



项目名称(Project Name): RX5000-WIFI

天线型号(Antenna model): ZTX-RX5000-WIFI-ANT

A

物料编码(Item number): E.03.00849

MPN 码 (MPN) : B0680330D

日期 (Date) : 2023-5-26

设计公司: 福州中天迅通信技术有限公司

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版本 Rev	日期 Date	状态 Status
A1	2023-3-14	规格书制定。 Specifications.
A2	2023-3-15	结构图纸更新。 Structural drawings updated.
A3	2023-4-4	FPC 外形，线路更新。 FPC shape, line update.
A4	2023-5-26	增加性能数据；FPC 外形，线路更新。 Increase performance data; FPC shape, line update.
A5	2023-8-8	增加尺寸管控。 Increased size control.





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1 名词解释 (Explanation of Nouns)

dBi	Decibel relative isotropic antenna
Tx	Transmit frequency
Rx	Receive frequency
TRP	Total Radiated Power
TIS	Total Isotropic Sensitivity
VSWR	Voltage Standing Wave Ratio
GSM	Global Service for Mobile communication
DCS	Digital Communication System
CDMA	Code Division Multiple Access
WCDMA	Wideband Code Division Multiple Access

2 测试设备 (Test equipment)

矢量网络分析仪 (Vector network analyzer)	安捷伦 8753E (Agilent 8753E)
频谱分析仪 (Frequency analyzer)	
综合测试仪 (General-purpose tester)	安捷伦 8960 E5515C
标准高性能无反射屏蔽暗室 (High performance no-reflection shielding darkroom)	ETS
8m*4m*4m	

3 适用频段 (Applied frequency band)

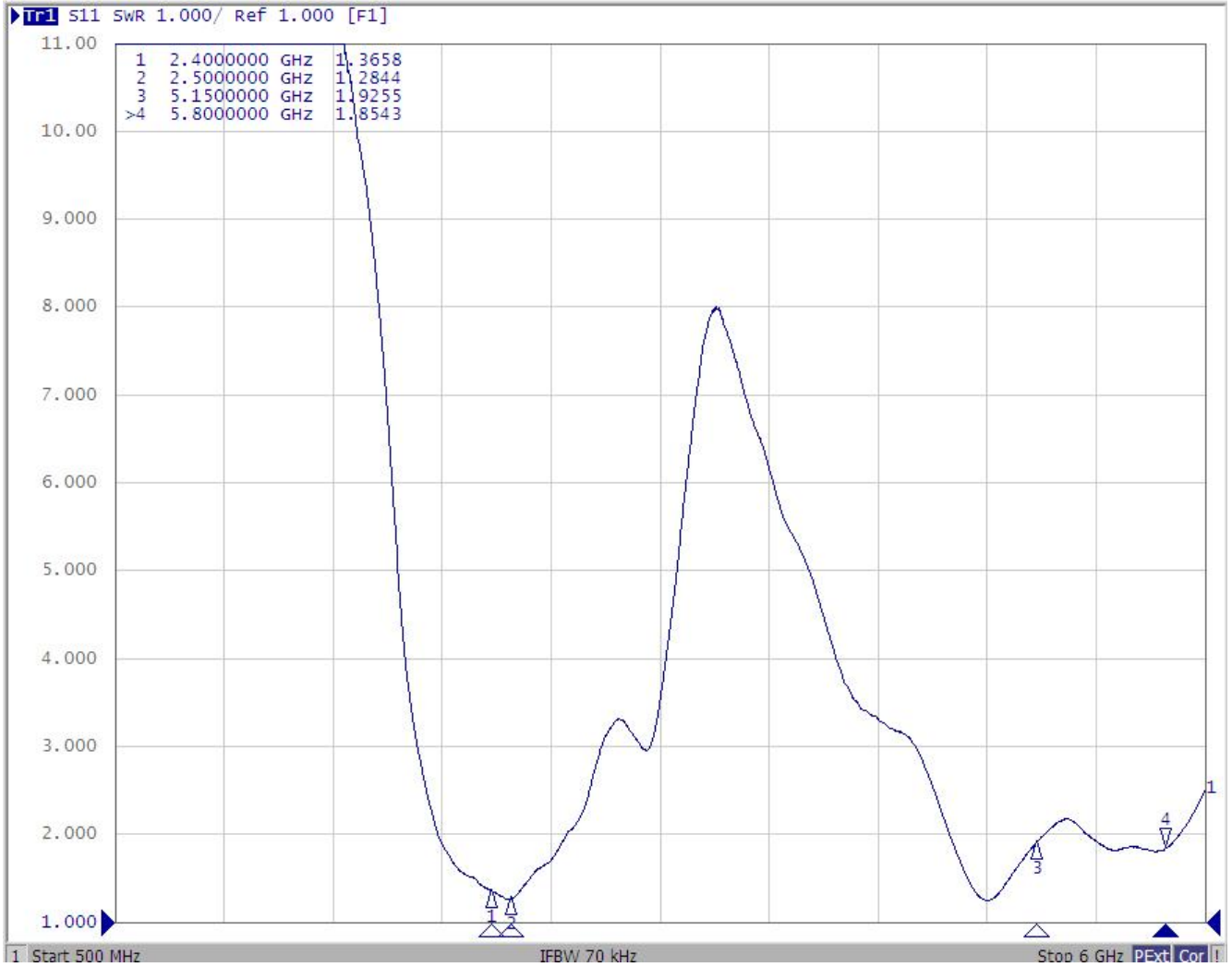
Frequency Band	Frequency
WIFI	2400-2500MHz, 5150-5850MHz。





4. 测试指标和数据图表 (Test indicators and figures)

4.1 驻波图 (VSWR)





4.2 无源效率 (Active test data)

chNo	Freq (MHz)	Gain (dBi)	Efficiency_Pcent (%)
1	2400	0.24995	34.81392
2	2410	0.560611	34.07695
3	2420	0.925198	34.77558
4	2430	0.964343	34.36759
5	2440	0.747183	34.34583
6	2450	0.797926	37.28844
7	2460	0.908076	38.72509
8	2470	1.019094	41.01197
9	2480	0.922604	40.39245
10	2490	0.925195	40.44568
11	2500	1.024811	42.37926
12	5150	0.509315	26.11116
13	5200	0.062353	28.80992
14	5250	0.532509	34.02872
15	5300	0.324015	34.01572



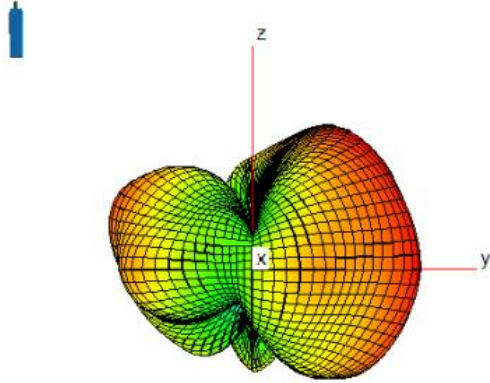


chNo	Freq (MHz)	Gain (dBi)	Efficiency_Pcent (%)
16	5350	-0.47445	29.76685
17	5400	0.892576	33.76064
18	5450	0.806474	31.96272
19	5500	-0.10143	26.29921
20	5550	-0.17355	26.53184
21	5600	1.034205	27.99993
22	5650	2.23177	31.00855
23	5700	1.203379	28.46255
24	5750	0.565341	26.26745
25	5800	1.560492	29.16738
26	5850	0.139882	27.21972

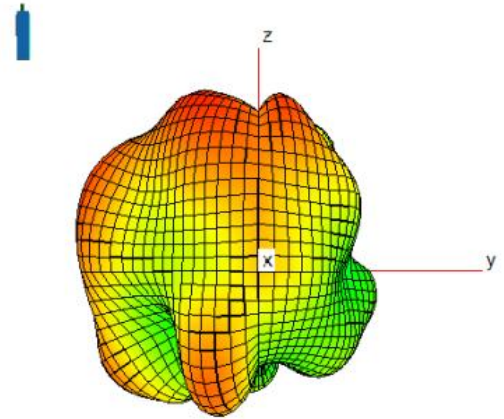




4.3 3D 辐射图 (3d radiation map)



2450MHz



5500MHz





4.4 有源数据 (Active test data)

测试项目 Test item	测试频段 Test frequency band	测试信道 Test channel	测试条件 Test condition	测试值 Test value	
WiFi	TRP	11b	1	11Mbps	11.94
			7		12.43
			13		12.56
		11g	1	6Mbps	10.85
			7		11.43
			13		11.3
		11n	1	MCS0	10.76
			7		11.41
			13		11.32
		11a	36	6Mbps	11.34
			64		8.96
			157		7.29



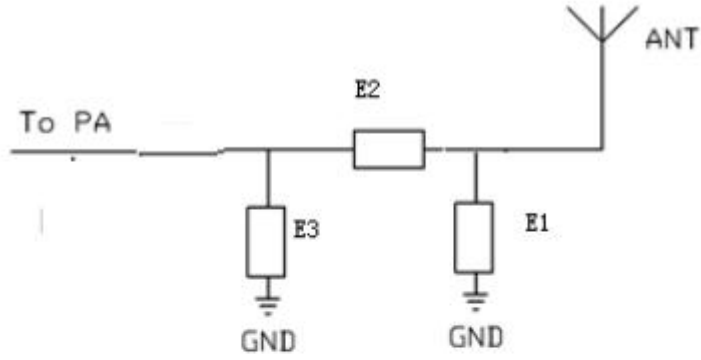


测试项目 Test item	测试频段 Test frequency band	测试信道 Test channel	测试条件 Test condition	测试值 Test value	
WiFi	TIS	11b	1	11Mbps	-77.73
			7		-72.45
			13		-73.07
		11g	1	54Mbps	-68.37
			7		-65.58
			13		-66.06
		11n	1	MCS7	-64.51
			7		-61.09
			13		-62
	11a	36	54Mbps	-70.28	
		64		-59.46	
		157		-62.84	





4.5 匹配说明 (Matching specification)

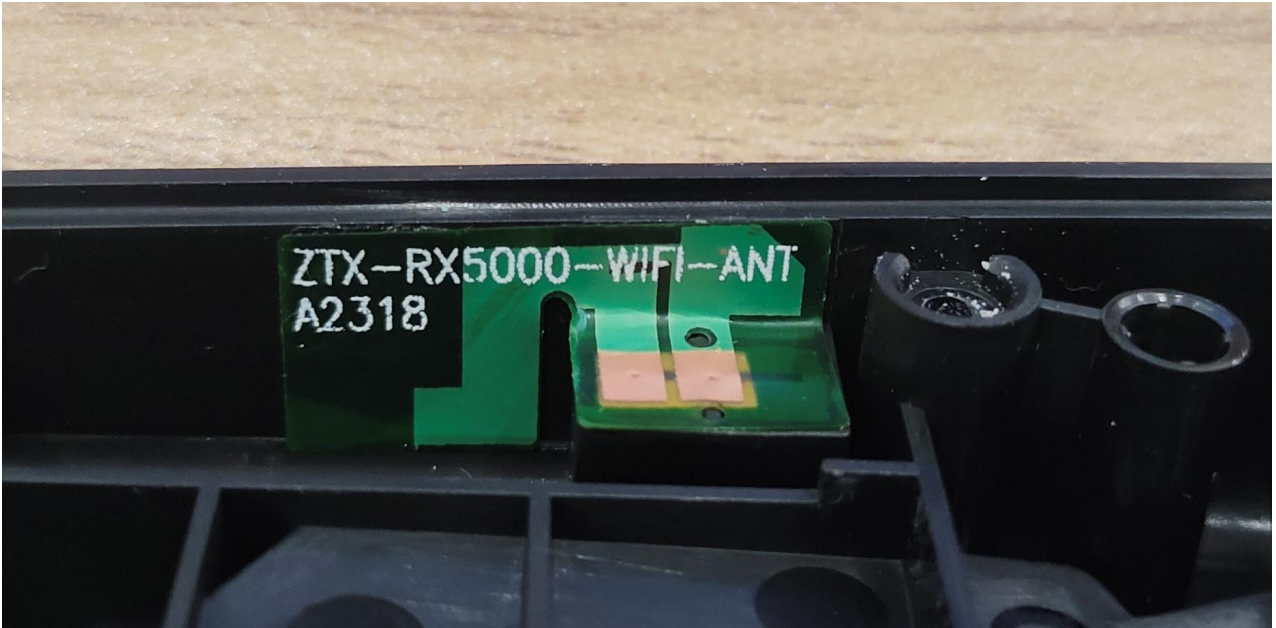


E1	NC
E2	0Ω
E3	4.7nH



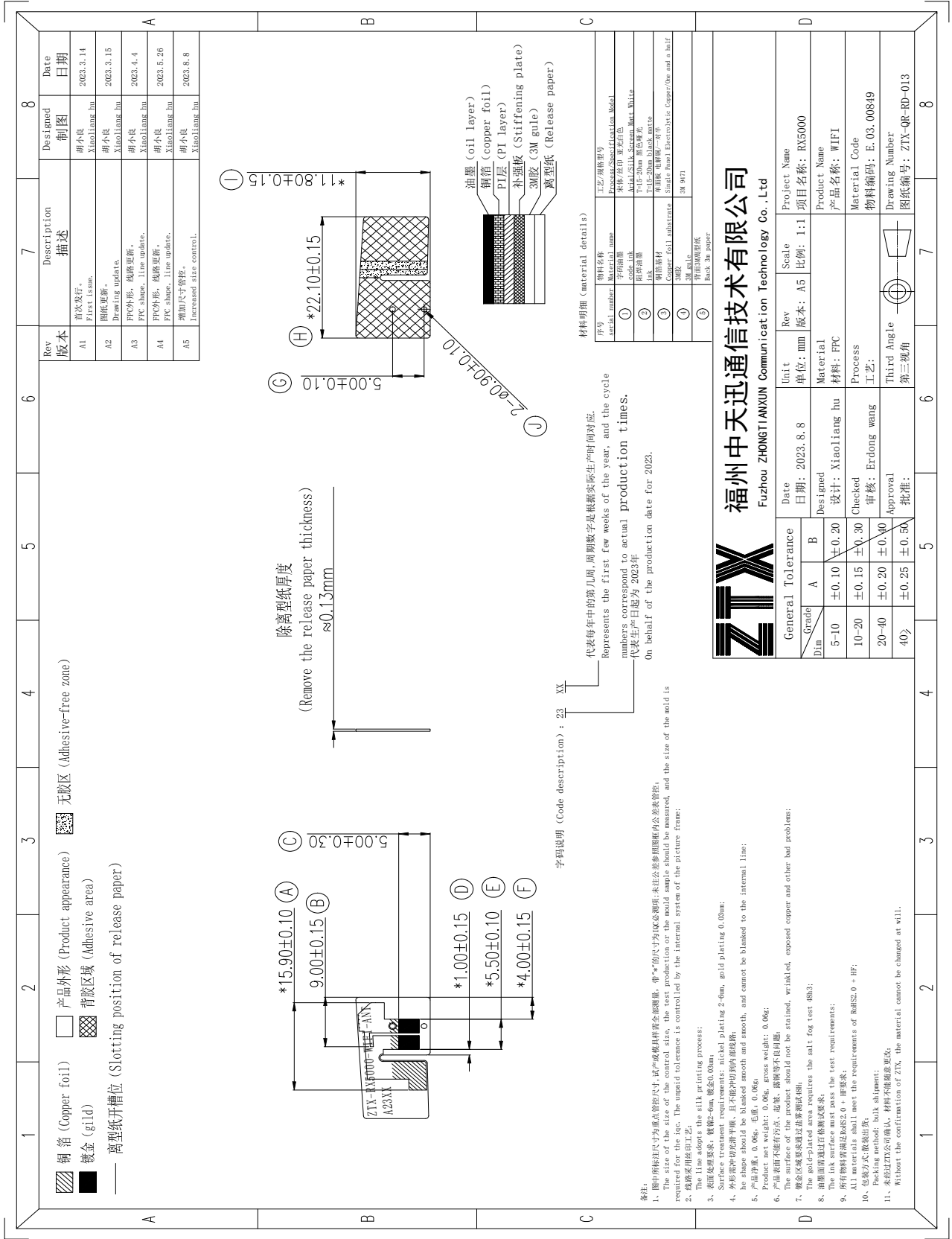


4.6 装配图 (Environment treatment)



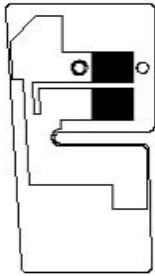





5. 天线外形图



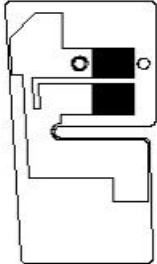





6. 包装作业指导

福州中天迅通信技术有限公司 Fuzhou Zhongtian Xun Communication Technology Co., Ltd.				作业指导书															
产品名称	产品型号	文件编号	版本	工序序号/名称	工序工时	日产量													
WiFi	RX5000	ZTX-QD-WI-024	A1	包装	/	/													
 <p>图1: 确认数量</p>  <p>图2: 每10小袋用大PE袋包装</p>  <p>图3: 小标签及追溯码</p>  <p>图4: 贴外箱标签, 封箱</p>				<p>作业方法 (自检验工序作业合格后, 方能流入下一道工序)</p> <ol style="list-style-type: none"> 1. 产品采用单PCS出货, 每 (100pcs) 产品用90*130mmPE封口膜 2. 每个160*240mmPE开口膜袋装10小袋 (1000PCS), 尾数除外; 3. 外箱上除标签贴外, 不能有任何丝印 (即空白纸箱) 出货; 4. 将包装好的产品装入纸箱, 每箱数量根据订单数量要求进行数量确认, 保证每箱装入的数量正确。 5. 在装好产品的箱子上将外箱标签及物料追溯码, RoHS贴于外箱的右上角, 打印标签内容包含 (生产产家, 型号, 产品名称, 客户编码, 数量, 订单号, 日期, QA检验,) 															
				<p>物料编号</p> <table border="1"> <thead> <tr> <th>物料名称及规格</th> <th>用量</th> <th>工/夹具治具</th> </tr> </thead> <tbody> <tr> <td>纸箱 (45*32.5*21) cm</td> <td>1</td> <td>电子秤</td> </tr> <tr> <td>PE封口袋 (90*130)mm</td> <td>200</td> <td>封口机</td> </tr> <tr> <td>PE开口袋 (160*240)mm</td> <td>20</td> <td></td> </tr> </tbody> </table>				物料名称及规格	用量	工/夹具治具	纸箱 (45*32.5*21) cm	1	电子秤	PE封口袋 (90*130)mm	200	封口机	PE开口袋 (160*240)mm	20	
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<p>修訂內容</p>																			
版本				修訂日期	修訂人														
制訂	胡小良	审核	易爱玲	品质确认	胡春梅	批准	张武民												





福州中天迅通信技术有限公司 Fuzhou ZHONGTIANXUN Communication Technology Co.,Ltd				SOP																																											
product name	product model	File Number	version	Process number/name	process man-hou	Daily output																																									
WIFI	RX5000	ZTY-QD-WI-024	A1	package	/	/																																									
 <p>Figure 1: Confirmed quantity</p>  <p>Picture 2: Every 10 sachets are packed in large PE bags</p>  <p>Figure 3: Small label and traceability code</p>  <p>Figure 4: Attach the outer box label and seal the box</p>				<p>Packaging process</p> <ol style="list-style-type: none"> The products are shipped in a single PCS, and each (100pcs) product is packed in a 90*130mm PE sealing plastic bag; Each 160*240mm PE open plastic bag is packed in 10 sachets (1000PCS), except the mantissa; Except for the label, the outer box cannot be shipped with any silk screen (ie blank carton); Put the packaged products into cartons, and confirm the quantity of each box according to the order quantity requirements to ensure that the quantity of each box is correct. Put the outer box label and material traceability code, RoHS on the upper right corner of the outer box on the box with the product, and the printed label content includes (manufacturer, model, product name, customer code, quantity, order number, date, QA inspection,) 																																											
<p>Precautions</p> <ol style="list-style-type: none"> When it is found that the weight is out of the tolerance range, the quantity must be counted Only 1 material label is allowed in the outer box. If there are extra labels, they must be cleaned up. When the bar code label is attached to the outer box, it should be as flat as possible to avoid wrinkling that affects the customer's storage. The barcode must be clear and scannable 				<table border="1"> <thead> <tr> <th>Item number</th> <th>Material name and specification</th> <th>Dosage</th> <th>Work/Clamping Fixture</th> </tr> </thead> <tbody> <tr> <td></td> <td>Carton (45*32.5*21) cm</td> <td>1</td> <td>Electronic scale</td> </tr> <tr> <td></td> <td>PE sealed bag (90*130)mm</td> <td>200</td> <td>Sealer</td> </tr> <tr> <td></td> <td>PE open pocket (160*240)mm</td> <td>20</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				Item number	Material name and specification	Dosage	Work/Clamping Fixture		Carton (45*32.5*21) cm	1	Electronic scale		PE sealed bag (90*130)mm	200	Sealer		PE open pocket (160*240)mm	20																									
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					Revision date	Revised by																																									

