

承 認 書
SPECIFICATION FOR APPROVAL

客 戶
CUSTOMER

Sigmacom Co., Ltd

日 期
DATE

2005/11/24

品 名
DESCRIPTION

WPS008 5G
Swivel Type Antenna
RP-SMA (M) (Black)

客 戶 料 號
CUSTOMER P/N

CIWPS008SC

成 品 編 號
Part No.

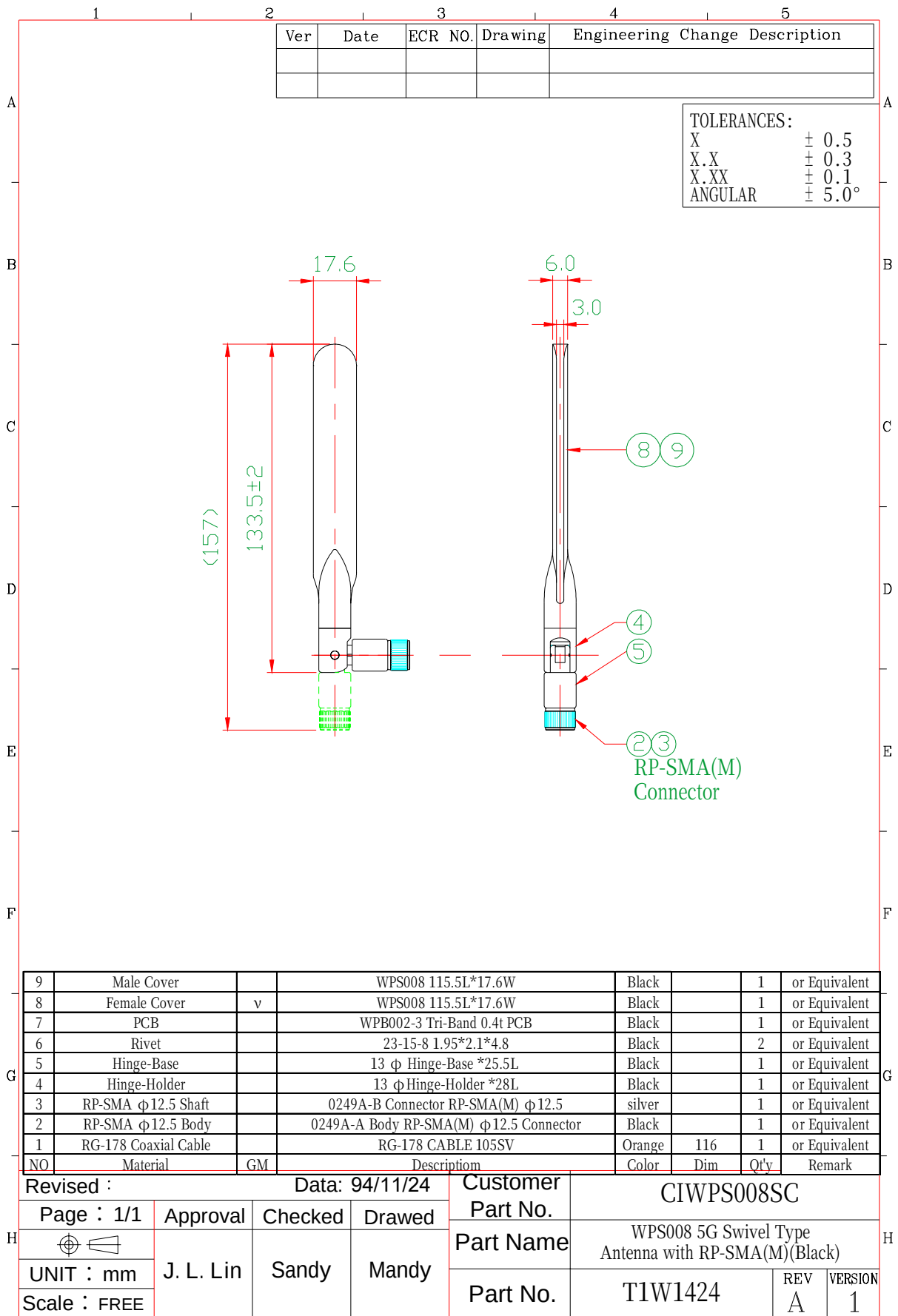
T1W1424A1

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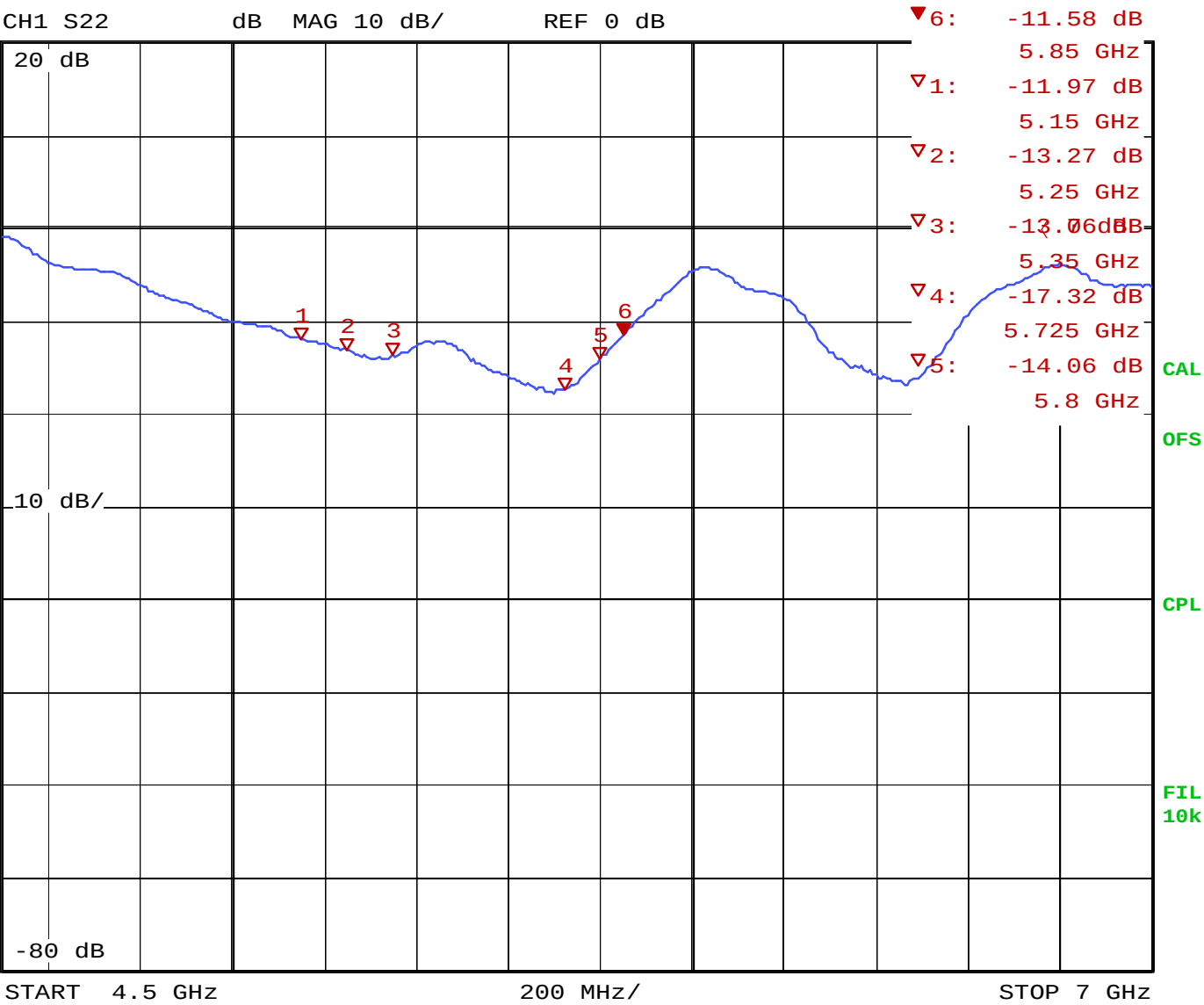
SPECIFICATION

- | | |
|-------------------------------|---|
| 1. Description | : 5GHz Swivel Type
Antenna With RP-SMA (M) |
| 2. Customer | : Sigmacom Co., Ltd |
| 3. Model No. | : WPS008 |
| 4. Part No. | : T1W1424A1 |
| 5. Standard | : IEEE 802.11a/g Wireless LAN |
| 6. Antenna Profile | : 133.5 (157) mm length (see Drawing) |
| 7. Color | : Black |
| 8. Electrical Characteristics | |
| Operating Frequency | : 5.15~5.35/5.725~5.85 GHz |
| Antenna Type | : PCB |
| Polarization Type | : Linear |
| Type of Radiation | : Toroidal |
| Antenna Gain | : 3.0 dBi Typical |
| Impedance | : 50 Ohm nominal |
| V.S.W.R. | : 2.0:1 Max. |
| 9. Mechanical Characteristics | |
| Swivel | : 90 degrees |
| Connector | : RP-SMA (M) |
| Core | : N/A |
| 10. Raw Material | |
| Coaxial Cable | : MIL-C-17 RG-178 B/U |
| Housing | : ABS+PC(FR-2000) |
| Hinge | : PC+ALLOY |



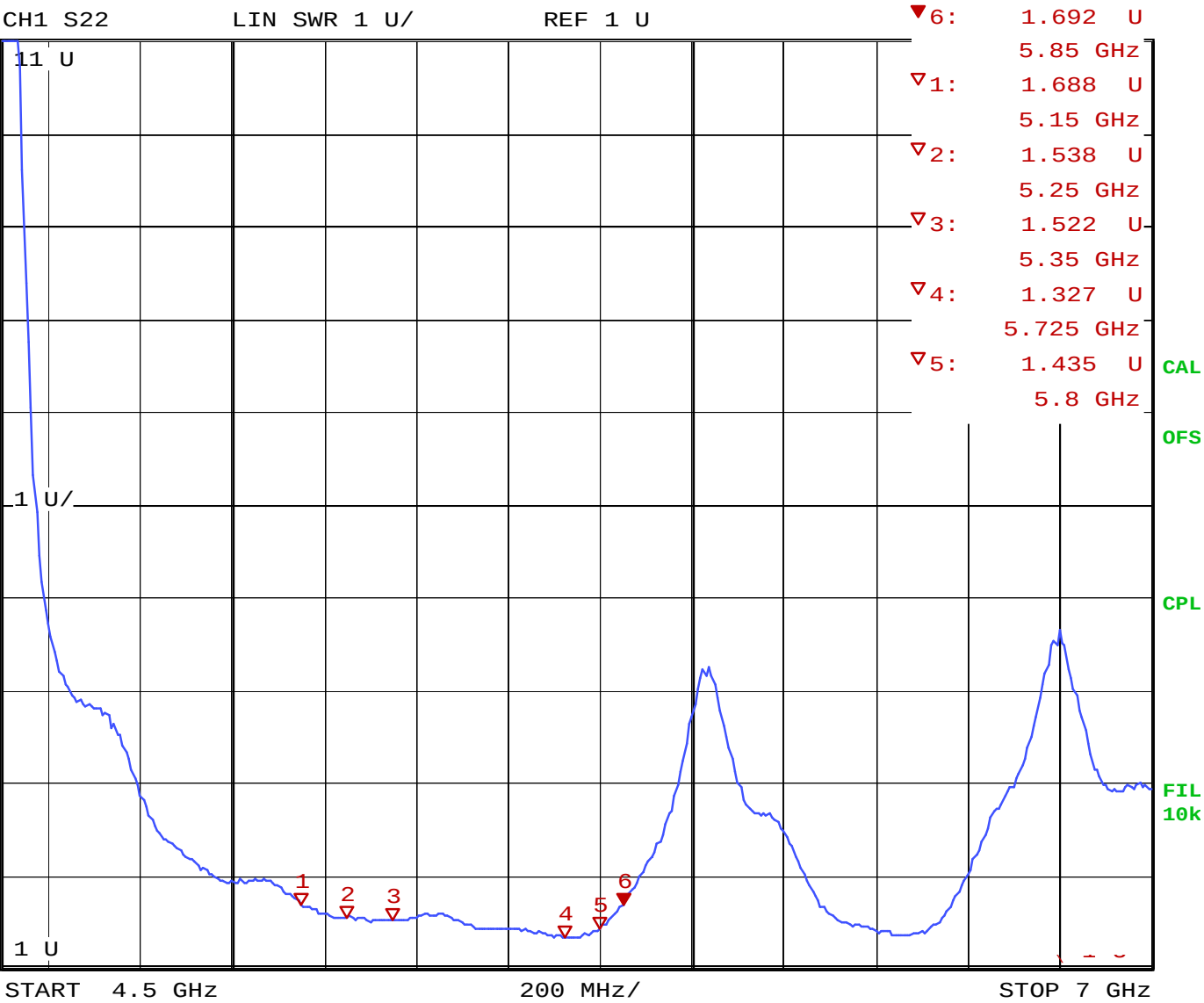
Electrical Properties

Return Loss



Electrical Properties

V.S.W.R



Electrical Properties

Radiation Pattern – H Plane

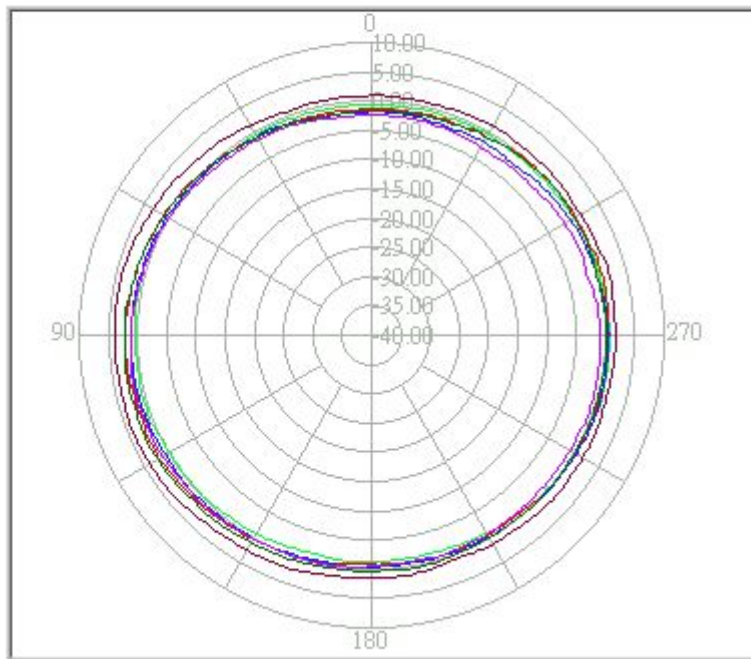


萬旭電業股份有限公司

Model No: 5G-1221

Antenna Position: Vertical

Test Mode: H- PLANE



Freq(MHz)	peak(dBi)	Angle(o)	Avg(dBi)
5150.00	0.78	104.44	-0.17
Freq(MHz)	peak(dBi)	Angle(o)	Avg(dBi)
5250.00	2.23	266.62	0.34
Freq(MHz)	peak(dBi)	Angle(o)	Avg(dBi)
5350.00	1.24	258.02	-0.12
Freq(MHz)	peak(dBi)	Angle(o)	Avg(dBi)
5725.00	1.54	258.02	-0.54
Freq(MHz)	peak(dBi)	Angle(o)	Avg(dBi)
5800.00	4.08	249.42	2.18
Freq(MHz)	peak(dBi)	Angle(o)	Avg(dBi)
5850.00	2.54	259.25	0.46

Electrical Properties

Radiation Pattern – E Plane

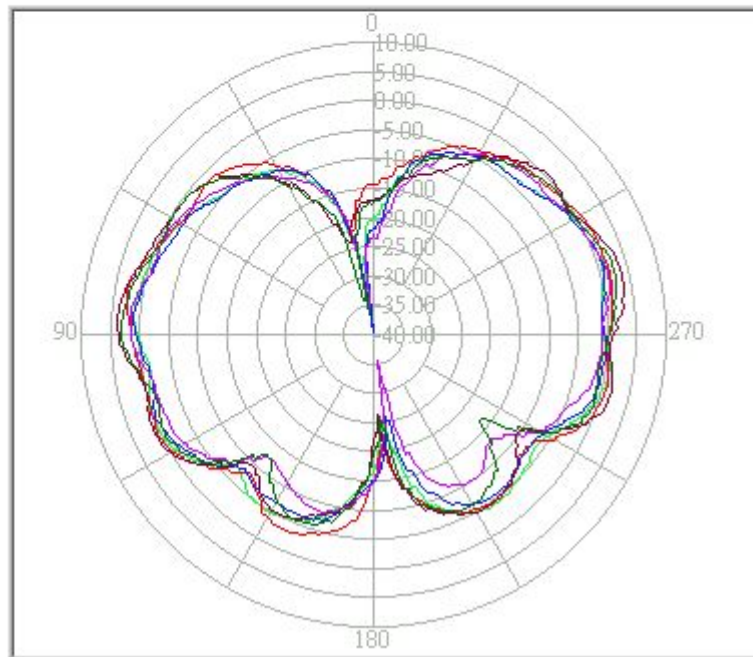


萬旭電業股份有限公司

Model No: 5G-1221

Antenna Position: Horizontal

Test Mode: E- PLANE



Freq(MHz)	peak(dBi)	Angle(o)	Avg(dBi)
5150.00	1.37	68.81	-3.09
Freq(MHz)	peak(dBi)	Angle(o)	Avg(dBi)
5250.00	2.79	280.14	-2.12
Freq(MHz)	peak(dBi)	Angle(o)	Avg(dBi)
5350.00	1.14	273.99	-3.54
Freq(MHz)	peak(dBi)	Angle(o)	Avg(dBi)
5725.00	1.66	273.99	-3.71
Freq(MHz)	peak(dBi)	Angle(o)	Avg(dBi)
5800.00	3.84	272.76	-1.62
Freq(MHz)	peak(dBi)	Angle(o)	Avg(dBi)
5850.00	3.20	271.54	-2.48

Coaxial Cable Data Sheet
RG-178

SPECIFICATION FOR APPROVAL

DOCUMENT: A30178B001

STYLE : 105°C 30V
RG-178B/U

SIZE: 7/0.102 SCCS

RECOGNIZED: UL 1979



WONDERFUL HI-TECH CO.,LTD

OFFICE : 72WU KONG 6TH ROAD,
WU KU IND. DISTRICT
TAIPEI HSIEN,TAIWAN

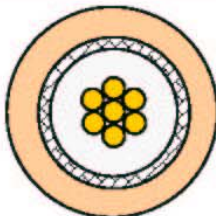
TEL : (02)22988033
FAX : (02)22988031-2

FACTORY : 17 PEI YUAN ROAD,
CHUNG-LI IND. PARK
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		



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 m ²)				
		Elongation	200% MIN.				
	Aged	Tensile Strength	UNAGED MIN 75%(168HRS×232°C)				
		Elongation	UNAGED MIN 75%(168HRS×232°C)				
Jacket	Unaged	Tensile Strength	2500 PSI MIN.(1.76 Kg / m m ²)				
		Elongation	200% MIN.				
	Aged	Tensile Strength	UNAGED MIN.75%(168HRS×232°C)				
		Elongation	UNAGED MIN.75%(168HRS×232°C)				
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	

- Hinge - PC+ALLOY

SHINBLEND® ALLOY ENGINEERING PLASTIC DIVISION	SHINKONG SYNTHETIC FIBERS CORPORATION 新光合成纖維股份有限公司 8th Fl., 123, Sec.2, Nanjing East Road, Taipei, Taiwan Tel: 886-2-2507-0131, 886-2-2507-1234 (Lines) 886-3-4932131-1730 Fax: 886-2-2506-8047, 886-3-491-3763
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Technical Data

SHINBLEND® A724NA

High Impact Grade / 超韌級 : AD4011

		Unit	Test Method	Values
Mechanical properties		機械性質		
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 ²	ASTM D638	540
Elongation	拉伸率	%	ASTM D638	100
Flexural Strength	彎曲強度	Kg/cm ²	ASTM D790	800
Flexural Modulus	彎曲模數	Kg/cm ²	ASTM D790	20000
Thermal properties		熱性質		
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
Electrical properties		電氣性質		
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	-
Other properties		其它性質		
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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2002/6