

SPECIFICATION FOR APPROVAL

Customer Name: 哈曼-国光

Product Name: Citation500

Antenna Description: 2.4/5G FPC Antenna L=170mm+IPEX

Customer P/N:

RF link P/N: RF11.C02083S

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
CHECKED BY:	YAOJIE SONG	
AUDITOR BY:	WENQIANG DENG	
APPROVED BY:	LIANG LIU	
DATE:	2018-6-22	

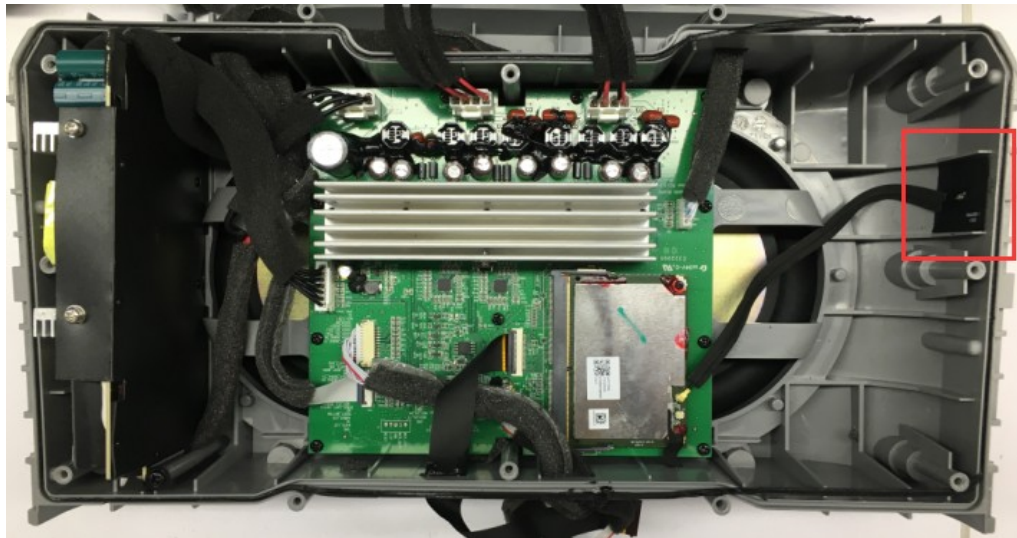
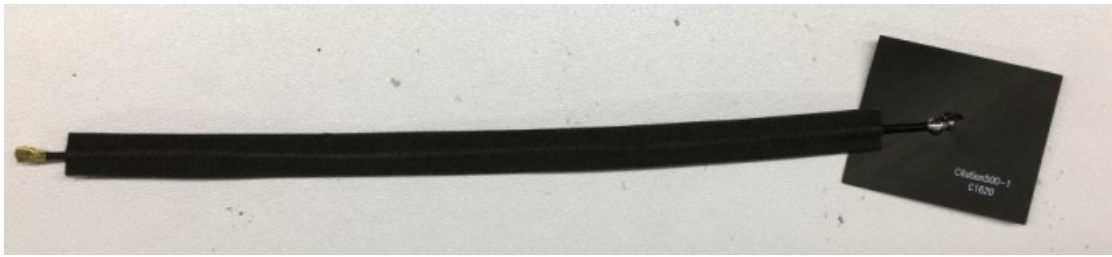
网址: <http://www.rflink.net.cn>

东莞公司地址: 东莞市塘厦镇清湖头三坑工业区 1 号

深圳地址: 深圳市南山区沙河西路 3009 号新能源创新产业园康和盛大厦 503 室

Number	Effective date	Change record
V1.0	2018-6-22	Initial release

1. Product Photo:



天线位于从左往右数第二个凹槽内，天线上边与机壳卡槽平齐（如红线所示），与机壳边沿的距离为6mm

2. Product features:

- a. Peak Gain 2.4G: 2.52dBi 5G: 4.51dBi
- b. Efficiency is high
- c. Assembly is simple

3. Parameter specification:

Frequency	2400-2500MHz 5100-5900 MHz
Impedance	50Ω
VSWR	< 2
Polarization	Linear
Max Input Power	1W(30dBm)
Cable Type	1.37mm Black
Antenna material	FPC
Antenna Dimensions	33.9mm×28mm×0.2mm
Matching circuit:	None

4. Electrical Specification :

Those specifications were specially defined for 哈曼 Citation500 model.

5. VSWR

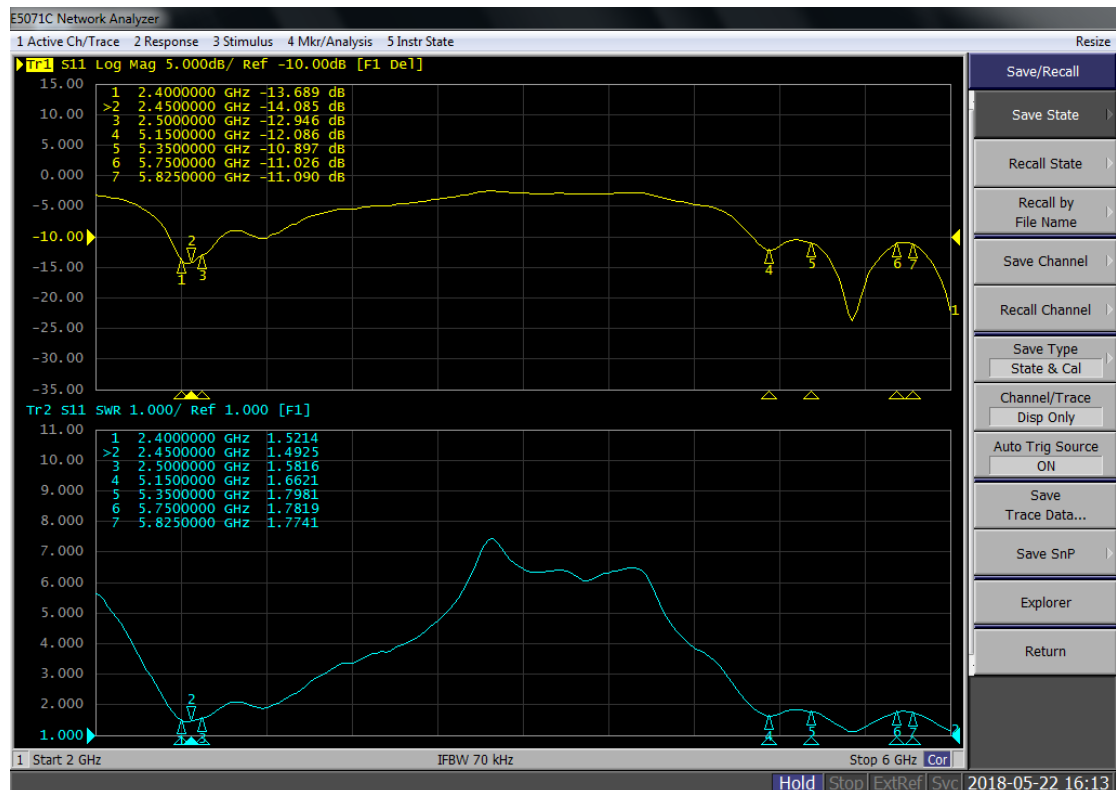
5.1 Measuring Method

1.A 50Ω coaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the VSWR

2.Keeping this jig away from metal at least 20cm

5.2 Measurement frequency points and VSWR value

Frequency (MHz)	2400	2450	2500	5150	5350	5750	5825	aux
Return Loss	-13.68	-14.08	-12.94	-12.08	-10.89	-11.02	-11.09	< -10
VSWR	1.52	1.49	1.58	1.66	1.79	1.78	1.77	< 2



6. Anechoic chamber

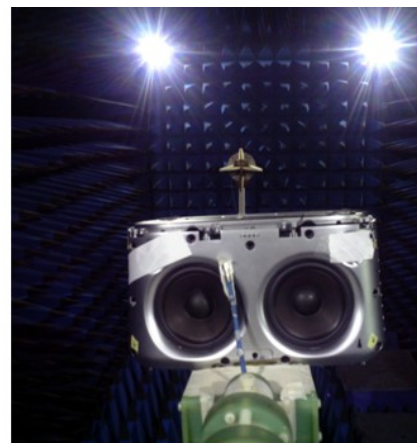
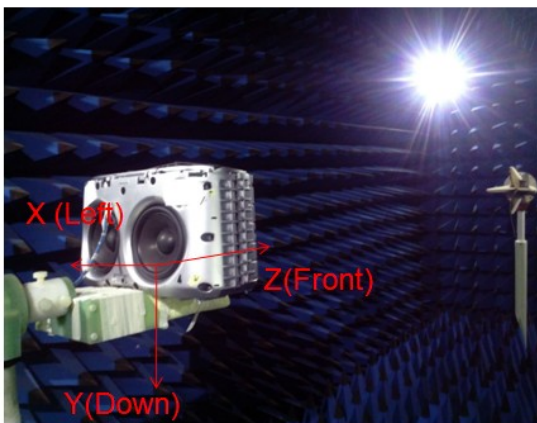
Introduction:

Microwave darkroom and no reflection chamber, absorbing short wave darkroom dark room. Microwave darkroom by electromagnetic shielding room, filtering and isolation, grounding device, the ventilation duct, indoor distribution system, monitoring system, ceiling wave material part. It is based on the wave absorbing material as the lining of the shield room, it can absorb the most of the electromagnetic energy into the six wall is a better simulation of the free space conditions.

The main working principle of microwave anechoic chamber is according to the electromagnetic wave in the medium from the low magnetic guide magnetic direction of propagation rules, absorbing materials to guide the electromagnetic wave using high permeability, through resonance, a substantial absorption of electromagnetic wave radiation energy, by coupling the electromagnetic energy into heat energy.

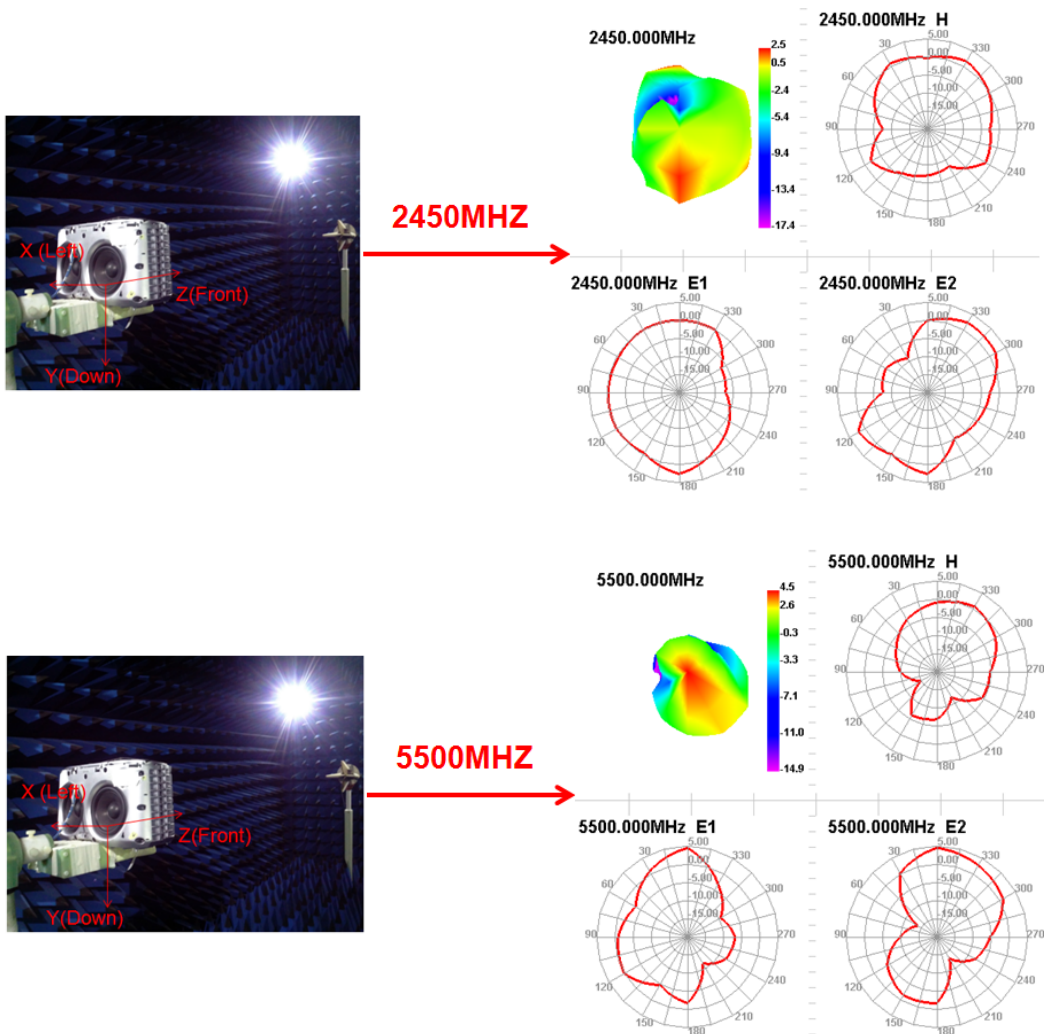
main performance :

Frequency range:400MHz ~ 6GHz ceiling reflected wave loss materials: 400MHz ~ 6GHz is equal to or more than 15dB (microwave absorbing material by composite wave absorbing materials, namely tapered containing carbon sponge suction wave material paste in ferrite)



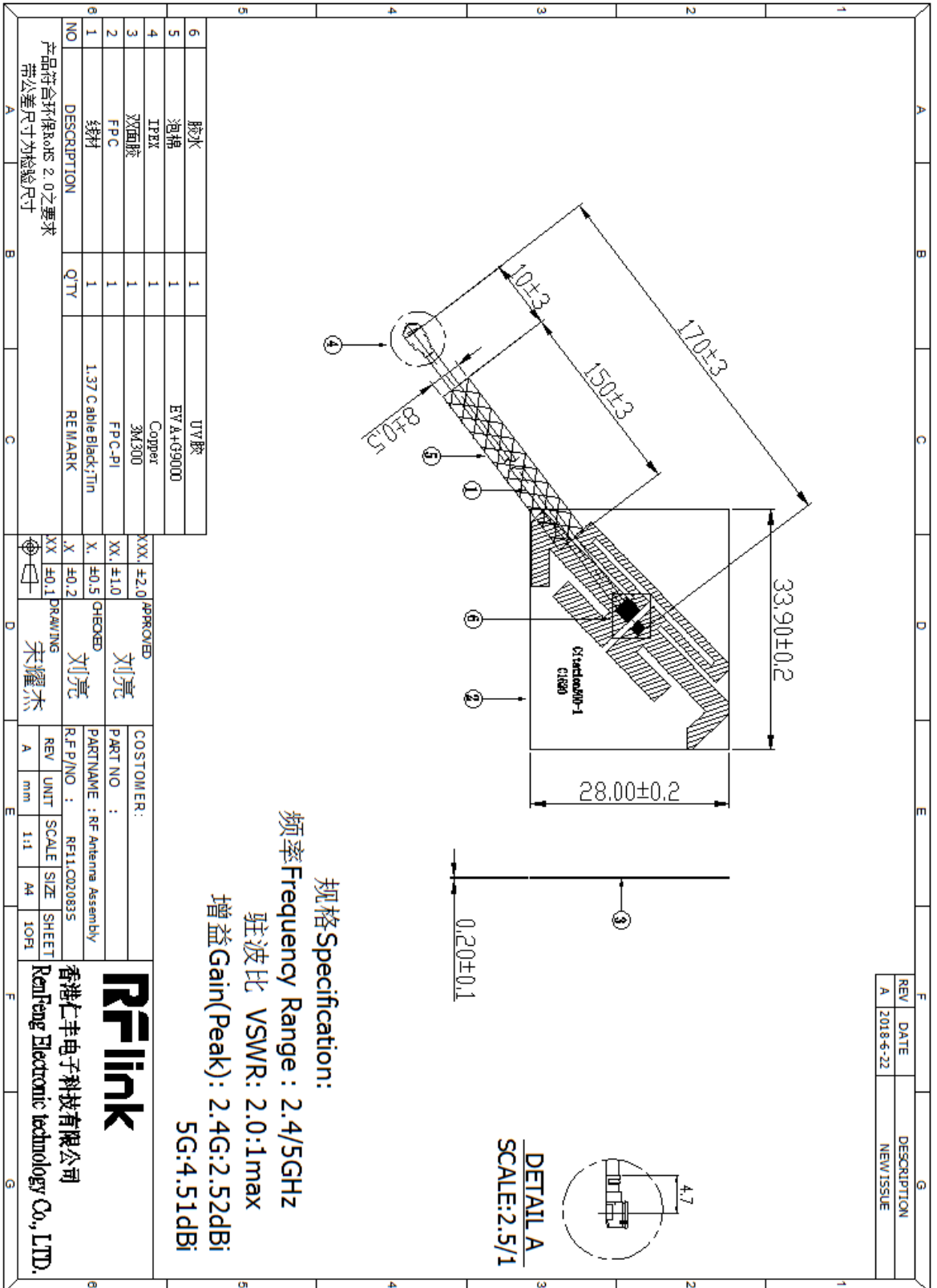
	XY	XZ	YZ
0°	Left	Front	Front
90°	up	Left	up
180°	Right	Back	Back
270°	Down	Right	Down

7.Gain table of Antenna



Frequency (MHz)	Efficiency (%)	Peak Gain (dBi)
2400	66.21	2.37
2420	67.27	2.49
2450	67.49	2.52
2480	67.05	2.46
2500	66.15	2.44
5100	53.79	3.85
5150	53.98	4.09
5350	54.08	4.32
5500	55.10	4.51
5750	54.86	4.47
5825	54.95	4.22
5900	53.82	4.18

8. Antenna Dimensions



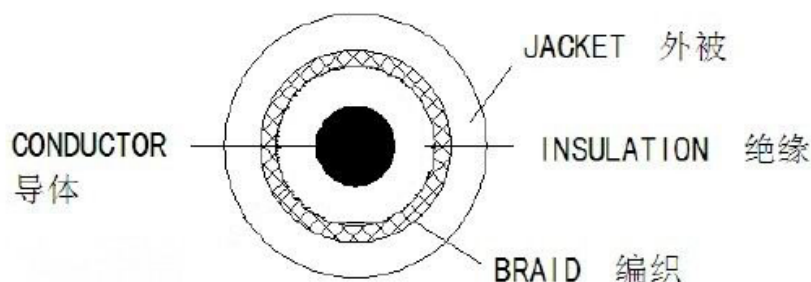
9. Wire decay

项目/Item		详细资料/Details
导体/Conductor	材料/Material	镀锡铜线 Tinned copper
	构成(根/mm)/Composition(No./mm)	7/0.08±0.005
	标称直径/NOM. O. D	0.24±0.01
绝缘层/Insulation	材料/Material	聚全氟乙丙烯/FEP
	标称外径/NOM. O. D	0.7±0.03
	颜色/Color	Natural
编织层/Braid Shield	材料/Material	镀锡铜线 Tinned copper
	构成/Composition	16/4/0.05±0.005
	遮蔽率/Shielding rate	90%
	标称直径/NOM. O. D	0.92±0.03
护套/Jacket	材料/Material	聚全氟乙丙烯/FEP
	标称外径/NOM. O. D	1.13±0.05
	颜色/Color	/

3. 电气特性(20℃时)/Electrical Properties(at 20℃)

项目/Item	单位/Unit	详细资料/Details	
电容/Capacitance	pF/m	98	
特性阻抗/Conductor Resistance	Ω	50±3.0	
耐压强度/Dielectric Strength	A. C V/lmin	1000	
最大工作频率/Max. oper. frequency	MHz	6000	
抗拉强度/Tensile strength	kgf/mm ²	1.76	
工作温度范围/Operating Temp.	℃	-55to200	
衰减/Attenuation	/	频率 /Frequency (MHz)	dB/1m
		1000	≤2.23
		2000	≤3.15
		3000	≤3.96
		4000	≤4.6
		5000	≤5.15
6000	≤5.7		
驻波比/Standing wave(0-6GHz)	/	≤1.4	

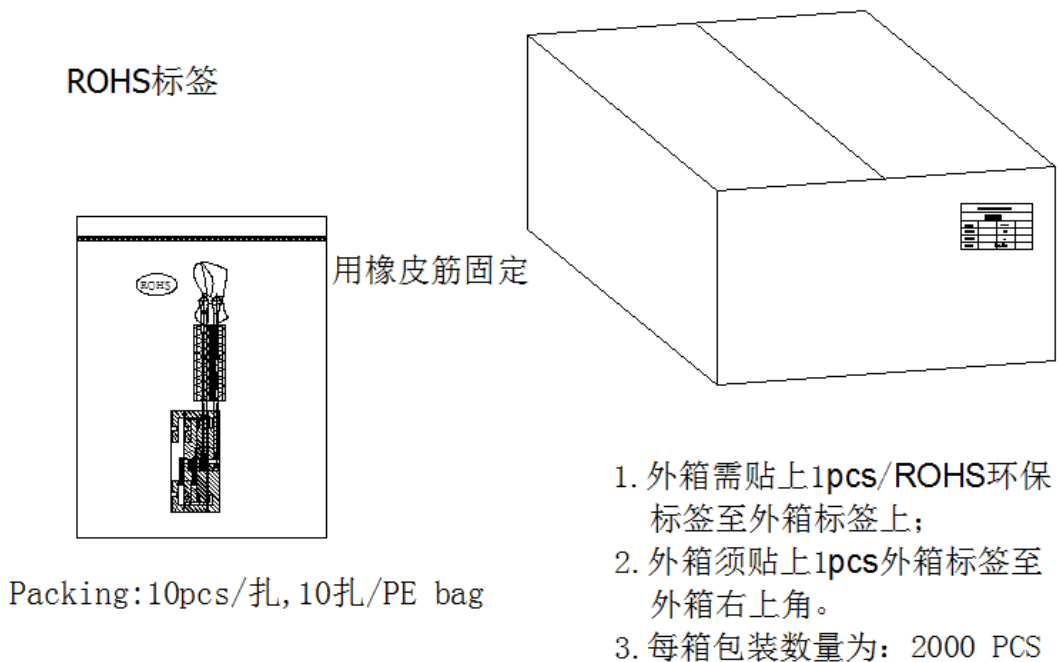
结构图/Configuration



10.ROHS:

Antenna RF11.C02083S meets RoHS requirements.

11. Product packaging instructions:



A. packing should meet the moistureproof, vibration, pressure and mildew proof, etc.

B. the smallest packing unit logo must have the manufacturer trademarks, product model, name, code and quantity.

C. in the attached packing list, certificate of approval, and the factory inspection report.

*****END*****