MULTILAYER NON-POLARITY SUPER-HIGH FREQUENCY CERAMIC CHIP INDUCTOR

片式无极性超高频陶瓷电感

PFHI SERIES

JIA RONG 嘉嵘伟业

深圳嘉嵘伟业电子有限公司

SHENZHEN JIARONG WEIYE ELECTRONICS CO.,LTD.

Tel:0755-2917 5978　　FAE:133 7842 9168

Website:www.ransioning.com　　E-mail:admin@ransioning.com

Multilayer Non-polarity Super-high Frequency Ceramic Chip Inductor-PFHI Series

片式无极性超高频陶瓷电感-PFHI 系列

INTRODUCTION AND CHARACTERISTICS 产品介绍及特性

INTRODUCTION	产品介绍
◆The PFHI series inductor has a improved internal electrode structure,which minimizes stray capacitance and increases the SRF.	◆PFHI 系列采用新设计的内电极结构可以降低寄生电容以增加共振频率。

CHARACTERISTICS	特性
◆Monolith structure for high reliability	◆积层独石结构、高可靠性
◆Compact size inductor possible	◆体积小
◆The transverse multilayer structure increases the self-resonant frequencies in GHz band	◆应用横向积层结构增加在 GHz 频率时共振频率
◆Excellent solderability and heat resistance for either wave or reflow soldering	◆良好的焊接性，适合于回流焊或波峰焊

APPLICATIONS	应用产品
◆Tablet PC,notebook,desktop computers and peripheral equipment	◆平板电脑，笔记型，桌上型电脑及其周边设备
◆DSC,DVC,LCD Television,Set Top Box	◆数位相机，数位摄影机，液晶电视机，数位机上盒
◆Mobile phone,smart phone,PHD	◆行动电话，智能手机，个人导航设备
◆Digital communication equipment	◆数位通讯设备
◆Various electronic equipment	◆各式电子设备
◆Various automotive electronic	◆各式汽车设备
◆RF circuit and module	◆射频电路及模组

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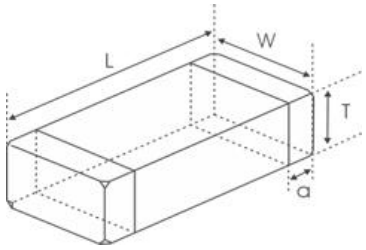
PRODUCT IDENTIFICATION 产品型号

PFHI	0603	H	1N2	S	T
①	②	③	④	⑤	⑥

①Product Series Code 产品系列码	PFHI	Multilayer Non-polarity Super-high Frequency Ceramic Chip Inductor 片式无极性超高频陶瓷电感
②Size Code 尺寸码	0603	长×宽（L×W）（mm） 0.6×0.3
③Material Code 材质代号	H	高频材料
④Inductance Value Code 感量值	1N2	1.2nH
	12N	12nH
⑤Inductance Tolerance 电感值公差	S	±0.3nH
	J	±5%
⑥Packing 包装形式	T	Tape and Reel 编带

SHAPE AND DIMENSIONS 外观尺寸



SIZE 尺寸	L 长 mm	W 宽 mm	T 厚 mm	a 银厚 mm
0603(0201)	0.6±0.05	0.3±0.05	0.3±0.05	0.1~0.2
1005(0402)	1.0±0.15	0.5±0.15	0.5±0.15	0.1~0.3
1608(0603)	1.6±0.15	0.8±0.15	0.8±0.15	0.1~0.5

STORAGE AND OPERATING CONDITIONS 储存及操作条件

Operating Temperature Range	0603/1005 series: -55℃ ~ +125 ℃ 1608 series: -40℃~+85 ℃
Storage Temperature and Humidity Range	－10℃~＋40℃,70%RH max.

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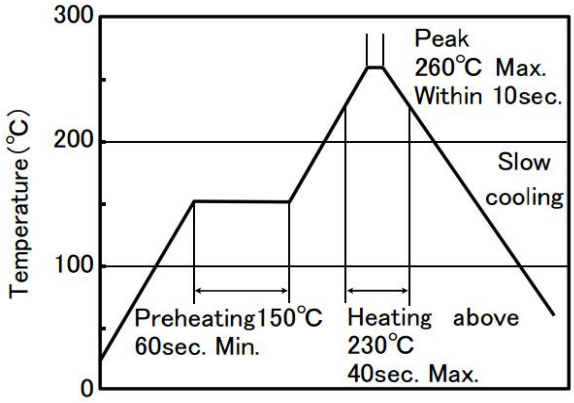
RECOMMENDED SOLDERING CONDITION 建议焊锡方式

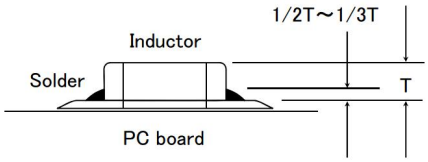
REFLOW SOLDERING 回流焊



① Ceramic chip components should be preheated to within 100 to 130℃ of the soldering.
② Assured to be reflow soldering for 2 times.

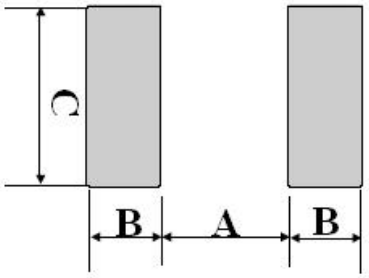
Caution:

1)The ideal condition is to have solder mass（fillet）controlled to 1/2 to 1/3 of the thickness of the inductor.



2)Because excessive dwell times can detrimentally affect solderability, soldering duration should be kept as close to recommended times as possible.

RECOMMENDED LAND PATTERN 推荐的焊盘尺寸

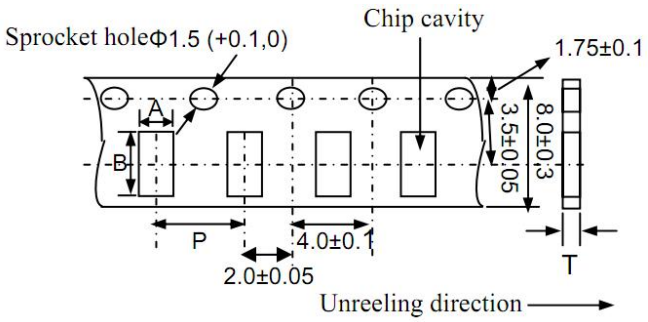


Dimension mm(inch)	A (mm)	B (mm)	C (mm)
0603(0201)	0.2~0.3	0.2~0.3	0.3~0.35
1005(0402)	0.45~0.55	0.40~0.50	0.45~0.55
1608(0603)	0.6~0.8	0.6~0.8	0.6~0.8

PACKING STANDARD 包装标准

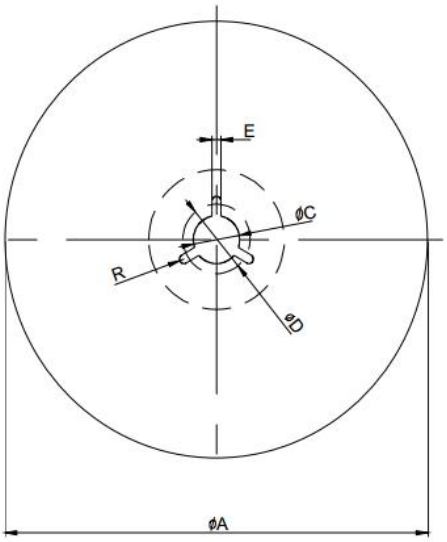
◆Taping Dimensions

Paper tape (8mm wide)



Type	Chip Thickness	A	B	P	T max.	Quantity (pcs/reel)
	(mm)					ø178mm Reel
PFHI0603	0.30	0.40	0.70	2.0	0.55	15000
PFHI1005	0.50	0.65	1.15	2.0	0.80	10000
PFHI1608	0.80	1.00	1.80	4.0	1.10	4000

◆Reel Dimensions



Symbol	ø178mm Reel	Ø330mm Reel
A	Ø178±2	Ø330±2
B	Ø60±2	Ø100±2
C	Ø13±0.8	Ø13±0.8
D	Ø21±0.8	Ø21±0.8
E	2	2
W8	10±1.5	10±1.5
W12	14.5±1.5	14.5±1.5
W16	--	17.4(Typ.)
W24	--	24.4(Typ.)
T	2±0.5	2±0.5
R	1	1

SPECIFICATIONS 规格特性

PFHI0603(0201) TYPE

Part Number 型号	Inductance 电感量 L	Quality Factor 品质因数 Q(100MHz)	Quality Factor 品质因数 Q(800MHz)	Self-resonant Freq 共振频率 S.R.F	DC Resistance 直流电阻 RDC	Rated Current 额定电流 Ir
Units 单位	nH	--	--	GHz	Ω	mA
PFHI0603H1N0ST	1.0	6	12	12	0.20	300
PFHI0603H1N1ST	1.1	6	11	11	0.22	300
PFHI0603H1N2ST	1.2	6	12	11	0.22	300
PFHI0603H1N3ST	1.3	6	12	10	0.24	300
PFHI0603H1N5ST	1.5	6	12	10	0.24	300
PFHI0603H1N6ST	1.6	6	12	10	0.27	300
PFHI0603H1N8ST	1.8	6	11	10	0.27	300
PFHI0603H2N0ST	2.0	6	12	9	0.30	300
PFHI0603H2N2ST	2.2	6	12	9	0.30	300
PFHI0603H2N4ST	2.4	6	12	8.5	0.35	300
PFHI0603H2N7ST	2.7	6	13	8.5	0.35	300
PFHI0603H3N0ST	3.0	6	12	8	0.40	200
PFHI0603H3N3ST	3.3	6	13	8	0.40	200
PFHI0603H3N6ST	3.6	6	11	8	0.45	200
PFHI0603H3N9ST	3.9	6	13	8	0.45	200
PFHI0603H4N3ST	4.3	6	12	7.5	0.50	200
PFHI0603H4N7ST	4.7	6	13	7.5	0.50	200
PFHI0603H5N1ST	5.1	6	12	6.5	0.60	200
PFHI0603H5N6ST	5.6	6	12	6.5	0.60	200
PFHI0603H6N2JT	6.2	6	12	6	0.65	200
PFHI0603H6N8JT	6.8	6	13	6	0.65	200
PFHI0603H7N5JT	7.5	6	12	6	0.70	200
PFHI0603H8N2JT	8.2	6	13	6	0.70	200
PFHI0603H9N1JT	9.1	6	12	5.5	0.80	200
PFHI0603H10NJT	10	6	13	5.5	0.80	200
PFHI0603H12NJT	12	6	12	5	1.00	150
PFHI0603H15NJT	15	6	12	4.5	1.10	150
PFHI0603H18NJT	18	6	12	4	1.30	100
PFHI0603H22NJT	22	6	12	3.5	1.60	100
PFHI0603H27NJT	27	6	12	3	1.70	100
PFHI0603H33NJT	33	6	11	2.8	1.80	100

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SPECIFICATIONS 规格特性

PFHI 1005(0402) TYPE

Part Number 型号	Inductance 电感量 L	Quality Factor 品质因数 Q(100MHz)	Quality Factor 品质因数 Q(800MHz)	Self-resonant Freq 共振频率 S.R.F	DC Resistance 直流电阻 RDC	Rated Current 额定电流 Ir
Units 单位	nH	--	--	GHz	Ω	mA
PFHI1005H1N0ST	1.0	5	20	12	0.10	500
PFHI1005H1N1ST	1.1	5	20	11.5	0.12	500
PFHI1005H1N2ST	1.2	5	18	11	0.12	500
PFHI1005H1N3ST	1.3	5	20	10	0.15	500
PFHI1005H1N5ST	1.5	6	19	9.5	0.15	500
PFHI1005H1N6ST	1.6	6	21	9	0.17	500
PFHI1005H1N8ST	1.8	6	21	8.5	0.17	500
PFHI1005H2N0ST	2.0	6	20	8.3	0.18	500
PFHI1005H2N2ST	2.2	6	19	8	0.18	500
PFHI1005H2N4ST	2.4	6	20	7.8	0.20	500
PFHI1005H2N7ST	2.7	6	22	7.5	0.20	500
PFHI1005H3N0ST	3.0	6	22	7.2	0.22	400
PFHI1005H3N3ST	3.3	7	20	7	0.22	400
PFHI1005H3N6ST	3.6	7	22	6.8	0.25	400
PFHI1005H3N9ST	3.9	7	21	6.5	0.25	400
PFHI1005H4N3ST	4.3	7	22	6.3	0.28	400
PFHI1005H4N7ST	4.7	7	22	6	0.28	400
PFHI1005H5N1ST	5.1	7	22	5.8	0.30	400
PFHI1005H5N6ST	5.6	7	22	5.7	0.30	400
PFHI1005H6N2JT	6.2	7	23	5.6	0.35	400
PFHI1005H6N8JT	6.8	7	22	5.5	0.35	400
PFHI1005H7N5JT	7.5	7	23	5	0.38	350
PFHI1005H8N2JT	8.2	7	23	5	0.38	350
PFHI1005H9N1JT	9.1	7	23	4.8	0.42	350
PFHI1005H10NJT	10	7	23	4.7	0.42	350
PFHI1005H12NJT	12	7	23	4.3	0.47	350
PFHI1005H15NJT	15	7	23	4	0.50	300
PFHI1005H18NJT	18	7	23	4	0.60	250
PFHI1005H22NJT	22	7	23	3.5	0.70	200
PFHI1005H27NJT	27	7	23	3	0.80	200
PFHI1005H33NJT	33	7	23	2.5	0.90	200
PFHI1005H39NJT	39	6	21	2	1.00	200
PFHI1005H47NJT	47	6	21	1.8	1.20	200
PFHI1005H56NJT	56	6	21	1.5	1.30	200
PFHI1005H68NJT	68	6	20	1.4	1.50	150
PFHI1005H82NJT	82	6	19	1.3	1.80	150

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PFHI1005HR10JT	100	6	18	1.1	2.20	100
PFHI1005HR11JT	110	6	18	1.1	2.70	100
PFHI1005HR12JT	120	6	18	1.1	3.00	100
PFHI1005HR13JT	130	6	16	1.1	3.30	100
PFHI1005HR15JT	150	6	17	1.1	5.00	80
PFHI1005HR16JT	160	6	18	1.1	5.20	80
PFHI1005HR18JT	180	6	17	1.1	6.00	80
PFHI1005HR20JT	200	6	17	1.1	6.20	70
PFHI1005HR22JT	220	6	15	1	6.20	70
PFHI1005HR24JT	240	6	15	1	6.50	70
PFHI1005HR27JT	270	6	12	0.9	6.50	70
PFHI1005HR30JT	300	6	12	0.9	7.50	70
PFHI1005HR33JT	330	6	12	0.85	8.00	70

SPECIFICATIONS 规格特性

PFHI 1608(0603) TYPE

Part Number 型号	Inductance 电感量 L	Quality Factor 品质因数 Q(100MHz)	Quality Factor 品质因数 Q(1GHz)	Self-resonant Freq 共振频率 S.R.F	DC Resistance 直流电阻 RDC	Rated Current 额定电流 Ir
Units 单位	nH	--	--	GHz	Ω	mA
PFHI1608H1N0ST	1.0	5	20	10	0.10	500
PFHI1608H1N2ST	1.2	5	20	9.0	0.15	500
PFHI1608H1N5ST	1.5	5	20	8.5	0.16	500
PFHI1608H1N8ST	1.8	5	21	8.0	0.20	500
PFHI1608H2N2ST	2.2	5	21	7.5	0.21	500
PFHI1608H2N7ST	2.7	5	22	7.0	0.23	500
PFHI1608H3N3ST	3.3	6	22	6.5	0.25	400
PFHI1608H3N9ST	3.9	6	22	6.0	0.28	400
PFHI1608H4N7ST	4.7	6	22	5.5	0.32	400
PFHI1608H5N6ST	5.6	6	22	5.0	0.35	400
PFHI1608H6N8JT	6.8	6	22	4.5	0.38	400
PFHI1608H8N2JT	8.2	6	23	4.3	0.42	350
PFHI1608H10NJT	10	6	23	4.0	0.45	350
PFHI1608H12NJT	12	6	23	3.7	0.50	350
PFHI1608H15NJT	15	7	23	3.5	0.55	300
PFHI1608H18NJT	18	7	23	3.3	0.65	250
PFHI1608H22NJT	22	7	23	3.1	0.75	200
PFHI1608H27NJT	27	7	23	2.8	0.95	200
PFHI1608H33NJT	33	7	23	2.5	1.10	200
PFHI1608H39NJT	39	7	21	2.3	1.20	200
PFHI1608H47NJT	47	7	21	2.0	1.30	200
PFHI1608H56NJT	56	7	21	1.8	1.40	200

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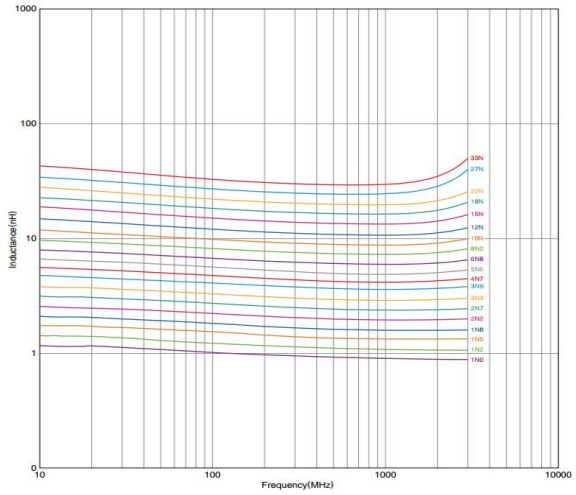
PFHI1608H68NJT	68	7	20	1.5	1.60	150
PFHI1608H82NJT	82	7	19	1.2	1.80	150
PFHI1608HR10JT	100	7	19	1.0	2.20	100
PFHI1608HR12JT	120	7	18	0.8	2.50	50
PFHI1608HR15JT	150	7	18	0.6	3.00	50
PFHI1608HR18JT	180	7	17	0.4	3.40	50

TYPICAL ELECTRICAL CHARACTERISTICS 典型电气特性

INDUCTANCE vs. FREQUENCY

PFHI 0603(0201) TYPE



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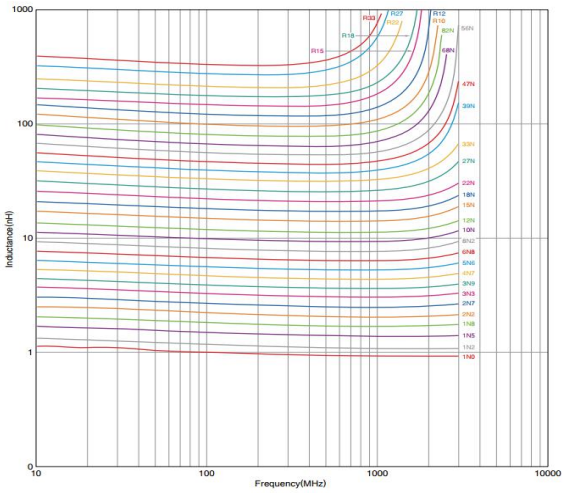
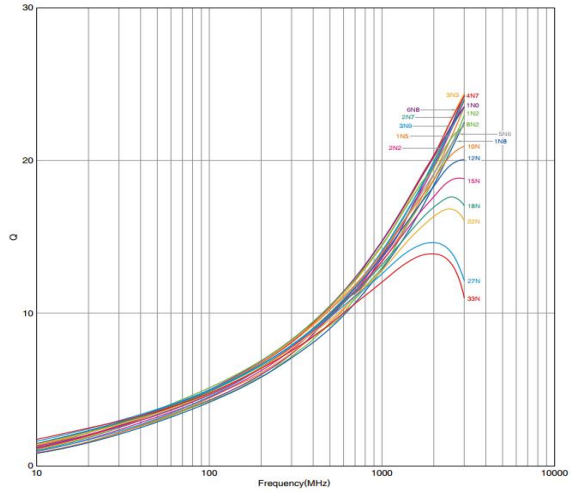


Q vs. FREQUENCY

PFHI 0603(0201) TYPE



PFHI 1005(0402) TYPE