



榮 昌 科 技 股 份 有 限 公 司

GRAND-TEK TECHNOLOGY CO.,LTD

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承 認 書

SPECIFICATION FOR APPROVAL

客 戶 名 稱 : 盛達

CUSTOMER

產 品 : LTE BAND12/17 ANTENNA 7dBi

PRODUCT

客 戶 料 號 : A0ZANIX7B1217XX00

PART NO.

榮 昌 料 號 : DA-B1217-07-01-BL

PART NO.

承認書編號 : RC130924002

SHEET NO.

DATE : 2014/02/27

CUSTOMER CONCLUSION : ☐ **APPROVED** (承 認)

(客 戶 判 定) ☐ **REJECTED** (不合格)

☐ **LIMITED** (允 收)

☐ **CONDITIONAL APPROVAL** (條 件 認 可)

INCLUDING THIS COVER TOTAL 185 PAGES

(含 此 封 面 頁 共 185 頁)

*** PLEASE SIGNED AND FAX THE RESULT TO US .**

(請 於 判 定 簽 名 後 將 結 果 傳 回)

AUTHORIZE DSIGNATURES



榮昌科技股份有限公司

GRAND-TEK TECHNOLOGY CO.,LTD

3F., No.4, Ln. 235, Baociao Rd., Sindian City, Taipei County 231, Taiwan(R.O.C.)

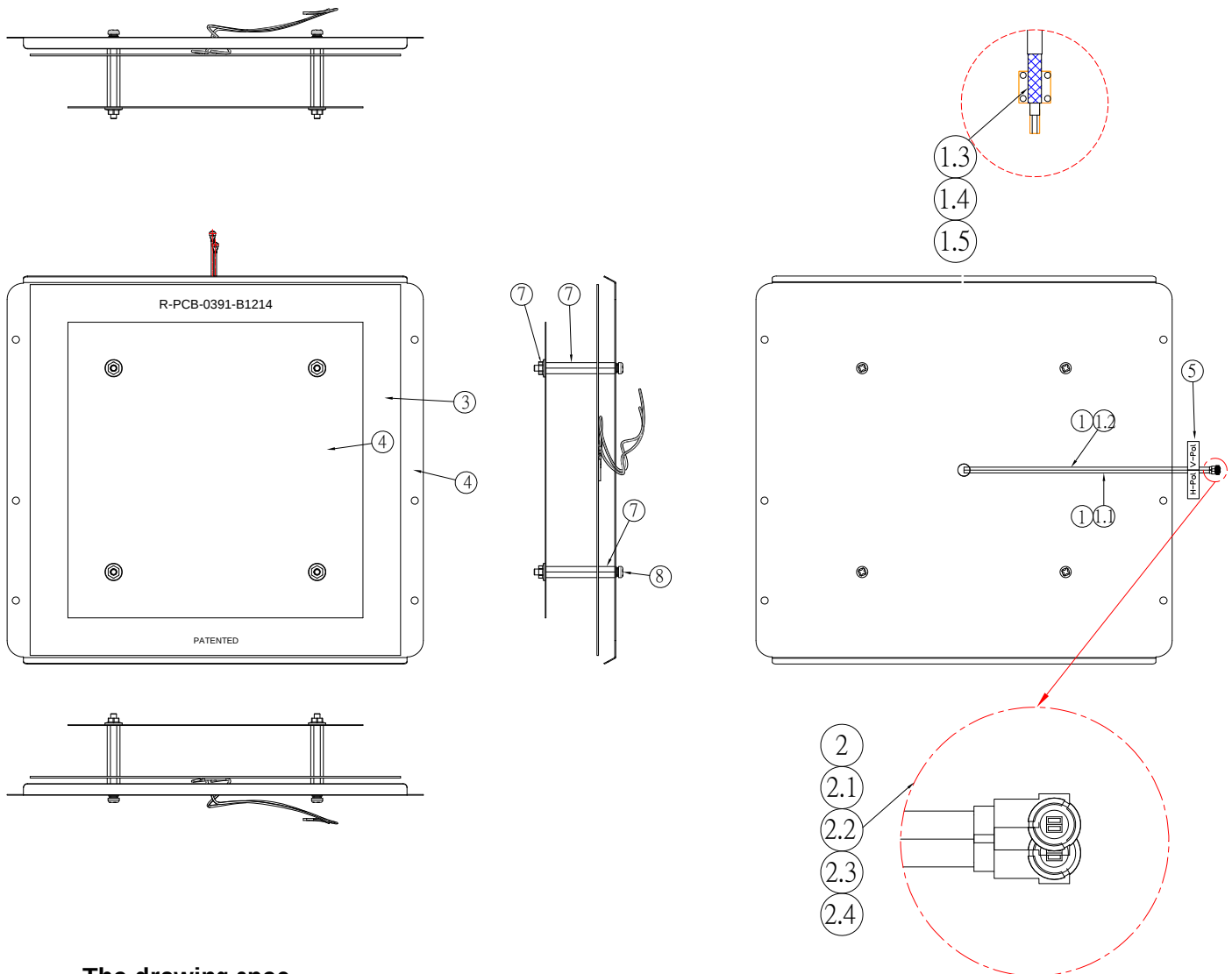
TEL : (02)29177353 FAX:(02)29106546

GTT Part Number /Doc. Ver. :DA-B1217-07-01-BL / Ver.A

Customer Part Number : A0ZANIJX7DAB3B4000

Description: LTE BAND 12/17 ANTENNA 7dBi

Table Of Contents



The drawing spec.

Antenna Assembly & Packing.....	4
U.fl Jumper Cable Assembly(Color:White).....	7
U.fl Jumper Cable Assembly(Color:Gray).....	9

Material RoHS Report

1	Coxial Cable	
1.1	White FEP(Jacket).....	11
1.2	Gray FEP(Jacket).....	17
1.3	Tinned Copper wire.....	23
1.4	FEP 5100J(Insulation).....	26

1.5	Silver Coated Copper Wire.....	33
2	HRS U.FL Connector	
2.1	UFL-068,088 Shell,Contact Nickel plated.....	42
2.2	UFL-068,088 Shell,Contact Gold plated.....	46
2.3	U.FL310SE0HF-White Core.....	50
2.4	C5210R-Shell Metal.....	57
3	FR-4 PCB	
	Black Solder Mask.....	61
	White Ink.....	72
	FR-4 PCB.....	81
4	Reflector Plane	
	馬口鐵.....	131
5	Label	
	上光膜.....	135
	銅版紙.....	142
	Blank Ink.....	149
6	Lead-Free-Wire	
	Lead-Free-Wire.....	159
7	Plastic Nut & Plastic Column	
	Nylon 66.....	164
8	Metal Screw	
	Stainless Steel Parts.....	173

Assembly Test Report

● Other Documents

Antenna Test Report	178
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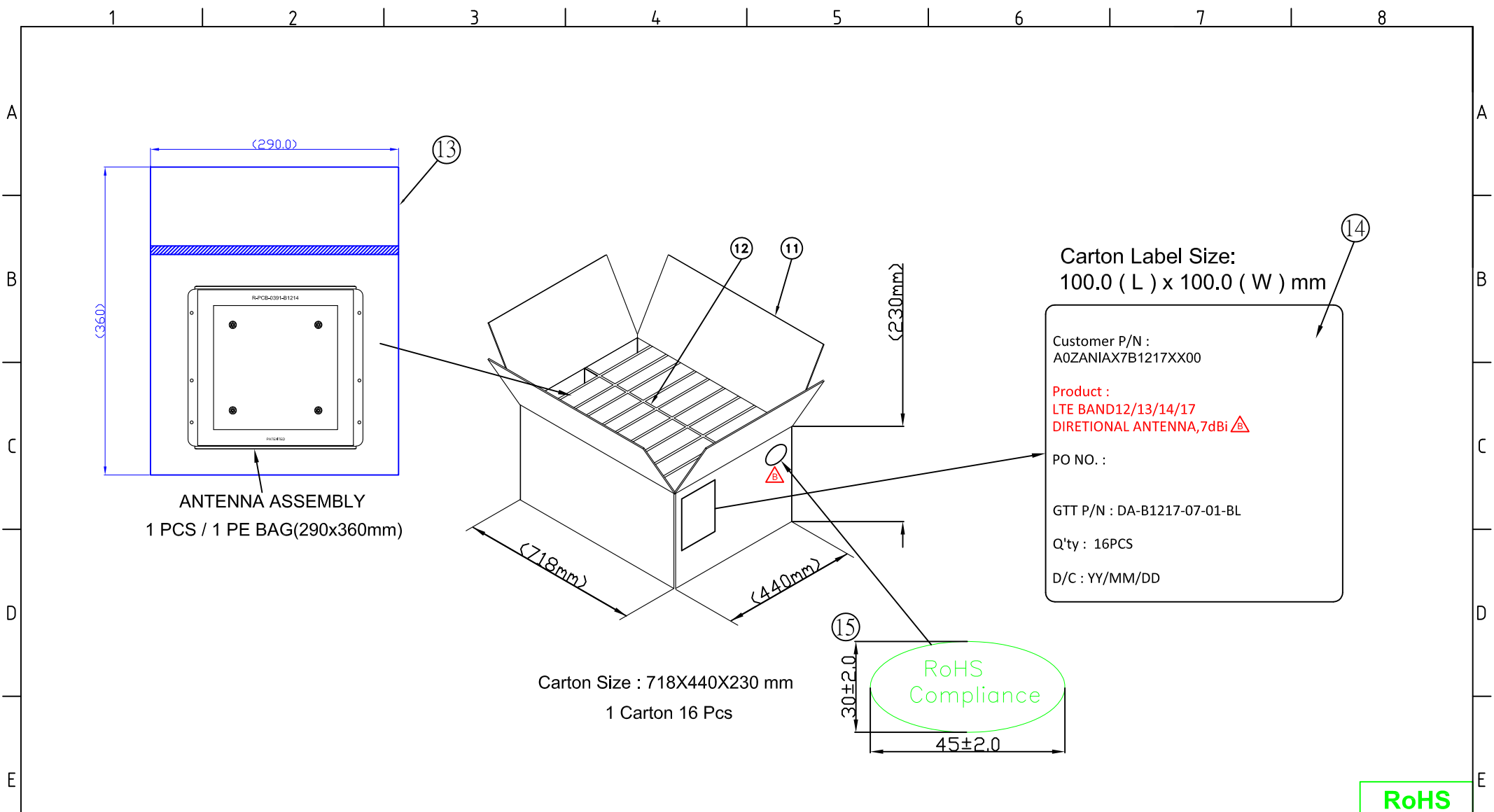
**Grand-Tek**
Technology

GRAND-TEK TECHNOLOGY CO., LTD.

Part No.	A0ZANIAX7B1217XX00	Item No.	DA-B1217-07-01-BL	Customer Code:	G0752
Edited By:	Matt	Check By:		Approved By:	

Standard Specification

REVISIONS				
DATE	REV.	ZONE	DESCRIPTION	ECN NO.
2013/08/30	X1		NEW RELEASE	
2013/09/02	X2		REVISE DRAWING	
2013/09/04	A		1.REV X2 TO REV A AND ADD PACKING 2.REVISE CABLE LENGTH FROM 200.0mm—250.0mm 3.ADD IN CUSTOMER PART NUMBER	
2013/09/30	B		1.REVISE THE ASSEMBLY DESCRIPTION 2.REVISE FREQUENCY & VSWR FOR ANTENNA SPEC 3.ADD IN RoHS LABEL TO PACKING 4.REVISE CARTON LABEL PRODUCT NAME	



				RoHS			
				UNLESS OTHERWISE SPECIFIED TOLERANCE : X.X ±0.3 X.XX ±0.15 ANGLES : ±2° DO NOT SCALE DRAWING			
				DRAWN BY: Matt			
				CHECKED BY:			
				APPROVED BY:			
				DWG NO.:			
15	1	EA	RoHS Label , Size: 45x30mm,Green background,Black Text	TITLE: LTE BAND12/13/14/17 ANTENNA 7dBi			
14	2	EA	CARTON LABEL 100x100 mm	G0752			
13	1	EA	PE BAG 29x36 CM	PART NO. A0ZANIA7B1217XX00			
12	1	EA	蜂巢式隔板 705X207X5.2MM	REV. B			
11	1	EA	CARTON 718X440X230MM , 可搭配蜂巢式隔板	THIRD ANGLE PROJECTION			
ITEM	QTY	U/M	DESCRIPTION	PAGE 2 OF 2			
				DATE 2013/09/30			
				ITEM NO. DA-B1217-07-01-BL			



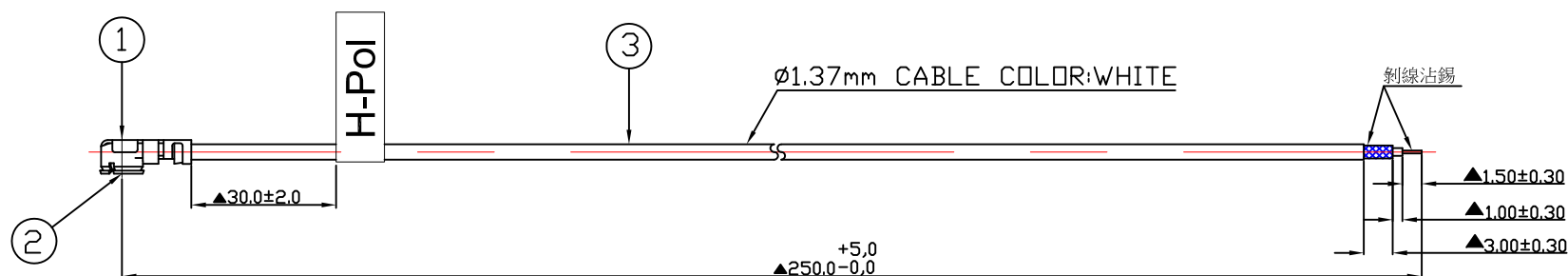
GRAND-TEK TECHNOLOGY CO., LTD.

Part No.		Item No.	R-721G0000250CB	Customer Code:	
Edited By:	Matt	Check By:		Approved by:	

Standard Specification

REVISIONS				
DATE	REV.	ZONE	DESCRIPTION	ECN NO.
2013/09/03	A		NEW RELEASE	

半成品



ELECTRICAL PERFORMANCE:

- 1.IMPEDANCE:50 OHMS
- 2.FREQUENCY RANGE:DC~6GHz
- 3.WORKING VOLTAGE:60V_{rms} MAXIMUM
- 4.DIELECTRIC WITHSTANDING VOLTAGE:200V_{rms}.
- 5.INSULATOR RESISTANCE:500M OHMS min.

RoHS

4	1	EA	LABEL,SIZE:31x10mm 白底黑字銅板紙,內容:H-Pol(雙面列印)
3	1	EA	Ø1.37mm CABLE TIN PLATED COLOR:WHITE
2	1	EA	U.FL-LP-088 鍍金CONTACT For □1.37mm Cable焊接式
1	1	EA	U.FL-LP-088 Halogen Free鍍銀Shell(無鹵)白膠芯 For □1.37mm Cable
TITLE	Q'TY	U/M	DESCRIPTION

UNLESS OTHERWISE SPECIFIED TOLERANCE :		ANGLES : ±2°		 榮昌科技股份有限公司 GRAND-TEK TECHNOLOGY CO., LTD.			
X.X ±0.3 X.XX ±0.15 DO NOT SCALE DRAWING		TITLE Horizontal U.FL Jumper,L=250.0mm Color:White					
DRAWN BY	Matt			SIZE A	UNIT mm	PART NO.	REV. A
CHECKED BY							
APPROVED BY				SCALE	1 : 2	THIRD ANGLE PROJECTION  	PAGE 1 OF 1
DWG NO.					ITEM NO. R-721G0000250CB	DATE 2013/09/03	



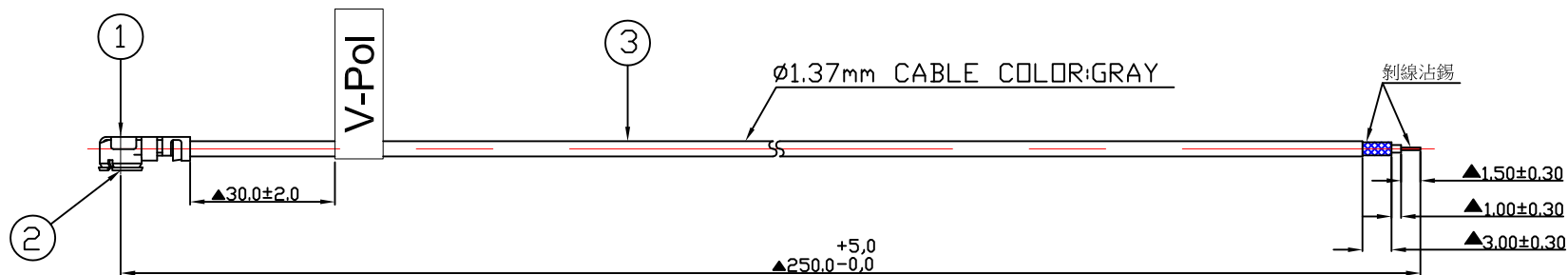
GRAND-TEK TECHNOLOGY CO., LTD.

Part No.		Item No.	R-721G0000250CC	Customer Code:	
Edited By:	Matt	Check By:		Approved by:	

Standard Specification

REVISIONS				
DATE	REV.	ZONE	DESCRIPTION	ECN NO.
2013/09/03	A		NEW RELEASE	

半成品

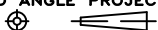


ELECTRICAL PERFORMANCE:

- 1.IMPEDANCE:50 OHMS
- 2.FREQUENCY RANGE:DC~6GHz
- 3.WORKING VOLTAGE:60V_{rms} MAXIMUM
- 4.DIELECTRIC WITHSTANDING VOLTAGE:200V_{rms}.
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RoHS

4	1	EA	LABEL,SIZE:31x10mm 白底黑字銅板紙,內容:V-Pol(雙面列印)
3	1	EA	Ø1.37mm CABLE TIN PLATED COLOR:GRAY
2	1	EA	U.FL-LP-088 鍍金CONTACT For 1.37mm Cable焊接式
1	1	EA	U.FL-LP-088 Halogen Free鍍銀Shell(無鹵)白膠芯 For 1.37mm Cable
TITLE	Q'TY	U/M	DESCRIPTION

UNLESS OTHERWISE SPECIFIED TOLERANCE : X.X ±0.3 X.XX ±0.15 DO NOT SCALE DRAWING		ANGLES : ±2°		 榮昌科技股份有限公司 GRAND-TEK TECHNOLOGY CO., LTD.			
DRAWN BY Matt		TITLE Vertical U.FL Jumper,L=250.0mm Color:Gray					
CHECKED BY		SIZE A	UNIT mm	PART NO.			REV. A
APPROVED BY		SCALE	1 : 1	THIRD ANGLE PROJECTION 			PAGE 1 OF 1
DWG NO.			ITEM NO. R-721G0000250CC			DATE 2013/09/03	

Test Report

0°/90° Dual-Polarized Directional Antenna V0.2 for LTE *Band 12/17*

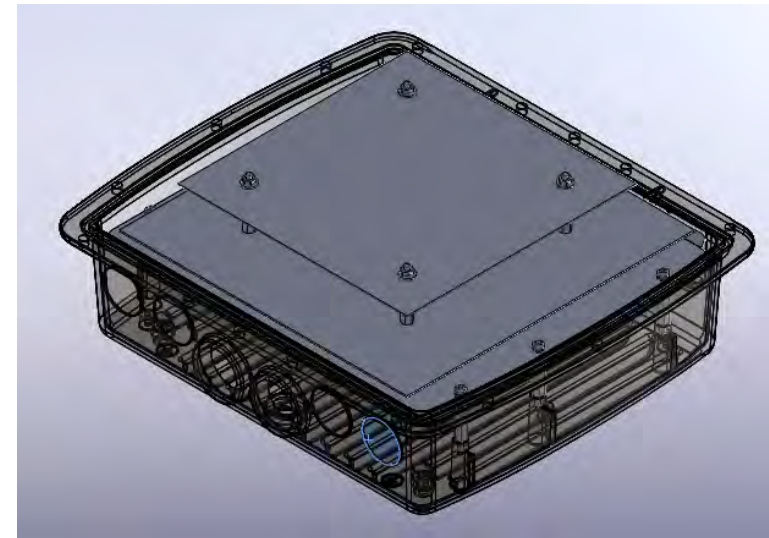
By GTT RF Design Center@ 2013-08-30

Contents

<i>Specification</i>	<i>Page.3</i>
<i>Pattern Test Setup</i>	<i>Page.4</i>
<i>VSWR & Isolation Test</i>	<i>Page.5</i>
<i>Radiation Pattern Test</i>	
<i>Gain & HPBW Table</i>	<i>Page.6</i>
<i>Radiation Patterns of Port#1</i>	<i>Page.7</i>
<i>Radiation Patterns of Port#2</i>	<i>Page.8</i>

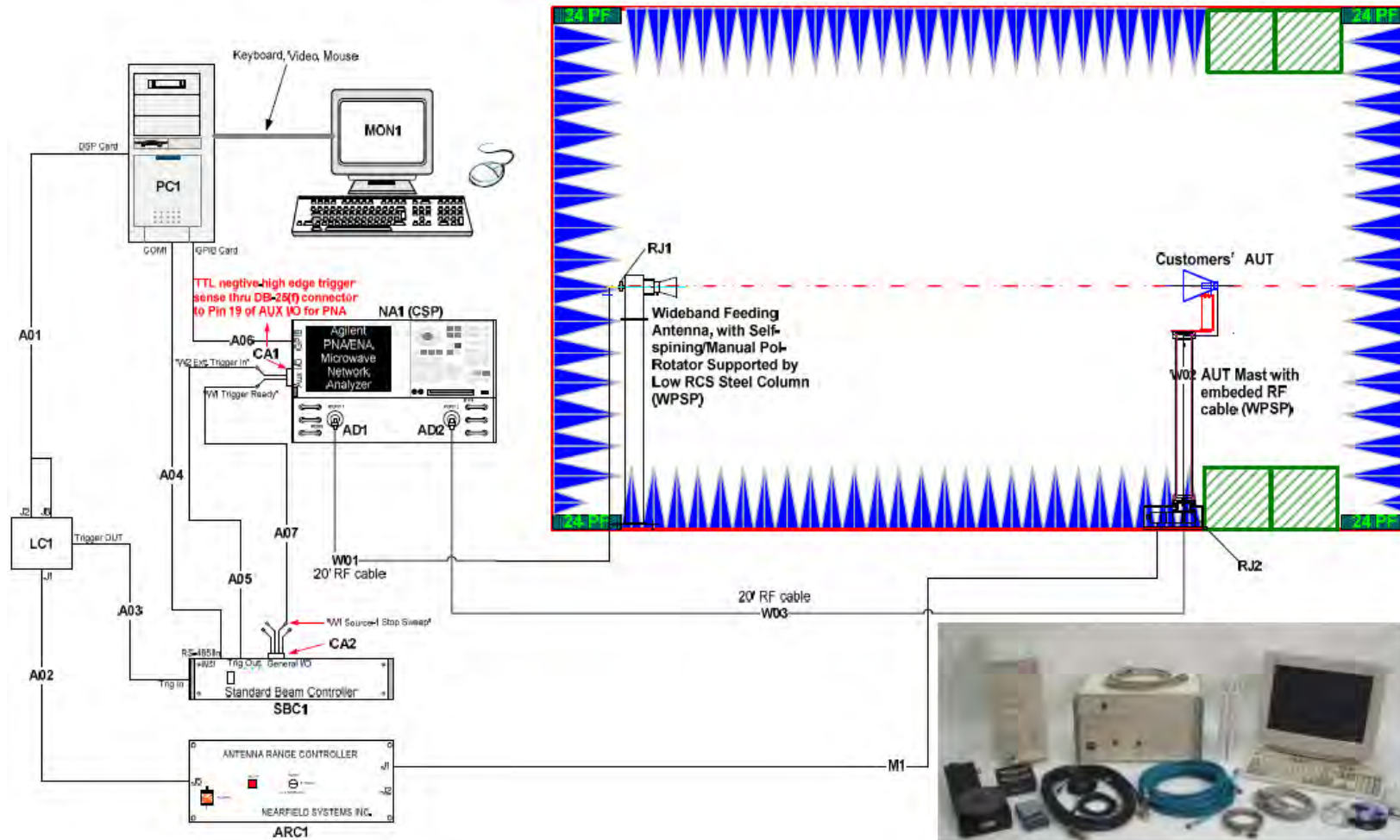
Specification

Port	Port#1	Port#2
Frequency	690~750MHz	
Polarization	Vertical (0°)	Horizontal (90°)
VSWR	< 2.0 : 1 max.	
Isolation	20dB typ.	
Gain*	6~7 dBi typl.	
H-plane HPBW	76°	68°
V-plane HPBW	70°	76°
Connector	U.F.Lx2	
Jumper cable	Φ1.37, 200 mm x2	



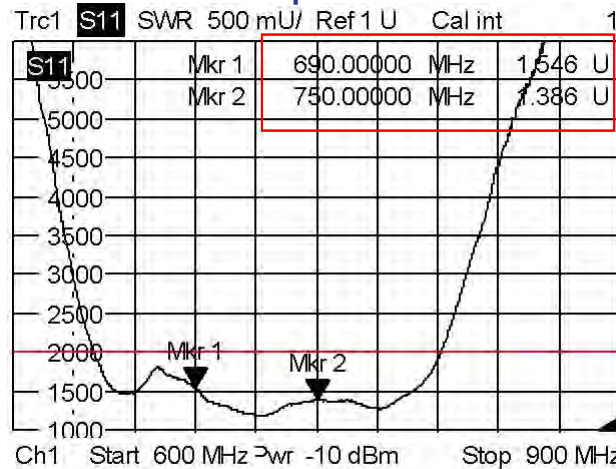
* Cable loss included

Pattern Test Setup

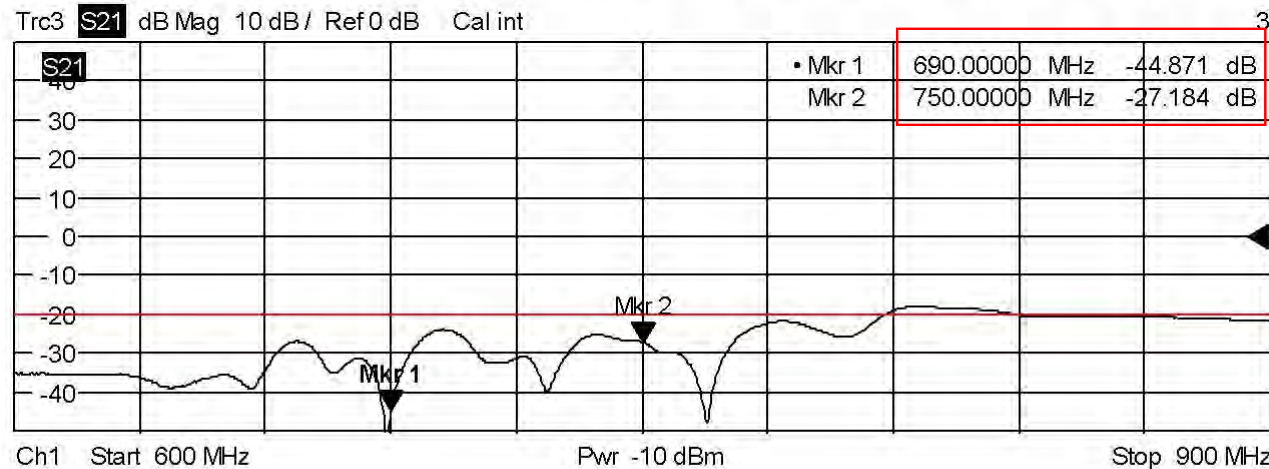
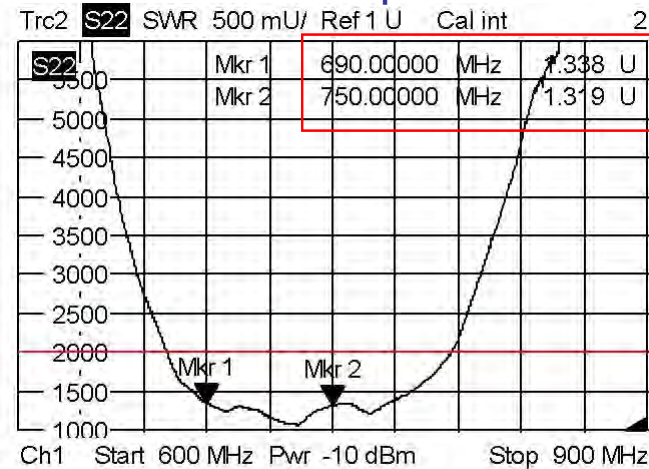


VSWR & Isolation Test

Port#1: V-polar. Port



Port#2: H-polar. Port



Radiation Pattern Test

– Summary –

Port#1: V-polar. Port

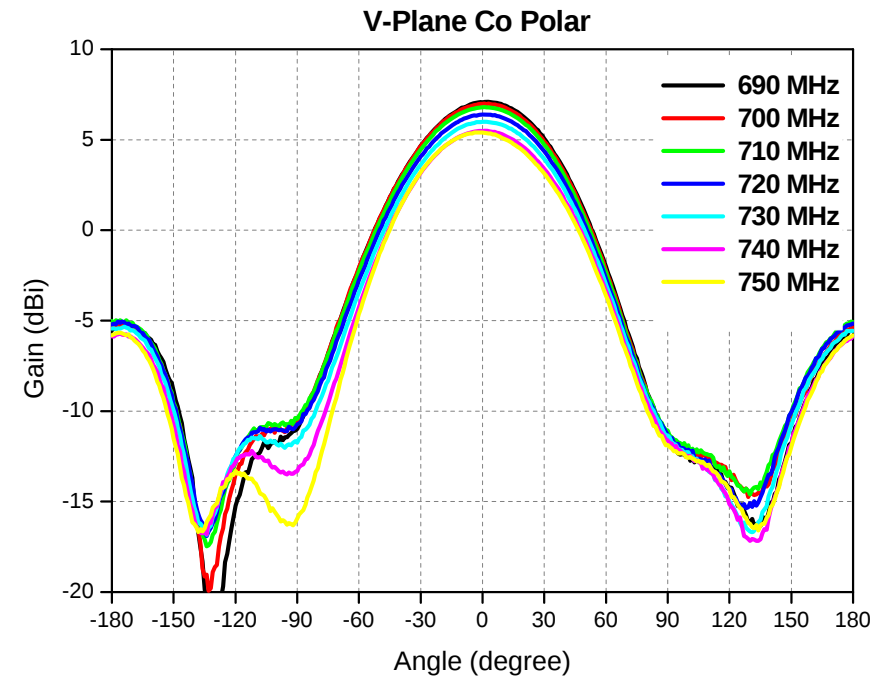
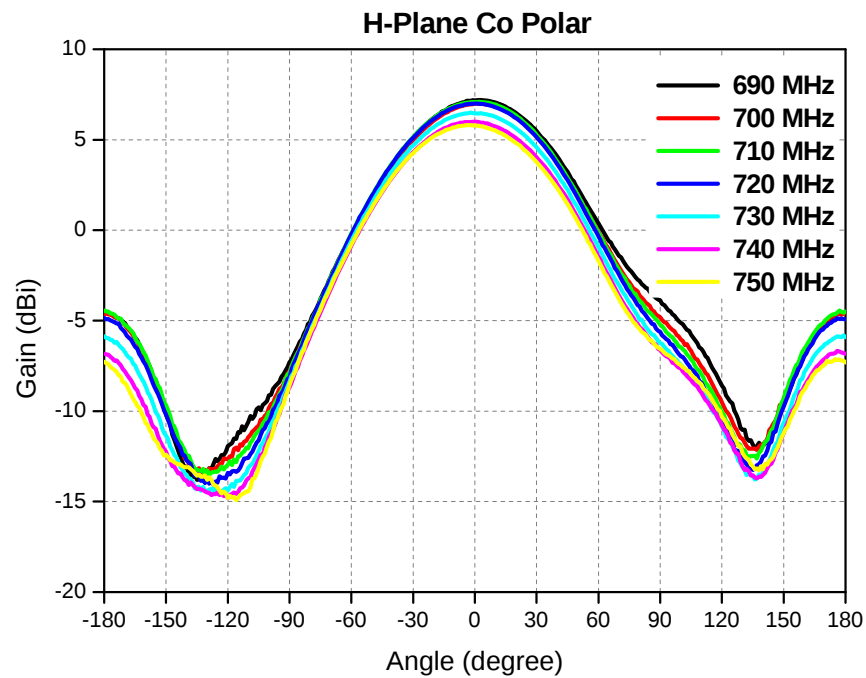
Frequency (MHz)	Peak Gain (dBi)		HPBW (degree)	
	H-plane	V-plane	H-plane	V-plane
690	7.2	7.1	76	69
700	7.0	7.0	76	70
710	7.1	6.8	76	70
720	7.0	6.4	76	70
730	6.5	6.0	76	70
740	6.0	5.5	76	70
750	5.8	5.4	77	70

Port#2: H-polar. Port

Frequency (MHz)	Peak Gain (dBi)		HPBW (degree)	
	H-plane	V-plane	H-plane	V-plane
690	7.2	7.5	67	75
700	7.5	7.4	67	75
710	7.3	7.3	67	76
720	7.0	7.2	68	76
730	6.3	6.4	68	76
740	6.0	6.0	68	76
750	5.8	6.0	68	76

Radiation Pattern Test

– Radiation Patterns of Port#1 –



Radiation Pattern Test

– Radiation Patterns of Port#2 –

