

WIRE WOUND FERRITE CHIP INDUCTOR

绕线式铁氧体电感



PWFI-HC Series



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# Wire Wound Ferrite Chip Inductor-PWFI-HC Series

## 绕线式铁氧体电感-PWFI-HC 系列



### INTRODUCTION AND CHARACTERISTICS 产品介绍及特性

INTRODUCTION	产品介绍
<p>◆ PWFI-HC Series is the newest in open type ferrite wire wound chip inductors. The wire wound ferrite construction supports higher SRF, lower DCR and superior Q values than other ferrite chip inductors.</p>	<p>◆ PWFI-HC 系列是最新的开放线绕式铁氧体电感，线绕式铁氧体电感的结构使其比铁氧体贴片电感有更高的共振频率、更低的直流电阻和更优的 Q 值。相对于 PWFI-F 系列具有更小的直流电阻和更大的额定电流。</p>

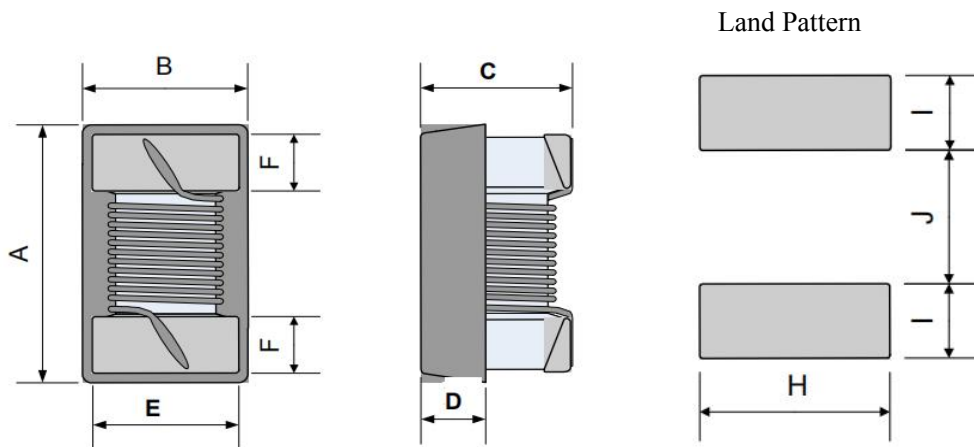
CHARACTERISTICS	特性
<ul style="list-style-type: none"> <li>◆ Minature size, suitable for SMT</li> <li>◆ low DC resistance , high current and high inductance</li> <li>◆ Using terminal electrode structure to restrain the parasitic component effect quite caused by lead</li> <li>◆ Excellent in solderability and heat resistance.</li> </ul>	<ul style="list-style-type: none"> <li>◆ 尺寸小，适合高密度表面贴装</li> <li>◆ 低电阻、高电流、高感量</li> <li>◆ 采用端电极结构，很好的抑制引线引起的寄生元件效应，具有高的可靠性</li> <li>◆ 良好的焊接性和耐焊性</li> </ul>

APPLICATIONS	应用产品
<ul style="list-style-type: none"> <li>◆ Personal comple</li> <li>◆ Wireless communication equipment and various types of general electronic equipment</li> <li>◆ Test equipment</li> </ul>	<ul style="list-style-type: none"> <li>◆ 个人电脑</li> <li>◆ 视听设备，无线通讯设备和各类通用电子设备</li> <li>◆ 测试设备</li> </ul>

**PRODUCT IDENTIFICATION 产品型号**

**PWFI 1608 HC 1R2 □ T**  
 ① ② ③ ④ ⑤ ⑥

①Product Series Code 产品系列码	PWFI	Wire Wound Ferrite Chip Inductor 绕线式铁氧体电感
②Size Code 尺寸码	1608	长×宽 (L×W) (mm) 1.6×0.8
③Material Code 材质代号	HC	材料代号
④Inductance Value Code 感量值	1R2	1.2uH
	R12	120nH
⑤Inductance Tolerance 电感值公差	K	±10%
	M	±20%
⑥Packing 包装形式	T	Tape and Reel 编带

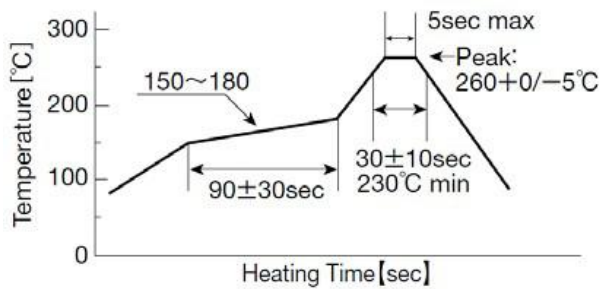
**SHAPE AND DIMENSIONS 外观尺寸**
**RECOMMENDED LAND PATTERN 推荐的焊盘尺寸**


Unit:mm

SIZE 尺寸	A Max.	B Max.	C Max.	D Ref.	E Typ.	F Typ.	H Typ.	I Typ.	J Typ.
1608(0603)	1.80	1.32	1.12	0.38	0.76	0.33	1.02	0.64	0.64
2012(0805)	2.29	1.73	1.3	0.61	1.27	0.51	1.78	1.02	0.76

**STORAGE AND OPERATING CONDITIONS 储存及操作条件**

Operating Temperature Range	-40°C~+80 °C
Storage Temperature and Humidity Range	-10°C~+40°C,70%RH max.

**RECOMMENDED SOLDERING CONDITION 建议焊锡方式**
**REFLOW SOLDERING 回流焊**


1) For reflow soldering with either leaded or lead-free solder, the profile specified in "point for controlling" is recommended.

2) Put the soldering iron on the land-pattern. Soldering iron's temperature - Below 350 °C  
Duration - 3 seconds or less. The soldering iron should not come in contact with inductor directly.

**◆ CLEANING**

In the case of ultrasonic cleaning, too much power output can cause excessive vibration of the PC board which may lead to the cracking of the inductor or the soldered portion, or decrease the terminal electrodes' strength. Thus the following conditions should be carefully checked;

Ultrasonic output Below 20W/ℓ

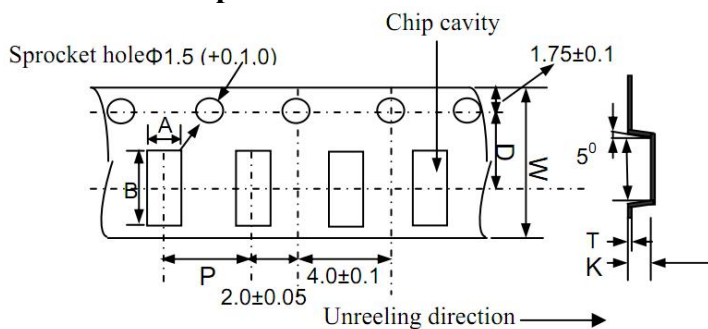
Ultrasonic frequency Below 40kHz

Ultrasonic washing period 5 min. or less

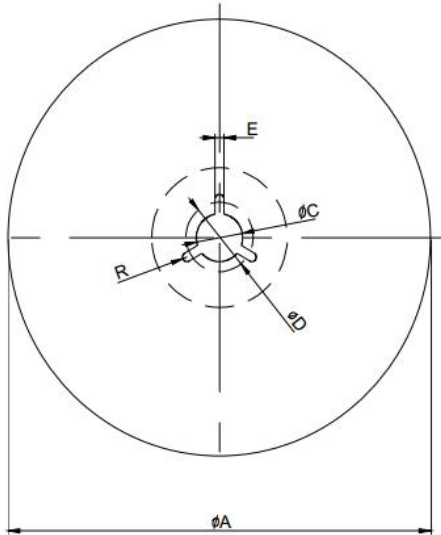

Note:

Washing by supersonic waves shall be avoided for PWF1 series.

If washed by supersonic waves, the products might be broken.

**PACKING STANDARD 包装标准**
**◆ Embossed Tape**


Type	Chip Thickness	W	A	B	D	P	K max.	T max.	Quantity (pcs/reel)
	(mm)								ø178mm
PWF11608	1.12	8.0	1.45	1.9	3.5	4.0	1.32	0.32	2000
PWF2012	1.3	8.0	1.88	2.4	3.5	4.0	1.55	0.32	2000

**◆ Reel Dimensions**



Symbol	$\phi 178\text{mm}$ Reel	$\phi 330\text{mm}$ Reel
A	$\phi 178 \pm 2$	$\phi 330 \pm 2$
B	$\phi 60 \pm 2$	$\phi 100 \pm 2$
C	$\phi 13 \pm 0.8$	$\phi 13 \pm 0.8$
D	$\phi 21 \pm 0.8$	$\phi 21 \pm 0.8$
E	2	2
W8	$10 \pm 1.5$	$10 \pm 1.5$
W12	$14.5 \pm 1.5$	$14.5 \pm 1.5$
W16	--	17.4(Typ.)
W24	--	24.4(Typ.)
T	$2 \pm 0.5$	$2 \pm 0.5$
R	1	1

**SPECIFICATIONS 规格特性**
**PWFI 1608(0603) TYPE**

Part Number 型号	Inductance 电感量 L	Tolerance 公差	Quality Factor 品质因 数 Q	L/Q Test Freq 测试频 率 Freq.	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	uH	--	--	MHz	MHz	$\Omega \pm 30\%$	mA
PWFI1608HC1R0□T	1.0	K,M	16	7.9	390	0.32	700
PWFI1608HC1R5□T	1.5	K,M	16	7.9	160	0.40	600
PWFI1608HC1R8□T	1.8	K,M	16	7.9	121	0.43	580
PWFI1608HC2R2□T	2.2	K,M	16	7.9	103	0.56	580
PWFI1608HC2R7□T	2.7	K,M	16	7.9	72	0.62	500
PWFI1608HC3R3□T	3.3	K,M	16	7.9	66	0.70	500
PWFI1608HC3R9□T	3.9	K,M	16	7.9	61	0.83	460
PWFI1608HC4R7□T	4.7	K,M	16	7.9	51	0.97	420
PWFI1608HC5R6□T	5.6	K,M	16	7.9	47	1.10	380
PWFI1608HC6R8□T	6.8	K,M	16	7.9	43	1.50	340
PWFI1608HC8R2□T	8.2	K,M	16	7.9	40	1.68	300
PWFI1608HC100□T	10	K,M	14	2.5	36	1.85	280
PWFI1608HC120□T	12	K,M	14	2.5	32	2.28	260
PWFI1608HC150□T	15	K,M	14	2.5	29	2.60	240
PWFI1608HC180□T	18	K,M	14	2.5	28	2.90	220
PWFI1608HC220□T	22	K,M	14	2.5	24	3.61	200

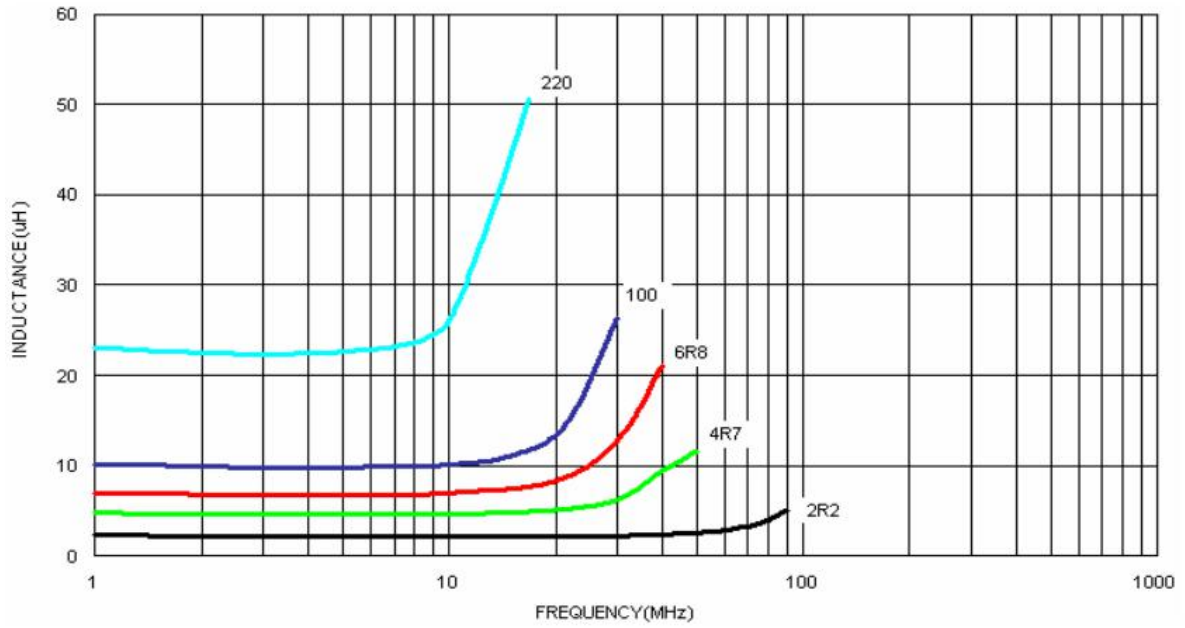
**PWFI 2012(0805) TYPE**

Part Number 型号	Inductance 电感量 L	Tolerance 公差	Quality Factor 品质因 数 Q	L/Q Test Freq 测试频 率 Freq.	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	uH	--	--	MHz	MHz	$\Omega \pm 30\%$	mA
PWFI2012HCR47□T	0.47	K,M	14	7.9	850	0.12	1500
PWFI2012HCR68□T	0.68	K,M	14	7.9	765	0.15	1300
PWFI2012HC1R0□T	1.0	K,M	14	7.9	208	0.13	1300
PWFI2012HC1R2□T	1.2	K,M	14	7.9	159	0.16	1270
PWFI2012HC1R5□T	1.5	K,M	14	7.9	159	0.17	1260
PWFI2012HC1R8□T	1.8	K,M	14	7.9	112	0.20	1080
PWFI2012HC2R2□T	2.2	K,M	13	7.9	87	0.22	1040
PWFI2012HC2R7□T	2.7	K,M	13	7.9	72	0.25	1040
PWFI2012HC3R3□T	3.3	K,M	12	7.9	70	0.28	1020
PWFI2012HC3R9□T	3.9	K,M	14	7.9	61	0.38	960
PWFI2012HC4R7□T	4.7	K,M	14	7.9	51	0.43	840
PWFI2012HC5R6□T	5.6	K,M	12	7.9	47	0.50	800

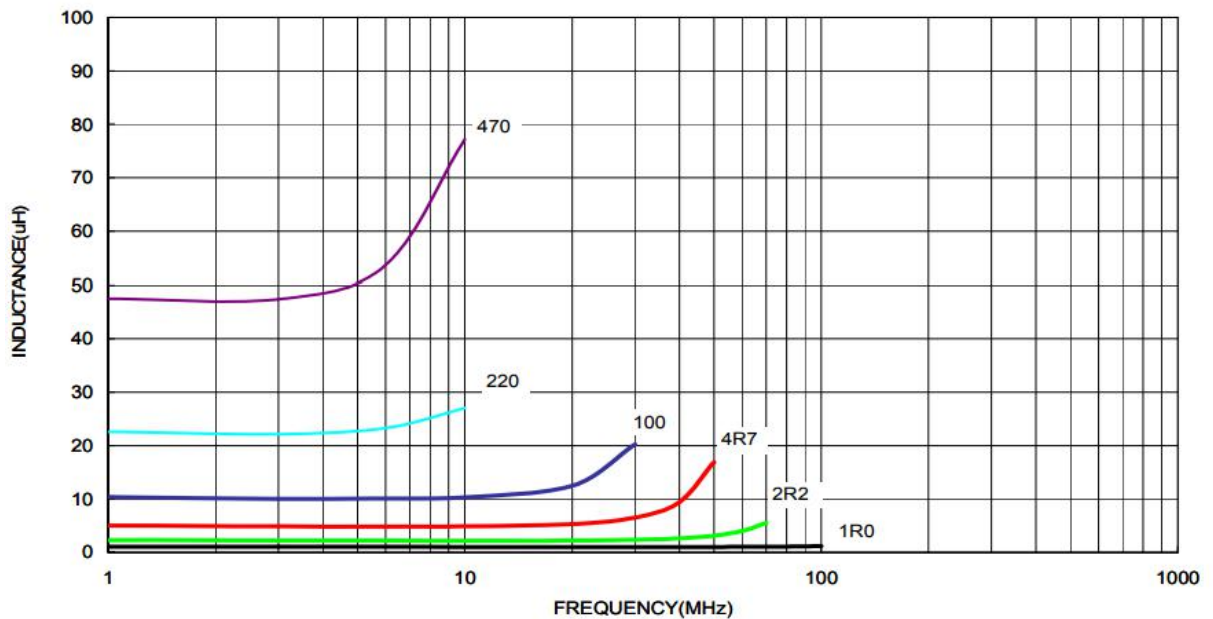
PWFI2012HC6R8□T	6.8	K,M	14	7.9	46	0.68	700
PWFI2012HC8R2□T	8.2	K,M	13	7.9	33	0.73	680
PWFI2012HC100□T	10	K,M	14	2.5	31	0.85	560
PWFI2012HC120□T	12	K,M	14	2.5	30	0.90	460
PWFI2012HC150□T	15	K,M	15	2.5	28	1.40	380
PWFI2012HC180□T	18	K,M	15	2.5	27	1.55	360
PWFI2012HC220□T	22	K,M	15	2.5	20	1.76	340

**TYPICAL ELECTRICAL CHARACTERISTICS 典型电气特性**  
**INDUCTANCE vs. FREQUENCY**

**PWFI 1608(0603)**



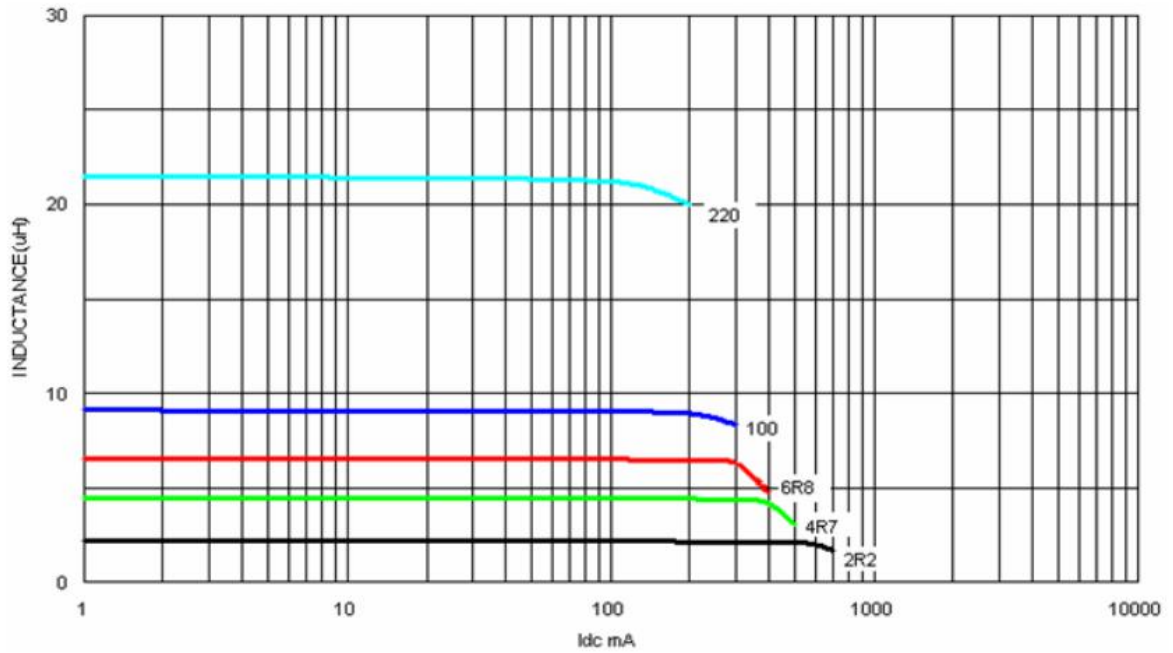
**PWFI 2012(0805)**



**TYPICAL ELECTRICAL CHARACTERISTICS 典型电气特性**

**INDUCTANCE vs. DC BIAS CURRENT**

**PWFI 1608(0603)**



**PWFI 2012(0805)**

