

承 認 書
SPECIFICATION FOR APPROVAL

客 戶
CUSTOMER

威力工業網絡股份有限公司

日 期
DATE

2013/2/4

品 名
DESCRIPTION

WSS023 Dual Band Antenna with
RP-SMA(M)(Black)

客 戶 料 號
CUSTOMER P/N

2172-3T-02-031-05-02

成 品 編 號
Part NO.

OG1WFI0001A



萬旭電業股份有限公司
Wanshih Electronic Co., Ltd.

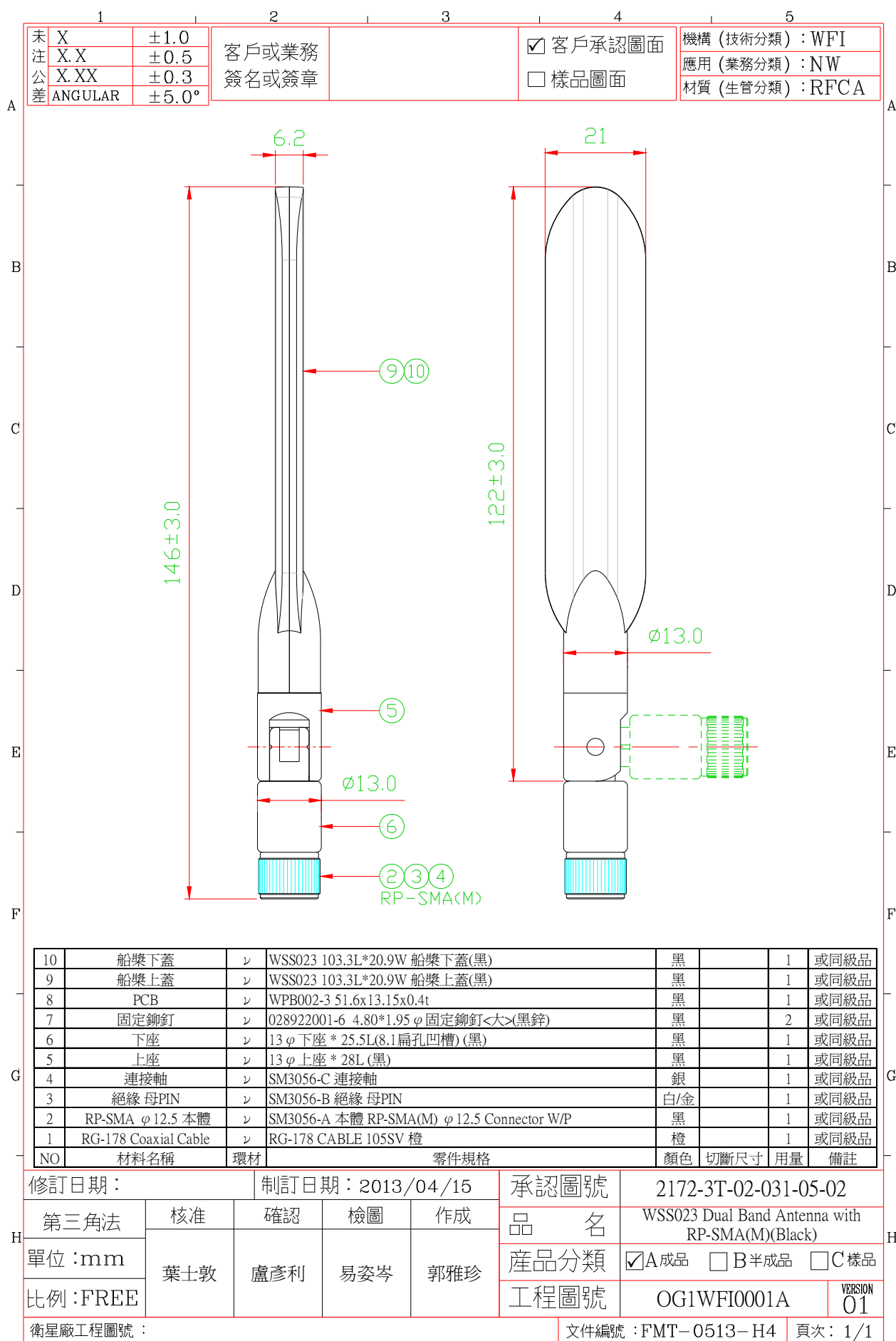
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SPECIFICATION

- | | |
|-------------------------------|--|
| 1. Description | : WSS023 Dual Band Antenna
With RP-SMA(M) |
| 2. Customer | : 威力工業網絡股份有限公司 |
| 3. Model No. | : WSS023 |
| 4. Part No. | : OG1WFI0001A |
| 5. Standard | : IEEE 802.11a+b/g Wireless LAN |
| 6. Antenna Profile | : 146 mm (see Drawing) |
| 7. Color | : Black |
| 8. Electrical Characteristics | |
| Operating Frequency | : 2.4~2.5/5.15~5.35/5.725~5.85 GHz |
| Antenna Type | : PCB |
| Polarization Type | : Linear |
| Type of Radiation | : Toroidal |
| Antenna Peak Gain | : 2.0 dBi Typical |
| Impedance | : 50 Ohm nominal |
| V.S.W.R. | : 3.0:1 Max. |
| 9. Mechanical Characteristics | |
| Swivel | : 90 degrees |
| Connector | : RP-SMA(M) |
| Core | : N/A |
| 10. Raw Material | |
| Coaxial Cable | : RG-178 |
| Housing | : ABS |
| Hinge | : PC+ALLOY |

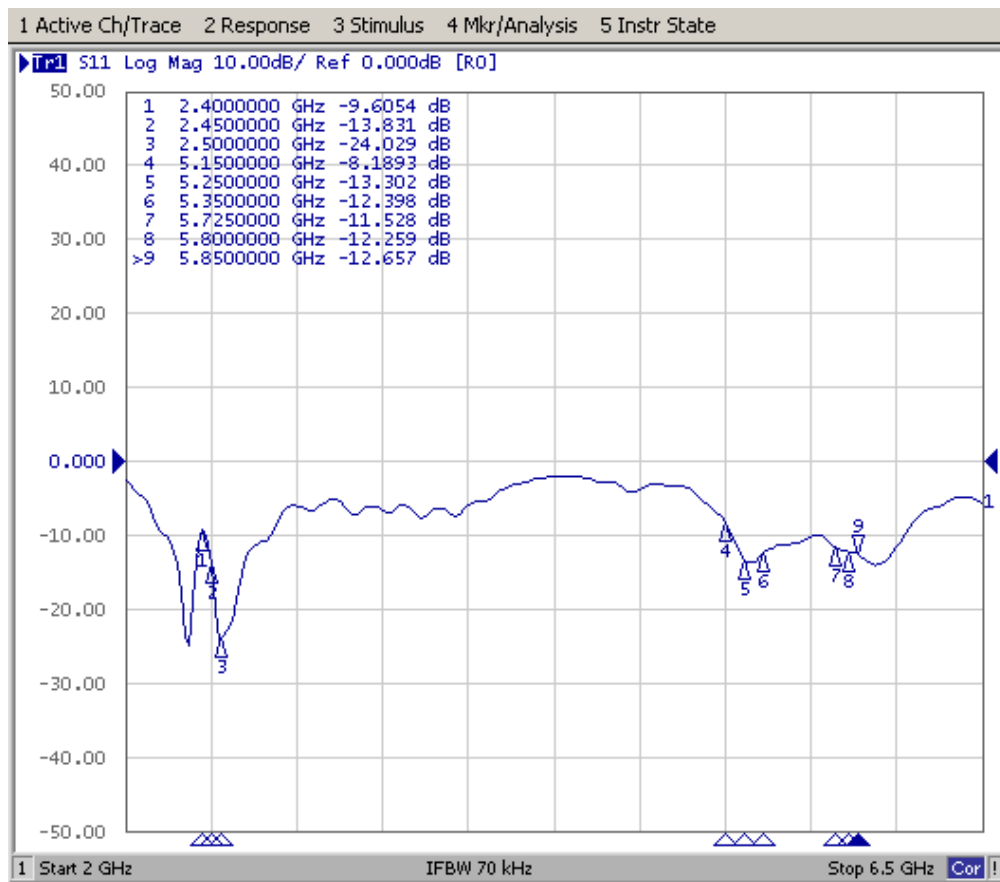


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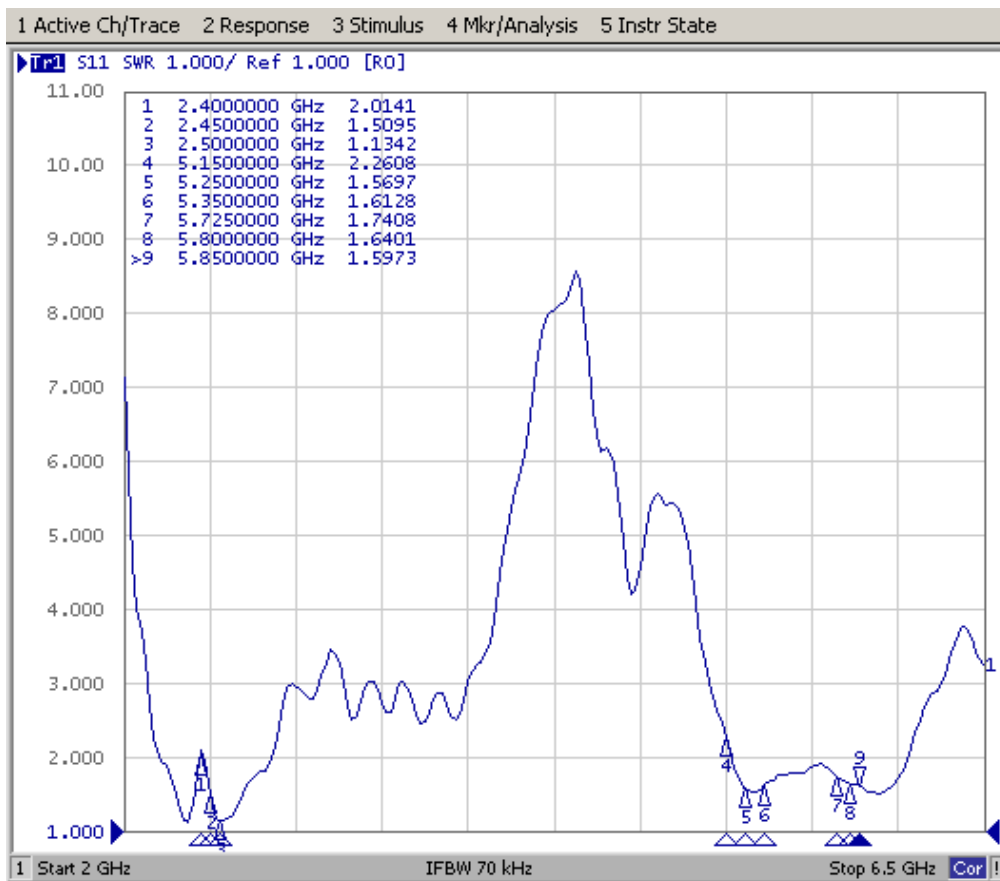


Electrical Properties

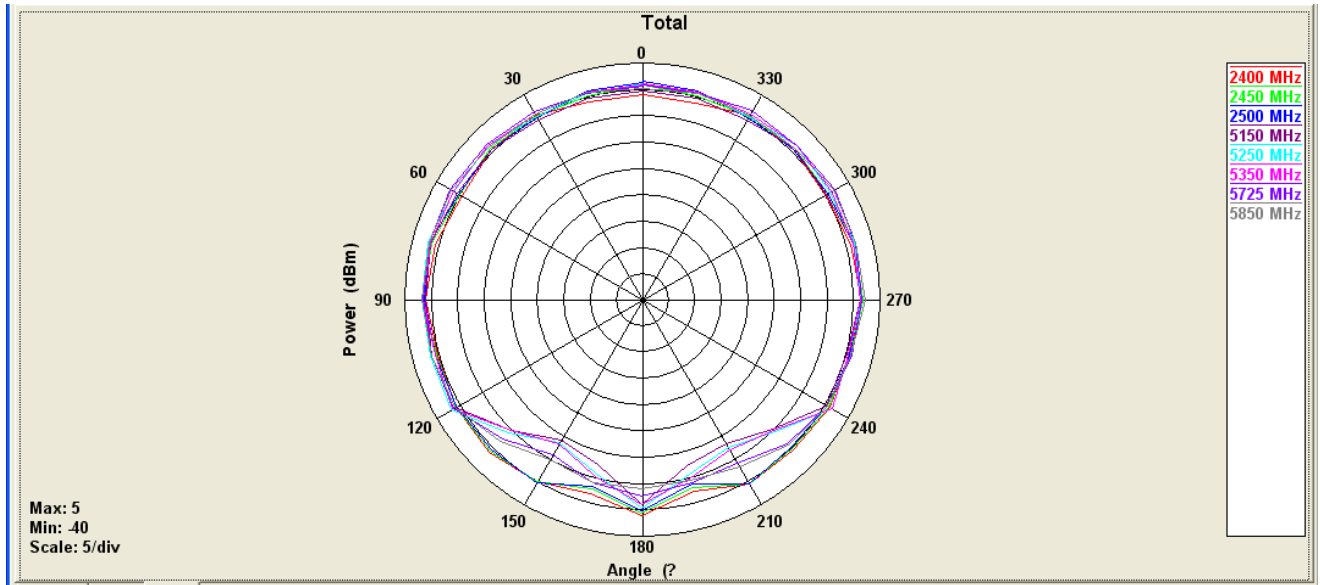
Return Loss



V.S.W.R



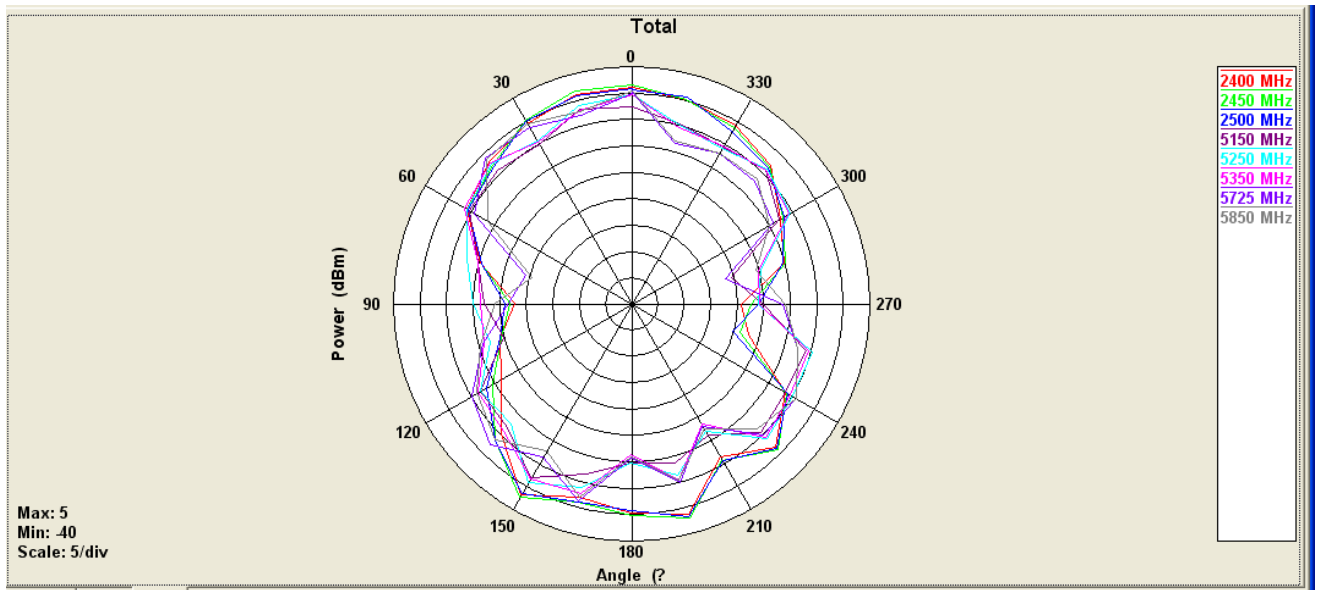
Radiation Pattern – H Plane



Frequency	2400	2450	2500	5150	5250	5350	5725	5850
Ant. Port Input Pwr. (dBm)	0	0	0	0	0	0	0	0
Tot. Rad. Pwr. (dBm)	0.03858	0.22809	0.25813	-0.7759	-0.0307	-0.1469	0.22315	0.0901
Peak EIRP (dBm)	1.35363	1.48474	1.51369	1.26204	1.70393	1.41949	1.87551	1.92461
Directivity (dBi)	1.31505	1.25665	1.25556	2.03798	1.7346	1.56635	1.65236	1.83451
Efficiency (dB)	0.03858	0.22809	0.25813	-0.7759	-0.0307	-0.1469	0.22315	0.0901
Gain (dBi)	1.35363	1.48474	1.51369	1.26204	1.70393	1.41949	1.87551	1.92461
Front/Back Ratio (dB)	0.39634	0.20082	1.04417	1.36106	1.5385	0.45633	1.5366	0.30753
Beamwidth (?)	162	159	173	144	145	100	160	136
+ Beamwidth (?)	90	90	83	54	55	90	70	90
- Beamwidth (?)	72	69	90	90	90	10	90	46
Boresight Angle (?)	270	270	75	75	75	240	60	270
Maximum Power (dBm)	1.35363	1.48474	1.51369	1.26204	1.70393	1.41949	1.87551	1.92461
Minimum Power (dBm)	-2.4212	-3.2969	-3.9742	-9.2561	-8.7255	-8.5076	-6.1003	-5.1534
Average Power (dBm)	-0.05	0.25065	0.33677	-0.7606	0.04123	-0.0807	0.249	0.08226
Max/Min Ratio (dB)	3.77478	4.78167	5.48787	10.5181	10.4295	9.9271	7.97581	7.07796
Max/Avg Ratio (dB)	1.40361	1.23409	1.17691	2.02268	1.6627	1.50021	1.62651	1.84234
Min/Avg Ratio (dB)	-2.3712	-3.5476	-4.311	-8.4954	-8.7668	-8.4269	-6.3493	-5.2356
Average Gain (dB)	0.03858	0.22809	0.25813	-0.7759	-0.0307	-0.1469	0.22315	0.0901

Electrical Properties

Radiation Pattern – E Plane



Frequency	2400	2450	2500	5150	5250	5350	5725	5850
Ant. Port Input Pwr. (dBm)	0	0	0	0	0	0	0	0
Tot. Rad. Pwr. (dBm)	-2.8135	-2.4297	-2.762	-6.244	-5.1424	-5.2229	-5.3089	-5.4804
Peak EIRP (dBm)	1.50765	1.99906	1.56613	-1.9625	-0.449	-0.5884	-0.1887	0.25998
Directivity (dBi)	4.32114	4.42879	4.32811	4.28149	4.69343	4.63443	5.12018	5.74042
Efficiency (dB)	-2.8135	-2.4297	-2.762	-6.244	-5.1424	-5.2229	-5.3089	-5.4804
Gain (dBi)	1.50765	1.99906	1.56613	-1.9625	-0.449	-0.5884	-0.1887	0.25998
Front/Back Ratio (dB)	2.68217	3.73384	0.8944	6.92067	9.63567	11.0164	10.719	11.325
Beamwidth (°)	23	24	64	47	37	35	63	59
+ Beamwidth (°)	13	14	9	14	26	24	54	50
- Beamwidth (°)	10	10	55	33	11	11	9	9
Boresight Angle (°)	150	150	195	15	0	0	360	0
Maximum Power (dBm)	1.50765	2	1.56613	-1.9625	-0.449	-0.5884	-0.1887	0.25998
Minimum Power (dBm)	-19.452	-18.874	-20.453	-20.709	-16.147	-15.933	-21.858	-20.69
Average Power (dBm)	-2.4054	-1.9975	-2.4024	-5.8685	-4.543	-4.6293	-4.6207	-4.6547
Max/Min Ratio (dB)	20.9594	20.8729	22.0194	18.7468	15.6976	15.345	21.6692	20.9501
Max/Avg Ratio (dB)	3.91309	3.99657	3.96855	3.90599	4.09401	4.04085	4.432	4.91464
Min/Avg Ratio (dB)	-17.046	-16.876	-18.051	-14.841	-11.604	-11.304	-17.237	-16.036
Average Gain (dB)	-2.8135	-2.4297	-2.762	-6.244	-5.1424	-5.2229	-5.3089	-5.4804