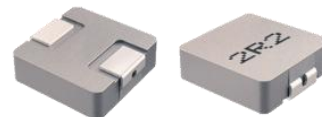


FEATURES 特征

- Metal material for large current and low DCR.
合金材料，高饱和电流，低DCR
- Closed magnetic circuit design reduces leakage flux.
闭合磁路设计，漏磁干扰小
- Halogen free, RoHS compliant.
无卤，符合RoHS标准
- Operating Temp : -55℃~+125℃(Including self heating)
工作温度范围:-55℃~+125℃(包括自身温度上升)



APPLICATIONS 用途

- TV, graphics, memory.
TV、显卡、内存
- Notebooks, tablets.
笔记本电脑、平板电脑
- Communication equipments, industrial equipments.
通讯设备、工业设备

PART NUMBERING 产品型号

APH	0630	T	100	M
①	②	③	④	⑤

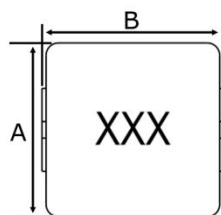
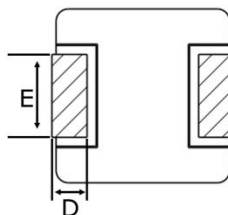
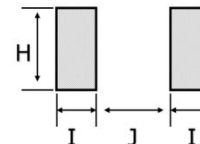
① Series Name	
APH	Molded SMD Power Inductors

③ Feature Type	
T	Standard

④ Nominal Inductance	
Code (example)	Nominal Value [μH]
R47	0.47
1R0	1.0
100	10

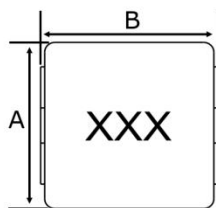
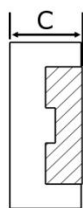
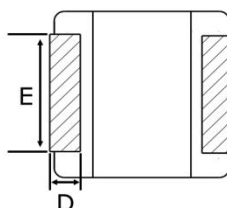
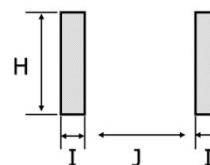
⑤ Inductance Tolerance	
K	±10%
M	±20%
N	±30%

② External Dimensions [LxWxT mm]	
0412	4.4x4.2x1.0
0420	4.4x4.2x1.8
0515	5.4x5.2x1.3
0518	5.4x5.2x1.6
0520	5.6x5.2x2.0
0530	5.4x5.2x2.8
0615	7.0x6.6x1.3
0618	7.0x6.6x1.6
0620	7.0x6.6x1.8
0624	7.0x6.6x2.2
0630	7.0x6.6x2.8
0640	7.0x6.6x3.8
0650	7.0x6.6x4.8
0840	8.8x8.0x3.8
0850	8.8x8.0x4.8
1030	11.0x10.0x2.8
1040	11.0x10.0x3.8
1050	11.0x10.0x4.8
1240	13.45x12.8x3.8
1250	13.45x12.8x4.8
1260	13.45x12.8x5.8
1265	13.45x12.8x6.5
1770	17.65x17.0x6.7
2213	23.5x22.0x12.6

DIMENSIONS & RECOMMENDED LAND PATTERN 尺寸及推荐焊盘


Remark: APH0412-APH1770

Recommended Land Pattern



Remark: APH2213

Recommended Land Pattern

Unit: mm

Series	Dimensions					Recommended Land Pattern		
	A	B	C	D	E	I	J	H
						Typ.		
APH0412	4.2±0.3	4.4±0.35	1.0±0.2	0.8±0.5	2.0±0.3	1.50	2.20	2.50
APH0420	4.2±0.3	4.4±0.35	1.8±0.2	0.8±0.5	2.0±0.3	1.50	2.20	2.50
APH0515	5.2±0.3	5.4±0.35	1.3±0.2	1.2±0.5	2.2±0.3	1.90	2.20	2.50
APH0518	5.2±0.3	5.4±0.35	1.6±0.2	1.2±0.5	2.2±0.3	1.90	2.20	2.50
APH0520	5.2±0.3	5.6±0.5	2.0 Max	1.3±0.5	2.2±0.3	1.90	2.20	2.50
APH0530	5.2±0.3	5.4±0.35	2.8±0.2	1.2±0.5	2.2±0.3	1.90	2.20	2.50
APH0615	6.6±0.3	7.0±0.35	1.3±0.2	1.6±0.5	3.0±0.3	2.35	3.70	3.50
APH0618	6.6±0.3	7.0±0.35	1.6±0.2	1.6±0.5	3.0±0.3	2.35	3.70	3.50
APH0620	6.6±0.3	7.0±0.35	1.8±0.2	1.6±0.5	3.0±0.3	2.35	3.70	3.50
APH0624	6.6±0.3	7.0±0.35	2.2±0.2	1.6±0.5	3.0±0.3	2.35	3.70	3.50
APH0630	6.6±0.3	7.0±0.35	2.8±0.2	1.6±0.5	3.0±0.3	2.35	3.70	3.50
APH0640	6.6±0.3	7.0±0.35	3.8±0.2	1.6±0.5	3.0±0.3	2.35	3.70	3.50
APH0650	6.6±0.3	7.0±0.35	4.8±0.2	1.6±0.5	3.0±0.3	2.35	3.70	3.50
APH0840	8.0±0.5	8.8±0.5	3.8±0.2	2.3±0.5	3.0±0.3	3.00	4.00	4.10
APH0850	8.0±0.5	8.8±0.5	4.8±0.2	2.3±0.5	3.0±0.3	3.00	4.00	4.10
APH1030	10.0±0.3	11.0±0.5	2.8±0.2	2.3±0.5	3.0±0.5	4.10	5.40	4.10
APH1040	10.0±0.3	11.0±0.5	3.8±0.2	2.3±0.5	3.0±0.5	4.10	5.40	4.10
APH1050	10.0±0.3	11.0±0.5	4.8±0.2	2.3±0.5	3.0±0.5	4.10	5.40	4.10
APH1240	12.8±0.5	13.45±0.5	3.8±0.2	2.5±0.7	3.8±0.5	4.10	6.50	5.50
APH1250	12.8±0.5	13.45±0.5	4.8±0.2	2.5±0.7	3.8±0.5	4.10	6.50	5.50
APH1260	12.8±0.5	13.45±0.5	5.8±0.2	2.5±0.7	3.8±0.5	4.10	6.50	5.50
APH1265	12.8±0.5	13.45±0.5	6.5 Max.	2.5±0.7	3.8±0.5	4.10	6.50	5.50
APH1770	17.0±0.5	17.65±0.8	6.7±0.3	2.5±0.7	11.9±0.5	3.50	11.2	12.8
APH2213	22.0±0.3	23.5±0.5	12.6±0.4	5.0±0.5	19.0±0.3	5.75	12.5	19.6

ELECTRICAL CHARACTERISTICS 特性规格表
● APH0412 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH0412TR15M	0.15	±20%	9	12.45	15.00	6.91	7.50
APH0412TR22M	0.22	±20%	11	9.13	11.00	6.58	7.00
APH0412TR33M	0.33	±20%	19	6.96	8.40	5.82	6.50
APH0412TR47M	0.47	±20%	21	5.61	6.80	5.32	6.00
APH0412TR68M	0.68	±20%	36	4.98	6.00	4.28	4.70
APH0412T1R0M	1	±20%	47	4.57	5.50	3.91	4.50
APH0412T1R5M	1.5	±20%	75	3.32	4.00	2.78	3.25
APH0412T2R2M	2.2	±20%	83.5	2.49	3.00	2.28	2.75
APH0412T3R3M	3.3	±20%	160	2.43	2.70	1.80	2.00
APH0412T4R7M	4.7	±20%	195	1.86	2.20	1.50	1.80

● APH0420 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH0420TR10M	0.1	±20%	4	18.26	22.00	11.47	13.00
APH0420TR22M	0.22	±20%	6.6	10.38	12.50	8.40	9.50
APH0420TR33M	0.33	±20%	11	9.96	12.00	8.81	10.00
APH0420TR47M	0.47	±20%	14	7.89	9.50	6.78	7.50
APH0420TR56M	0.56	±20%	16	7.47	9.00	6.24	7.00
APH0420TR68M	0.68	±20%	18	6.64	8.00	6.28	7.00
APH0420T1R0M	1	±20%	27	5.81	7.00	5.49	6.00
APH0420T1R2M	1.2	±20%	27	5.40	6.50	5.49	6.00
APH0420T1R5M	1.5	±20%	46	4.57	5.50	4.41	5.00
APH0420T2R2M	2.2	±20%	58	4.15	5.00	3.91	4.50
APH0420T3R3M	3.3	±20%	87	2.91	3.50	2.88	3.30
APH0420T4R7M	4.7	±20%	105	2.49	3.00	2.29	2.80
APH0420T5R6M	5.6	±20%	180	2.24	2.80	2.00	2.50
APH0420T6R8M	6.8	±20%	175	2.08	2.50	1.98	2.40
APH0420T100M	10	±20%	282	1.66	2.00	1.35	1.60
APH0420T220M	22	±20%	363	1.16	1.40	0.95	1.20

ELECTRICAL CHARACTERISTICS 特性规格表
● APH0515 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH0515TR47M	0.47	±20%	13	12.00	13.00	8.70	9.50
APH0515TR68M	0.68	±20%	15.5	9.50	11.20	8.10	9.00
APH0515T1R0M	1	±20%	23	8.00	9.50	5.80	6.50
APH0515T2R2M	2.2	±20%	52	4.80	5.80	4.00	5.00
APH0515T3R3M	3.3	±20%	72	4.00	4.50	3.00	3.30
APH0515T4R7M	4.7	±20%	106	3.70	4.20	2.60	3.00

● APH0518 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH0518TR22M	0.22	±20%	4.8	19.00	21.50	16.00	19.00
APH0518TR33M	0.33	±20%	7.2	17.00	19.00	14.00	16.00
APH0518TR47M	0.47	±20%	9	9.96	12.00	9.65	10.50
APH0518TR56M	0.56	±20%	10	9.13	11.00	8.40	9.50
APH0518TR68M	0.68	±20%	13.8	9.48	10.50	7.85	8.70
APH0518T1R0M	1	±20%	17	7.47	9.00	7.32	8.00
APH0518T1R5M	1.5	±20%	26	6.64	8.00	6.74	7.50
APH0518T2R2M	2.2	±20%	35	4.98	6.00	4.32	5.00
APH0518T3R3M	3.3	±20%	58	3.98	4.80	3.91	4.50
APH0518T4R7M	4.7	±20%	85	3.32	4.00	3.08	3.50
APH0518T6R8M	6.8	±20%	120	2.82	3.40	2.46	2.80
APH0518T100M	10	±20%	155	2.08	2.50	2.25	2.50

● APH0520 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH0520TR10N	0.1	±30%	3.4	20.00	22.00	16.00	17.00
APH0520TR15M	0.15	±20%	4	18.00	20.00	15.00	16.00
APH0520TR22M	0.22	±20%	5.4	14.00	15.00	11.00	12.00
APH0520TR33M	0.33	±20%	8.8	12.00	13.00	10.00	10.50
APH0520TR47M	0.47	±20%	12	11.00	12.00	9.00	9.50
APH0520TR68M	0.68	±20%	16.5	10.00	11.00	7.50	8.50

ELECTRICAL CHARACTERISTICS 特性规格表
● APH0520 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH0520T1R0M	1	±20%	25	9.00	10.00	7.00	8.00
APH0520T1R5M	1.5	±20%	33	7.50	8.00	5.50	6.00
APH0520T2R2M	2.2	±20%	46	6.00	7.00	4.50	5.00
APH0520T3R3M	3.3	±20%	65	5.50	6.00	3.50	3.70
APH0520T4R7M	4.7	±20%	100	4.00	5.00	2.80	3.00
APH0520T5R6M	5.6	±20%	105	3.80	4.00	2.50	2.80
APH0520T6R8M	6.8	±20%	140	3.80	4.00	2.00	2.20
APH0520T8R2M	8.2	±20%	155	3.00	3.50	1.90	2.10
APH0520T100M	10	±20%	195	2.80	3.00	1.80	2.00

● APH0530 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH0530TR10M	0.1	±20%	3	24.90	30.00	23.30	25.00
APH0530TR20M	0.2	±20%	4.1	16.60	20.00	13.15	14.00
APH0530TR22M	0.22	±20%	4.68	16.00	18.00	12.90	14.50
APH0530TR33M	0.33	±20%	5.5	14.94	18.00	13.24	14.00
APH0530TR47M	0.47	±20%	8.5	12.45	15.00	10.15	11.00
APH0530TR68M	0.68	±20%	12	9.55	11.50	8.32	9.00
APH0530TR82M	0.82	±20%	10.4	9.40	10.50	9.23	10.50
APH0530T1R0M	1	±20%	14	8.30	10.00	7.91	8.50
APH0530T1R2M	1.2	±20%	16	7.89	9.50	7.95	8.50
APH0530T1R5M	1.5	±20%	25	7.47	9.00	7.69	8.20
APH0530T2R2M	2.2	±20%	29	5.81	7.00	6.49	7.00
APH0530T3R3M	3.3	±20%	38	4.98	6.00	5.08	5.50
APH0530T4R7M	4.7	±20%	60	3.82	4.60	4.08	4.50
APH0530T6R8M	6.8	±20%	90	2.99	3.60	2.99	3.50
APH0530T100M	10	±20%	125	2.91	3.50	2.86	3.20
APH0530T150M	15	±20%	170	2.03	2.20	1.63	1.80
APH0530T220M	22	±20%	250	2.10	2.30	1.30	1.50

ELECTRICAL CHARACTERISTICS 特性规格表
● APH0615 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH0615TR47M	0.47	±20%	8.5	14.44	16.00	9.02	10.00
APH0615TR56M	0.56	±20%	11	12.62	14.00	8.12	9.00
APH0615TR68M	0.68	±20%	12	10.83	12.00	7.67	8.50
APH0615TR82M	0.82	±20%	17	9.02	10.00	7.22	8.00
APH0615T1R0M	1	±20%	21	8.12	9.00	5.41	6.00
APH0615T1R5M	1.5	±20%	40	7.00	8.00	4.40	5.00
APH0615T2R2M	2.2	±20%	54	6.31	7.00	3.43	3.80
APH0615T3R3M	3.3	±20%	63	4.96	5.50	3.16	3.50
APH0615T4R7M	4.7	±20%	85	4.51	5.00	2.89	3.20
APH0615T6R8M	6.8	±20%	135	3.61	4.00	2.25	2.50
APH0615T100M	10	±20%	175	2.70	3.00	1.80	2.00
APH0615T220M	22	±20%	510	2.25	2.50	1.33	1.40

● APH0618 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH0618TR10M	0.1	±20%	2.3	31.54	38.00	23.30	25.00
APH0618TR22M	0.22	±20%	3.5	19.92	24.00	20.30	22.00
APH0618TR47M	0.47	±20%	8.4	14.94	18.00	10.23	11.50
APH0618TR68M	0.68	±20%	12	13.70	16.50	8.57	9.50
APH0618T1R0M	1	±20%	16	9.96	12.00	7.74	8.50
APH0618T1R5M	1.5	±20%	26	7.64	9.20	7.24	8.00
APH0618T2R2M	2.2	±20%	35	6.64	8.00	6.32	7.00
APH0618T3R3M	3.3	±20%	50	4.98	6.00	3.91	4.50
APH0618T4R7M	4.7	±20%	62	4.15	5.00	3.58	4.00
APH0618T6R8M	6.8	±20%	110	3.74	4.50	2.49	3.00
APH0618T8R2M	8.2	±20%	135	3.01	3.60	2.15	2.40
APH0618T100M	10	±20%	155	3.32	4.00	2.00	2.30
APH0618T220M	22	±20%	350	1.91	2.30	1.46	1.80

ELECTRICAL CHARACTERISTICS 特性规格表
● APH0620 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH0620T1R5M	1.5	±20%	26	10.30	12.00	7.15	8.00
APH0620T2R2M	2.2	±20%	35	6.00	7.50	5.20	6.50
APH0620T4R7M	4.7	±20%	60	4.57	5.50	3.52	4.30
APH0620T6R8M	6.8	±20%	73	5.00	5.50	3.50	4.00
APH0620T100M	10	±20%	145	3.34	4.00	2.31	2.80

● APH0624 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH0624TR22M	0.22	±20%	3	24.90	30.00	19.30	21.00
APH0624TR33M	0.33	±20%	4.1	20.34	24.50	16.30	18.00
APH0624TR47M	0.47	±20%	5.1	16.60	20.00	13.73	15.00
APH0624TR56M	0.56	±20%	6.5	14.11	17.00	11.73	13.00
APH0624TR68M	0.68	±20%	7	13.28	16.00	10.73	12.00
APH0624T1R0M	1	±20%	13.5	12.45	15.00	8.15	9.00
APH0624T1R5M	1.5	±20%	20	11.21	13.50	7.18	8.20
APH0624T2R2M	2.2	±20%	28	8.30	10.00	6.32	7.00
APH0624T3R3M	3.3	±20%	39	6.64	8.00	4.91	5.50
APH0624T4R7M	4.7	±20%	50	5.40	6.50	4.41	5.00
APH0624T6R8M	6.8	±20%	70	4.98	6.00	3.32	4.00
APH0624T100M	10	±20%	101	3.32	4.00	2.51	3.10
APH0624T150M	15	±20%	160	2.74	3.30	2.08	2.50
APH0624T220M	22	±20%	230	2.08	2.50	1.66	2.00

● APH0630 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH0630TR10M	0.1	±20%	1.7	54.05	60.00	29.10	32.50
APH0630TR12M	0.12	±20%	0.75	31.50	40.00	32.90	38.00
APH0630TR22M	0.22	±20%	3	28.22	34.00	21.45	24.00
APH0630TR24M	0.24	±20%	3.1	23.24	28.00	19.09	23.00
APH0630TR33M	0.33	±20%	4.2	20.75	25.00	19.30	21.00

ELECTRICAL CHARACTERISTICS 特性规格表

● APH0630 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH0630TR56M	0.56	±20%	4.5	14.94	18.00	15.23	16.50
APH0630TR68M	0.68	±20%	5.3	14.11	17.00	14.73	16.00
APH0630TR82M	0.82	±20%	6	13.28	16.00	12.73	14.00
APH0630T1R0M	1	±20%	8.4	12.45	15.00	10.73	12.00
APH0630T1R2M	1.2	±20%	10.5	11.20	14.00	9.50	10.00
APH0630T1R5M	1.5	±20%	12.1	9.96	12.00	10.73	12.00
APH0630T1R8M	1.8	±20%	12.6	9.76	11.80	8.37	9.30
APH0630T2R2M	2.2	±20%	15	8.30	10.00	8.65	9.50
APH0630T3R3M	3.3	±20%	27	7.89	9.50	7.65	8.50
APH0630T4R7M	4.7	±20%	33	7.47	9.00	5.15	6.00
APH0630T5R6M	5.6	±20%	42	5.40	6.50	4.91	5.50
APH0630T6R8M	6.8	±20%	58	4.98	6.00	4.32	5.00
APH0630T8R2M	8.2	±20%	72	4.57	5.50	4.32	5.00
APH0630T100M	10	±20%	68	4.57	5.50	3.91	4.50
APH0630T150M	15	±20%	113	3.32	4.00	2.41	3.00
APH0630T220M	22	±20%	170	2.49	3.00	2.08	2.50
APH0630T330M	33	±20%	270	2.08	2.50	1.66	2.00
APH0630T470M	47	±20%	385	1.66	2.00	1.25	1.50

● APH0640 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH0640TR15M	0.15	±20%	0.66±7%	45.00	50.00	36.00	40.00
APH0640TR22M	0.22	±20%	0.98±7%	28.00	35.00	32.00	35.00
APH0640TR68M	0.68	±20%	4.8	15.83	19.00	13.93	17.00
APH0640T1R0M	1	±20%	6.6	13.33	16.00	11.07	13.50
APH0640T1R5M	1.5	±20%	10	10.42	12.50	10.16	12.40
APH0640T2R2M	2.2	±20%	14	9.13	11.00	8.13	10.00
APH0640T3R3M	3.3	±20%	20	7.92	9.50	6.97	8.50
APH0640T4R7M	4.7	±20%	30	7.47	9.00	6.08	6.50
APH0640T6R8M	6.8	±20%	45	5.42	6.50	4.51	5.50
APH0640T100M	10	±20%	65	5.00	6.00	3.93	4.80
APH0640T150M	15	±20%	95	3.74	4.50	2.94	3.70
APH0640T220M	22	±20%	125	3.33	4.00	2.70	3.30
APH0640T330M	33	±20%	240	2.50	3.00	1.80	2.20
APH0640T470M	47	±20%	320	2.08	2.50	1.48	1.80

ELECTRICAL CHARACTERISTICS 特性规格表
● APH0650 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH0650TR47M	0.47	±20%	3.9	17.43	21.00	17.45	20.00
APH0650TR68M	0.68	±20%	4.5	14.94	18.00	14.80	16.50
APH0650T1R0M	1	±20%	6.6	13.28	16.00	10.30	12.00
APH0650T1R5M	1.5	±20%	10	10.79	13.00	8.40	9.50
APH0650T2R2M	2.2	±20%	12.5	9.13	11.00	8.15	9.00
APH0650T3R3M	3.3	±20%	22	8.30	10.00	7.74	8.50
APH0650T4R7M	4.7	±20%	29	6.64	8.00	5.15	6.00
APH0650T6R8M	6.8	±20%	41	5.23	6.30	4.27	5.80
APH0650T8R2M	8.2	±20%	48	4.57	5.50	4.91	5.50
APH0650T100M	10	±20%	60	4.40	5.30	3.91	4.50
APH0650T150M	15	±20%	90	3.32	4.00	2.68	3.10
APH0650T220M	22	±20%	140	2.91	3.50	2.09	2.60
APH0650T330M	33	±20%	209	2.49	3.00	1.88	2.30
APH0650T470M	47	±20%	230	2.16	2.60	1.58	2.00
APH0650T680M	68	±20%	423	2.05	2.50	1.48	1.80
APH0650T101M	100	±20%	515	1.80	2.20	1.31	1.60

● APH0840 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH0840TR22M	0.22	±20%	1.8	55.75	60.00	30.90	36.00
APH0840TR33M	0.33	±20%	2.4	40.75	45.00	25.75	30.00
APH0840TR47M	0.47	±20%	2.8	36.90	42.00	25.45	28.00
APH0840TR56M	0.56	±20%	3.2	23.45	26.00	22.30	24.00
APH0840TR68M	0.68	±20%	3.8	22.30	24.00	21.30	23.00
APH0840TR82M	0.82	±20%	4.4	19.30	21.00	19.30	21.00
APH0840T1R0M	1	±20%	4.62	17.30	19.00	17.30	19.00
APH0840T1R5M	1.5	±20%	7.6	15.30	17.00	15.30	17.00
APH0840T1R8M	1.8	±20%	11	13.73	15.00	12.88	15.00
APH0840T2R2M	2.2	±20%	11.4	12.30	14.00	12.30	14.00
APH0840T3R3M	3.3	±20%	15	11.23	12.50	10.30	12.00
APH0840T4R7M	4.7	±20%	26.5	10.65	11.50	8.65	9.50
APH0840T5R6M	5.6	±20%	30	10.15	11.00	8.15	9.00
APH0840T6R8M	6.8	±20%	36.8	8.15	9.00	7.15	8.00

ELECTRICAL CHARACTERISTICS 特性规格表
● APH0840 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH0840T8R2M	8.2	±20%	46	7.85	8.70	6.15	7.00
APH0840T100M	10	±20%	59	7.15	8.00	5.65	6.50
APH0840T150M	15	±20%	71	4.99	5.50	4.89	5.40
APH0840T220M	22	±20%	113	4.58	5.00	4.29	4.80
APH0840T330M	33	±20%	156	3.33	3.50	3.08	3.50
APH0840T470M	47	±20%	225	2.93	3.10	2.56	2.90

● APH0850 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH0850T2R2M	2.2	±20%	10	12.75	15.00	11.05	13.00
APH0850T3R3M	3.3	±20%	15	11.90	14.00	9.35	11.00
APH0850T4R7M	4.7	±20%	22	11.05	13.00	6.80	8.00
APH0850T6R8M	6.8	±20%	28	8.93	10.50	6.38	7.50
APH0850T100M	10	±20%	38	7.65	9.00	5.10	6.00
APH0850T150M	15	±20%	52	5.95	7.00	4.68	5.50
APH0850T220M	22	±20%	82	5.10	6.00	3.57	4.20
APH0850T330M	33	±20%	140	4.68	5.50	2.98	3.50
APH0850T470M	47	±20%	190	3.23	3.80	1.87	2.20
APH0850T560M	56	±20%	185	2.98	3.50	2.13	2.50
APH0850T680M	68	±20%	300	2.98	3.50	1.70	2.00
APH0850T101M	100	±20%	400	2.13	2.50	1.28	1.50

● APH1030 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH1030TR22M	0.22	±20%	2.2	45.10	50.00	29.77	33.00
APH1030TR33M	0.33	±20%	2.4	28.86	32.00	20.75	23.00
APH1030TR36M	0.36	±20%	2.8	25.28	28.00	20.75	23.00
APH1030TR47M	0.47	±20%	3.6	23.45	26.00	19.85	22.00
APH1030TR82M	0.82	±20%	5.5	20.75	23.00	16.24	18.00
APH1030T1R0M	1	±20%	7.3	18.94	21.00	13.53	15.00

ELECTRICAL CHARACTERISTICS 特性规格表
● APH1030 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH1030T1R5M	1.5	±20%	7.5	18.04	20.00	11.73	13.00
APH1030T2R2M	2.2	±20%	9	12.62	14.00	9.92	11.00
APH1030T3R3M	3.3	±20%	16	10.82	12.00	8.12	9.00
APH1030T4R7M	4.7	±20%	25.5	9.01	10.00	6.31	7.00
APH1030T6R8M	6.8	±20%	48	7.00	8.00	4.80	5.50
APH1030T8R2M	8.2	±20%	45	6.32	7.00	4.51	5.00
APH1030T100M	10	±20%	55	5.86	6.50	4.06	4.50
APH1030T150M	15	±20%	78	5.30	6.00	3.50	4.00
APH1030T220M	22	±20%	118.8	4.40	5.00	2.65	3.00
APH1030T330M	33	±20%	160	3.60	4.00	2.35	2.60

● APH1040 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH1040TR13M	0.13	±20%	0.52	67.35	92.00	64.35	72.00
APH1040TR15M	0.15	±20%	0.65	62.25	75.00	40.75	45.00
APH1040TR22M	0.22	±20%	1	49.80	60.00	30.75	35.00
APH1040TR30M	0.3	±20%	1.1	37.35	45.00	30.75	35.00
APH1040TR33M	0.33	±20%	1.38	36.00	45.00	28.00	32.00
APH1040TR36M	0.36	±20%	1.2	37.35	45.00	25.75	30.00
APH1040TR45M	0.45	±20%	1.5	35.35	43.00	25.75	30.00
APH1040TR47M	0.47	±20%	1.7	33.20	40.00	25.75	30.00
APH1040TR56M	0.56	±20%	2.4	27.39	33.00	20.75	25.00
APH1040TR68M	0.68	±20%	2.8	24.90	30.00	19.60	23.00
APH1040TR80M	0.8	±20%	3.2	24.07	29.00	19.60	23.00
APH1040T1R0M	1	±20%	4.3	23.24	28.00	16.45	19.00
APH1040T1R5M	1.5	±20%	5.5	19.92	24.00	14.30	16.00
APH1040T1R8M	1.8	±20%	5.4	16.00	20.00	14.00	16.00
APH1040T2R2M	2.2	±20%	8	13.70	16.50	10.30	12.00
APH1040T2R7M	2.7	±20%	14.4	14.40	18.00	10.00	12.00
APH1040T3R3M	3.3	±20%	11.8	13.28	16.00	9.73	11.00
APH1040T4R7M	4.7	±20%	20	10.79	13.00	7.73	9.00
APH1040T5R6M	5.6	±20%	25	10.30	12.00	7.30	8.70
APH1040T6R8M	6.8	±20%	25	9.96	12.00	7.23	8.50

ELECTRICAL CHARACTERISTICS 特性规格表
● APH1040 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH1040T8R2M	8.2	±20%	27	7.47	9.00	6.98	8.00
APH1040T100M	10	±20%	30	7.06	8.50	7.04	7.80
APH1040T150M	15	±20%	45	5.81	7.00	5.74	6.50
APH1040T220M	22	±20%	79.2	4.57	5.50	4.32	5.00
APH1040T330M	33	±20%	92	3.98	4.80	3.89	4.40
APH1040T470M	47	±20%	174	3.16	3.50	2.88	3.30
APH1040T680M	68	±20%	195	2.49	3.00	2.08	2.50
APH1040T820M	82	±20%	285	2.38	2.80	2.13	2.30
APH1040T101M	100	±20%	340	2.13	2.30	1.83	2.00

● APH1050 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH1050TR22M	0.22	±20%	1.11	58.63	65.00	33.18	37.00
APH1050TR47M	0.47	±20%	1.32	44.20	50.00	31.80	36.00
APH1050TR68M	0.68	±20%	2.35	34.45	37.00	21.30	23.00
APH1050T1R0M	1	±20%	3	28.30	30.00	20.71	23.00
APH1050T1R5M	1.5	±20%	3.8	22.45	25.00	18.88	21.00
APH1050T2R2M	2.2	±20%	6	17.13	19.00	13.47	15.00
APH1050T3R3M	3.3	±20%	10	14.30	16.00	11.73	13.00
APH1050T4R7M	4.7	±20%	14	13.47	15.00	9.90	11.00
APH1050T5R6M	5.6	±20%	17	12.56	14.00	8.65	9.50
APH1050T6R8M	6.8	±20%	18.5	12.56	14.00	8.15	9.00
APH1050T100M	10	±20%	28	8.98	10.00	7.15	8.00
APH1050T150M	15	±20%	42	6.65	7.50	5.82	6.50
APH1050T220M	22	±20%	50	5.41	6.00	5.08	5.50
APH1050T330M	33	±20%	86	4.69	5.20	4.29	4.80
APH1050T470M	47	±20%	127	4.08	4.50	3.28	3.70
APH1050T680M	68	±20%	185	2.86	3.20	2.45	2.70
APH1050T820M	82	±20%	280	3.08	3.50	1.75	2.00
APH1050T101M	100	±20%	290	2.55	2.80	1.85	2.10

ELECTRICAL CHARACTERISTICS 特性规格表
● APH1240 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH1240TR22M	0.22	±20%	1.5	41.50	50.00	38.60	42.00
APH1240TR47M	0.47	±20%	3.1	39.84	48.00	29.60	33.00
APH1240TR68M	0.68	±20%	5.2	39.01	47.00	24.60	28.00
APH1240TR82M	0.82	±20%	6.5	33.20	40.00	24.60	28.00
APH1240T1R0M	1	±20%	10.2	29.05	35.00	20.60	24.00
APH1240T1R5M	1.5	±20%	12.3	25.32	30.50	17.45	20.00
APH1240T2R2M	2.2	±20%	12.8	21.58	26.00	15.45	18.00
APH1240T3R3M	3.3	±20%	13	17.43	21.00	13.30	15.00
APH1240T4R7M	4.7	±20%	14.5	14.94	18.00	11.30	13.00
APH1240T6R8M	6.8	±20%	20	11.62	14.00	8.15	9.00
APH1240T100M	10	±20%	25	8.30	10.00	7.15	8.00
APH1240T150M	15	±20%	39	6.23	7.50	5.91	6.50
APH1240T220M	22	±20%	51	4.98	6.00	3.91	4.50

● APH1250 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH1250TR22M	0.22	±20%	0.91	62.25	75.00	45.75	50.00
APH1250TR36M	0.36	±20%	1.11	41.50	50.00	37.75	42.00
APH1250TR50M	0.5	±20%	1.5	39.84	48.00	33.75	38.00
APH1250TR68M	0.68	±20%	2.02	38.18	46.00	29.60	33.00
APH1250TR82M	0.82	±20%	2.17	32.37	39.00	26.60	30.00
APH1250T1R0M	1	±20%	2.86	29.05	35.00	22.60	26.00
APH1250T1R5M	1.5	±20%	4.16	27.39	33.00	19.60	23.00
APH1250T2R2M	2.2	±20%	5	19.92	24.00	13.30	15.00
APH1250T3R3M	3.3	±20%	7	18.26	22.00	12.30	14.00
APH1250T4R7M	4.7	±20%	11	16.60	20.00	11.30	13.00
APH1250T6R8M	6.8	±20%	18	13.28	16.00	10.30	12.00
APH1250T100M	10	±20%	22	9.96	12.00	8.15	9.00
APH1250T150M	15	±20%	30	8.30	10.00	7.15	8.00
APH1250T220M	22	±20%	58	5.40	6.50	3.91	4.50
APH1250T330M	33	±20%	84	4.98	6.00	2.91	3.50
APH1250T470M	47	±20%	130	4.15	5.00	2.66	3.00
APH1250T680M	68	±20%	183	3.50	4.10	2.05	2.40

ELECTRICAL CHARACTERISTICS 特性规格表
● APH1260 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH1260T1R5M	1.5	±20%	3.9	27.45	30.00	23.60	27.00
APH1260T2R2M	2.2	±20%	4.2	24.60	28.00	18.60	22.00
APH1260T3R3M	3.3	±20%	6.8	21.60	25.00	14.45	17.00
APH1260T4R7M	4.7	±20%	9	19.92	24.00	12.45	15.00
APH1260T5R6M	5.6	±20%	11	18.68	22.50	11.30	13.00
APH1260T6R8M	6.8	±20%	13.5	15.77	19.00	10.30	12.00
APH1260T8R2M	8.2	±20%	16	11.21	13.50	9.30	11.00
APH1260T100M	10	±20%	20.7	11.31	12.50	8.73	10.00
APH1260T120M	12	±20%	23	8.30	10.00	7.98	9.00
APH1260T150M	15	±20%	29	7.47	9.00	7.65	8.50
APH1260T180M	18	±20%	35	6.64	8.00	6.65	7.50
APH1260T220M	22	±20%	39.5	6.23	7.50	6.15	7.00
APH1260T270M	27	±20%	56	5.40	6.50	5.15	6.00
APH1260T330M	33	±20%	75	4.98	6.00	4.91	5.50
APH1260T470M	47	±20%	90	4.57	5.50	4.32	5.00
APH1260T680M	68	±20%	140	3.74	4.50	3.32	4.00
APH1260T101M	100	±20%	200	2.91	3.50	2.58	3.00
APH1260T121M	120	±20%	235	2.66	3.20	1.75	2.00
APH1260T151M	150	±20%	350	2.24	2.70	1.25	1.50

● APH1265 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH1265TR33M	0.33	±20%	1.84	47.50	57.00	38.50	43.00
APH1265TR47M	0.47	±20%	2.1	43.30	52.00	34.80	39.00
APH1265TR68M	0.68	±20%	2.5	39.20	47.00	30.10	34.00
APH1265TR82M	0.82	±20%	2.65	35.00	42.00	27.50	31.00
APH1265T1R0M	1	±20%	2.73	32.10	38.50	24.80	29.00
APH1265T1R5M	1.5	±20%	3.77	28.30	34.00	23.50	27.50
APH1265T2R2M	2.2	±20%	5.2	25.80	31.00	19.20	22.50
APH1265T3R3M	3.3	±20%	7.68	24.20	29.00	16.70	19.50
APH1265T4R7M	4.7	±20%	8.5	20.00	24.00	13.70	16.00
APH1265T5R6M	5.6	±20%	10.5	18.80	22.50	12.00	14.00
APH1265T6R8M	6.8	±20%	13	15.80	19.00	11.10	13.00

ELECTRICAL CHARACTERISTICS 特性规格表
● APH1265 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH1265T8R2M	8.2	±20%	14	13.30	16.00	10.30	12.00
APH1265T100M	10	±20%	19.8	12.50	15.00	9.40	11.00
APH1265T150M	15	±20%	37	9.20	11.00	8.10	9.50
APH1265T220M	22	±20%	44	7.50	9.00	6.80	8.00
APH1265T330M	33	±20%	65	6.70	8.00	5.60	6.50
APH1265T470M	47	±20%	90	5.70	6.80	4.70	5.50
APH1265T680M	68	±20%	120	4.30	5.20	4.10	4.80
APH1265T820M	82	±20%	135	3.80	4.50	3.40	4.00
APH1265T101M	100	±20%	190	3.30	4.00	3.00	3.50
APH1265T151M	150	±20%	257	2.30	2.80	1.50	1.70

● APH1770 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH1770TR68M	0.68	±20%	2	35.00	40.00	27.00	31.00
APH1770T1R0M	1	±20%	2	34.80	40.00	26.50	31.00
APH1770T1R5M	1.5	±20%	2.1	35.00	40.00	29.00	33.00
APH1770T2R2M	2.2	±20%	2.5	28.30	34.00	24.80	29.00
APH1770T3R3M	3.3	±20%	3.95	25.00	30.00	20.50	24.00
APH1770T4R7M	4.7	±20%	4.75	20.00	24.00	17.90	21.00
APH1770T6R8M	6.8	±20%	9.5	18.30	22.00	14.50	17.00
APH1770T8R2M	8.2	±20%	9.7	16.70	20.00	11.10	13.00
APH1770T100M	10	±20%	9.9	15.80	19.00	10.30	12.00
APH1770T150M	15	±20%	17	12.10	14.50	9.40	11.00
APH1770T220M	22	±20%	23	9.60	11.50	7.30	8.50
APH1770T330M	33	±20%	37	8.30	10.00	6.80	8.00
APH1770T470M	47	±20%	47	6.30	7.50	5.10	6.00
APH1770T560M	56	±20%	66	6.30	7.20	5.10	5.80
APH1770T680M	68	±20%	85	5.40	6.50	4.40	5.20
APH1770T820M	82	±20%	110	5.30	6.00	4.00	4.50
APH1770T101M	100	±20%	130	4.20	5.00	3.20	3.70

ELECTRICAL CHARACTERISTICS 特性规格表
● APH2213 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Saturation Current		Heat Rating Current	
	@100KHz,1V		Max.	Max.	Typ.	Max.	Typ.
Unit	μH	-	mΩ	A		A	
Symbol	L	-	DCR	Isat		Irms	
APH2213T1R0M	1	±20%	0.95	54.00	60.00	65.00	70.00
APH2213T1R5M	1.5	±20%	1.15	48.00	52.00	57.00	62.00
APH2213T2R2M	2.2	±20%	1.25	43.00	48.00	52.00	58.00
APH2213T3R3M	3.3	±20%	1.75	37.00	41.00	47.00	49.00
APH2213T4R7M	4.7	±20%	2.2	34.00	38.00	44.00	47.00
APH2213T6R8M	6.8	±20%	3.1	32.00	36.00	36.00	40.00
APH2213T7R3K	7.3	±10%	3.9	28.00	33.00	32.00	36.00
APH2213T100M	10	±20%	4.15	20.00	28.00	30.00	33.00
APH2213T150M	15	±20%	6.12	18.00	23.00	23.00	26.00
APH2213T220M	22	±20%	11	14.00	15.00	18.00	22.00
APH2213T330M	33	±20%	15.4	10.50	12.00	16.00	19.00
APH2213T470M	47	±20%	20.8	10.00	12.00	14.00	17.00
APH2213T680M	68	±20%	29.5	9.00	12.00	12.00	14.00
APH2213T820M	82	±20%	34.2	7.70	9.00	10.00	12.00
APH2213T101M	100	±20%	40	7.50	9.00	9.50	11.00

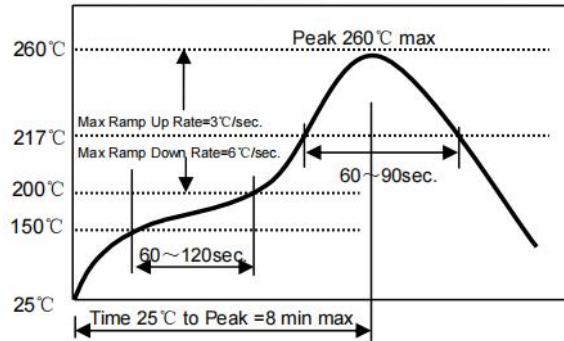
- All test data is referenced to 20℃ ambient.
- Rated current: Isat or Irms, whichever is smaller.
- Isat(Typ.) : DC current at which the inductance drops approximate 30% from its value without current.
- Irms(Typ.): DC current that causes the temperature rise ($\Delta T = 40^{\circ}\text{C}$) from 20℃ ambient.
- The part temperature (ambient + temp rise) should not exceed 125℃ under worst case operating conditions. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions, all affect the part temperature. Part temperature should be verified in the end application.
- Absolute maximum voltage:DC 30V .

RELIABILITY TEST 可靠性试验

Item	Specification and Requirement	Test Method
Solderability	The surface of terminal immersed shall be minimum of 95% covered with a new coating of solder	Solder heat proof: 1. Preheating: $160 \pm 10^{\circ}\text{C}$ 2. Retention time: $245 \pm 5^{\circ}\text{C}$ for 2 ± 0.5 seconds
Vibration	Inductance change: Within $\pm 10\%$; Without mechanical damage such as break	1. Vibration frequency: (10 Hz to 55 Hz to 10Hz) in 60 seconds as a period 2. Vibration time: Period cycled for 2 hours in each of 3 mutual perpendicular directions. 3. Amplitude: 1.5 mm max.
Shock	Inductance change: Within $\pm 10\%$; Without mechanical damage such as break	1. Peak value: 100 G 2. Duration of pulse: 11ms 3. 3 times in each positive and negative direction of 3 mutual perpendicular directions
Thermal Shock	Inductance change: Within $\pm 10\%$; Without distinct damage in appearance	1. Repeat 100 cycles as follow: ($-55 \pm 2^{\circ}\text{C}$, 30 ± 3 min) →(Room temp., 5 min) →($+125 \pm 2^{\circ}\text{C}$, 30 ± 3 min) →(Room temp., 5 min) 2. Recovery: $48 \pm 4 / -0$ hours of recovery under the standard condition after the test.
High Temperature Resistance	Inductance change: Within $\pm 10\%$; Without distinct damage in appearance	1. Environment condition: $85 \pm 2^{\circ}\text{C}$; Applied Current: Rated current 2. Duration: $1000 \pm 4 / -0$ hours
Humidity Resistance	Inductance change: Within $\pm 10\%$; Without distinct damage in appearance	1. Environment condition: $60 \pm 2^{\circ}\text{C}$; Humidity: 90~95%; Applied Current: Rated current 2. Duration: $1000 \pm 4 / -0$ hours
Low Temperature Store	Inductance change: Within $\pm 10\%$; Without distinct damage in appearance	Store temperature: $-55 \pm 2^{\circ}\text{C}$; Duration: $1000 \pm 4 / -0$ hours
High Temperature Store	Inductance change: Within $\pm 10\%$; Without distinct damage in appearance	Store temperature: $+125 \pm 2^{\circ}\text{C}$; Duration: $1000 \pm 4 / -0$ hours

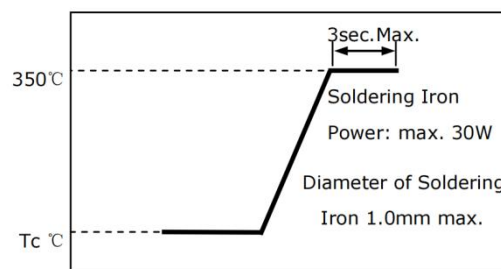
RECOMMENDED SOLDERING TECHNOLOGIES 焊接工艺建议

- Reflowing Profile.
- ☆ Preheat condition: 150~200°C/60~120sec.
- ☆ Allowed time above 217°C: 60~90sec.
- ☆ Max temp: 260°C.
- ☆ Max time at max temp: 10sec.
- ☆ Solder paste: Sn/3.0Ag/0.5Cu.
- ☆ Allowed Reflow time: 2x max.



- ☆ Note: The reflow profile in the above table is only for qualification and is not meant to specify board assembly profiles. Actual board assembly profiles must be based on the customer's specific board design, solder paste and process, and should not exceed the parameters as the Reflow profile shows.

- Iron Soldering Profile.
- ☆ Iron soldering power: Max.30W
- ☆ Pre-heating: 150 °C / 60sec.
- ☆ Soldering Tip temperature: 350°C Max.
- ☆ Soldering time: 3sec Max.
- ☆ Solder paste: Sn/3.0Ag/0.5Cu.
- ☆ Max.1 times for iron soldering



- ☆ Note: Take care not to apply the tip of the soldering iron to the terminal electrodes.

■ PRECAUTIONS ON USE 使用注意事项

● Precautions on Use.

- ☆ 1.Always wear static control bands to protect against ESD.
- ☆ 2.Any devices used with the products (soldering irons, measuring instruments) should be properly grounded.
- ☆ 3.Keep bare hands and metal conductors (i.e., metal desk) away from electrodes or conductive areas that lead to electrodes.
- ☆ 4.Preheat when soldering.
- ☆ 5.Don't apply current in excess of the rated current value. It may reduce the impedance or inductance, or cause damage to components due to over-current.
- ☆ 6.For magnetic products, keep clear of anything that may generate magnetic fields such as speakers and coils. Use non-magnetic tweezers when handling the chips.
- ☆ 7.When soldering, the electrical characteristics may be varied due to hot energy and mechanical stress.
- ☆ 8.When coating products with resin, the relatively high resin curing stress may change the electrical characteristics. For exterior coating, select resin carefully so that electrical and mechanical performance of the product is not affected. Before using, please evaluate reliability with the product mounted in your application set.
- ☆ 9.When mount chips with adhesive in preliminary assembly, do appropriate check before the soldering stage, i.e., the size of land pattern, type of adhesive, amount applied, hardening of the adhesive on proper usage and amounts of adhesive to use.
- ☆ 10.Mounting density: Add special attention to radiating heat of products when mounting other components nearby. The excessive heat by other products may cause deterioration at joint of this product with substrate.
- ☆ 11.Since some products are constructed like an open magnetic circuit, narrow spacing between components may cause magnetic coupling.
- ☆ 12.Please do not give the product any excessive mechanical shocks in transportation.
- ☆ 13.Please do not touch wires by sharp terminals such as tweezers to avoid causing any damage to wires.
- ☆ 14.Please do not add any shock and power to the soldered product to avoid causing any damage to chip body.
- ☆ 15.Please do not touch the electrodes by naked hand as the solderability of the external electrodes may deteriorate by grease or oil on the skin.
- ☆ 16.Avoid ultrasonic processing, which may cause component falling off and poor pad contact.
- ☆ 17.When using APV products, customers should record the production batch number for traceability.
- ☆ 18.Do not clean or soak the product with organic solvents, as this will cause the magnetic core to loosen and degrade the structural strength of the product.
- ☆ 19.The storage period is within 12 months. Be sure to follow the storage conditions (temperature: 15 to 35℃, humidity: 75% RH or less). If the storage period elapses, the soldering of the terminal electrodes may deteriorate.
- ☆ 20.Do not use or store in locations where there are conditions such as gas corrosion (salt, acid, alkali, etc.).
- ☆ 21.Soldering corrections after mounting should be within the range of the conditions determined in the specifications. If overheated, a short circuit, performance deterioration, or lifespan shortening may occur.
- ☆ 22.This product is not designed for production processes involving ultrasonic welding, as high-frequency vibration may cause application issues such as product detachment and breakage.

■ SAFETY REMINDERS 注意事项

SAFETY REMINDERS

● All products listed in this specification are developed, designed and intended for use in general electronics equipment. The products are not designed or Warranted to meet the requirements of the applications listed below, whose performance and/or quality require especially high reliability, or whose failure, malfunction or trouble might directly cause damage to society, person, or property. Please understand that we are not responsible for any damage or liability caused by use of the products in any of the applications below. Please contact us for more details if you intend to use our products in the following applications.

- ☆ 1.Aerospace/aviation equipment
- ☆ 2.Transportation equipment (cars, electric trains, ships, etc.)
- ☆ 3.Medical equipment
- ☆ 4.Power-generation control equipment
- ☆ 5.Atomic energy-related equipment
- ☆ 6.Seabed equipment
- ☆ 7.Transportation control equipment
- ☆ 8.Public information-processing equipment
- ☆ 9.Military equipment
- ☆ 10.Electric heating apparatus, burning equipment
- ☆ 11.Disaster prevention/crime prevention equipment
- ☆ 12.Safety equipment
- ☆ 13.Other applications that are not considered general-purpose applications

● When designing your equipment even for general-purpose applications, you are kindly requested to take into consideration securing protection circuit/device or providing backup circuits in your equipment.