the utilization of hot air soldering tools.

(2) Soldering Reflow:

Recommended temperature profiles for lead free re-flow soldering in Figure 1. Table 1.1&1.2 (J-STD-020E)

(3) Iron Reflow:

Products attachment with a soldering iron is discouraged due to the inherent process control limitations. In the event that a soldering iron must be employed the following precautions are recommended.(Fig. 2)

- Preheat circuit and products to 150°C
- Never contact the ceramic with the iron tip
- Use a 20 watt soldering iron with tip diameter of 1.0mm
- 355°C tip temperature (max)
- 1.0mm tip diameter (max)
- Limit soldering time to 4~5sec.

Fig.1 Soldering Reflow

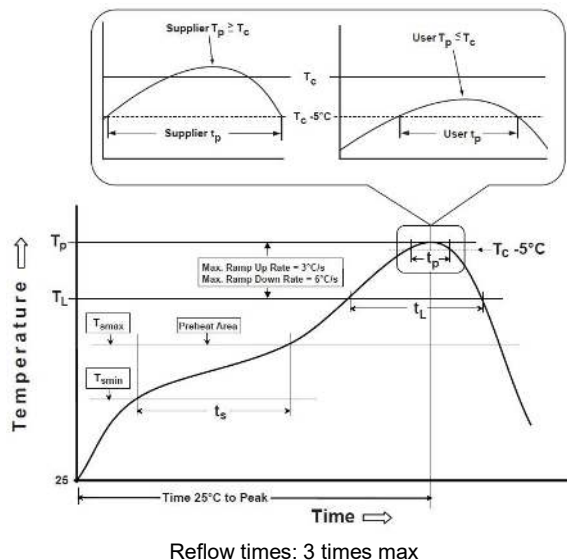


Fig.2 Iron soldering temperature profiles

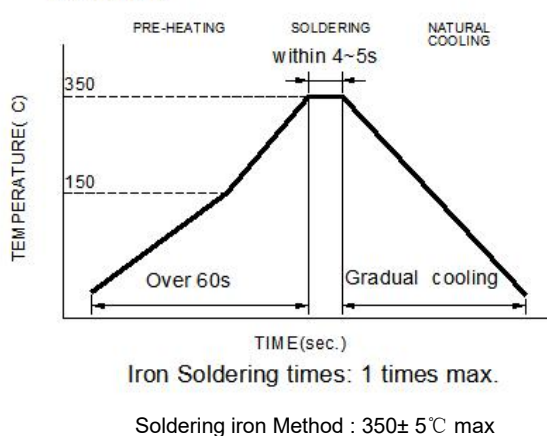


Table (1.1): Reflow Profiles

Profile Type:	Pb-Free Assembly
Preheat	
-Temperature Min(T_{smin})	150°C
-Temperature Max(T_{smax})	200°C
-Time(t_s)from(T_{smin} to T_{smax})	60-120seconds
Ramp-up rate(T_L to T_p)	3°C/second max.
Liquidus temperature(T_L)	217°C
Time(t_L)maintained above T_L	60-150 seconds
Classification temperature(T_c)	See Table (1.2)
Time(t_p) at $T_c - 5^\circ C$ (T_p should be equal to or less than T_c .)	* < 30 seconds
Ramp-down rate(T_p to T_L)	6°C /second max.
Time 25°C to peak temperature	8 minutes max.

T_p: maximum peak package body temperature, **T_c**: the classification temperature.

For user (customer) **T_p** should be equal to or less than **T_c**.

* Tolerance for peak profile temperature (T_p) is defined as a supplier minimum and a user maximum.

Table (1.2) Package Thickness/Volume and Classification Temperature (T_c)

	Package Thickness	Volume mm ³ <350	Volume mm ³ 350-2000	Volume mm ³ >2000
PB-Free Assembly	<1.6mm	260°C	260°C	260°C
	1.6-2.5mm	260°C	250°C	245°C
	≥2.5mm	250°C	245°C	245°C

Reflow is referred to standard IPC/JEDEC J-STD-020E.

9. Notes

- (1) When there are questions concerning measurement result : measurement shall be made after 48 ± 2 hours of recovery under the standard condition
- (2) This power choke coil itself does not have any protective function in abnormal condition such as overload, short-circuit and open-circuit conditions, etc. Therefore, it shall be confirmed as the end product that there is no risk of smoking, fire, dielectric withstand voltage, insulation resistance, etc. in abnormal conditions to provide protective devices and/or protection circuit in the end product.
- (3) When this power choke coil was used in a similar or new product to the original one, sometimes it might not be able to satisfy the specifications due to different condition of use.
- (4) Dielectric withstanding test with higher voltage than specific value will damage insulating material and shorten its life.
- (5) This power choke coil must not be used in wet condition by water, coffee or any liquid because insulation strength becomes very low in this condition.
- (6) Please consult our company to confirm the reliability of the process required to wash or use or exposure to a chemical solvent used in this product. PCB washing tested to MIL-STD-202 Method, and dry it off immediately.
- (7) The rated current as listed is either the saturation current or the heating current depending on which value is lower.
- (8) If this power choke is dipped in the cleaning agent, such as toluene, xylene, ketone, and ether system, there is a possibility that the performance decreases greatly, and marking disappears.
- (9) The high power ultrasonic washing may damage the choke body.
- (10) Before use, the user should determine whether this product is suitable for their own design, Our company only guarantees that the product meets the requirements of this specification.

Application Notice

· Storage Conditions

To maintain the solderability of terminal electrodes:

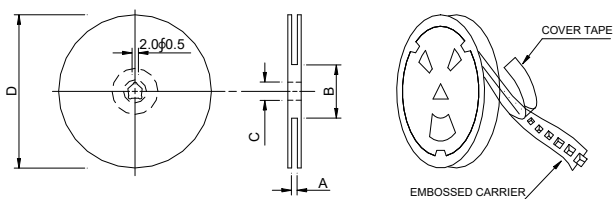
1. TAI-TECH products meet IPC/JEDEC J-STD-020E standard-MSL, level 1.
2. Temperature and humidity conditions: Less than 40°C and 60% RH.
3. Recommended products should be used within 12 months from the time of delivery.
4. The packaging material should be kept where no chlorine or sulfur exists in the air.

· Transportation

1. Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
2. The use of tweezers or vacuum pick up is strongly recommended for individual components.
3. Bulk handling should ensure that abrasion and mechanical shock are minimized.

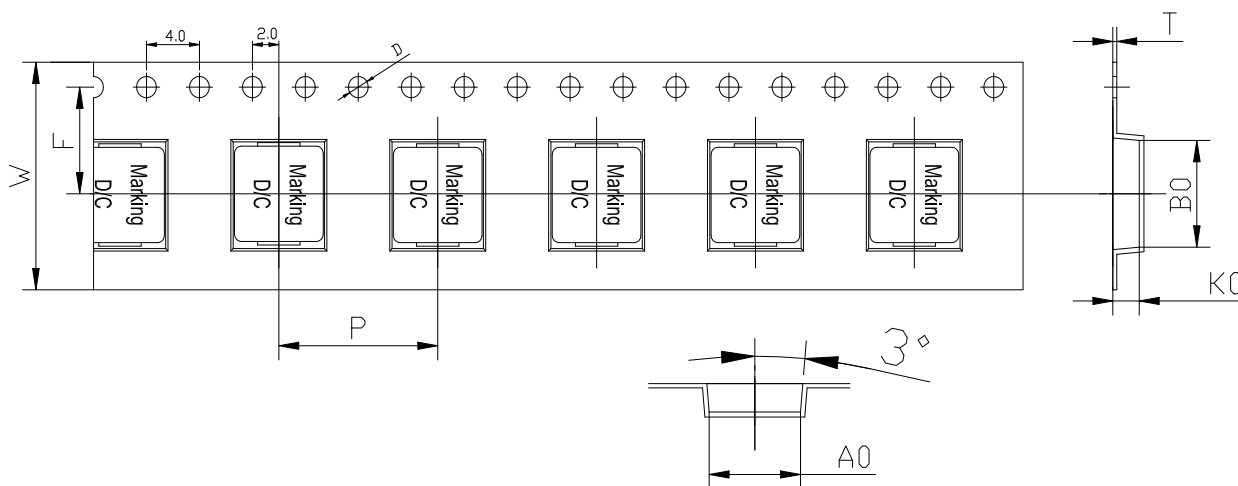
10. Packaging Information

(1) Reel Dimension

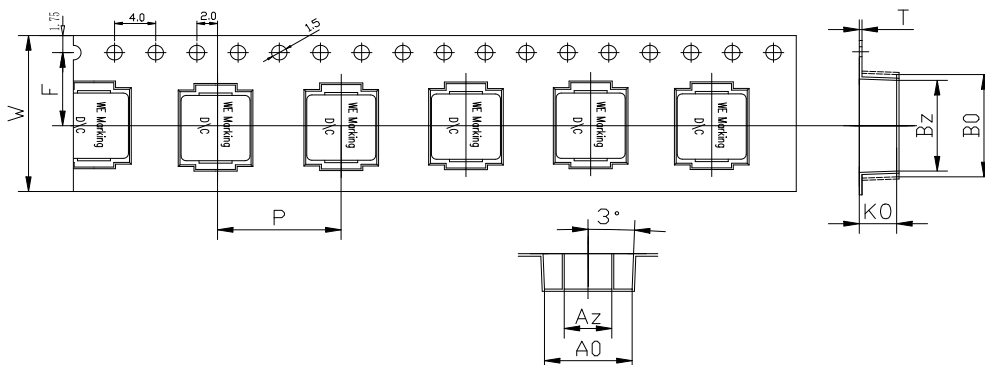


Size	Type	A(mm)	B(mm)	C(mm)	D(mm)
8030/40	13"x24mm	24.4+2/-0	100±2	13+0.5/-0.2	330
1002/1002/1004/1005/1203/ 1235/1205/1206/1265	13"x24mm	24.4+2/-0	100±2	13+0.5/-0.2	330
1707	13"x32mm	32.4+2/-0	100±2	13+0.5/-0.2	330

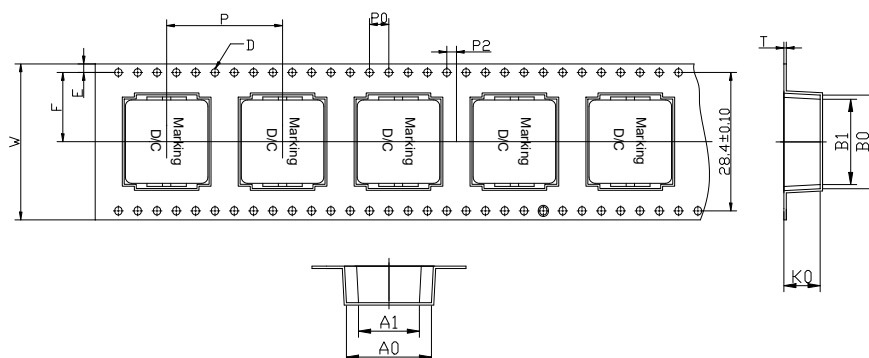
(2) Tape Dimension



Series	Size	Bo(mm)	Ao(mm)	Ko(mm)	P(mm)	W(mm)	F(mm)	T(mm)	D(mm)	Reel/PCS
TMPC	8030	10.1±0.1	8.9±0.1	3.3±0.1	16.0±0.1	24±0.3	11.5±0.1	0.35±0.05	1.5±0.1	1000
TMPC	8040	10.1±0.1	8.9±0.1	4.5±0.1	16.0±0.1	24±0.3	11.5±0.1	0.35±0.05	1.5±0.1	800
TMPC	1002	11.6±0.1	10.4±0.1	2.3±0.1	16.0±0.1	24±0.3	11.5±0.1	0.35±0.05	1.5±0.1	1000
TMPC	1003	11.6±0.1	10.4±0.1	3.5±0.1	16.0±0.1	24±0.3	11.5±0.1	0.35±0.05	1.5±0.1	1000
TMPC	1004	11.6±0.1	10.4±0.1	4.5±0.1	16.0±0.1	24±0.3	11.5±0.1	0.35±0.05	1.5±0.1	500
TMPC	1005	11.6±0.1	10.4±0.1	5.3±0.1	16.0±0.1	24±0.3	11.5±0.1	0.35±0.05	1.5±0.1	500

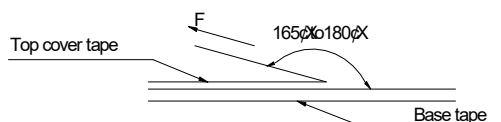


Series	Size	Bo(mm)	Bz(mm)	Ao(mm)	Az(mm)	Ko(mm)	P(mm)	W(mm)	F(mm)	t(mm)	Reel/PCS
TMPC	1203	14.1±0.1	13.0±0.1	12.9±0.1	7.0±0.1	3.3±0.1	16.0±0.1	24±0.3	11.5±0.1	0.35±0.05	500
TMPC	1235	14.1±0.1	13.0±0.1	12.9±0.1	7.0±0.1	4.0±0.1	16.0±0.1	24±0.3	11.5±0.1	0.35±0.05	500
TMPC	1205	14.1±0.1	13.0±0.1	12.9±0.1	7.0±0.1	5.5±0.1	16.0±0.1	24±0.3	11.5±0.1	0.35±0.05	500
TMPC	1206	14.1±0.1	13.0±0.1	12.9±0.1	7.0±0.1	6.5±0.1	16.0±0.1	24±0.3	11.5±0.1	0.35±0.05	500
TMPC	1265	14.2±0.1	13.0±0.1	13.0±0.1	7.0±0.1	7.0±0.1	16.0±0.1	24±0.3	11.5±0.1	0.35±0.05	500



Series	Size	Bo(mm)	B1(mm)	Ao(mm)	A1(mm)	Ko(mm)	P(mm)	P0(mm)	P2(mm)	W(mm)	E(mm)	F(mm)	t(mm)	D(mm)	Reel/PCS
TMPC	1707	18.5±0.1	17.5±0.1	17.5±0.1	12.6±0.1	7.5±0.1	24±0.1	4.0±0.1	2.0±0.05	32±0.3	1.75±0.1	14.2±0.1	0.5±0.05	1.5±0.1	200

(3) Tearing Off Force

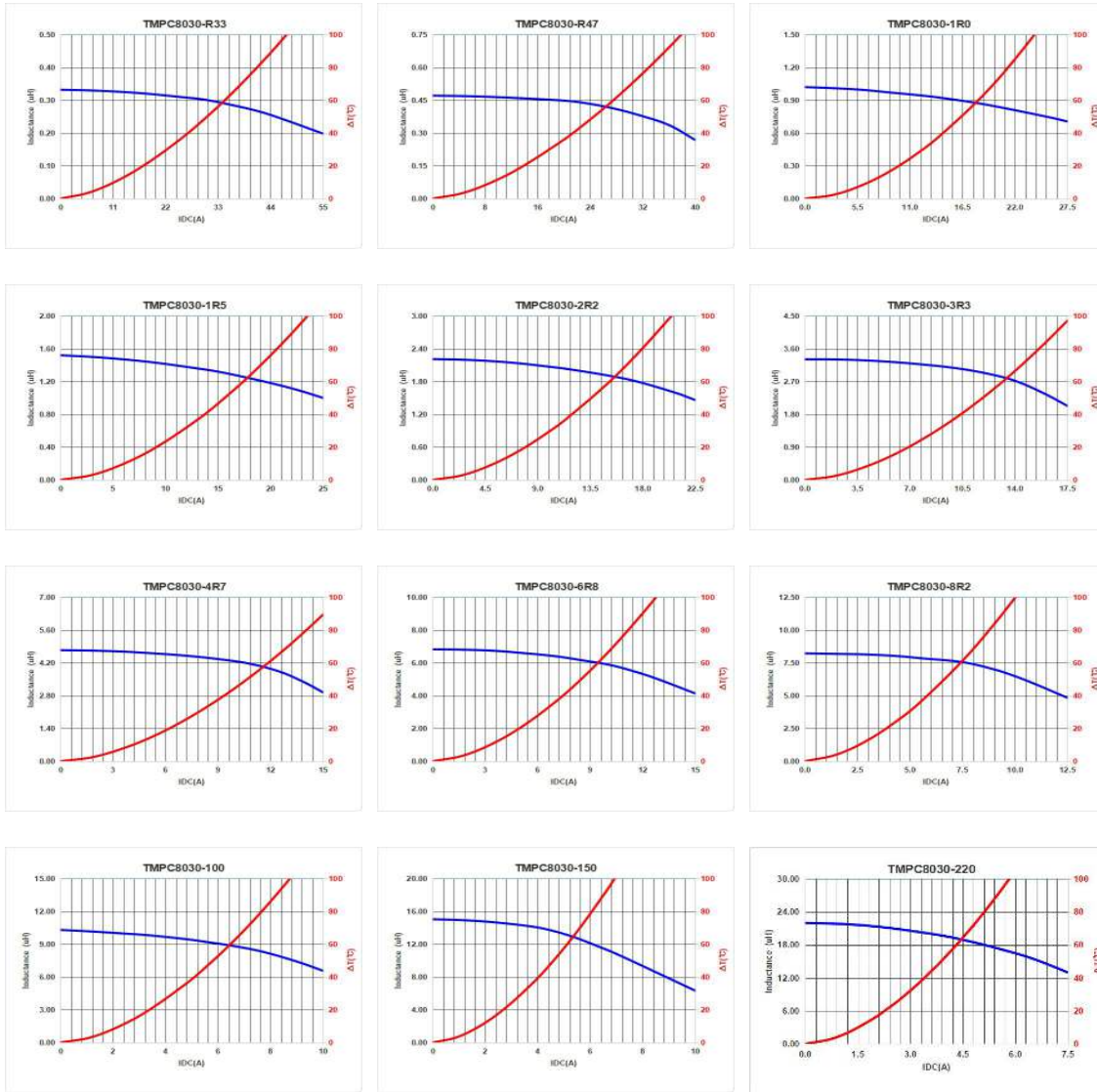


The force for tearing off cover tape is 10 to 130 grams in the arrow direction under the following conditions(referenced ANSI/EIA-481-D-2008 of 4.11 standard).

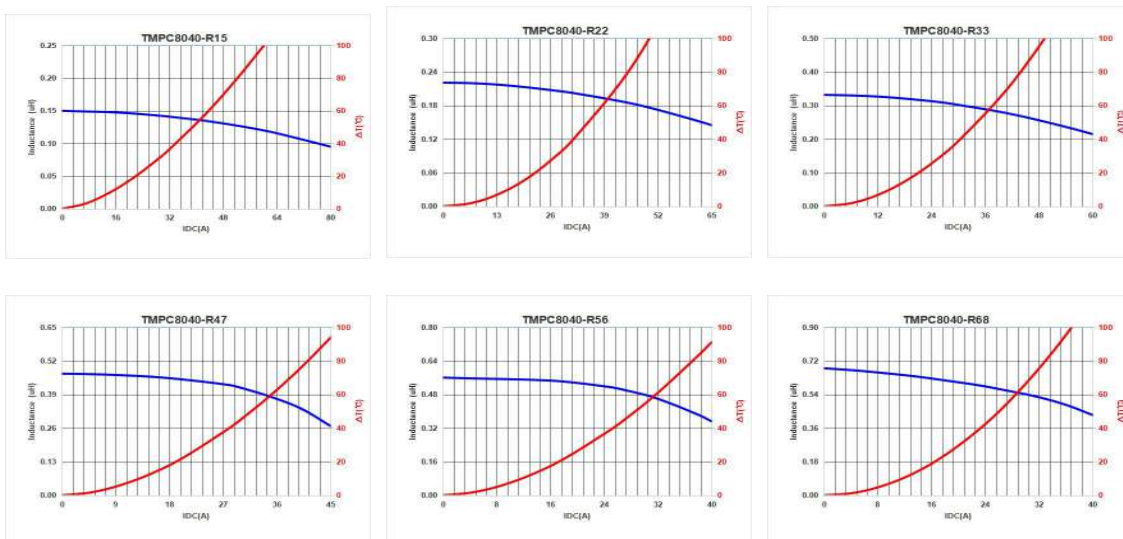
Tearing Speed mm	Room Temp. (°C)	Room Humidity (%)	Room atm (hPa)
300±10	5~35	45~85	860~1060

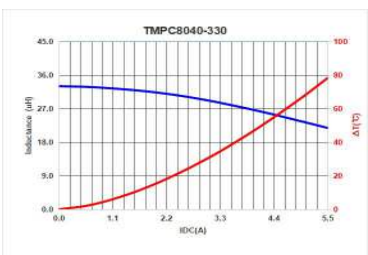
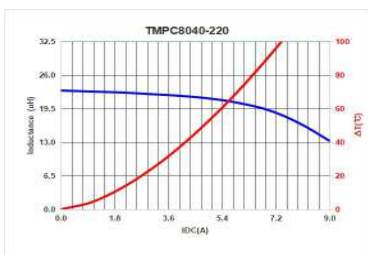
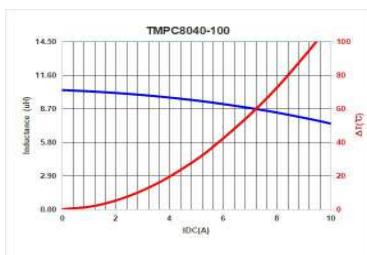
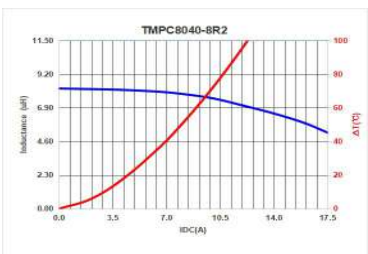
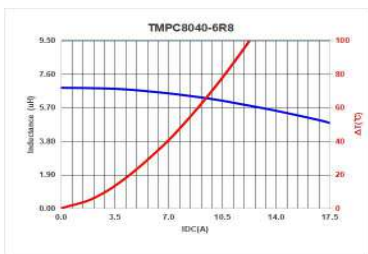
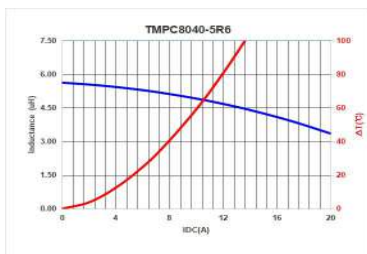
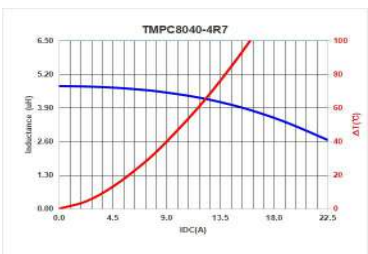
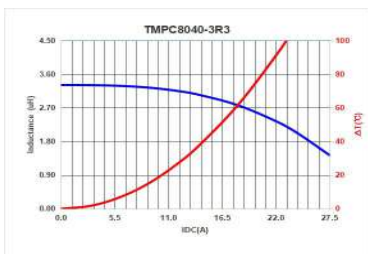
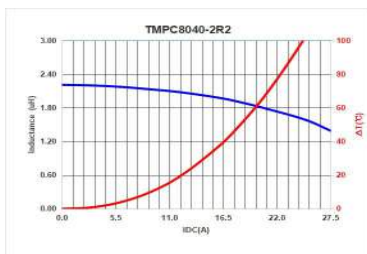
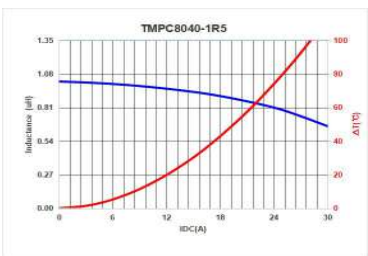
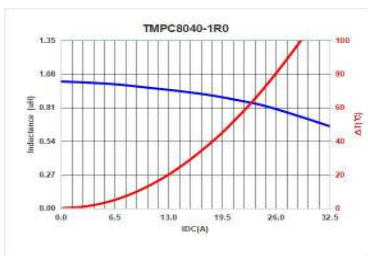
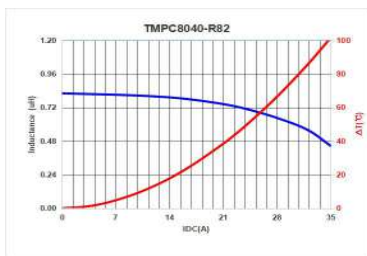
11. Typical Performance Curves

TMPC8030

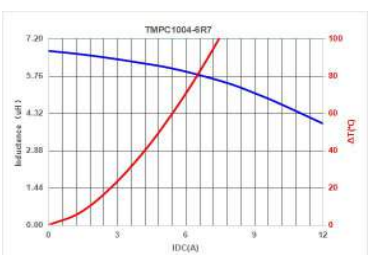
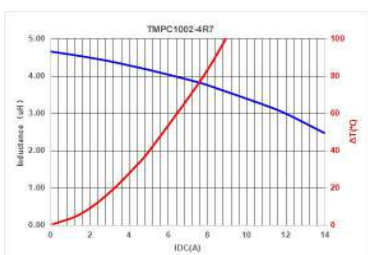
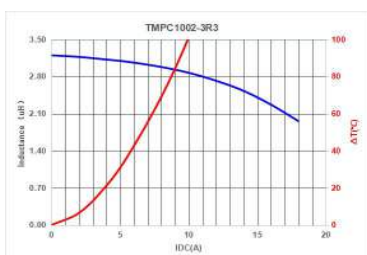
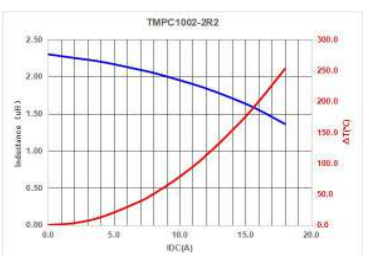
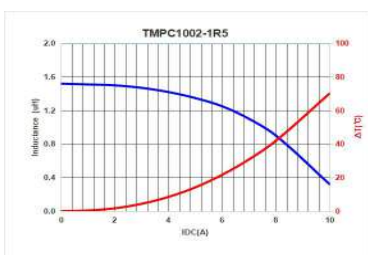
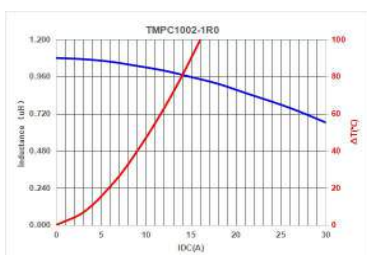


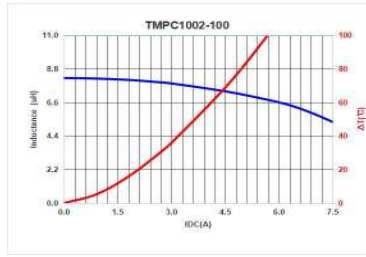
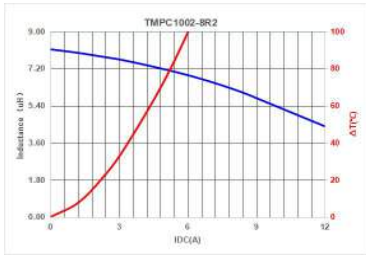
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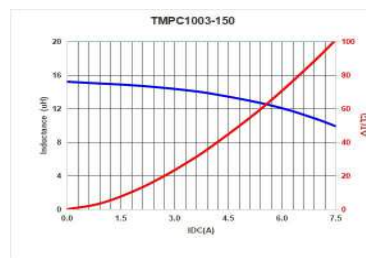
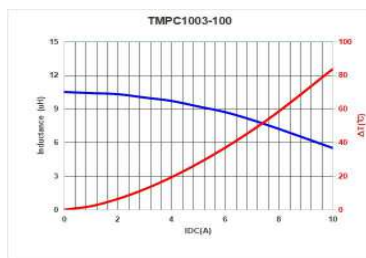
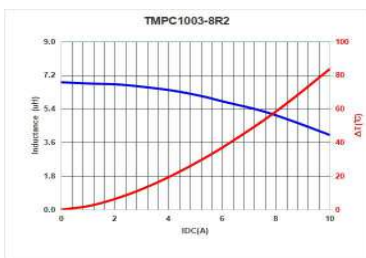
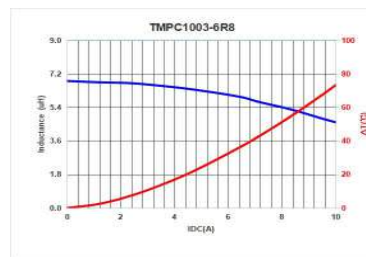
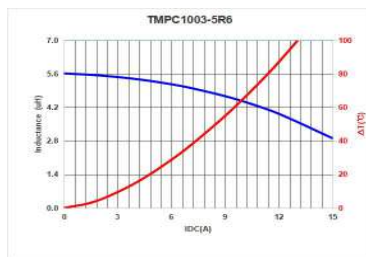
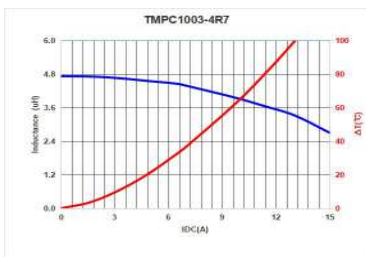
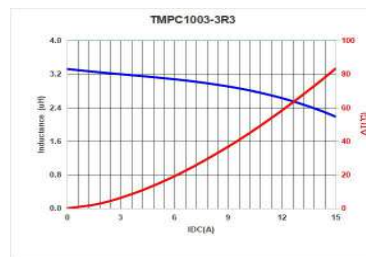
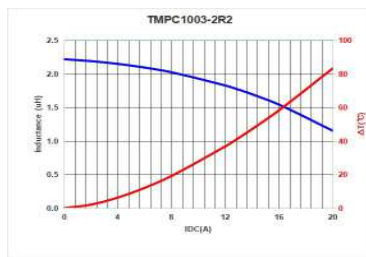
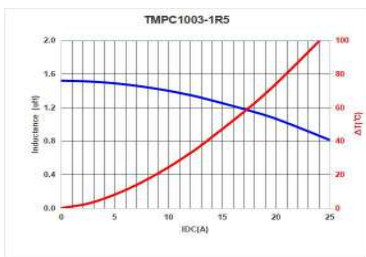
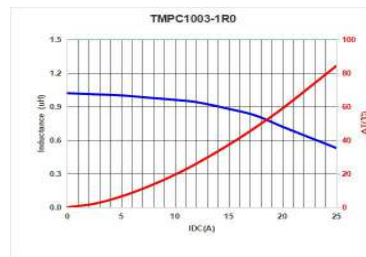
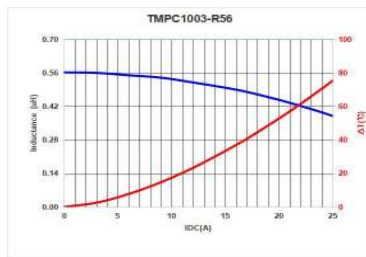
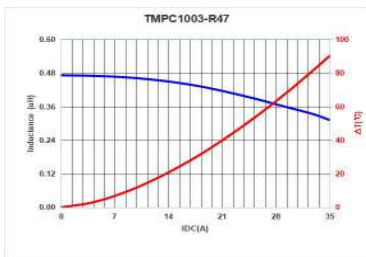
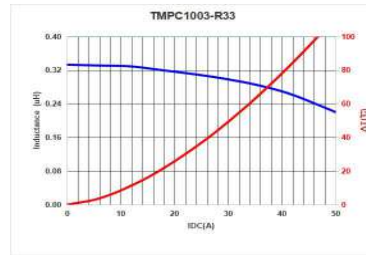
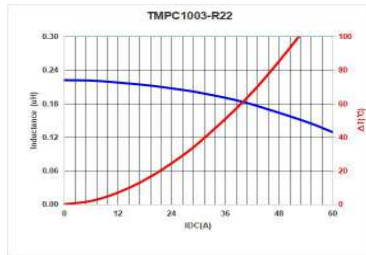
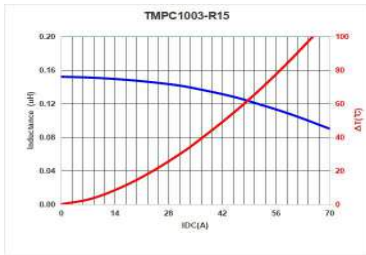


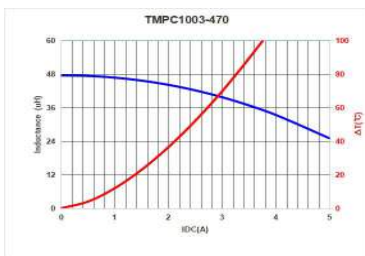
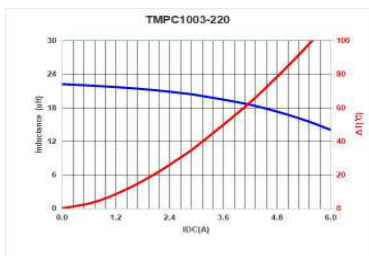
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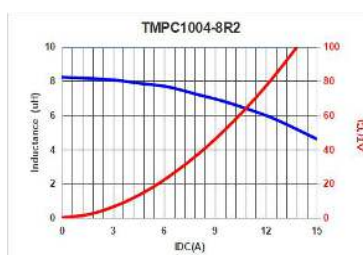
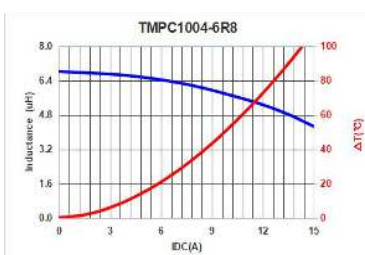
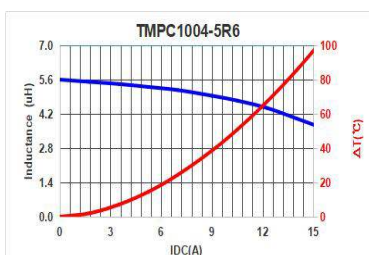
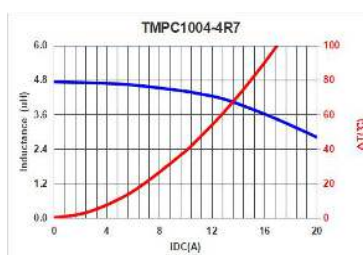
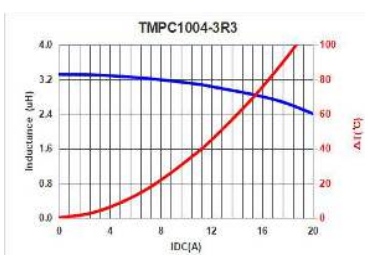
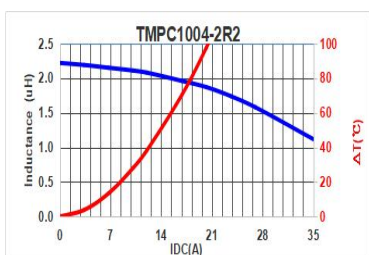
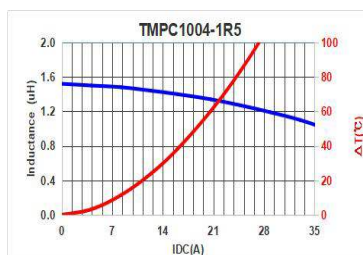
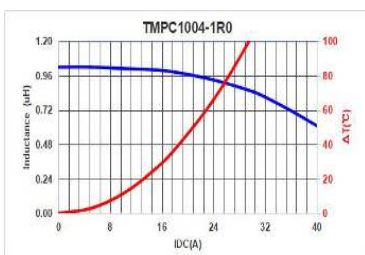
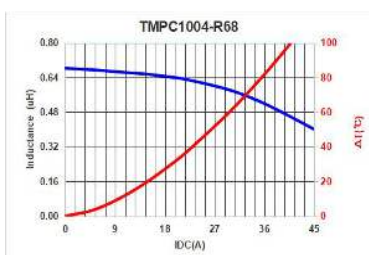
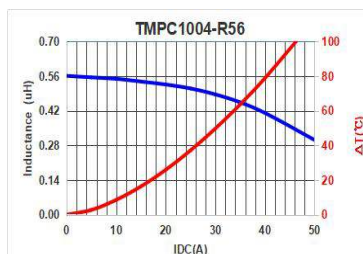
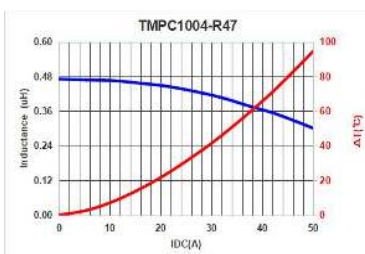
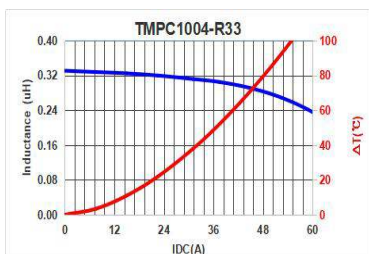
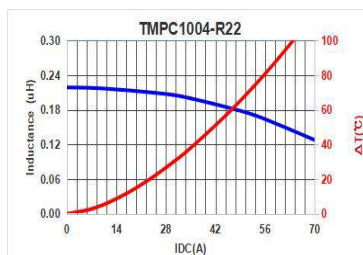
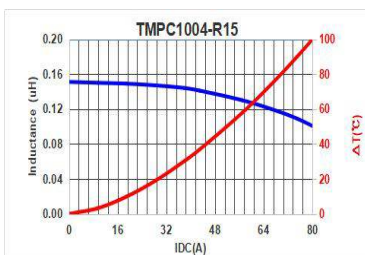
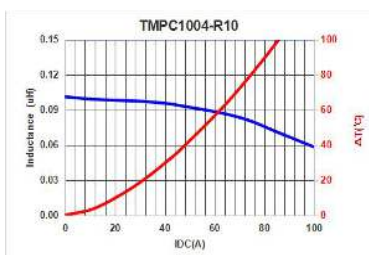


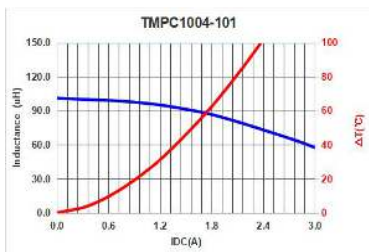
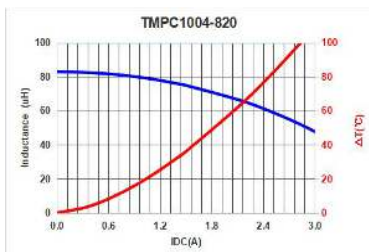
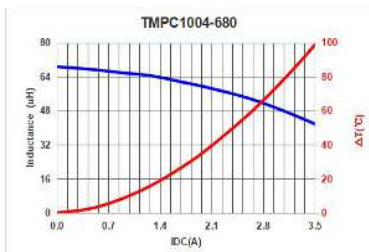
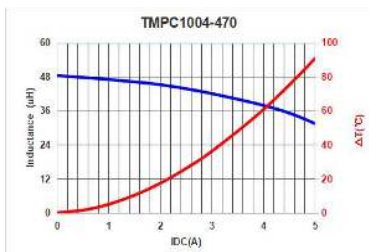
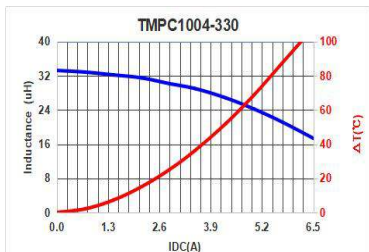
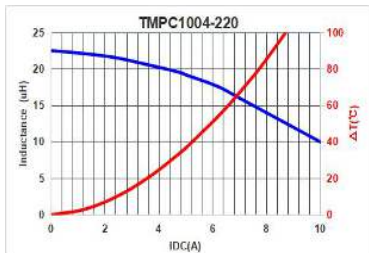
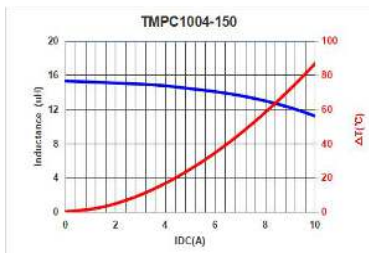
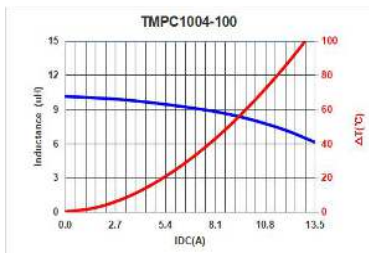
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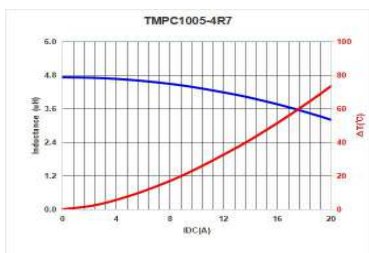
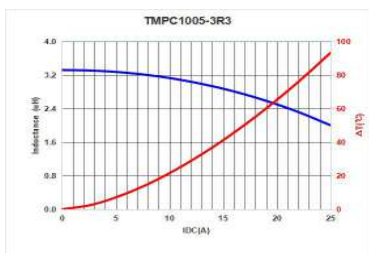
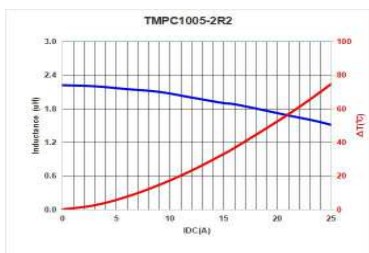
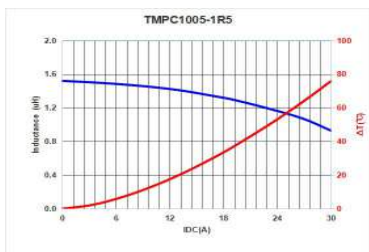
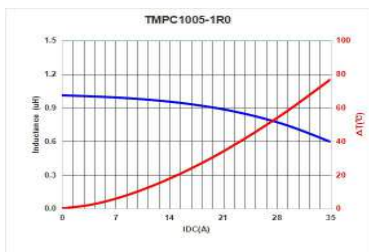
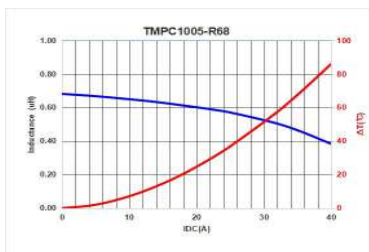
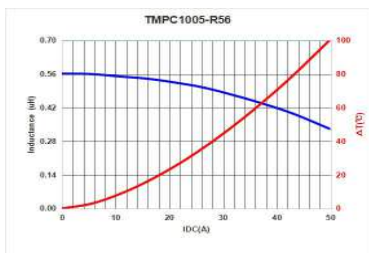
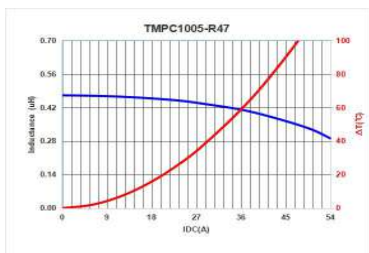
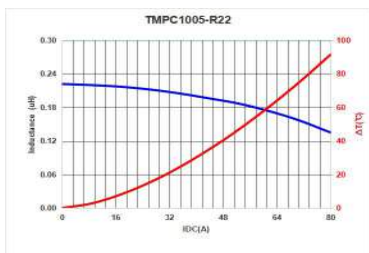


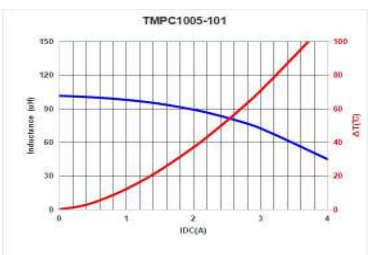
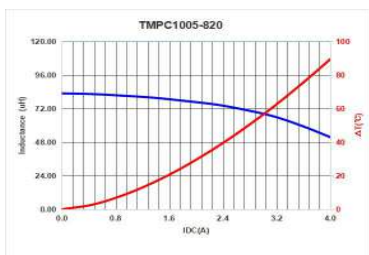
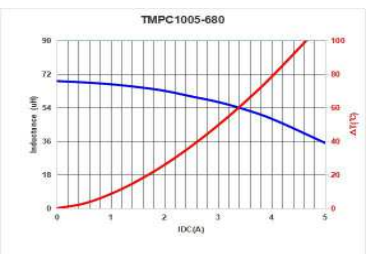
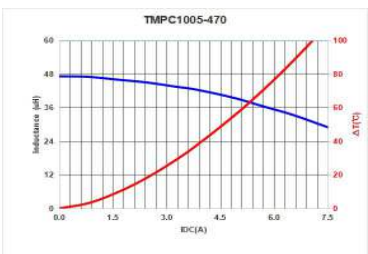
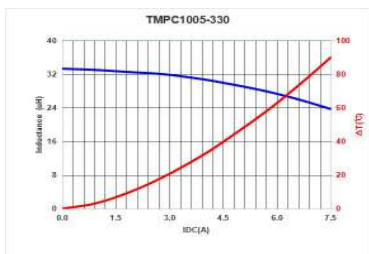
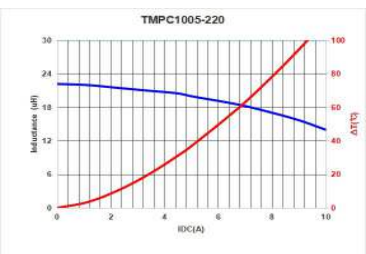
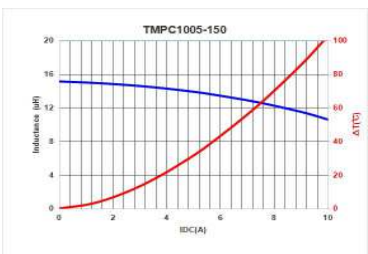
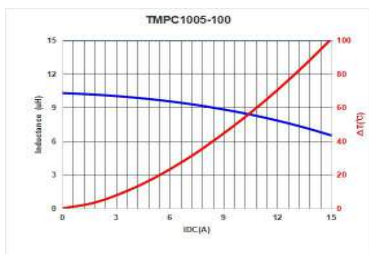
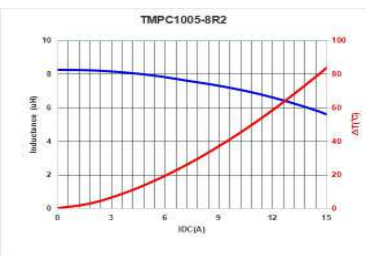
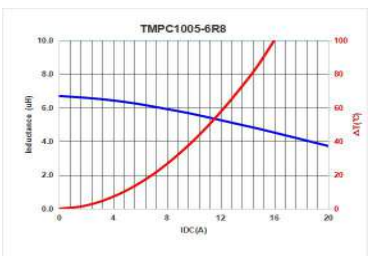
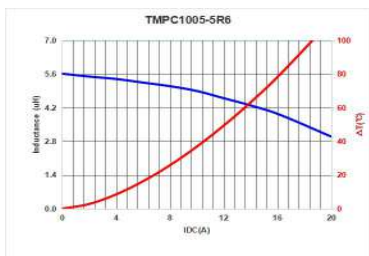
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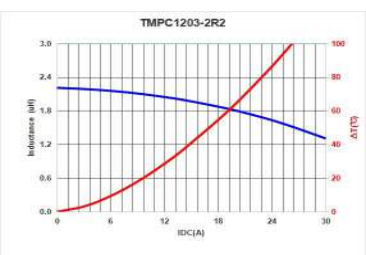
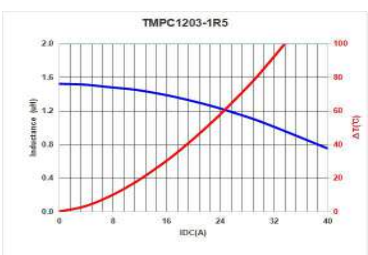
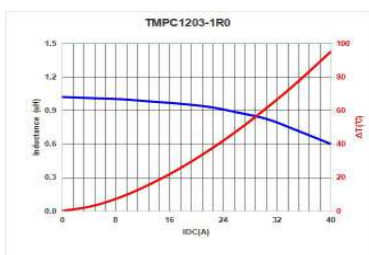
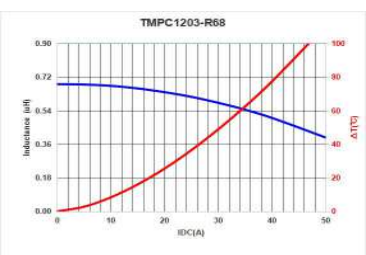
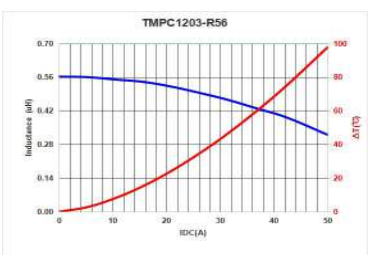
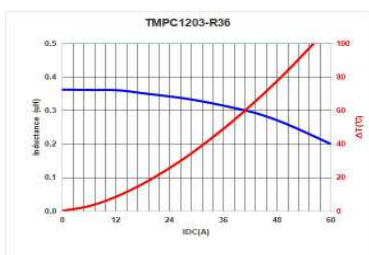


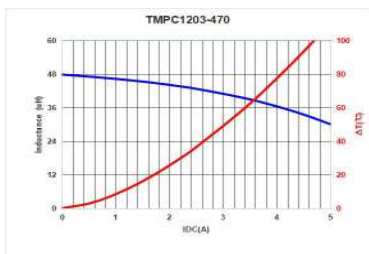
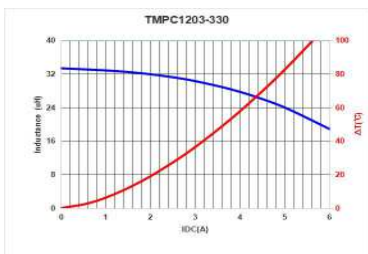
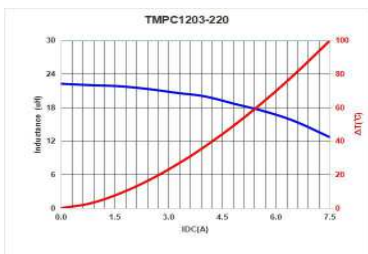
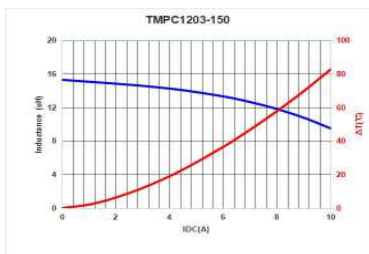
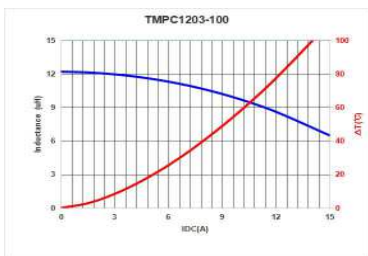
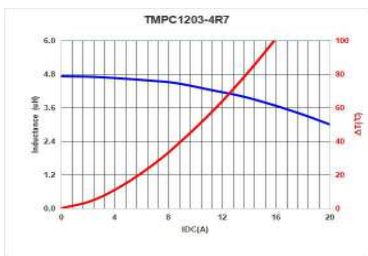
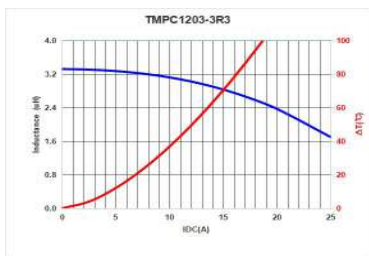
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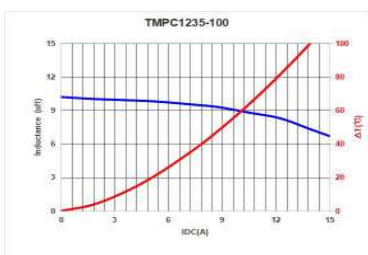
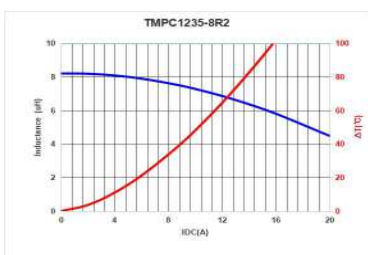
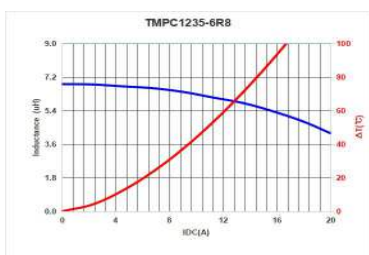
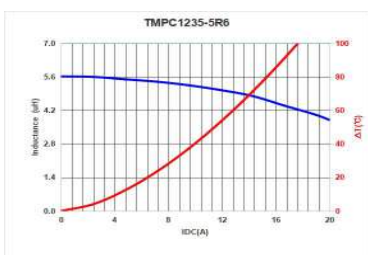
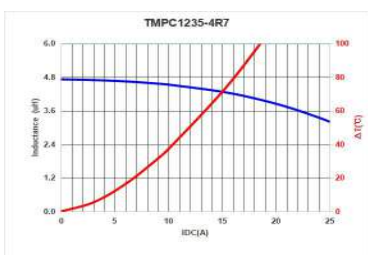
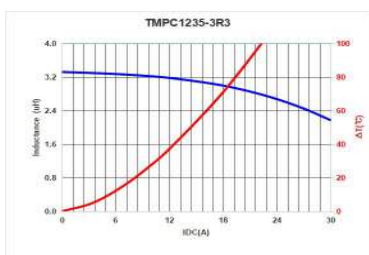
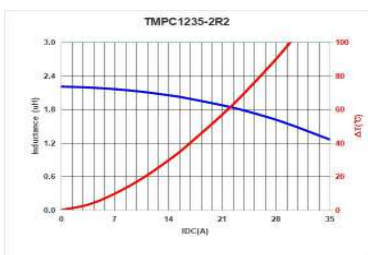
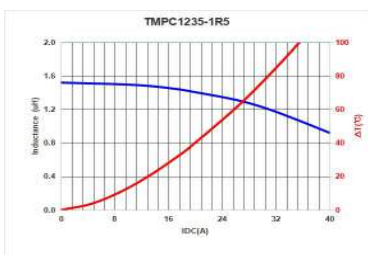
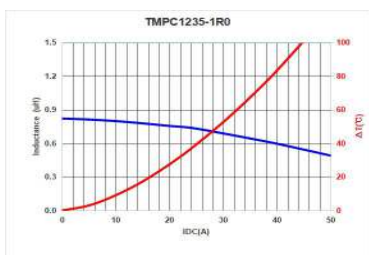


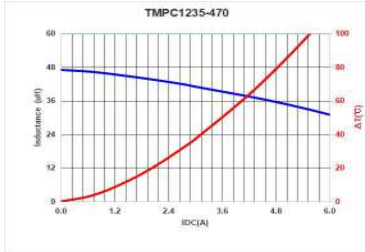
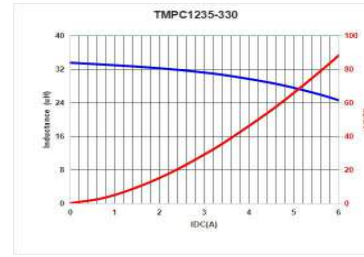
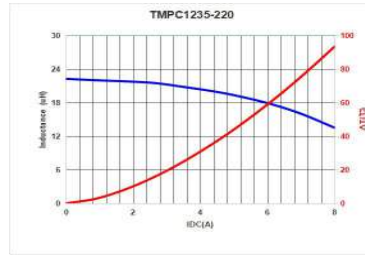
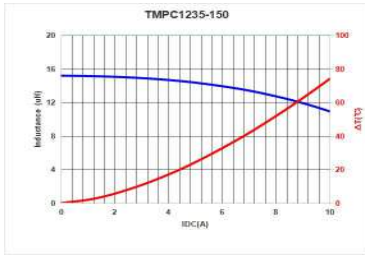
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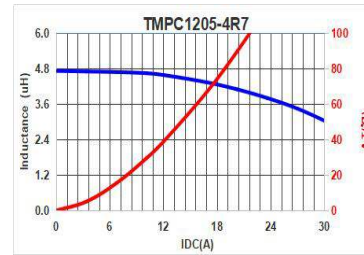
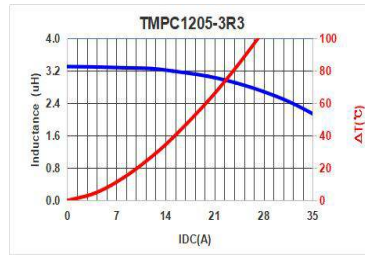
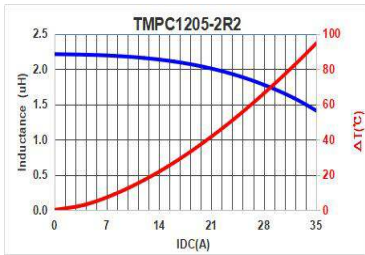
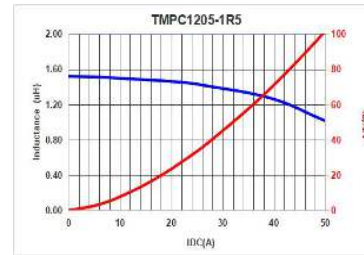
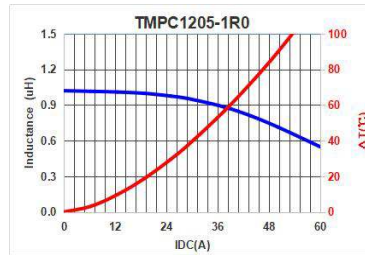
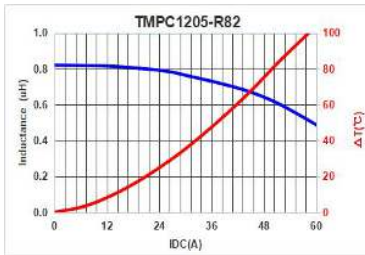
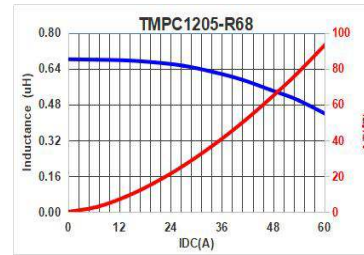
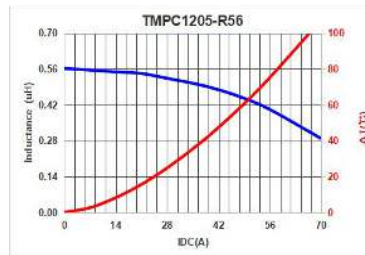
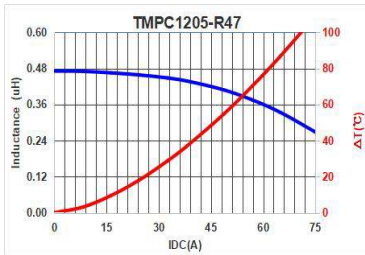
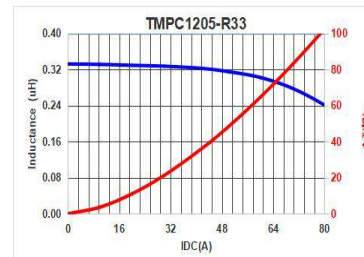
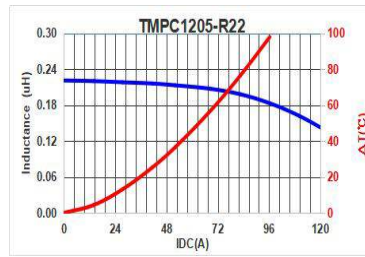
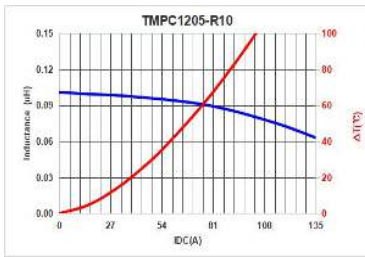


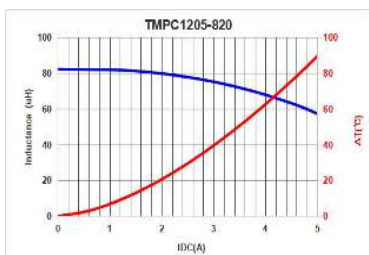
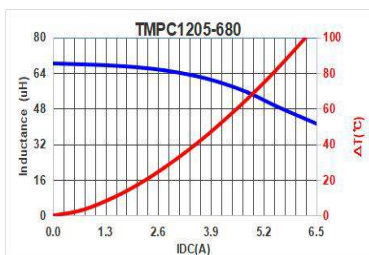
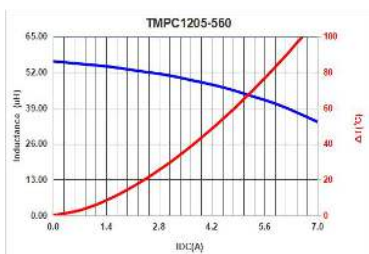
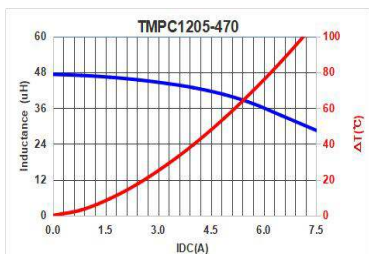
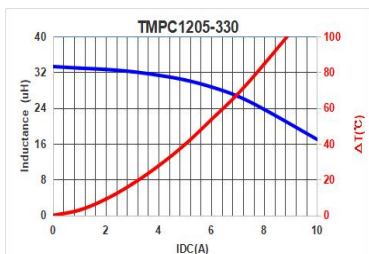
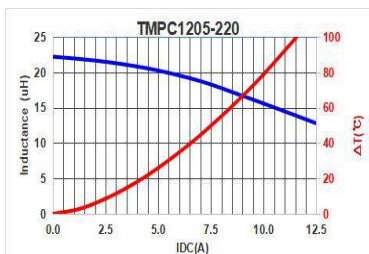
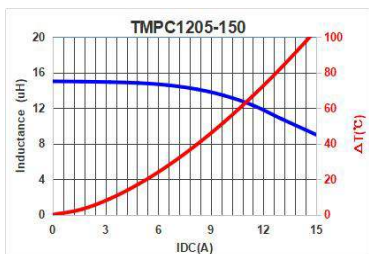
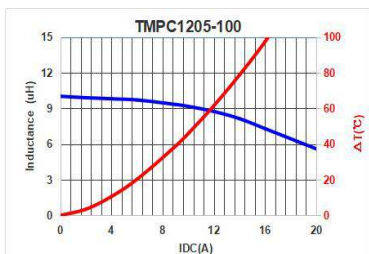
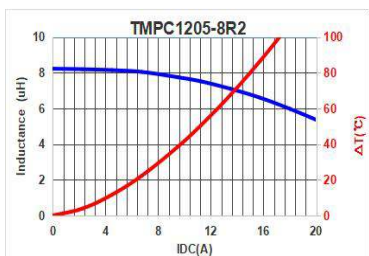
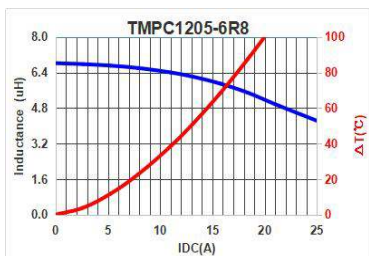
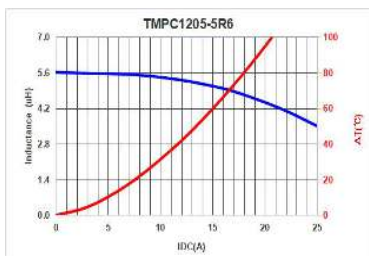
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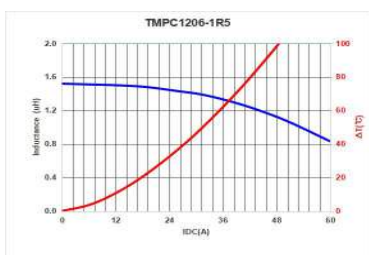
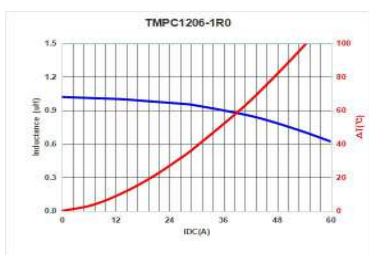
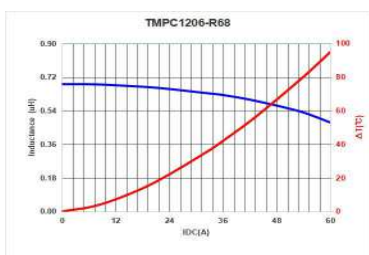
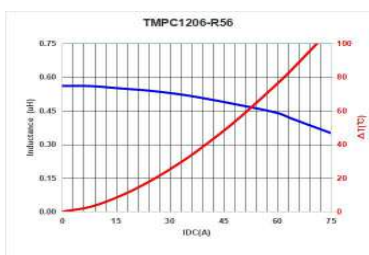
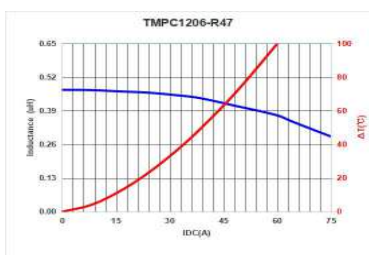
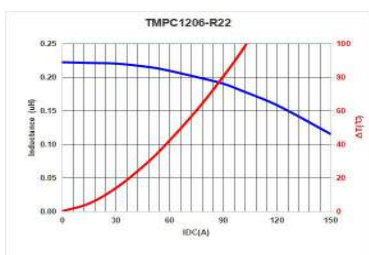


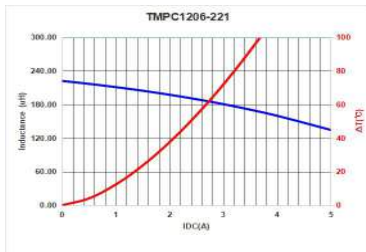
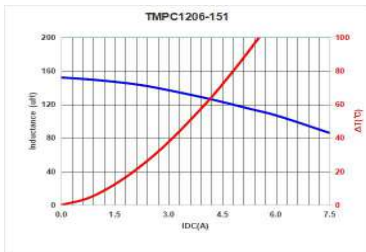
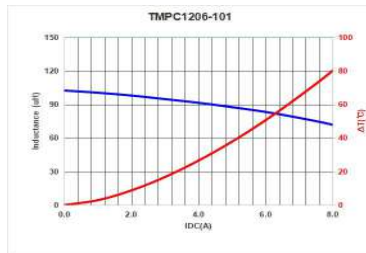
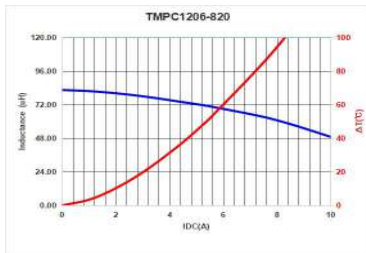
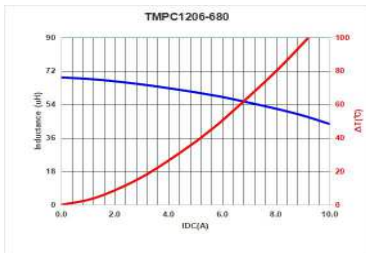
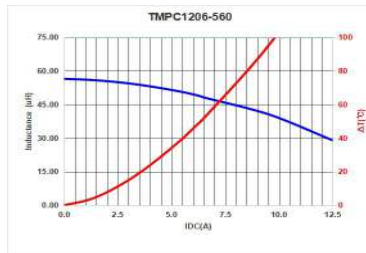
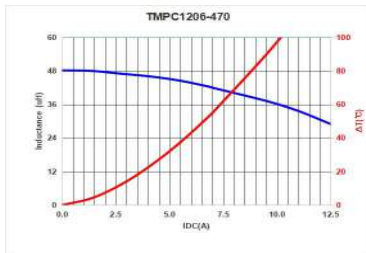
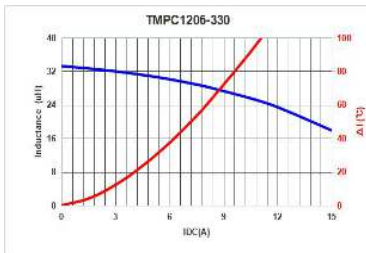
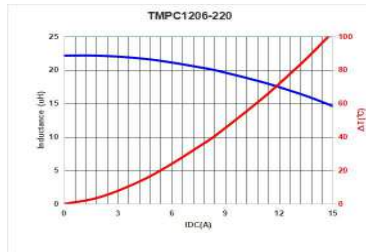
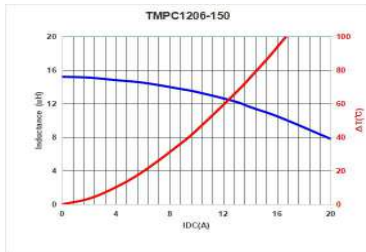
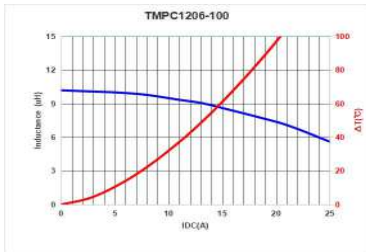
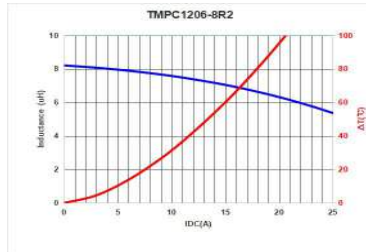
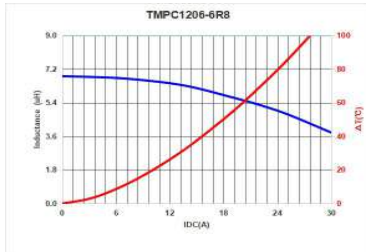
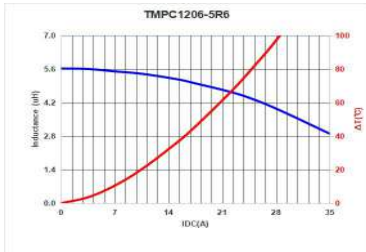
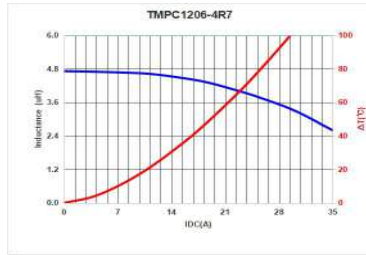
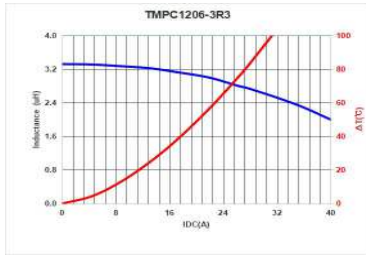
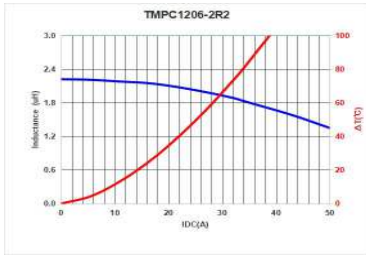
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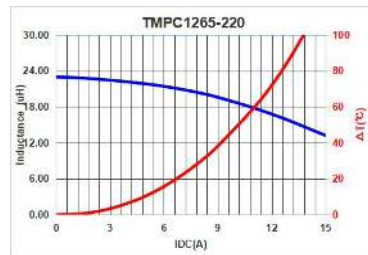
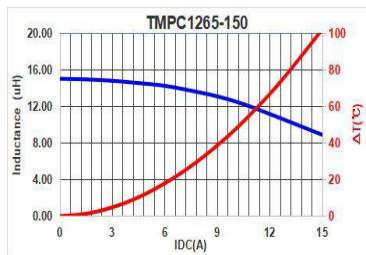
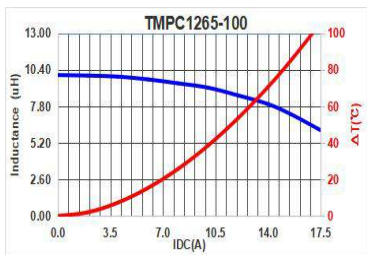
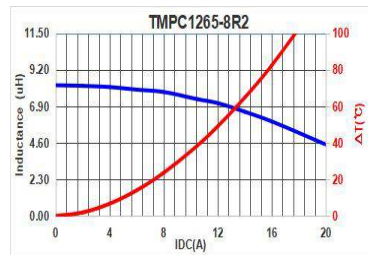
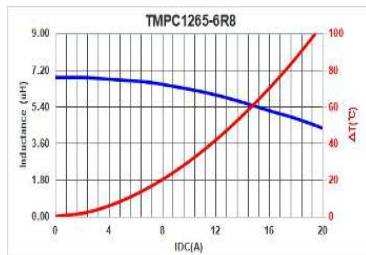
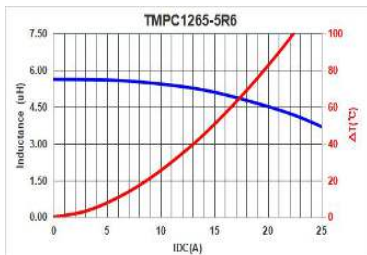
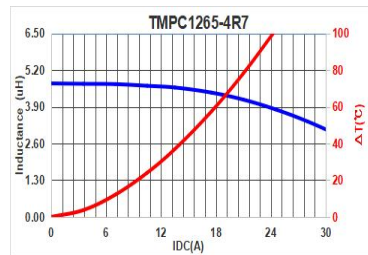
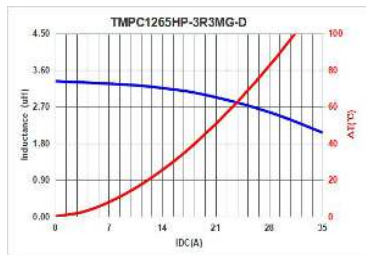
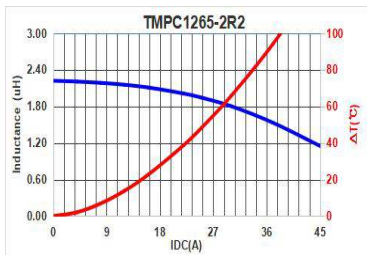
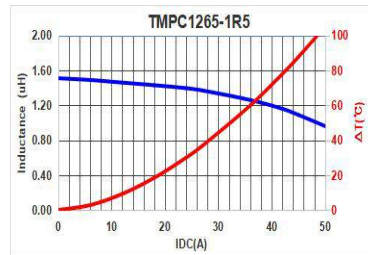
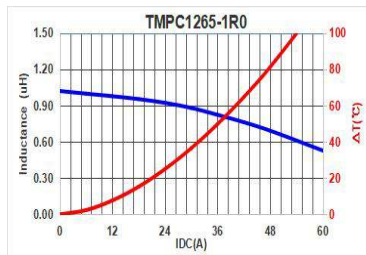
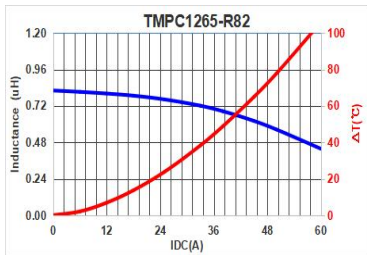
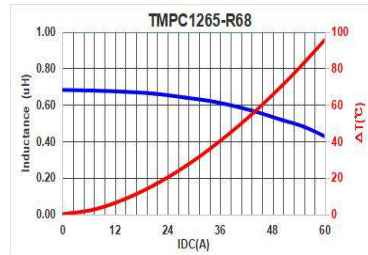
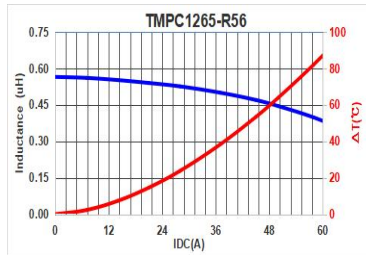
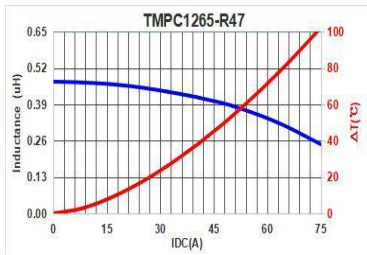
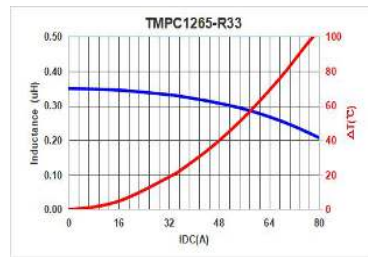
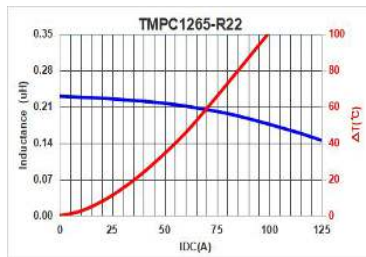
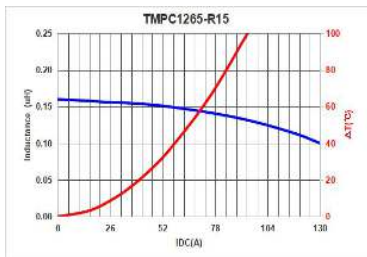


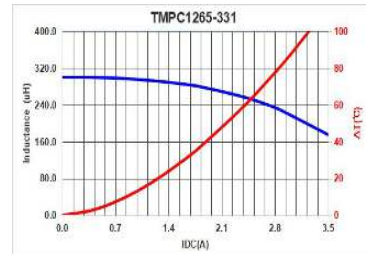
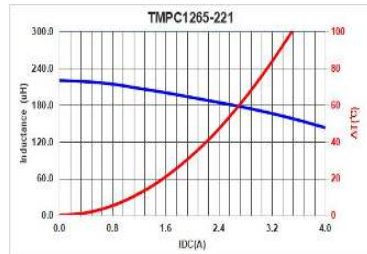
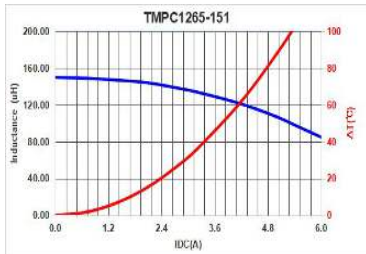
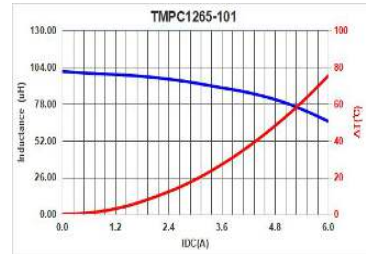
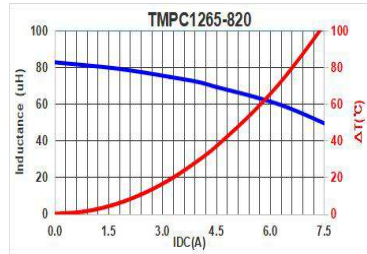
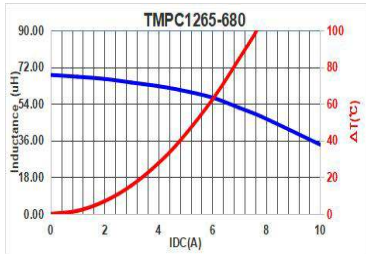
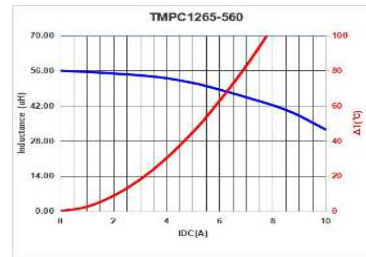
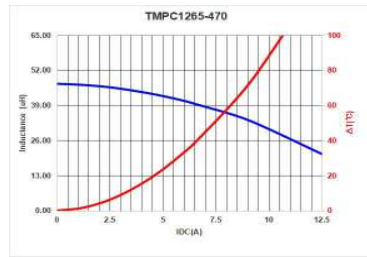
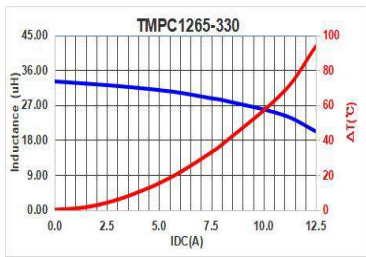
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TMPC1707

