



产品承认书

SPECIFICATION FOR APPROVAL

客户名称:

CUSTOMER

我司料号:

OUR PART NO.

XRFWHP1010A-220M

我司品名:

OUR PART NAME

Molding Power Inductors

送样日期:

DATE SAMPLES

数量:

QUANTITY

制造确认 MANUFACTURER APPROVE

拟制 DRAWN	审核 CHECKED	确认 APPROVED
HuFangting	RaoPin	Zhongcuilan

客户确认 CUSTOMER APPROVE

客户名称 CUSTOMER NAME:

客户料号 CUSTOMER P/N:

规格型号 DESCRIPTION:

XRFWHP1010A 22uH $\pm 20\%$ 13.5A

检查结果: ☐ 合格 ☐ 不合格

签名及盖章:

INSPECT RESULT ACCEPT REJECT

SIGNATURE AND STAMP

说明 REMARK:

如对本承认书内容有异议请提出或标记发送至我司, 本承认书在未收到异议回复时于本承认书提供一周后生效。

If you have any objection to the contents of this acknowledgement, please put forward or mark it and send it to our company. This acknowledgement will take effect one week after it is provided if you do not receive an objection reply.

东莞市祥如电子有限公司

Dongguan xiangru electronics co., ltd

Tel: 0769-86346548 Fax: 0769-86346358

Email: dgxiangru@126.com



客户名称 CUSTOMER		日期 DATE	2025/9/10
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我司物料编号 OUR PART NO	XRFWHP1010A-220M	我司品名 OUR PART NAME	Molding Power Inductors

修订记录 Revision record

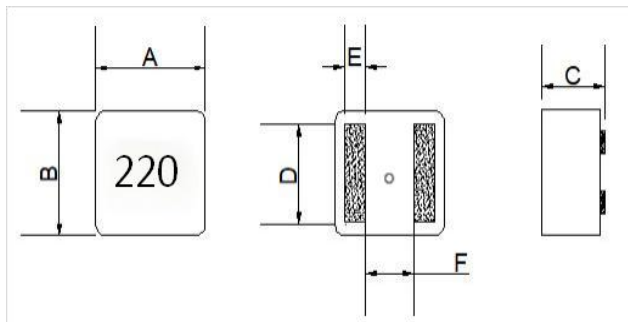
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外观尺寸 Appearance of size
单位 Unit: mm



A	10.0±0.5	C	9.8±0.3	E	2.2±0.3	
B	11.3±0.5	D	8.3±0.5	F	4.4 TYP	
标识Identification						

ELECTRICAL CHARACTERISTIC:

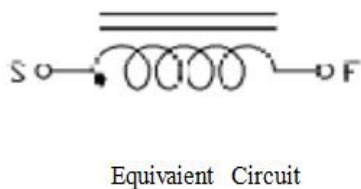
L(μH) :	22±20% 100KHz 1.0V
DCR(mΩ):	22.0Max. 20.5 (Typ.)(@25℃)
Isat(A):	13.5Typ (L13.5A/L0A*100% ≈70%)
INDUCTANCE Drop Approximately:	30% .@IDC 13.5A
Irms(A):	13.0 Typ. 40℃ MAX (Δt)

Use Frequency Range: 4.5 MHz (REF)

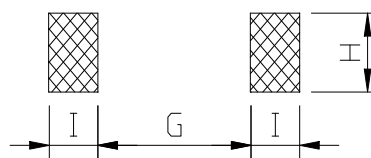
Self Resonant Frequency (REF) : 8.9 MHz (REF)

Operating Temperature Range: -55℃ ~+125℃

SCHEMATIC DRAWING :



PCB PATTERN :



G : 4.20 m/m (REF)
H : 9.0 m/m (REF)
I : 3.20 m/m (REF)

MATERIAL LIST:

NO	ITEM	MATERIAL	SUPPLIER OF THE MATERIAL
1	CORE		
2	BLAK		
3	COPPER		
4	COATING		
5	MARKING		



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TEST DATA

ELECTRICAL CHARACTERISTICS									
MEAS. ITEM	L(μH)	DCR(mΩ)	Isat(A)	A	B	C	D	E	F
TEST FREQ.	100KHZ/1.0V	Max	Typ.	m/m	m/m	m/m	m/m	m/m	m/m
YOUR									
SPEC.	22±20%	22	13.5A≈70%	10.0±0.5	11.3±0.5	9.8±0.3	8.3±0.5	2.2±0.3	4.4TYP
1	20.11	20.3	71.70%	10.08	11.35	9.79	8.16	2.14	4.43
2	20.06	20.35	70.10%	10.06	11.35	9.83	8.12	2.11	4.42
3	19.87	20.54	70.40%	10.06	11.37	9.85	8.11	2.29	4.45
4	19.79	20.41	70.50%	10.06	11.36	9.83	8.15	2.17	4.43
5	20.03	20.31	70.10%	10.05	11.35	9.86	8.12	2.18	4.42
6	20.84	20.28	70.90%	10.07	11.34	8.94	8.18	2.13	4.45
7	20.56	20.34	71.60%	10.06	11.35	9.85	8.12	2.19	4.44
8	20.47	20.36	70.40%	10.05	11.36	9.79	8.23	2.2	4.52
9	20.78	20.41	70.10%	10.06	11.38	9.82	8.2	2.22	4.43
10	20.12	20.3	71.30%	10.05	11.38	9.82	8.15	2.18	4.45
X	20.263	20.361	70.71%	10.061	11.359	9.832	8.156	2.171	4.434
R	1.050	0.26	1.60%	0.03	0.04	0.15	0.13	0.11	0.03

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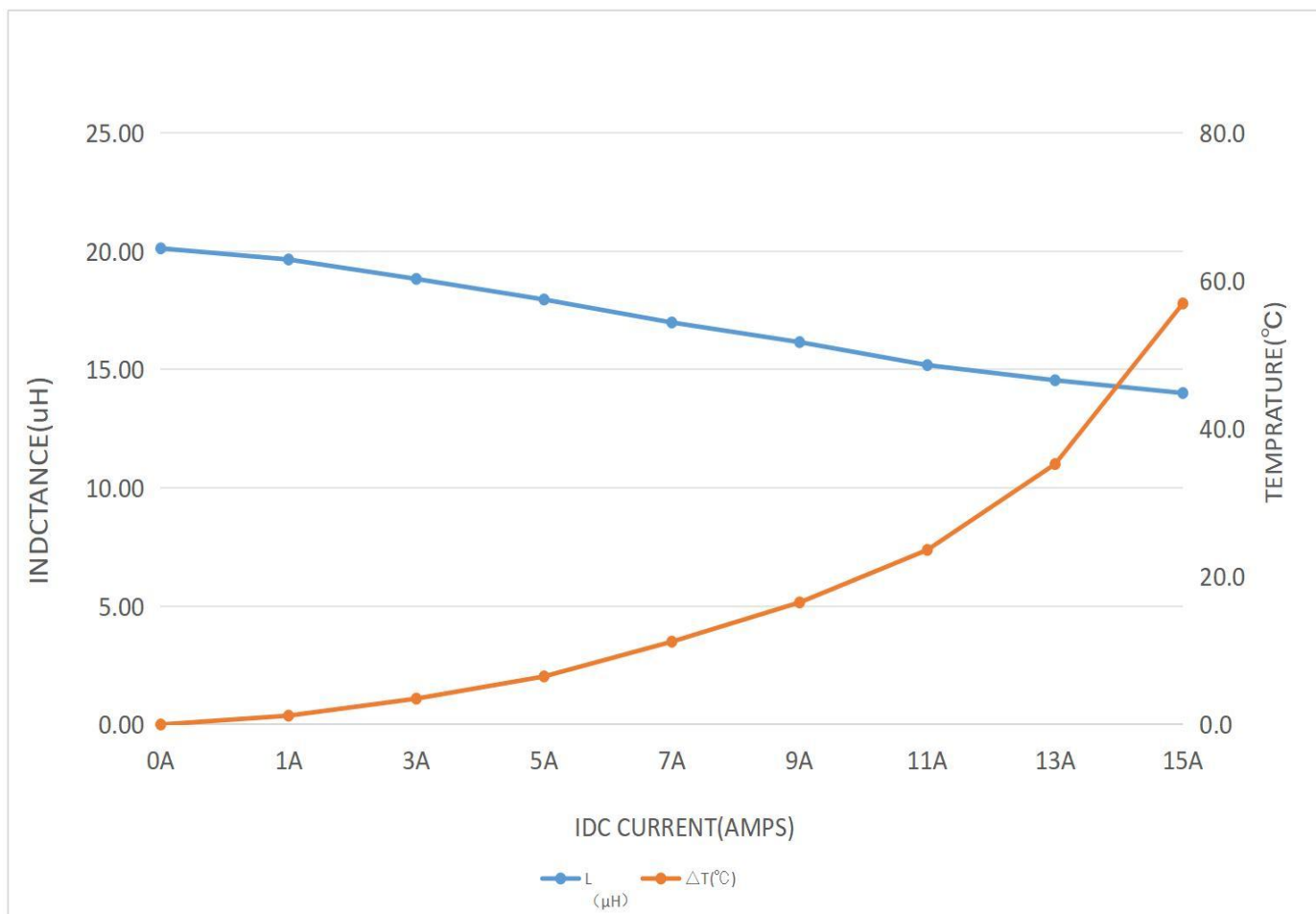
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TYPICAL ELECTRICAL CHARACTERISTICS:

INDUCTANCE VS CURRENT@100KHZ/1.0V

IDC	0A	1A	3A	5A	7A	9A	11A	13A	15A			
L (μH)	20.11	19.64	18.82	17.95	16.98	16.15	15.18	14.54	14.0			
$\Delta T(^{\circ}\text{C})$	0	1.2	3.5	6.5	11.2	16.5	23.6	35.2	56.9			



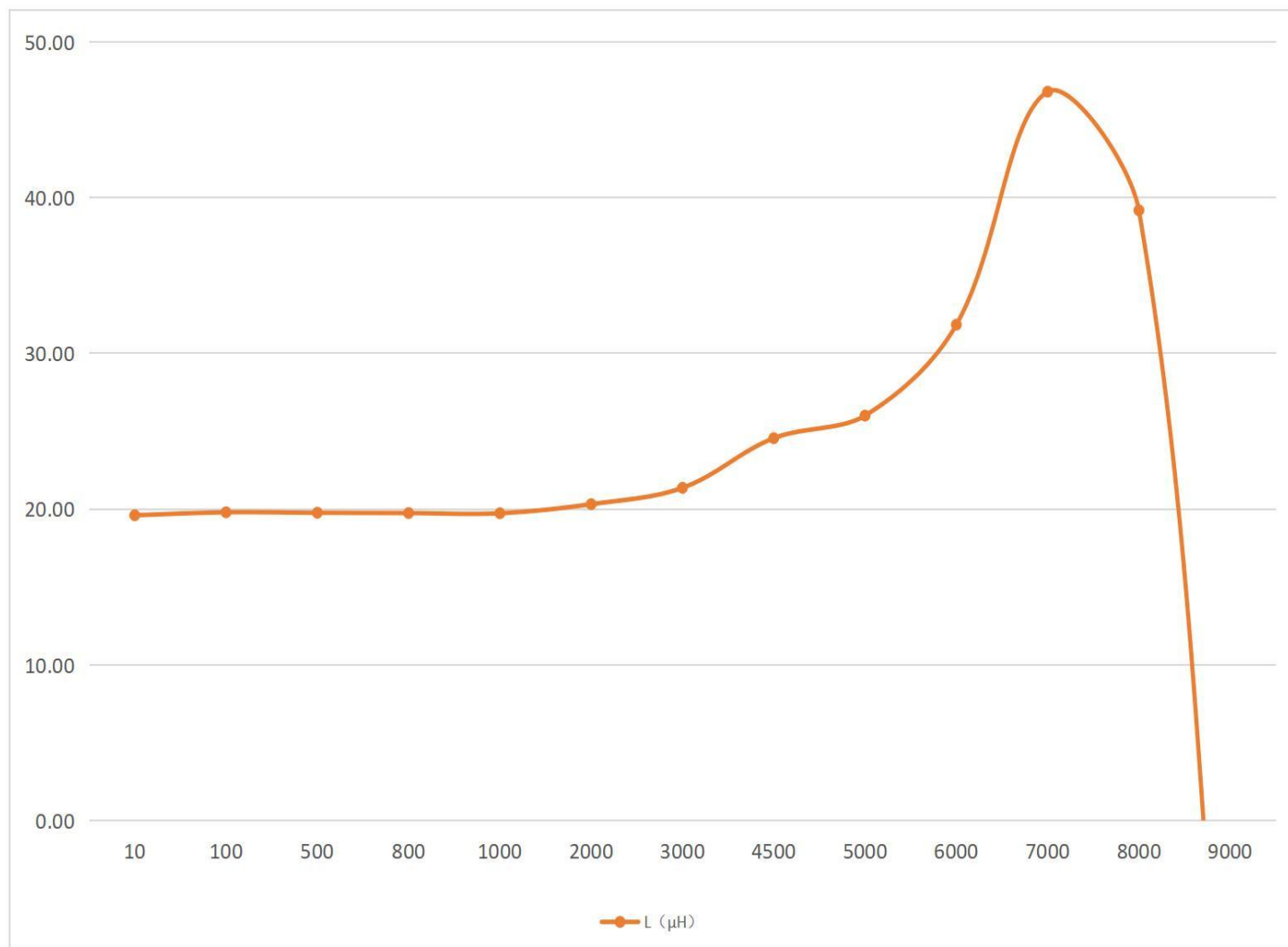


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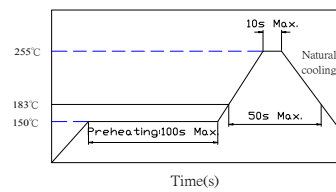
L Frequency characteristics:

Hz(KHz)	10	100	500	800	1000	2000	3000	4500	5000	6000	7000	8000	9000	
L (μH)	19.6	19.79	19.76	19.74	19.73	20.31	21.36	24.55	26.0	31.84	46.81	39.19	-21.85	
		100.00%	99.80%	99.70%	99.70%	102.60%	107.90%	124.10%	131.40%	160.90%	236.50%	198	-110.40%	



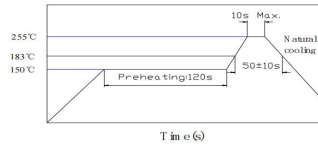
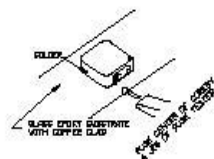
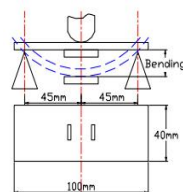
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TEST ITEMS	SPECIFICATIONS	TEST CONDITIONS / TEST METHODS	
ELECTRICAL PERFORMANCE TEST			
L	REFER TO STANDARD ELEC-TRICAL CHARACTERISTIC LIST.	MICROTEST6377	
DCR		TH2511	
RATED CURRENT		APPLIED THE CURRENT TO COILS THE IDUCTANCE CHANGE SHOULD BE LESS THAN 30% TO INITIAL VALUE AND TEMPERATURE RISE SHOULD NOT BE 40℃ TYPICAL	
TEMPERATURERISE TEST	40℃ MAX (Δt)	1. APPLIED THE ALLOWED DC CURRENT FOR 4 HOURS. 2. TEMPERATURE MEASURE BY DIGITAL SURFACE THERMOMETER.	
OVER LOAD TEST	NO EVIDENCE OF ELECTRICALDAMAGE	APPLIED 1.5 TIMES OF RATED ALLOWED DC CURRENT TO INDUCTORS FOR A PERIOD OF 5 MINUTES.	
MECHANICAL PERFORMANCE TEST			
SOLDER HEAT RESISTANCE	1. INDUCTORS SHOULD HAVE NO EVIDENCE OF ELEC- TRICAL AND MICHANICAL DAMAGE 2.INDUCTANCE SHOULD NOT HANGE MORE THAN±10%	PREHEAT:150℃ 100s Max. SOLDER TEMPERATURE: 255±5℃ DIP TIME:10s Max. 	
VIBRATION TEST (LOW FREQUENCY)		1.AMPLITUDE: 1.5 mm 2.FREQUENCY: 10-55-10HZ / 1 MIN 3.DIRECTION: X, Y, Z 4.DURATION: 2 HRS/X, Y, Z	
SHOCK TEST		INDUCTORS SHOULD BE DROPPED 10 TIMES FROM AHEIGHT OF 1m ONTO 3cm WOODEN BOARD.	

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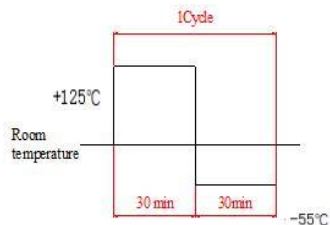
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MECHANICAL PERFORMANCE TEST			
SOLDERABILITY TEST	MORE THAN 90% OF TERMINAL ELECTRODE SHOULD BE COVERED WITH SOLDER.	PREHEAT:150℃ 120x SOLDER BATH AT 255±5℃ DIP TIME:10s Max.	
COMPONENT ADHESION (PUSH TEST)	1.5Kg Min	THE DEVICE SHOULD BE REFLOW SOLDERED (255±5℃ FOR 10 SECONDS) TO A TINNED COPPER SUBSTRATE. A DYNOMETER FORCE GAUGE SHOULD BE APPLIED TO THE SIDE OF THE COMPONENT. THE DEVICE MUST WITH- STAND A MINIMUM FORCE OF 1.5Kg WITHOUT AILURE OF THE TERMINATION .	
COMPONENT ADHESION (PULL TEST)	1.5Kg Min	1.INSERT 10cm WIRE INTO THE REMAINING OPEN EYE BEND THE ENDS OF EVEN WIRE LENGTHS UPWARD AND WIND TOGETHER 2. TERMINAL SHALL NOT BEREMARKABLY DAMAGED	
FLEXTURE STRENGTH	THE FORCES APPLIED SHOULD NOT DAMAGE THE DIELECTRIC.	SOLDER A CHIP ON A TEST SUBSTRATE, BEND THE SUBSTRATE BY 2mm AND RETURN.	
RESISTANCE TO SOLVENT TEST	THERE SHOULD BE NO CASEDEFORMATION, CHANGE IN APPEARANCE OR BITERATION OF MARKING	INDUCTERS SHALL WITHSTAND 6 MINTES OF ALCOHOL	



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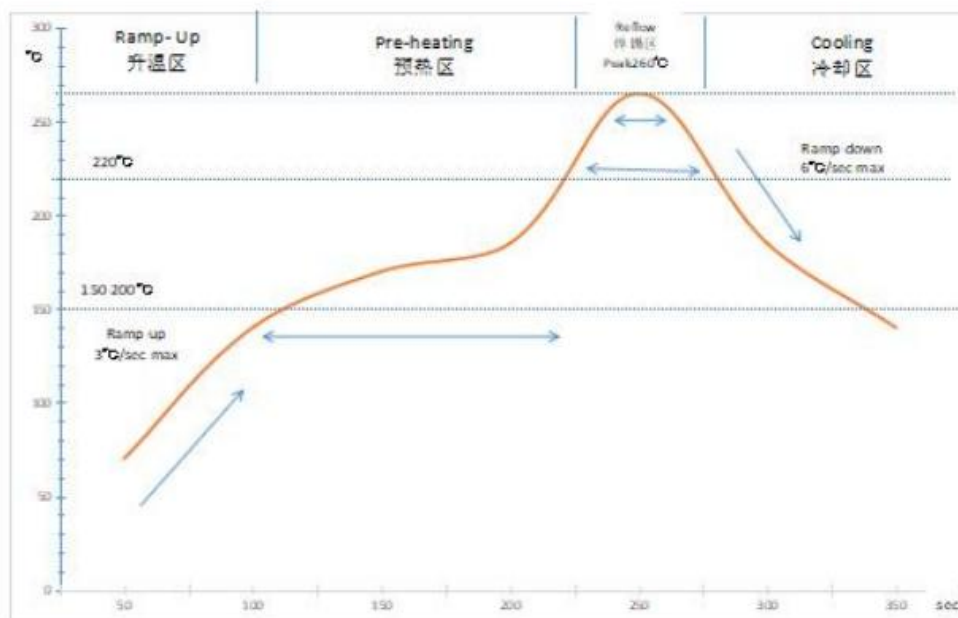
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TEST ITEMS	SPECIFICATIONS	TEST CONDITIONS / TEST METHODS	
CLIMATIC TEST			
TEMPERATURE CHARACTERISTIC	1.APPEARANCE:NO DAMAGE 2.INDUCTANCE:WITHIN±10% OF INITIAL VALUE.	(-55℃ ~ +125℃)	
HUMIDITY TEST		60℃±2℃ / 96±2 HOURS R.H:90-95%RH	
LOW TEMPERATURE STORAGE		1.TEMPERATURE:-55℃±2℃ 2.TIME: 96±2 HOURS	
THERMAL SHOCK TEST		1.-55±5℃ FOR 30 MINUTES. +125±5℃ FOR 30 MINUTES. 2.TOTAL: 10 CYCLES	
HIGH TEMPERATURE STORAGE		1.APPLIED CURRENT: MAX RATED CURRENT 2.TEMPERATURE:120℃±2℃	
NOTE: INDUCTORS ARE TO BE TESTED AFTER 2 HOUR AT ROOM TEMPERATURE.			
LIFE TEST			
HIGH TEMPERATURE LOAD LIFE TEST	INDUCTORS SHOULD BE NO EVIDENCE OF SHORT OR OPEN CIRCUIT	1. TEMPERATURE: 125±2℃ 2. TIME: 500±12 HOURS 3. LOAD: ALLOWED DC CURREN	
HUMIDITY LOAD LIFE TEST		1. TEMPERATURE: 60±2℃ 2. R.H.: 90-95% 3. TIME: 500±12 HOURS 4. LOAD: ALLOWED DC CURREN	



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REFLOW PROFILE



Lead-Free(LF)标准温度分析范围

项目 Item	升温区 Ramp-up	预热区 Pre-heating	焊接区 Reflow	PeakTemp	冷却区 Cooling
温度范围 TempScope	R.T. ~150°C	150~200°C	220°C	260±5°C	6°C/sec Max
标准时间 Time spec	-	60~180 sec	60~150 sec	20~40 sec	-

Notes:

1. Re-flow possible times: within 2 time
2. Nitrogen adopted is recommended while in re-flow

Iron Soldering Profile

Iron soldering power: Max. 30W

Pre-heating: 150°C/60sec

Soldering time: 3sec. Max. Solder paste: Sn/3.0Ag/0.5Cu

Max. 1 times for iron soldering

