



權億科技股份有限公司
Master Wave Technology Co., Ltd.

承認書

APPROVAL SHEET

Customers: 金運科技股份有限公司

Customer Model No.:

Master Wave Model No.: 98282MRSX000

Product Description: 8282 Replacement Ant.

Issue Date: 2011/9/7

REV.: 00

客戶承認用印 Customer Approved		權億承認用印 Confirmation Signature	
			
核准 Approve	主管 Chief	承辦 Responsible	
Hero	Corey	Charlene	

MASTER WAVE TECHNOLOGY CO., LTD.

權億科技股份有限公司

Address: No.81-8, Longshou St., Taoyuan City, Taoyuan County 330, Taiwan (R.O.C.)

Tel: +886-3-3600306 Fax: +886-3-3600979

Shengyih Electronic Plastic Co. Ltd (Shou Zhou)

聲億電子塑膠有限公司 (蘇州廠)

Address: No.95 Wusong south Rd of Luzhi Town Wu zhong Area Suzhou City, China

Tel : +86-512-65046030 Fax : +86-512-65046033

Shengyih Electronic Plastic Manufactory (Dongguan)

聲億電子塑膠製品廠 (東莞廠)

Address: Mu-Lun Administration Area, Changping Town, Dongguan City, Guangdong Province, China

Tel : +86-769-83914045 Fax : +86-769-83914046



Table of Contents

Item

1. Antenna Specifications

- Drawing
 - Electrical Properties
 - Mechanical Properties
-

2. Test Report

- Electrical test
 - Pattern test
 - Antenna Efficiency
-

3. Material Certifications

- Connector
 - Cable
-

4. Packing

- PE Bag
- Carton

Modification History:

REV.	Date	Content
00	2011/9/7	



4		3		2		1																																																							
		REV	ZONE	DESCRIPTION	ENG	APPROVED	DATE																																																						
<div><div>F</div><div>E</div><div>D</div><div>C</div><div>B</div><div>A</div></div> <div><p>Reverse SMA Plug</p></div> <table border="1"><thead><tr><th colspan="2">Electrical Properties</th></tr></thead><tbody><tr><td>Frequency Range</td><td>2.4~2.5GHz</td></tr><tr><td>Impedance</td><td>50Ω</td></tr><tr><td>V.S.W.R.</td><td>≤2.0</td></tr><tr><td>Radiation</td><td>Omni</td></tr><tr><td>Gain</td><td>2 dBi</td></tr><tr><td>Polarization</td><td>Vertical</td></tr><tr><th colspan="2">Mechanical Properties</th></tr><tr><td>Whip</td><td>TPEE</td></tr><tr><td>Connector</td><td>Brass</td></tr><tr><td>Weight</td><td>12 g(est)</td></tr><tr><td>Operating Temp</td><td>-20°C~+65°C</td></tr></tbody></table> <table border="1"><thead><tr><th colspan="2">UNLESS OTHERWISE SPECIFIED TOLERANCES ON : ±0.5</th><th>DATE:</th><th>MAT'L:</th><th colspan="2">Master Wave Technology CO.,LTD</th></tr></thead><tbody><tr><td colspan="2"></td><td>UNIT:</td><td>FINISH: Black</td><td colspan="2"></td></tr><tr><td colspan="2">THIRD ANGLE PROJECTION</td><td>SCALE: 1/1</td><td colspan="3">TITLE : 8282 Replacement Antenna</td></tr><tr><td>APPROVED BY:</td><td>CHECKED BY:</td><td>DESIGNED BY:</td><td>DRAWN BY: Sally</td><td>MODEL NO. : 98282MRSX000</td><td>REV 00</td></tr><tr><td colspan="6">PART NO. :</td></tr></tbody></table> <div>THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MASTER WAVE AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION.</div> <div><div>4</div><div>3</div><div>2</div><div>1</div></div>								Electrical Properties		Frequency Range	2.4~2.5GHz	Impedance	50Ω	V.S.W.R.	≤2.0	Radiation	Omni	Gain	2 dBi	Polarization	Vertical	Mechanical Properties		Whip	TPEE	Connector	Brass	Weight	12 g(est)	Operating Temp	-20°C~+65°C	UNLESS OTHERWISE SPECIFIED TOLERANCES ON : ±0.5		DATE:	MAT'L:	Master Wave Technology CO.,LTD				UNIT:	FINISH: Black			THIRD ANGLE PROJECTION		SCALE: 1/1	TITLE : 8282 Replacement Antenna			APPROVED BY:	CHECKED BY:	DESIGNED BY:	DRAWN BY: Sally	MODEL NO. : 98282MRSX000	REV 00	PART NO. :					
Electrical Properties																																																													
Frequency Range	2.4~2.5GHz																																																												
Impedance	50Ω																																																												
V.S.W.R.	≤2.0																																																												
Radiation	Omni																																																												
Gain	2 dBi																																																												
Polarization	Vertical																																																												
Mechanical Properties																																																													
Whip	TPEE																																																												
Connector	Brass																																																												
Weight	12 g(est)																																																												
Operating Temp	-20°C~+65°C																																																												
UNLESS OTHERWISE SPECIFIED TOLERANCES ON : ±0.5		DATE:	MAT'L:	Master Wave Technology CO.,LTD																																																									
		UNIT:	FINISH: Black																																																										
THIRD ANGLE PROJECTION		SCALE: 1/1	TITLE : 8282 Replacement Antenna																																																										
APPROVED BY:	CHECKED BY:	DESIGNED BY:	DRAWN BY: Sally	MODEL NO. : 98282MRSX000	REV 00																																																								
PART NO. :																																																													



Electrical Properties

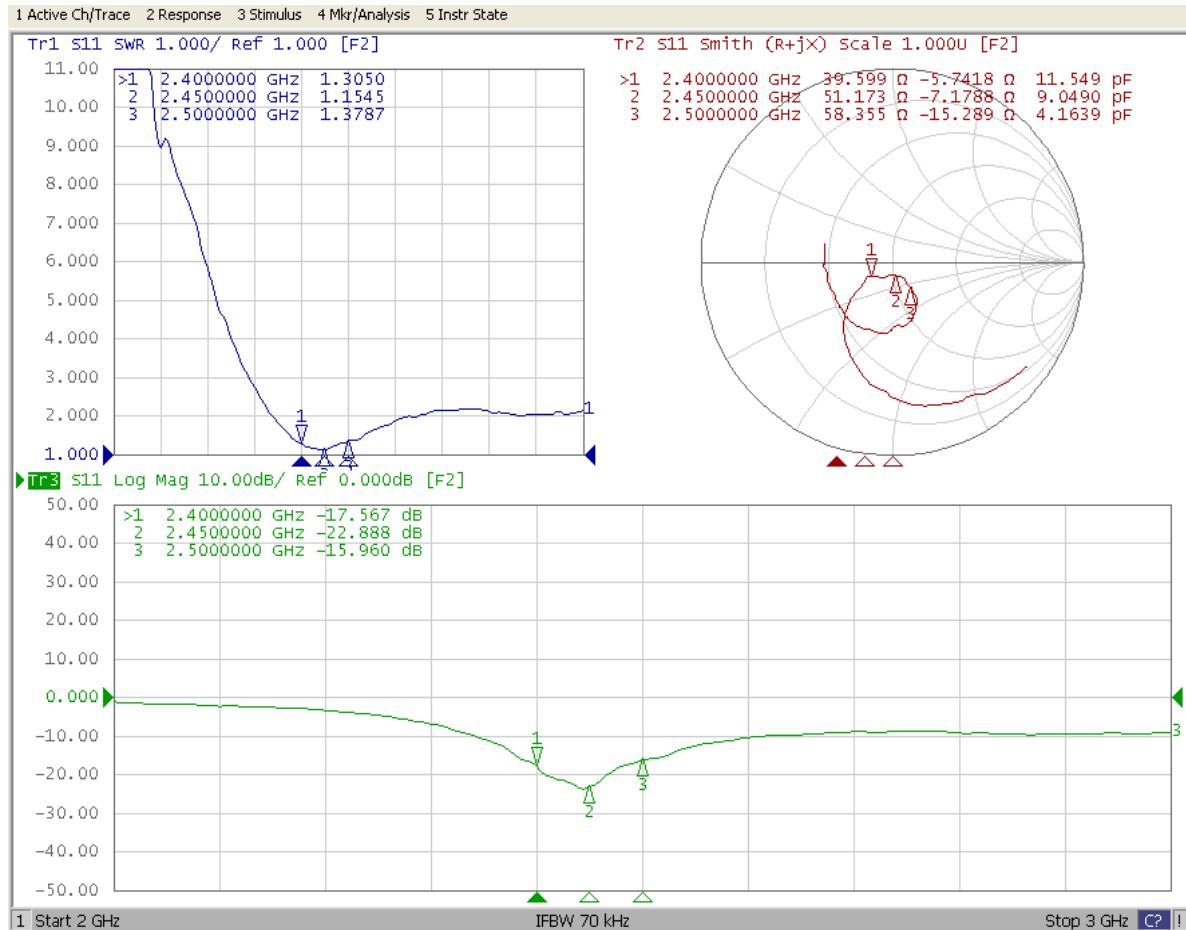
Type	8282 Replacement Antenna
Frequency range	2.4~2.5 GHz
Impedance	50 Ohms
VSWR	≤ 2.0

Mechanical Properties

Material	TPEE
Connector	RP SMA Plug
Dimension(L*W*H)	86*Ø10 mm

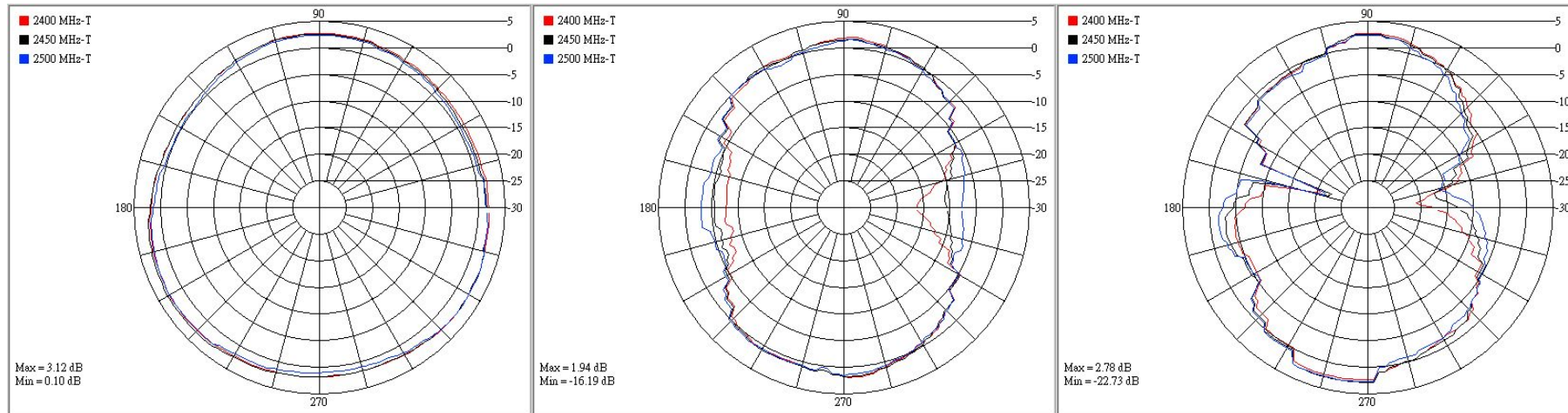


Electrical Test





2D Radiation Pattern



XY-Plane

XZ-Plane

YZ-Plane



Antenna Efficiency

XY-Plane			
Frequency (MHz)	2400	2450	2500
Peak Gain (dBi)	2.75	3.12	2.68
Average Gain (dB)	2	1.96	1.58
XZ-Plane			
Frequency (MHz)	2400	2450	2500
Peak Gain (dBi)	1.94	1.85	1.52
Average Gain (dB)	-2.47	-2.23	-2.09
YZ-Plane			
Frequency (MHz)	2400	2450	2500
Peak Gain (dBi)	2.71	2.78	2.76
Average Gain (dB)	-2.49	-2.25	-2.34

Frequency (MHz)	2400	2450	2500
Peak EIRP (dBm)	2.7	3.09	2.65
Efficiency (%)	89.7	92.3	85.9



Connector

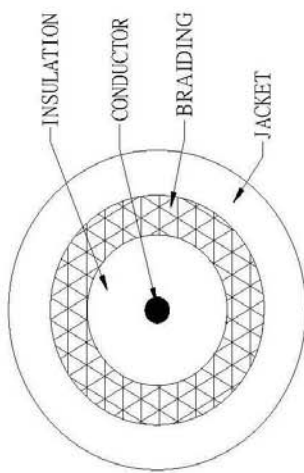
SMA

Electrical Properties	Impedance	50 ohm
	Frequency Range	0~6 GHz
	V.S.W.R	≤ 1.5
	Working Voltage	$\leq 250V_{rms}$
	Dielectric Withstanding	$\leq 670 V_{rms}$
	Voltage Insulation Resistance	≥ 2000 Megohms
	Contact Resistance	Center contact: 3.0 Milliohms (Max.) Outer contact: 2.0 Milliohms (Max.)
	Recommended coupling nut torque	4.0 in. lbs. ~ 8.8in. lbs.
	Coupling nut retention force	≥ 60 lbs.
	Contact captivation axial	≥ 6 lbs.
	Coupling Proof Torque	15 in-lbs.min
	Durability (mating)	≥ 500 cycles
Environmental Ratings	Operating Temperature	-65°C ~ +165°C
	Thermal shock	MIL-STD-202,METHOD 107,Condition B
	Corrosion	MIL-STD-202,METHOD 101,Condition B
	Shock	MIL-STD-202,METHOD 213,Condition I
	Vibration	MIL-STD-202,METHOD 204,Condition D
	Moisture Resistance	MIL-STD-202,METHOD 106
Material Specifications	Material Data	Material
	Body	Brass
	Center Contact	Brass
	Insulator	Teflon



線材規格

CABLE SPECIFICATION

SPECIFICATION:		1.37mm CABLE	CONSTRUCTION D.W.G	
ITEM		SPECIFICATION		
CONDUCTOR	AWG	30AWG		
	MATERIAL	Silver-plated copper wire stranded conductor		
	COND.SIZE	7/0.102±0.008 mm		
INSULATION	MATERIAL	Teflon FEP		
	O. D	0.9±0.03 mm		
	N O.	1C		
	COLOR	Natural color		
BRAID	MATERIAL	Silver-plated copper wire		
COPPER	SIZE	5/16/0.05 Min.90% ↑		
	MATERIAL	Teflon FEP		
	COLOR	White, Black, Brown, Gray, Red, Blue, Yellow		
JACKET	O. D	1.37±0.10 mm		
	COLOUR CODE:			
1. 30AWG*1C				
Character of electrical				
Item		Unit	Detail of spec.	
1.Capacitance(Nom.)	-----	pF/M	95	
	-----	Ω	50±2	
3. Attenuation(Max.)	1.0GHZ	dB/M	1.5	
	2.0GHZ	dB/M	2.1	
	2.4GHZ	dB/M	2.4	
	3.0GHZ	dB/M	2.6	
	4.0GHZ	dB/M	3.1	
	5.0GHZ	dB/M	3.5	
6.0GHZ	dB/M	3.9		
PHYSICAL PROPERTIES OF JACKET				
Master Wave Technology Co., Ltd.				
PART NO.				
APPROVED		CUSTOMER		
CHECKED		REV		
DRAWING		DATE		
Dyan		A		
		2007/10/8		