

承 認 書  
SPECIFICATION FOR APPROVAL

客 戶  
CUSTOMER

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日 期  
DATE

2008/11/25

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品 名  
DESCRIPTION

WSS002 850~925MHz Antenna  
with RP-SMA (M)(Black)

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客 戶 料 號  
CUSTOMER P/N

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萬旭電業股份有限公司

WANSHIH ELECTRONIC CO., LTD.

台北縣五股鄉五工六路 72 號 3 樓

3F 72 WU KONG 6TH RD., WU KU INDUSTRIAL DISTRICT

TAIPEI HSIEN, TAIWAN, R.O.C.

TEL : (02) 22988066 (5 LINE) FAX : (02)22981102

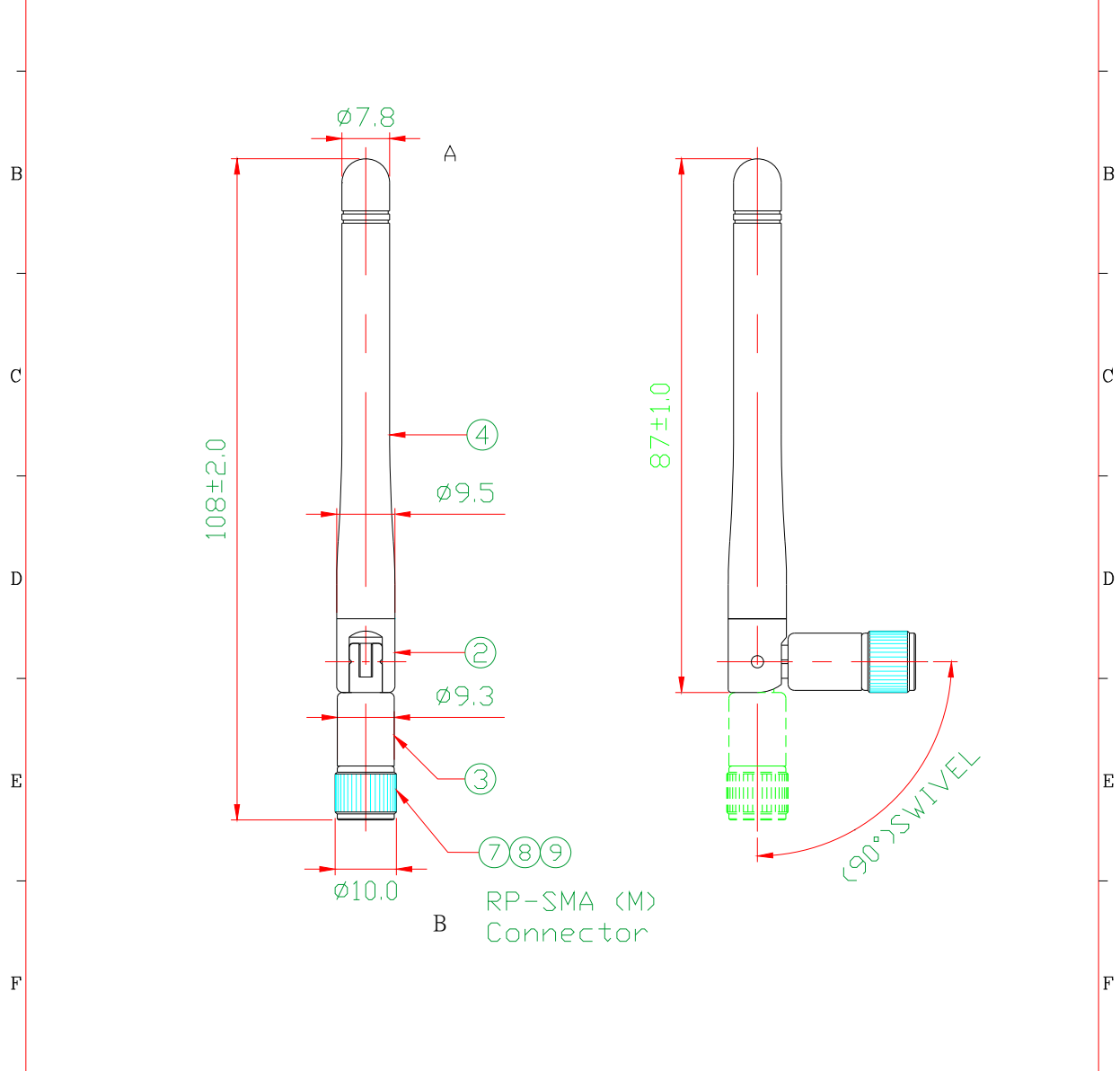
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## SPECIFICATION

- |                               |                               |
|-------------------------------|-------------------------------|
| 1. Description                | : WSS002 850~925MHz Antenna   |
| 2. Model No.                  | : WSS002                      |
| 3. Antenna Profile            | : 108 mm length (see Drawing) |
| 4. Color                      | : Black                       |
| 5. Electrical Characteristics |                               |
| Operating Frequency           | : 850~925MHz                  |
| Antenna Type                  | : Monopole                    |
| Polarization Type             | : Linear                      |
| Type of Radiation             | : Toroidal                    |
| Peak Gain                     | : 0 dBi Typical               |
| Impedance                     | : 50 Ohm nominal              |
| V.S.W.R                       | : 3.5:1 Max.(50*50mm 測試板)     |
| 6. Mechanical Characteristics |                               |
| Action                        | : 90 degrees                  |
| Connector                     | : RP-SMA (M)                  |
| Core                          | : N/A                         |
| 7. Raw Material               |                               |
| Coaxial Cable                 | : RG-178                      |
| Housing                       | : TPU                         |
| Hinge                         | : PC+ALLOY                    |

TOLERANCES:		版次			修訂日期		ECR NO.	作成	設計變更內容簡述	
X	±1									
X.X	±0.5									
X.XX	±0.2									
ANGULAR	±5.0°									

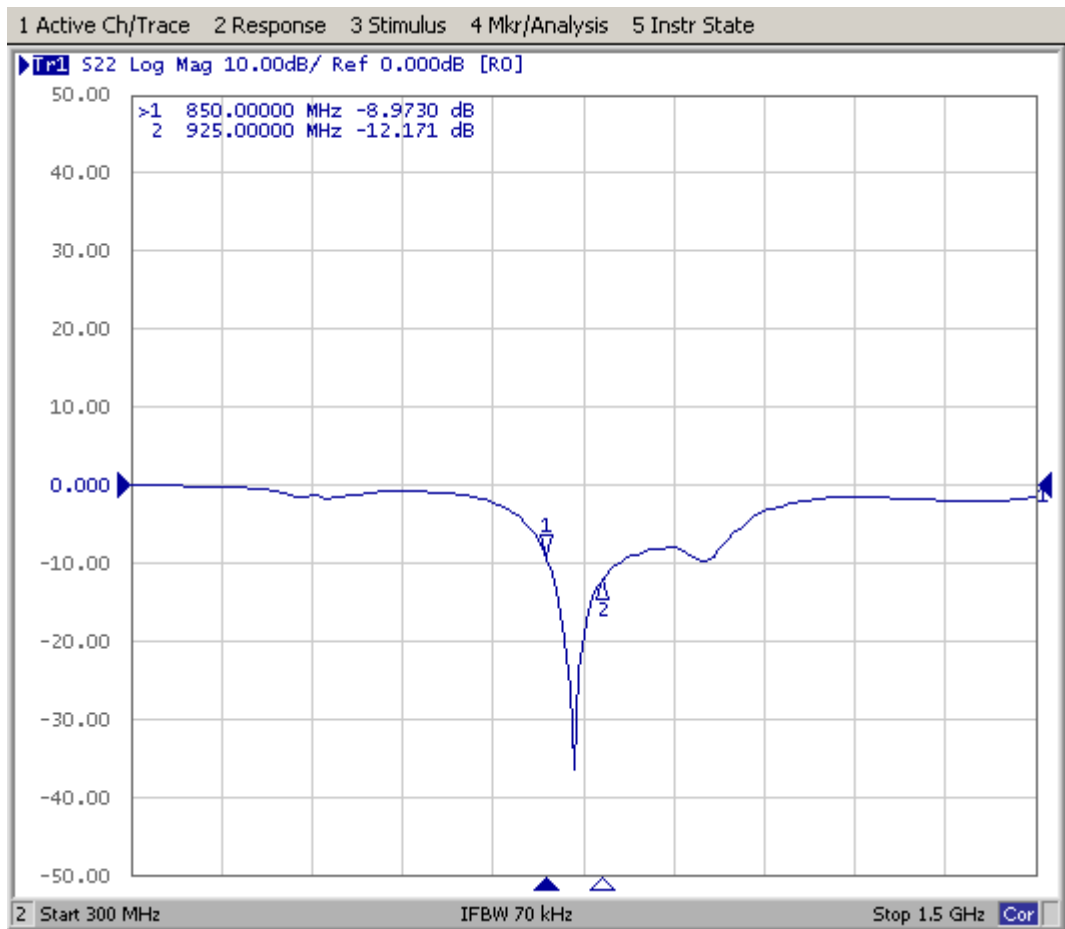


9	Reverse SMA φ 10 本體	√	B02892200301A5	@028922003 SMA CONNECTOR 10 φ	黑		1	或同級品
8	Reverse SMA φ 10 PIN絕緣	√	B02892200302A5	@028922003 SMA CONNECTOR 10 φ 母			1	或同級品
7	Reverse SMA φ 10 連接軸	√	B10874700000A5	@REVESE SMA φ 10 連接軸 L=8.7 φ 4.7銀	銀		1	或同級品
6	銅線	√		@銅線 0.7 φ *50L	銅		1	或同級品
5	固定鉚釘(黑鋅)	√	B02892200140A5	@028922001-4 3.80*1.90 φ 固定鉚釘<小>(黑鋅)	黑		2	或同級品
4	外套<黑>	√	B609575LTPE01I	@IY072BK000 9.5 φ *75L 外套 <黑> TPU	黑		1	或同級品
3	下座<黑>	√	B6093198LP001I	@IY113BK000 9.3 φ 下座 <黑> POM	黑		1	或同級品
2	上座<黑>	√	B609620LPC001I	@IY114BK000 9.5 φ 上座 <黑> PC+ALLOY	黑		1	或同級品
1	RG-178 Coaxial Cable	√	I9RG17800030AE	@RG-178 CABLE 105SV(萬泰)	橙	35	1	或同級品
NO	材料名稱	環材	電腦編號	零件規格	顏色	切斷尺寸	用量	備註

修訂日期:		制訂日期: 2008/11/25		承認圖號		
頁數: 1/1	核准	審查	作成	品名		
第三角法	Jason	Jason	郭雅珍	WSS002 850~925MH Antenna with RP-SMA(M)(Black)		
單位: mm				成品編號	REV	VERSION
比例: FREE					S	1

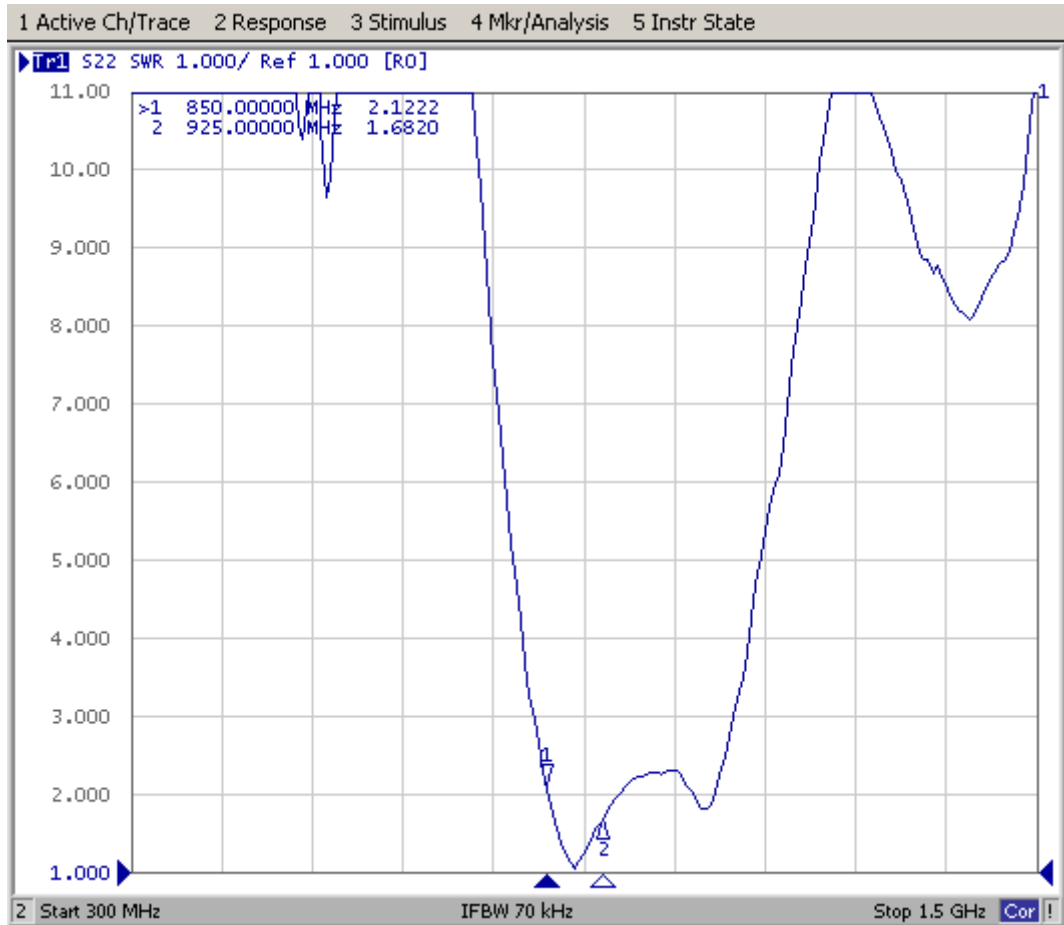
# Electrical Properties

## Return Loss



# Electrical Properties

## V.S.W.R



Coaxial Cable Data Sheet  
RG-178

**SPECIFICATION FOR APPROVAL**

DOCUMENT: A30178B001

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STYLE : 105°C 30V  
RG-178B/U

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SIZE: 7/0.102 SCCS

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RECOGNIZED: UL 1979

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WONDERFUL HI-TECH CO.,LTD

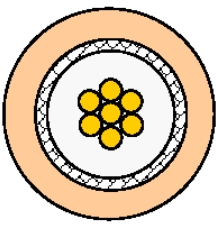
OFFICE : 72WU KONG 6TH ROAD,  
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TAIWAN, R.O.C.

TEL : (03)4527777  
FAX : (03)4517214

 **WONDERFUL HI-TECH CO., LTD**  
**SPECIFICATION**

STYLE	105°C 30V UL1979	DOCUMENT NO : A30178B001	
SIZE	RG-178B/U	ESTABLISHED DATE: 2004/03/22	
STANDARD : MIL-C-17			
Conductor	Size	AWG	30
	Material	----	Silver-Coated Copper Clad Steel
	Conductors No.	----	7
	Conductors Size	mm	0.102
	O.D.	mm	0.30
Insulation	Average Thickness	mm	0.28
	Diameter	mm	0.86 ±0.03
	Material	----	FEP
	Color	----	Clear
Braid	Material	----	Silver-Coated Copper
	Construction	mm	16 / 3 / 0.10
	Coverage	%	95
Jacket	Average Thickness	mm	0.25
	Diameter	mm	1.80 ±0.05
	Material	----	FEP
	Color	----	Brown
Marking			
Drawing			

AK001/210X297/1.0

PAGE : 1

EDITION : 1.2

MAKER : C.Y.CHEN

CONFIRM : S.N.WONG

APPROVAL : W.J.WANG



 **WONDERFUL HI-TECH CO., LTD.**  
**SPECIFICATION**

Electrical & Physical Properties						
Item		RG-178B/U				
Rating Temp Voltage		105°C 30V				
Conductor Resistance		838 OHM/KM/20°C MAX.				
Insulation Resistance		3000 MEGA OHM/KM MIN.				
Dielectric Strength		AC 500V/Minute				
Spark Test		2.5 KV				
Insulation	Unaged	Tensile Strength	2500 PSI MIN.( 1.76 Kg / m <sup>2</sup> )			
		Elongation	200% MIN.			
	Aged	Tensile Strength	<b>UNAGED MIN 75%(168HRS×232°C)</b>			
		Elongation	<b>UNAGED MIN 75%(168HRS×232°C)</b>			
Jacket	Unaged	Tensile Strength	2500 PSI MIN.( 1.76 Kg / m <sup>2</sup> )			
		Elongation	200% MIN.			
	Aged	Tensile Strength	<b>UNAGED MIN.75%(168HRS×232°C)</b>			
		Elongation	<b>UNAGED MIN.75%(168HRS×232°C)</b>			
Nom. Impedance		50 Ohms				
Nom. Capacitance		95.8 pF/m				
Nom. Vel. of Prop.		69.5%				
VSWR (0 – 6 GHZ)		UNDER 1.3				
Attenuation (dB/100m)	100MHz	1GHz	1.8GHz	2.4GHz	5.2GHz	6GHz
	46	155	295	340	505	550

AK001/210X297/1.0

PAGE : 2

EDITION : 1.2

MAKER : C.Y.CHEN

CONFIRM : S.N.WONG

APPROVAL : W.J.WANG

# Housing Material Data Sheet

- Housing - TPU



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東莞宏德化學工業有限公司檢驗報告

DONG GUAN HONTEX CHEMICAL CO.,LTD. TEST REPORT

廣東省東莞市長安鎮霄邊工業區 Postcode:523850

Tel:(0769)85533620 Fax:(0769)85533635

http://www.dghontex.com.cn E-mail:hontex@pub.dgnet.gd.cn

品名 Product Name	TU56DG	製造批號 Lot No.	R80398005
送驗日期 Sample Received	2008/3/13	檢驗日期 Sample Tested	2008/3/14
檢驗項目 Test Items	標準值/測試條件 Spec./Test Method	檢驗結果 Test Results	
外觀 Appearance	/	霧狀	
拉伸強度(kg/cm <sup>2</sup> ) Tensile Strength	>300	496	
延伸率(%) Elongation	>380	603	
100%模量(kg/cm <sup>2</sup> ) 100% modulus	>90	131	
硬度(ShoreD) Hardness	56±2D	55D	
熔融指數(g/10min) Melt Index	10kg/210°C	16.2	
熔融粘度(Pa.s) Melt Viscosity	10kg/210°C	3195	
色差 Color Index	/	11.1	
耐磨耗(mm3) Abrasion:DIN	/	59	
耐寒耐曲折性 Flexibility@-10°C	-10°C/4萬次	完好	
透明性 Transparency	/	不透明	
INSPECTION RESULT		PASS	

主管:  
Supervisor:



檢驗員:  
(Inspector):

王文忠

2008年4月9日

• Hinge(Base/Holder)- PC+ALLOY

<b>SHINBLEND</b> <sup>®</sup> <b>ALLOY</b> ENGINEERING PLASTIC DIVISION	<b>SHINKONG SYNTHETIC FIBERS CORPORATION</b> 新光合成纖維股份有限公司
	5th Fl., 123, Sec.2, Nankong East Road, Taipei, Taiwan
	Tel: 886-2-2507-0131 886-2-2507-1233 (0Lines) 886-3-4932131-1730 Fax: 886-2-2506-8847 886-3-491-5763

**Technical Data**

<b>SHINBLEND</b> <sup>®</sup> <b>A724NA</b> High Impact Grade / 超韌級 AD4011
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		Unit	Test Method	Values
<b>Mechanical properties</b>		<b>機械性質</b>		
Izod Impact(Notched) 23°C	衝擊強度	Kg-cm/cm	ASTM D256	85
-20°C	衝擊強度	Kg-cm/cm	ASTM D256	70
-40°C	衝擊強度	Kg-cm/cm	ASTM D256	65
Tensile Strength	拉伸強度	Kg/cm <sup>2</sup>	ASTM D638	540
Elongation	拉伸率	%	ASTM D638	100
Flexural Strength	彎曲強度	Kg/cm <sup>2</sup>	ASTM D790	800
Flexural Modulus	彎曲模數	Kg/cm <sup>2</sup>	ASTM D790	20000
<b>Thermal properties</b>		<b>熱性質</b>		
Heat Deflection Temperature	熱變形溫度		ASTM D648	
66psi		°C		-
264psi		°C		100
Flammability	防火性	-	UL94	-
Melting Point	熔點	°C	DSC	223
<b>Electrical properties</b>		<b>電氣性質</b>		
Dielectric Strength	介電強度	KV/MM	ASTM D149	-
Dielectric Constant	介電常數	...	ASTM D150	-
Volume Resistivity	體積電阻	Ω-CM	ASTM D257	-
<b>Other properties</b>		<b>其它性質</b>		
Specific Gravity	比重	-	ASTM D792	1.19
Water Absorption	吸水率	%	ASTM D570	0.14
Mold Shrinkage	成形收縮率		ASTM D955	
Flow	流動方向	%		0.4~0.6
Cross Flow	垂直方向	%		0.5~0.7

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