

特点 FEATURES

高性能合金材料，高通流，低损耗，低电阻

- * High performance metal material for large current / low loss and lower DCR

闭合磁路设计，低磁漏

- * Closed magnetic circuit design reduces leakage flux

100%无铅（Pb）符合RoHS标准

- * 100% lead (Pb) free meet RoHS standard

应用 Applications

智能手机、平板

- * Smart phone, pad

笔记本电脑、LCD显示器、HDD、DVC、DSC、PDA等

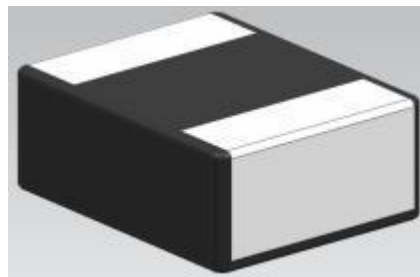
- * Noetbooks, LCD displays, HDDs, DVCs, DSCs, PDAs etc..

服务器、DC/DC转换器

- * Server, DC/DC converters

DC/DC转换器

- * DC/DC converters



零件编号 Part Numbering:



系列：电感 = 小尺寸模压片式电感

(1)Series: HP= Mini molded chip power inductor

等级：MO = 产品等级

(2)Grade :MO: Product Level

尺寸：2016=2016系列、10=产品高度1.0毫米

(3)Dimension: 2016=2016 Series; 10= Product Height 1.0mm

电感值

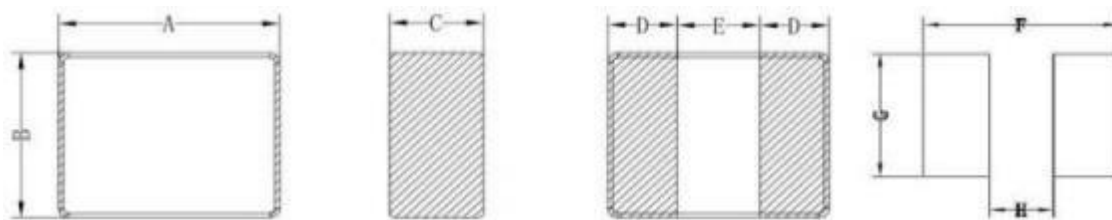
(4)Inductance: R47=0.47 μ H, 4R7=4.7 μ H, 100=10 μ H, 220=22 μ H

电感公差

(5)Inductance Tolerance: J=±5%, K=±10%, L=±15%, M=±20%, N=±30%

尺寸和推荐PCB板图案（单位：毫米）

Dimensions and Recommend PC Board Pattern (unit: mm):



尺寸：毫米 Dimensions in mm

TYPE	A	B	C	D	G	H	F
160808	1.6±0.2	0.8±0.2	0.8max	0.5Typ	1.0	0.6	1.8
201208	2.0±0.2	1.2±0.2	0.8max	0.5Typ	1.4	0.8	2.2
201210	2.0±0.2	1.2±0.2	1.0max	0.5Typ	1.4	0.8	2.2
201610	2.0±0.2	1.6±0.2	1.0max	0.5Typ	1.8	0.8	2.2
201612	2.0±0.2	1.6±0.2	1.2max	0.5Typ	1.8	0.8	2.2
252010	2.5±0.2	2.0±0.2	1.0max	0.7Typ	2.2	0.9	2.7
252012	2.5±0.2	2.0±0.2	1.2max	0.7Typ	2.2	0.9	2.7

160808 系列 标准规格

160808 Series Standard Specifications

HPMO系列 SERIES									
Part No.	Inductance	Test Freq	DCR(mΩ)		I _{rms} (A)		I _{sat} (A)		Withstanding Voltage
	(μH)		Typ	Max	Typ	Max	Typ	Max	Typ.
	(μH)		Typ	Max	Typ	Max	Typ	Max	VDC
HPMO160808-R22M	0.22	1MHz,1V	52	63	4.5	4.0	5.0	4.5	30
HPMO160808-R47M	0.47	1MHz,1V	92	105	3.0	2.5	3.2	2.7	30
HPMO160808-1R0M	1.00	1MHz,1V	155	170	1.8	1.4	2.0	1.6	30
HPMO160808-2R2M	2.20	1MHz,1V	315	340	1.2	0.9	1.4	1.0	30

HPMH系列 SERIES									
Part No.	Inductance	Test Freq	DCR(mΩ)		I _{rms} (A)		I _{sat} (A)		Withstanding Voltage
	(μH)		Typ	Max	Typ	Max	Typ	Max	Typ.
	(μH)		Typ	Max	Typ	Max	Typ	Max	VDC
HPMH160808-R22M	0.22	1MHz,1V	42	50	5.0	4.5	5.5	5.0	30
HPMH160808-R47M	0.47	1MHz,1V	81	90	3.5	3.0	3.8	3.2	30
HPMH160808-1R0M	1.00	1MHz,1V	142	160	2.3	1.8	2.5	2.1	30
HPMH160808-2R2M	2.20	1MHz,1V	290	320	1.5	1.2	1.8	1.4	30

电感公差

Inductance Tolerance: J= ±5%, K= ±10%, L= ±15%, M= ±20%, N= ±30%

1.所有测试数据均以20℃环境温度为基准。

All test data is referenced to 20℃ ambient.

2.温升电流: 使得温度从20℃环境温度升高(ΔT=40℃) 的直流电流。

I_{rms}: DC current that causes the temperature rise (ΔT=40℃) from 20℃ ambient.

3.饱和电流: 通入直流电流后电感感值从初始状态下降低约30%时对应的电流。

I_{sat} : DC current at which the inductance drops approximate 30% from its value without current.

4.工作温度范围 -40℃至+125℃。

Operating temperature range -40℃ to +125℃.

5.额定电流 : 以I_{sat}和I_{rms}中更小者为准。Rated current: I_{sat} or I_{rms}, whichever is smaller.

201208 系列 标准规格

201208 Series Standard Specifications

Part No.	Inductance	Test Freq	DCR(mΩ)		Irms(A)		Isat(A)		Withstanding Voltage
	(μH)		Typ	Max	Typ	Max	Typ	Max	Typ.
									VDC
HPMO系列 SERIES									
HPMO201208-R22M	0.22	1MHz,1V	23	29	5.8	5.2	6.5	6.0	30
HPMO201208-R47M	0.47	1MHz,1V	38	48	4.0	3.2	4.5	4.0	30
HPMO201208-1R0M	1.00	1MHz,1V	95	115	2.7	2.3	3.0	2.5	30
HPMO201208-1R5M	1.50	1MHz,1V	145	165	2.3	1.8	2.5	2.0	30
HPMO201208-2R2M	2.20	1MHz,1V	175	195	1.7	1.3	2.0	1.5	30
HPMH系列 SERIES									
HPMH201208-R22M	0.22	1MHz,1V	18	25	6.5	6.0	7.3	6.5	30
HPMH201208-R47M	0.47	1MHz,1V	33	40	4.5	4.0	5.0	4.5	30
HPMH201208-1R0M	1.00	1MHz,1V	80	100	3.0	2.5	3.5	3.0	30
HPMH201208-1R5M	1.50	1MHz,1V	136	150	2.2	2.0	2.6	2.5	30
HPMH201208-2R2M	2.20	1MHz,1V	175	185	1.8	1.5	2.5	2.0	30

201210 系列 标准规格

201210 Series Standard Specifications

Part No.	Inductance	Test Freq	DCR(mΩ)		I _{rms} (A)		I _{sat} (A)		Withstanding Voltage
	(μH)		Typ	Max	Typ	Max	Typ	Max	Typ.
									VDC
HPMO系列 SERIES									
HPMO201210-R22M	0.22	1MHz,1V	20	26	5.5	6.0	6.8	6.2	30
HPMO201210-R47M	0.47	1MHz,1V	35	45	3.8	3.5	4.7	4.2	30
HPMO201210-1R0M	1.00	1MHz,1V	80	95	3.0	2.5	3.3	2.7	30
HPMO201210-1R5M	1.50	1MHz,1V	126	150	2.5	2.2	3.0	2.5	30
HPMO201210-2R2M	2.20	1MHz,1V	165	185	1.9	1.6	2.2	1.8	30
HPMH系列 SERIES									
HPMH201210-R22M	0.22	1MHz,1V	17	20	6.5	6.0	7.1	6.6	30
HPMH201210-R47M	0.47	1MHz,1V	29	35	4.2	4.8	5.0	4.6	30
HPMH201210-1R0M	1.00	1MHz,1V	75	83	3.3	2.8	3.7	3.2	30
HPMH201210-1R5M	1.50	1MHz,1V	115	130	2.9	2.5	3.5	2.9	30
HPMH201210-2R2M	2.20	1MHz,1V	150	170	2.3	2.0	2.6	2.2	30

201610 系列 标准规格
201610 Series Standard Specifications

Part No.	Inductance	Test Freq	DCR(mΩ)		I _{rms} (A)		I _{sat} (A)		Withstanding Voltage
			Typ	Max	Typ	Max	Typ	Max	Typ.
	(μH)		Typ	Max	Typ	Max	Typ	Max	VDC
HPMO系列 SERIES									
HPMO201610-R22M	0.22	1MHz,1V	13	18	6.5	6.0	7.0	6.5	30
HPMO201610-R47M	0.47	1MHz,1V	23	29	4.7	4.3	5.2	4.8	30
HPMO201610-1R0M	1.00	1MHz,1V	55	65	3.5	3.1	3.8	3.5	30
HPMO201610-1R5M	1.50	1MHz,1V	75	90	3.0	2.5	3.3	2.8	30
HPMO201610-2R2M	2.20	1MHz,1V	110	130	2.6	2.1	2.5	2.0	30
HPMO201610-3R3M	3.30	1MHz,1V	190	220	2.1	1.8	2.2	1.6	30
HPMO201610-4R7M	4.70	1MHz,1V	242	270	1.7	1.5	2.1	1.4	30
HPMH系列 SERIES									
HPMH201610-R22M	0.22	1MHz,1V	10	14	6.8	6.3	7.3	6.8	30
HPMH201610-R47M	0.47	1MHz,1V	19	24	5.0	4.6	5.5	5.1	30
HPMH201610-1R0M	1.00	1MHz,1V	48	55	3.8	3.5	4.1	3.8	30
HPMH201610-1R5M	1.50	1MHz,1V	68	75	3.3	2.8	3.6	3.1	30
HPMH201610-2R2M	2.20	1MHz,1V	100	110	2.9	2.4	3.0	2.5	30
HPMH201610-3R3M	3.30	1MHz,1V	180	195	2.4	2.1	2.5	1.9	30
HPMH201610-4R7M	4.70	1MHz,1V	195	230	2.0	1.8	3.4	1.7	30
HPMH201610-100M	10.0	1MHz,1V	510	490	1.0	1.5	1.0	1.4	30

201612 系列 标准规格

201612 Series Standard Specifications

Part No.	Inductance	Test Freq	DCR(mΩ)		Irms(A)		Isat(A)		Withstanding Voltage
	(μH)		Typ	Max	Typ	Max	Typ	Max	Typ.
			VDC						
HPMO系列 SERIES									
HPMO201612-R22M	0.22	1MHz,1V	11	15	7.0	6.5	8.0	7.5	30
HPMO201612-R47M	0.47	1MHz,1V	22	28	5.0	4.5	5.5	5.0	30
HPMO201612-1R0M	1.00	1MHz,1V	45	60	3.7	3.3	4.1	3.5	30
HPMO201612-1R5M	1.50	1MHz,1V	67	80	3.2	2.7	3.5	3.0	30
HPMO201612-2R2M	2.20	1MHz,1V	83	105	2.7	2.2	3.0	2.5	30
HPMO201612-3R3M	3.30	1MHz,1V	150	175	2.3	1.9	2.5	2.0	30
HPMO201612-4R7M	4.70	1MHz,1V	188	210	1.9	1.7	2.0	1.6	30
HPMH系列 SERIES									
HPMH201612-R22M	0.22	1MHz,1V	9	12	7.5	7.0	8.5	8.0	30
HPMH201612-R47M	0.47	1MHz,1V	17	23	5.5	5.0	6.0	6.5	30
HPMH201612-1R0M	1.00	1MHz,1V	37	46	4.0	3.6	4.4	3.9	30
HPMH201612-1R5M	1.50	1MHz,1V	59	68	3.5	3.0	3.8	3.3	30
HPMH201612-2R2M	2.20	1MHz,1V	75	85	3.0	2.6	3.3	2.8	30
HPMH201612-3R3M	3.30	1MHz,1V	141	155	2.5	2.1	2.8	2.3	30
HPMH201612-4R7M	4.70	1MHz,1V	176	190	2.1	2.0	2.3	1.9	30

252010 系列 标准规格
252010 series Standard Specifications

Part No.	Inductance	Test Freq	DCR(mΩ)		I _{rms} (A)		I _{sat} (A)		Withstanding Voltage
			Typ	Max	Typ	Max	Typ	Max	Typ.
	(μH)								VDC
HPMO系列 SERIES									
HPMO252010-R22M	0.22	1MHz,1V	12	18	7.0	6.5	8.5	8.0	30
HPMO252010-R47M	0.47	1MHz,1V	23	29	5.5	5.0	6.0	5.5	30
HPMO252010-1R0M	1.00	1MHz,1V	45	55	4.3	3.8	4.8	4.2	30
HPMO252010-1R5M	1.50	1MHz,1V	60	75	3.7	3.3	3.7	3.2	30
HPMO252010-2R2M	2.20	1MHz,1V	105	125	2.8	2.5	3.0	2.7	30
HPMO252010-3R3M	3.30	1MHz,1V	135	155	2.3	1.8	2.8	2.3	30
HPMO252010-4R7M	4.70	1MHz,1V	220	250	1.6	1.2	1.8	1.6	30
HPMO252010-100M	10.0	1MHz,1V	453	500	1.2	1.4	1.5	1.1	30
HPMH系列 SERIES									
HPMH252010-R22M	0.22	1MHz,1V	9	13	7.5	7.0	9.0	8.5	30
HPMH252010-R47M	0.47	1MHz,1V	18	23	6.0	5.5	6.4	5.9	30
HPMH252010-1R0M	1.00	1MHz,1V	39	45	4.5	4.0	5.1	4.5	30
HPMH252010-1R5M	1.50	1MHz,1V	52	62	4.0	3.5	4.0	3.6	30
HPMH252010-2R2M	2.20	1MHz,1V	96	108	3.1	2.8	3.3	3.0	30
HPMH252010-3R3M	3.30	1MHz,1V	123	135	2.5	2.1	3.1	2.6	30
HPMH252010-4R7M	4.70	1MHz,1V	208	225	1.8	1.5	2.1	1.8	30

252012 系列 标准规格
252012 series Standard Specifications

Part No.	Inductance	Test Freq	DCR(mΩ)		I _{rms} (A)		I _{sat} (A)		Withstanding Voltage
	(μH)		Typ	Max	Typ	Max	Typ	Max	Typ.
									VDC
HPMO系列 SERIES									
HPMO252012-R22M	0.22	1MHz,1V	10	16	7.3	6.8	8.8	8.3	30
HPMO252012-R47M	0.47	1MHz,1V	22	28	6.0	5.5	6.5	6.0	30
HPMO252012-1R0M	1.00	1MHz,1V	40	50	4.5	4.0	5.0	4.5	30
HPMO252012-1R5M	1.50	1MHz,1V	55	70	3.8	3.5	4.2	3.6	30
HPMO252012-2R2M	2.20	1MHz,1V	85	100	3.2	2.7	3.5	3.0	30
HPMO252012-3R3M	3.30	1MHz,1V	130	150	2.5	2.0	3.0	2.5	30
HPMO252012-4R7M	4.70	1MHz,1V	188	220	1.8	1.5	2.1	1.8	30
HPMO252012-100M	10.0	1MHz,1V	435	465	1.5	1.3	1.8	1.4	30
HPMH系列 SERIES									
HPMH252012-R22M	0.22	1MHz,1V	8	12	7.6	7.1	9.0	8.6	30
HPMH252012-R47M	0.47	1MHz,1V	18	23	6.5	6.0	7.0	6.5	30
HPMH252012-1R0M	1.00	1MHz,1V	34	40	4.8	4.3	5.3	4.8	30
HPMH252012-1R5M	1.50	1MHz,1V	48	57	4.0	3.8	4.5	4.0	30
HPMH252012-2R2M	2.20	1MHz,1V	76	86	3.5	3.0	3.8	3.3	30
HPMH252012-3R3M	3.30	1MHz,1V	120	135	2.8	2.3	3.3	2.8	30
HPMH252012-4R7M	4.70	1MHz,1V	170	190	2.1	1.8	2.4	2.1	30

大尺寸模压片式电感系列 HP SERIES

特点 FEATURES

高性能合金材料，高通流，低损耗，低电阻

- * High performance metal material for large current / low loss and lower DCR

闭合磁路设计，低磁漏

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服务器、DC/DC转换器

- * Server, DC/DC converters

DC/DC转换器

- * DC/DC converters

零件编号 Part Numbering:

HP	IH	404010	1R0	HP	MH	404012	1R0	M
①	②	③	④	①	②	③	④	⑤

系列：电感 = 大尺寸模压片式电感

- (1)Series: HP= Mini molded chip power inductor

等级：MH/IH= 产品等级

- (2)Grade:MH/IH: Product Level

尺寸：4040=4040系列、10/12=产品高度1.0/1.2毫米

- (3)Dimension: 4040=4040 Series; 12=Product Height 1.2mm

电感值

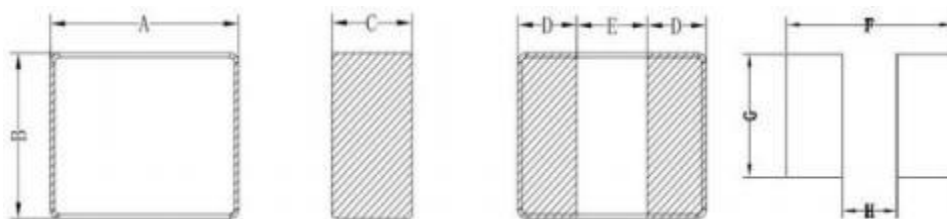
- (4)Inductance: R47=0.47 μ H, 4R7=4.7 μ H, 100=10 μ H ,

电感公差

- (5)Inductance Tolerance: J=±5%, K=±10%, L=±15%, M=±20%, N=±30%

尺寸和推荐PCB板图案（单位：毫米）

Dimensions and Recommend PC Board Pattern (unit: mm):



尺寸：毫米 Dimensions in mm

TYPE	A	B	C	D	G	H	F
404010	4.0±0.3	4.0±0.3	1.0max	1.1Typ	4.6	1.6	4.6
404012	4.0±0.3	4.0±0.3	1.2max	1.1Typ	4.6	1.6	4.6

404010 系列 标准规格

404010 series Standard Specifications

Part No.	Inductance	Test Freq	DCR(mΩ)		Irms(A)		Isat(A)		Withstanding Voltage
	(μH)		Typ	Max	Typ	Max	Typ	Max	Typ.
	(μH)		Typ	Max	Typ	Max	Typ	Max	VDC
HPIH404010-2R2M	2.2	1MHz,1V	46	55	3.6	3.0	5.8	5.3	30
HPIH404010-3R3M	3.3	1MHz,1V	62	75	3.3	2.8	5.0	4.5	30
HPIH404010-4R7M	4.7	1MHz,1V	85	100	3.0	2.5	4.0	3.5	30
HPIH404010-100M	10.0	1MHz,1V	200	240	2.0	1.8	2.5	2.3	30

404012 系列 标准规格

404012 series Standard Specifications

Part No.	Inductance	Test Freq	DCR(mΩ)		Irms(A)		Isat(A)		Withstanding Voltage
	(μH)		Typ	Max	Typ	Max	Typ	Max	Typ.
	(μH)		Typ	Max	Typ	Max	Typ	Max	VDC
HPMH404012-R22M	0.22	1MHz,1V	10	16	8.5	8.0	9.5	9.0	40
HPMH404012-R47M	0.47	1MHz,1V	19	25	8.0	7.5	8.2	7.5	40
HPMH404012-1R0M	1.00	1MHz,1V	29	38	7.0	6.5	7.5	6.8	40
HPMH404012-1R5M	1.50	1MHz,1V	41	50	6.5	6.0	7.0	6.3	40
HPMH404012-2R2M	2.20	1MHz,1V	56	62	6.0	5.5	6.5	5.8	40
HPMH404012-3R3M	3.30	1MHz,1V	71	80	5.0	4.5	5.2	4.5	40
HPMH404012-4R7M	4.70	1MHz,1V	93	105	4.5	4.0	4.6	4.0	40
HPMH404012-6R8M	6.80	1MHz,1V	154	165	3.2	2.8	3.5	3.0	40
HPMH404012-8R2M	8.20	1MHz,1V	182	195	2.8	2.4	3.0	2.5	40
HPMH404012-100M	10.00	1MHz,1V	240	255	2.3	1.9	2.5	2.0	40

电感公差

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Operating temperature range -40℃ to +125℃.

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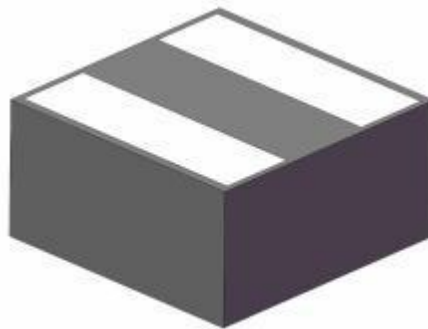
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* High performance metal material for large current / low loss and lower DCR

- 闭合磁路设计，低磁漏
* Closed magnetic circuit design reduces leakage flux
100%无铅（Pb）符合RoHS标准
* 100% lead (Pb) free meet RoHS standard

应用 Applications

- 智能手机、平板
* Smart phone, pad
笔记本电脑、LCD显示器、HDD、DVC、DSC、PDA等
* Noetbooks, LCD displays, HDDs, DVCs, DSCs, PDAs etc..
服务器、DC/DC转换器
* Server, DC/DC converters
DC/DC转换器
* DC/DC converters



零件编号 Part Numbering:



系列：电感 = 大尺寸模压片式电感

(1)Series: HP= Mini molded chip power inductor

等级：MP = 产品等级

(2)Grade :MP: Product Level

尺寸：4040=4040系列、20=产品高度2.0毫米

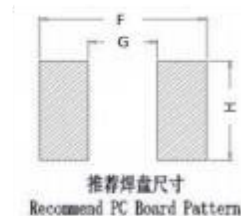
(3)Dimension: 4040=4040 Series; 20=Product Height 2.0mm
电感值

(4)Inductance: R47=0.47μH, 4R7=4.7μH, 100=10μH ,
电感公差

(5)Inductance Tolerance: J=±5%, K=±10%, L=±15%, M=±20%, N=±30%

尺寸和推荐PCB板图案（单位：毫米）

Dimensions and Recommend PC Board Pattern (unit: mm):



尺寸：毫米 Dimensions in mm

TYPE	A	B	C	D	G	H	F
322512	3.2±0.2	2.5±0.2	1.2max	0.6Typ	1.4	2.8	3.7
404020	4.0±0.3	4.0±0.3	2.0max	1.1Typ	1.6	4.6	4.6
404030	4.0±0.3	4.0±0.3	3.0max	1.1Typ	1.6	4.6	4.6
505020	5.0±0.3	5.0±0.3	2.0max	1.3Typ	1.8	5.5	5.5
505030	5.0±0.3	5.0±0.3	3.0max	1.3Typ	1.8	5.5	5.5

322512 系列 标准规格
322512 series Standard Specifications

Part No.	Inductance	Test Freq	DCR(mΩ)		Irms(A)		Isat(A)		Withstanding Voltage
	(μH)		Typ	Max	Typ	Max	Typ	Max	Typ.
			VDC						
HPMP系列 SERIES									
HPMP322512-R22M	0.22±20%	1MHz,1V	12	16	8.5	8.0	9.0	8.5	30
HPMP322512-R47M	0.47±20%	1MHz,1V	16	18	7.5	7.0	8.0	7.5	30
HPMP322512-R68M	0.68±20%	1MHz,1V	18	20	6.5	6.0	7.0	6.5	30
HPMP322512-1R0M	1.00±20%	1MHz,1V	45	50	4.8	4.2	5.7	5.0	30
HPMP322512-1R5M	1.50±20%	1MHz,1V	53	62	4.5	4.0	5.0	4.5	30
HPMP322512-2R2M	2.20±20%	1MHz,1V	65	75	4.2	3.7	4.5	4.0	30
HPMP322512-3R3M	3.30±20%	1MHz,1V	120	135	3.0	2.5	3.5	3.0	30
HPMP322512-4R7M	4.70±20%	1MHz,1V	150	170	2.0	1.7	2.5	2.2	30
HPMP322512-6R8M	6.80±20%	1MHz,1V	220	250	1.8	1.5	2.3	2.0	30
HPMP322512-100M	10.0±20%	1MHz,1V	320	368	1.4	1.2	1.6	1.4	30

Part No.	Inductance	Test Freq	DCR(mΩ)		I _{rms} (A)		I _{sat} (A)		Withstanding Voltage
	(μH)		Typ	Max	Typ	Max	Typ	Max	Typ.
									VDC
HPMH系列 SERIES									
HPMH322512-R22M	0.22±20%	1MHz, 1V	6.6	10	9.2	8.7	11.5	11.0	40
HPMH322512-R47M	0.47±20%	1MHz, 1V	11	14	7.5	7.2	8.6	8.2	40
HPMH322512-R68M	0.68±20%	1MHz, 1V	12	15	7.0	6.5	8.0	7.5	40
HPMH322512-1R0M	1.00±20%	1MHz, 1V	18	22	5.5	5.0	7.7	7.0	40
HPMH322512-1R5M	1.50±20%	1MHz, 1V	37	45	4.7	4.3	5.1	4.7	40
HPMH322512-2R2M	2.20±20%	1MHz, 1V	42	50	3.8	3.5	5.0	4.5	40
HPMH322512-3R3M	3.30±20%	1MHz, 1V	75	95	2.9	2.5	3.7	3.2	40
HPMH322512-4R7M	4.70±20%	1MHz, 1V	115	135	2.3	2.0	2.9	2.6	40
HPMH322512-6R8M	6.80±20%	1MHz, 1V	177	210	2.1	1.9	2.8	2.4	40
HPMH322512-100M	10.0±20%	1MHz, 1V	210	230	2.2	1.8	2.3	1.9	40

404020 系列 标准规格

404020 series Standard Specifications

Part No.	Inductance	Test Freq	DCR(mΩ)		Irms(A)		Isat(A)		Withstanding Voltage
	(μH)		Typ	Max	Typ	Max	Typ	Max	Typ.
			VDC						
HPMP系列 SERIES									
HPMP404020-R22M	0.22±20%	1MHz, 1V	9	12	11.0	10.0	13.0	12.0	30
HPMP404020-R47M	0.47±20%	1MHz, 1V	14	21	9.0	8.5	11.0	10.0	30
HPMP404020-1R0M	1.00±20%	1MHz, 1V	22	30	9.0	8.6	9.5	9.0	30
HPMP404020-1R5M	1.50±20%	1MHz, 1V	35	45	7.8	7.2	8.5	8.0	30
HPMP404020-2R2M	2.20±20%	1MHz, 1V	40	50	7.3	6.8	7.5	7.0	30
HPMP404020-3R3M	3.30±20%	1MHz, 1V	50	65	6.3	5.8	6.7	6.2	30
HPMP404020-4R7M	4.70±20%	1MHz, 1V	58	75	5.1	4.7	5.7	5.2	30
HPMP404020-6R8M	6.80±20%	1MHz, 1V	115	135	4.7	4.3	5.0	4.4	30
HPMP404020-8R2M	8.20±20%	1MHz, 1V	178	195	4.1	3.7	4.5	4.0	30
HPMP404020-100M	10.0±20%	1MHz, 1V	195	225	3.5	2.8	4.0	3.0	30
HPMP404020-150M	15.0±20%	1MHz, 1V	219	242	2.5	2.0	3.0	2.5	30

4.0

Part No.	Inductance	Test Freq	DCR(mΩ)		I _{rms} (A)		I _{sat} (A)		Withstanding Voltage
	(μH)		Typ	Max	Typ	Max	Typ	Max	Typ.
			VDC						
HPMH系列 SERIES									
HPMH404020-R22M	0.22±20%	1MHz, 1V	6	10	12.0	11.0	14.0	13.0	60
HPMH404020-R47M	0.47±20%	1MHz, 1V	10	13	11.0	10.5	12.0	11.0	60
HPMH404020-1R0M	1.00±20%	1MHz, 1V	17	23	9.5	9.0	10.0	9.5	60
HPMH404020-1R5M	1.50±20%	1MHz, 1V	20	26	8.0	7.5	8.8	8.3	60
HPMH404020-2R2M	2.20±20%	1MHz, 1V	25	30	7.0	6.5	8.5	7.5	60
HPMH404020-3R3M	3.30±20%	1MHz, 1V	34	40	6.5	6.0	7.5	7.0	60
HPMH404020-4R7M	4.70±20%	1MHz, 1V	48	58	5.5	5.0	6.0	5.5	60
HPMH404020-6R8M	6.80±20%	1MHz, 1V	75	88	5.0	4.5	5.5	5.0	60
HPMH404020-8R2M	8.20±20%	1MHz, 1V	98	115	4.5	4.0	5.0	4.5	60
HPMH404020-100M	10.0±20%	1MHz, 1V	120	140	4.0	3.5	4.5	4.0	60
HPMH404020-150M	15.0±20%	1MHz, 1V	207	222	2.5	2.0	3.5	3.0	60

404030 系列 标准规格

404030 series Standard Specifications

Part No.	Inductance	Test Freq	DCR(mΩ)		Irms(A)		Isat(A)		Withstanding Voltage
	(μH)		Typ	Max	Typ	Max	Typ	Max	Typ.
									VDC
HPMP系列 SERIES									
HPMP404030-R47M	0.47±20%	1MHz, 1V	8	12	12.0	11.5	13.0	12.0	30
HPMP404030-1R0M	1.00±20%	1MHz, 1V	13	18	11.0	10.0	12.0	11.0	30
HPMP404030-1R5M	1.50±20%	1MHz, 1V	25	30	9.5	8.5	10.5	9.5	30
HPMP404030-2R2M	2.20±20%	1MHz, 1V	28	35	8.5	8.0	9.5	8.5	30
HPMP404030-3R3M	3.30±20%	1MHz, 1V	35	40	7.0	6.5	8.0	7.0	30
HPMP404030-4R7M	4.70±20%	1MHz, 1V	50	58	5.5	5.0	6.5	6.0	30
HPMP404030-6R8M	6.80±20%	1MHz, 1V	65	75	5.3	4.8	5.5	5.0	30
HPMP404030-8R2M	8.20±20%	1MHz, 1V	116	138	4.5	4.0	5.0	4.5	30
HPMP404030-100M	10.0±20%	1MHz, 1V	142	155	3.8	3.2	4.0	3.5	30
HPMP404030-150M	15.0±20%	1MHz, 1V	205	226	3.3	2.8	3.5	3.0	30
HPMP404030-220M	22.0±20%	1MHz, 1V	345	360	2.3	1.8	2.5	2.0	30

HPMH系列 SERIES									
HPMH404030-R47M	0.47±20%	1MHz, 1V	6	7.8	13.0	12.0	14.0	13.0	60
HPMH404030-1R0M	1.00±20%	1MHz, 1V	10	15	12.0	11.0	13.0	12.0	60
HPMH404030-1R5M	1.50±20%	1MHz, 1V	22	26	10.5	9.5	11.0	10.0	60
HPMH404030-2R2M	2.20±20%	1MHz, 1V	25	28	9.0	8.5	10.0	9.0	60
HPMH404030-3R3M	3.30±20%	1MHz, 1V	32	35	7.5	7.0	8.0	7.5	60
HPMH404030-4R7M	4.70±20%	1MHz, 1V	40	46	7.0	6.5	7.3	6.8	60
HPMH404030-6R8M	6.80±20%	1MHz, 1V	51	60	6.0	5.0	6.0	5.5	60
HPMH404030-8R2M	8.20±20%	1MHz, 1V	72	90	5.0	4.5	5.5	5.0	60
HPMH404030-100M	10.0±20%	1MHz, 1V	95	110	4.5	4.0	5.0	4.5	60
HPMH404030-150M	15.0±20%	1MHz, 1V	185	210	4.5	3.1	4.0	3.5	60
HPMH404030-220M	22.0±20%	1MHz, 1V	295	330	2.6	2.2	3.0	2.5	60

505020 系列 标准规格

505020 series Standard Specifications

Part No.	Inductance	Test Freq	DCR(mΩ)		I _{rms} (A)		I _{sat} (A)		Withstanding Voltage
								Typ.	
	(μH)		Typ	Max	Typ	Max	Typ	Max	VDC
HPMP系列 SERIES									
HPMP505020-R22M	0.22±20%	1MHz, 1V	5.5	4.5	14.0	13.0	14.0	15.0	30
HPMP505020-R33M	0.22±20%	1MHz, 1V	8.0	6.0	14.0	13.0	14.0	15.0	30
HPMP505020-R47M	0.47±20%	1MHz, 1V	9	10.5	12.0	11.0	14.0	13.0	30
HPMP505020-R68M	0.68±20%	1MHz, 1V	11	13	11.0	10.0	12.0	11.0	30
HPMP505020-1R0M	1.00±20%	1MHz, 1V	15	20	10.0	9.0	11.0	10.0	30
HPMP505020-1R5M	1.50±20%	1MHz, 1V	23	27	8.5	8.0	9.5	9.0	30
HPMP505020-2R2M	2.20±20%	1MHz, 1V	31	38	7.5	7.0	8.5	8.0	30
HPMP505020-3R3M	3.30±20%	1MHz, 1V	48	60	7.0	6.5	7.5	7.0	30
HPMP505020-4R7M	4.70±20%	1MHz, 1V	56	70	5.5	5.0	6.5	6.0	30
HPMP505020-6R8M	6.80±20%	1MHz, 1V	95	115	5.0	4.5	5.5	5.0	30
HPMP505020-8R2M	8.20±20%	1MHz, 1V	135	155	4.5	4.0	5.0	4.5	30
HPMP505020-100M	10.0±20%	1MHz, 1V	150	175	3.5	3.0	4.0	3.5	30
HPMP505020-150M	15.0±20%	1MHz, 1V	182	205	3.0	2.5	3.5	3.0	30

HPMH系列 SERIES									
HPMH505020-R47M	0.47±20%	1MHz, 1V	8	9	14.0	13.0	15.0	14.0	60
HPMH505020-R68M	0.68±20%	1MHz, 1V	10	12	12.0	11.0	13.0	12.0	60
HPMH505020-1R0M	1.00±20%	1MHz, 1V	12	16	11.0	10.0	12.0	11.0	60
HPMH505020-1R5M	1.50±20%	1MHz, 1V	19	24	10.0	9.0	11.0	10.0	60
HPMH505020-2R2M	2.20±20%	1MHz, 1V	21	25	9.0	8.0	10.0	9.0	60
HPMH505020-3R3M	3.30±20%	1MHz, 1V	30	38	7.5	7.0	8.5	8.0	60
HPMH505020-4R7M	4.70±20%	1MHz, 1V	45	52	6.5	6.0	7.5	7.0	60
HPMH505020-6R8M	6.80±20%	1MHz, 1V	59	68	5.5	5.0	6.0	5.5	60
HPMH505020-8R2M	8.20±20%	1MHz, 1V	81	92	5.0	4.5	5.5	5.0	60
HPMH505020-100M	10.0±20%	1MHz, 1V	99	109	4.0	3.5	4.5	4.0	60
HPMH505020-150M	15.0±20%	1MHz, 1V	153	180	3.5	3.0	4.0	3.5	60

505030 系列 标准规格

505030 series Standard Specifications

Part No.	Inductance	Test Freq	DCR(mΩ)		Irms(A)		Isat(A)		Withstanding Voltage
	(μH)		Typ	Max	Typ	Max	Typ	Max	Typ.
			VDC						
HPMP系列 SERIES									
HPMP505030-R47M	0.47±20%	1MHz, 1V	6.5	8.5	13.0	12.0	15.0	14.0	30
HPMP505030-R68M	0.68±20%	1MHz, 1V	9	12	12.0	11.0	13.0	12.0	30
HPMP505030-1R0M	1.00±20%	1MHz, 1V	13	15	10.0	9.0	11.0	10.0	30
HPMP505030-1R5M	1.50±20%	1MHz, 1V	17	25	8.0	7.5	9.0	8.5	30
HPMP505030-2R2M	2.20±20%	1MHz, 1V	25	29	6.0	5.5	7.0	6.0	30
HPMP505030-3R3M	3.30±20%	1MHz, 1V	34	38	5.5	5.0	6.0	5.0	30
HPMP505030-4R7M	4.70±20%	1MHz, 1V	52	60	4.5	4.0	5.0	4.0	30
HPMP505030-6R8M	6.80±20%	1MHz, 1V	69	90	3.5	3.0	4.0	3.5	30
HPMP505030-100M	10.0±20%	1MHz, 1V	112	125	3.2	2.7	3.5	3.0	30
HPMP505030-150M	15.0±20%	1MHz, 1V	158	185	2.5	2.0	2.8	2.5	30
HPMP505030-220M	22.0±20%	1MHz, 1V	235	260	2.0	1.5	2.5	2.0	30

HPMH系列 SERIES									
HPMH505030-R47M	0.47±20%	1MHz, 1V	6.5	8.5	14.0	13.0	16.0	15.0	60
HPMH505030-R68M	0.68±20%	1MHz, 1V	8	11	13.0	12.0	14.0	13.0	60
HPMH505030-1R0M	1.00±20%	1MHz, 1V	12	14	10.5	9.0	11.0	10.5	60
HPMH505030-1R5M	1.50±20%	1MHz, 1V	16	23	9.5	8.5	10.5	10.0	60
HPMH505030-2R2M	2.20±20%	1MHz, 1V	23	27	8.5	7.5	9.5	9.0	60
HPMH505030-3R3M	3.30±20%	1MHz, 1V	28	34	8.0	7.0	8.5	7.5	60
HPMH505030-4R7M	4.70±20%	1MHz, 1V	41	50	7.5	6.5	8.0	7.0	60
HPMH505030-6R8M	6.80±20%	1MHz, 1V	58	70	7.0	6.0	7.5	6.5	60
HPMH505030-100M	10.0±20%	1MHz, 1V	74	78	6.5	5.0	6.0	5.0	60
HPMH505030-150M	15.0±20%	1MHz, 1V	135	155	4.0	3.0	4.5	3.8	60
HPMH505030-220M	22.0±20%	1MHz, 1V	220	235	2.5	2.0	3.0	3.0	60

电感公差

Inductance Tolerance: J= ±5%, K= ±10%, L= ±15%, M= ±20%, N= ±30%

1.所有测试数据均以20℃环境温度为基准。

All test data is referenced to 20℃ ambient.

2.升温电流: 使得温度从20℃环境温度升高 (ΔT=40℃) 的直流电流。

Irms: DC current that causes the temperature rise (ΔT=40℃) from 20℃ ambient.

3.饱和电流: 通入直流电流后电感感值从初始状态下降低约30%时对应的电流。

Isat : DC current at which the inductance drops approximate 30% from its value without current.

4.工作温度范围 -40℃至+125℃。

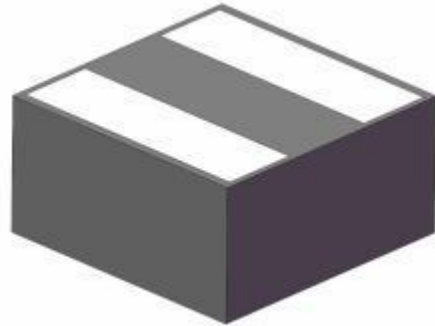
Operating temperature range -40℃ to +125℃.

5.额定电流 : 以Isat和Irms中更小者为准。

Rated current: Isat or Irms, whichever is smaller.

DDR5 大尺寸低压片式电感系列 HP SERIES**特点 FEATURES**

- 高性能合金材料，高通流，低损耗，低电阻
- * High performance metal material for large current / low loss and lower DCR
 - 闭合磁路设计，低磁漏
 - * Closed magnetic circuit design reduces leakage flux
 - 超宽温度应用范围(-55℃~155℃)
 - * Ultra wide temperature range of application(-55℃~155℃)
 - 100%无铅 (Pb) 符合RoHS标准
 - * 100% lead (Pb) free meet RoHS standard

**应用 Applications**

- 高端手机、平板电脑、5G模块
- * High performance phones, tablets, 5G modules
 - 服务器、基站等
 - * Server, base station, etc.
 - 高性能内存条应用 (DDR5)
 - * High performance memory module application (DDR5)
 - 各种DC-DC 转换电源模块
 - * Various DC-DC conversion power modules

零件编号 Part Numbering:

系列：电感 = 大尺寸低压片式电感

(1)Series: HP= Mini molded chip power inductor

等级：MT = 产品等级

(2)Grade: MT: Product Level

尺寸：4040=4040系列、20=产品高度2.0毫米

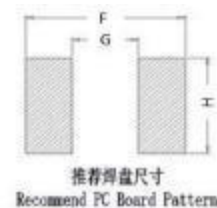
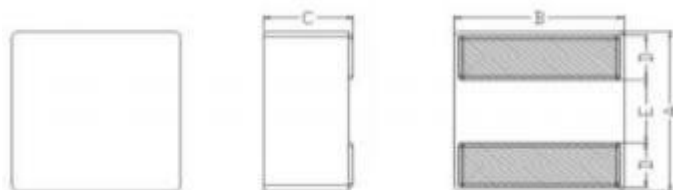
(3)Dimension: 4040=4040 Series; 20=Product Height 2.0mm

电感值

(4)Inductance: R47=0.47μH, 1R2=1.2μH,

电感公差

(5)Inductance Tolerance: J=±5%, K=±10%, L=±15%, M=±20%, N=±30%

尺寸和推荐PCB板图案 (单位：毫米)**Dimensions and Recommend PC Board Pattern (unit: mm):****尺寸：毫米 Dimensions in mm**

TYPE	A	B	C	D
404020	4.2±0.3	4.1±0.3	2.0max	1.1Typ

G	H	F
1.4	4.6	5.0

DDR5 404020 系列标准规格

DDR5 404020 series Standard Specifications

Part No.	Inductance	Test Freq	DCR(mΩ)		Irms(A)		Isat(A)		Withstanding Voltage
			Typ	Max	Typ	Max	Typ	Max	Typ.
	(μH)								VDC
HPMT404020-R10M	0.10	1MHz, 1V	1.3	1.6	34.0	30.5	35.0	30.0	60
HPMT404020-R20M	0.20	1MHz, 1V	2.0	2.4	27.0	24.3	20.5	17.5	60
HPMT404020-R22M	0.22	1MHz, 1V	2.2	2.7	26.0	23.4	20.0	17.0	60
HPMT404020-R33M	0.33	1MHz, 1V	3.2	3.9	19.5	17.0	15.0	13.0	60
HPMT404020-R47M	0.47	1MHz, 1V	4.1	5.1	17.0	15.5	13.5	12.0	60
HPMT404020-R56M	0.56	1MHz, 1V	4.7	5.6	15.0	13.5	12.7	11.0	60
HPMT404020-R68M	0.68	1MHz, 1V	6.2	7.2	12.5	12.0	10.0	9.0	60
HPMT404020-1R0M	1.00	1MHz, 1V	7.5	9.0	11.5	11.0	9.0	8.5	60
HPMT404020-1R2M	1.20	1MHz, 1V	9.0	11.0	10.5	10.0	7.5	8.0	60
HPMT404020-1R5M	1.50	1MHz, 1V	11.5	14.0	10.0	9.0	8.0	6.8	60
HPMT404020-2R2M	2.20	1MHz, 1V	17.5	21.0	9.0	8.0	6.4	5.4	60

电感公差

Inductance Tolerance: J= ±5%, K= ±10%, L= ±15%, M= ±20%, N= ±30%

1.所有测试数据均以20℃环境温度为准。

All test data is referenced to 20℃ ambient.

2.温升电流: 使得温度从20℃环境温度升高 (ΔT=40℃) 的直流电流。

Irms: DC current that causes the temperature rise (ΔT=40℃) from 20℃ ambient.

3.饱和电流: 通入直流电流后电感感值从初始状态下降约30%时对应的电流。

Isat : DC current at which the inductance drops approximate 30% from its value without current.

4. 工作温度范围 -55℃至+155℃

Operating temperature range -55℃ to +155℃.

5.额定电流: 以Isat和Irms中更小者为准。

Rated current: Isat or Irms, whichever is s

大尺寸高电流电感系列 HP SERIES

特点 FEATURES

高性能合金材料，高通流，低损耗，低电阻

* High performance metal material for large current / low loss and lower DCR

闭合磁路设计，低磁漏

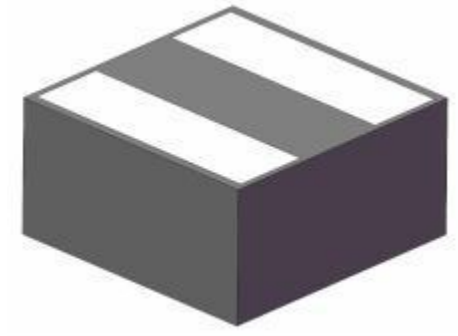
* Closed magnetic circuit design reduces leakage flux

超宽温度应用范围(-55℃~155℃)

* Ultra wide temperature range of application(-55℃~155℃)

100%无铅 (Pb) 符合RoHS标准

* 100% lead (Pb) free meet RoHS standard



应用 Applications

电源模块、平板电脑、机器人

* High performance phones, tablets, 5G modules

服务器、基站等

* Robot Motor Drive Board

机器人电机驱动板

* High performance memory module application (DDR5)

各种DC-DC 转换电源模块

* Various DC-DC conversion power modules

零件编号 Part Numbering:

HP	TU	505030	1R0	M
①	②	③	④	⑤

系列：电感 = 大尺寸低压片式电感

(1)Series: HP= Mini molded chip power inductor

等级：TU = 产品等级

(2)Grade: MT: Product Level

尺寸：5050=5050系列、30=产品高度3.0毫米

(3)Dimension: 5050=5050 Series; 20=Product Height 2.0mm

电感值

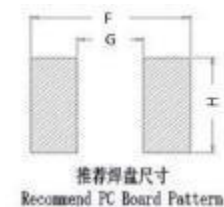
(4)Inductance: R47=0.47μH, 1R2=1.2μH,

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(5)Inductance Tolerance: J=±5%, K=±10%, L=±15%, M=±20%, N=±30%

尺寸和推荐PCB板图案 (单位：毫米)

Dimensions and Recommend PC Board Pattern (unit: mm):



尺寸：毫米 Dimensions in mm

TYPE	A	B	C	D
505020	5.1±0.2	5.3±0.2	3.0max	1.6Typ

G	H	F
1.7	5.7	5.5

HP505030系列标准规格

HP505030 series Standard Specifications

Part No.	Inductance	Test Freq	DCR(mΩ)		Irms(A)		Isat(A)		Withstanding Voltage
	(μH)		Typ	Max	Typ	Max	Typ	Max	Typ.
HPTU-505030-R10-M	0.10	100kHz, 1.0V	0.68	0.82	46.0	41.4	52.0	45.0	60
HPTU-505030-R12-M	0.12	100kHz, 1.0V	0.77	0.92	41.6	37.0	50.0	43.0	60
HPTU-505030-R15-M	0.15	100kHz, 1.0V	0.74±5%		38.0	35.0	45.0	41.0	60
HPTU-505030-R22-M	0.22	100kHz, 1.0V	1.30	1.55	33.0	30.0	38.0	32.0	60
HPTU-505030-R33-M	0.33	100kHz, 1.0V	1.8	2.2	28.5	25.5	32.0	27.5	60
HPTU-505030-R36-M	0.36	100kHz, 1.0V	2.0	2.4	27.0	24.5	29.0	25.0	60
HPTU-505030-R47-M	0.47	100kHz, 1.0V	2.5	3.0	24.0	21.5	26.0	22.5	60
HPTU-505030-R56-M	0.56	100kHz, 1.0V	3.0	3.6	22.0	20.0	24.0	21.0	60
HPTU-505030-R68-M	0.68	100kHz, 1.0V	3.8	4.6	19.5	17.5	21.5	18.5	60
HPTU-505030-1R0-M	1.0	100kHz, 1.0V	5.0	6.0	17.0	15.5	18.0	15.5	60
HPTU-505030-1R5-M	1.5	100kHz, 1.0V	7.2	8.7	14.0	12.5	15.0	13.0	60
HPTU-505030-2R2-M	2.2	100kHz, 1.0V	9.8	11.8	12.0	10.5	11.0	9.5	60
HPTU-505030-3R3-M	3.3	100kHz, 1.0V	15.0	18.0	10.0	9.0	9.2	8.0	60
HPTU-505030-4R7-M	4.7	100kHz, 1.0V	20.0	22.0	8.0	7.0	7.5	7.0	60

电感公差

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