

# APPROVAL SHEET

MESSRS

MODEL NO. **800/900/1800/1900MHz Antenna  
with SMA Swivel Male**

PART NO. **R04-S**

MANUFACTACTURER

APPROVEL NO.

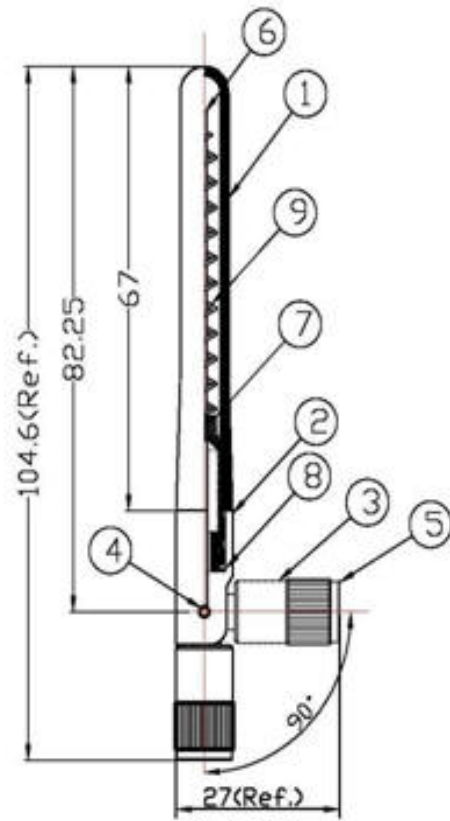
DATE **August 03, 2007**

SAMPLE SHEET NO. **S9608062**

|          |         |
|----------|---------|
|          |         |
|          |         |
| APPROVED | CHECKED |
|          |         |

|          |         |       |
|----------|---------|-------|
| APPROVED | CHECKED | DRAFT |
|          |         |       |





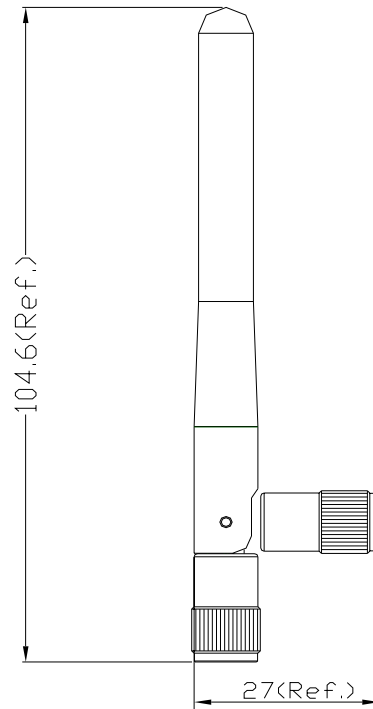
| B.O.M |                   |              |     |      |      |
|-------|-------------------|--------------|-----|------|------|
| ITEM  | NAME              | MATERIAL     | Qty | Fin. | Note |
| 1     | Main Sleeve       | Polyurethane | 1   |      |      |
| 2     | Upper Base        | Polyurethane | 1   |      |      |
| 3     | Lower Base        | Polyurethane | 1   |      |      |
| 4     | Rivet             | zinc.Black   | 2   |      |      |
| 5     | Sma-P/R connector | BRASS        | 1   | Bcr. |      |
| 6     | Coaxial Cable     | RG-17B       | 1   |      |      |
| 7     | Copper Tube       | Copper       | 1   |      |      |
| 8     | Retainer          | P.O.M        | 1   |      |      |
| 9     | Spring            | Copper       | 1   |      |      |



DIMENSIONS ARE IN MILLIMETER  
UNLESS OTHERWISE SPECIFIED  
TOLERANCES ARE

|         |      |
|---------|------|
| xx      | ±3.0 |
| x       | ±0.5 |
| .x      | ±0.2 |
| .xx     | ±0.1 |
| ANGULAR | ±3°  |

| MATERIAL | VER. Δ         | DESCRIPTIONS    | DONE BY, CKD. BY |
|----------|----------------|-----------------|------------------|
| FINISH   | REVISIONS NOTE |                 |                  |
| SCALE    | DESIGN/CHKD.   | APPROVED BY.    |                  |
| DATE     | DRAWN BY.      | <i>Hoo Yang</i> |                  |



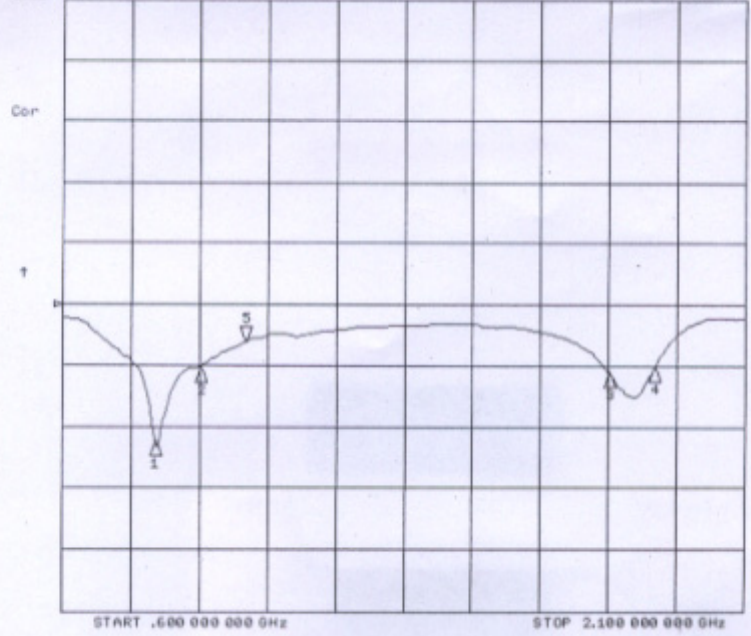
***Electrical Properties***

|                 |                      |
|-----------------|----------------------|
| Frequency Range | 800-9001800-1900Mhz  |
| Impedance       | 50 Ohms nominal      |
| V.S.W.R         | 2.0 (Max.)           |
| Gain            | 0 dBi                |
| Polarization    | Vertical             |
| Radiation       | Omni                 |
| Electrical Wave | 1/4 $\lambda$ Dipole |

***Mechanical Properties:***

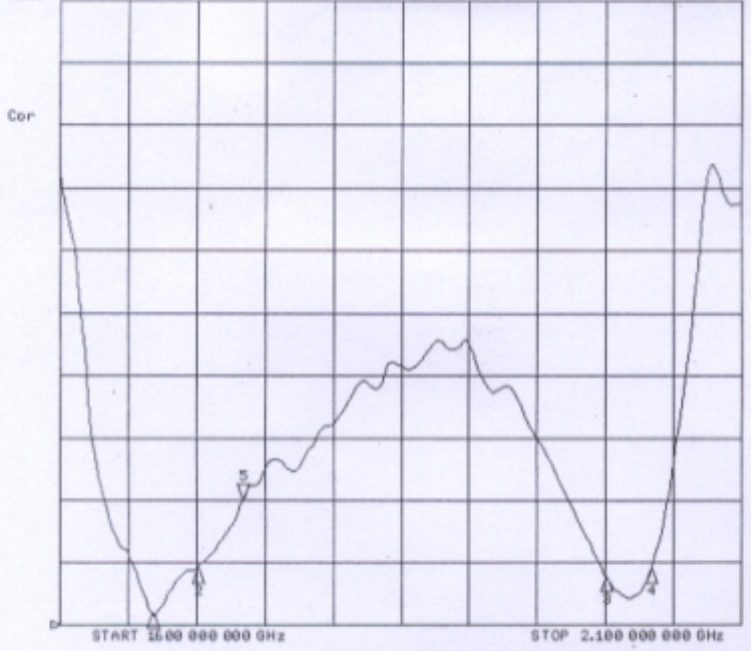
|                     |                  |
|---------------------|------------------|
| Cable               | RG-178           |
| Antenna Cover       | Polyurethane     |
| Antenna Base        | Polyurethane     |
| Connector           | SMA Plug Reverse |
| Color               | Black            |
| Operation Temperatu | -20 ~+65         |
| Storage Tempersture | -30 ~+75         |

3 Aug 2007 08:44:40  
S11 L08 10 dB/REF 0 dB S1-6.1080 dB 1.000000 000 GHz



CH1 Markers  
1: -22.400 dB  
800.000 MHz  
2: -10.310 dB  
900.000 MHz  
3: -11.114 dB  
1.60000 GHz  
4: -10.234 dB  
1.90000 GHz

3 Aug 2007 08:44:43  
S11 SWR 1 / REF 1 S1 3.0014 1.000000 000 GHz

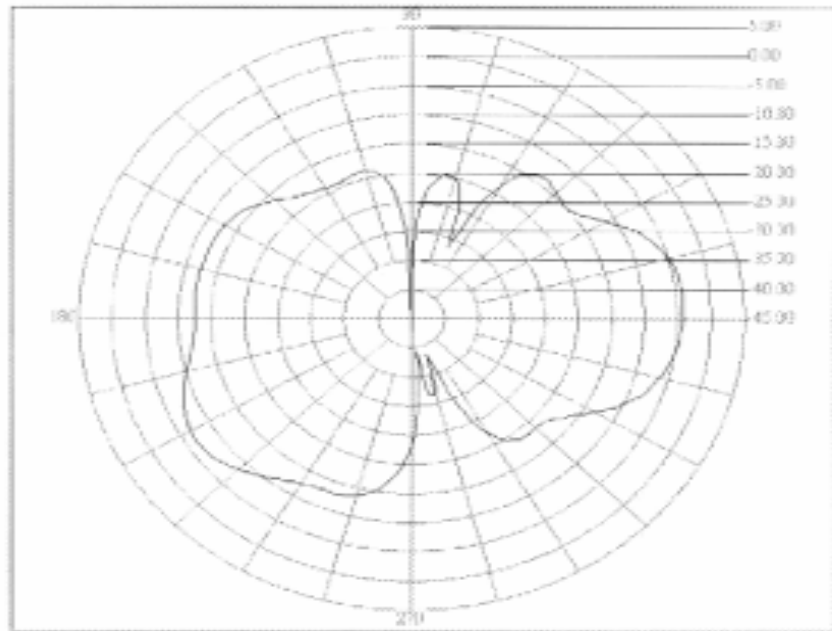


CH1 Markers  
1: 1.1813  
800.000 MHz  
2: 1.9025  
900.000 MHz  
3: 1.7751  
1.60000 GHz  
4: 1.8947  
1.90000 GHz



### CCS WUGU Antenna Pattern

Job No.:100SRP-F-850-E  
 Date:2006/12/14      Time:下午 02:16      Temp.(°C)/Hum.(%):25°C/80%  
 Tested by:

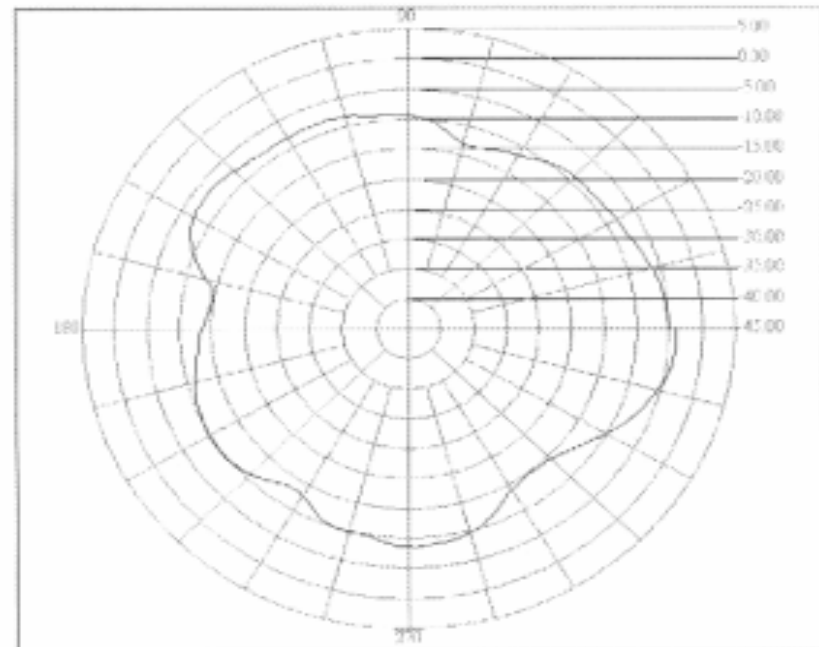


Center freq.(MHz): 850      Polarization : E Plane  
 Max gain(dBi):-4.01      Min gain(dBi):-46.88      Avg gain(dBi):-10.98



### CCS WUGU Antenna Pattern

Job No.:100SRP-F-850-H  
 Date:2006/12/14      Time:下午 02:07      Temp.(°C)/Hum.(%):25°C/80%  
 Tested by:



Center freq.(MHz): 850      Polarization : H Plane  
 Max gain(dBi):-3.92      Min gain(dBi):-14.79      Avg gain(dBi):-9.06



### CCS WUGU Antenna Pattern

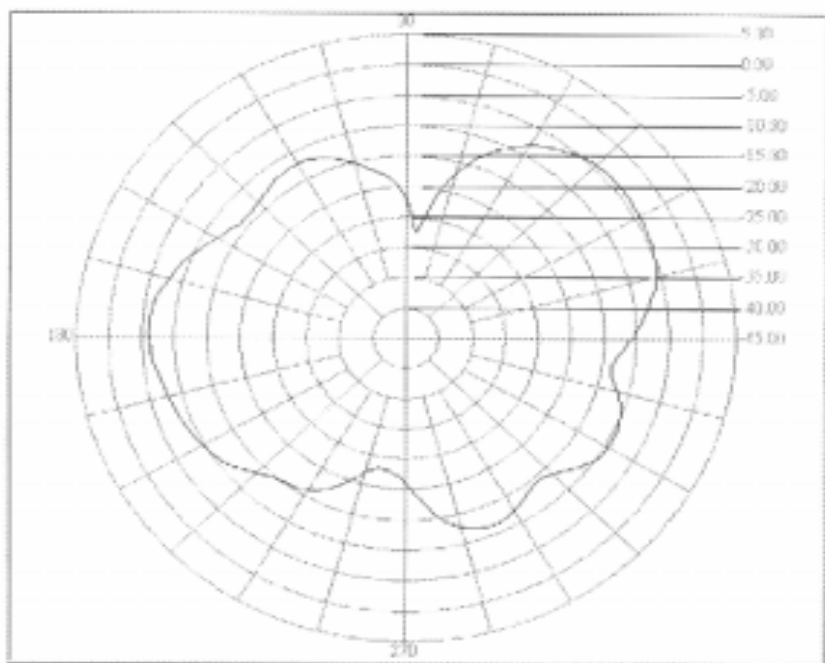
Job No.:100SRP-F-910-E

Date:2006/12/14

Time:下午 02:15

Temp.(°C)/Hum.(%):25°C/80%

Tested by:



Center freq.(MHz): 910

Polarization : E Plane

Max gain(dBi):-4.09

Min gain(dBi):-27.36

Avg gain(dBi):-9.79



### CCS WUGU Antenna Pattern

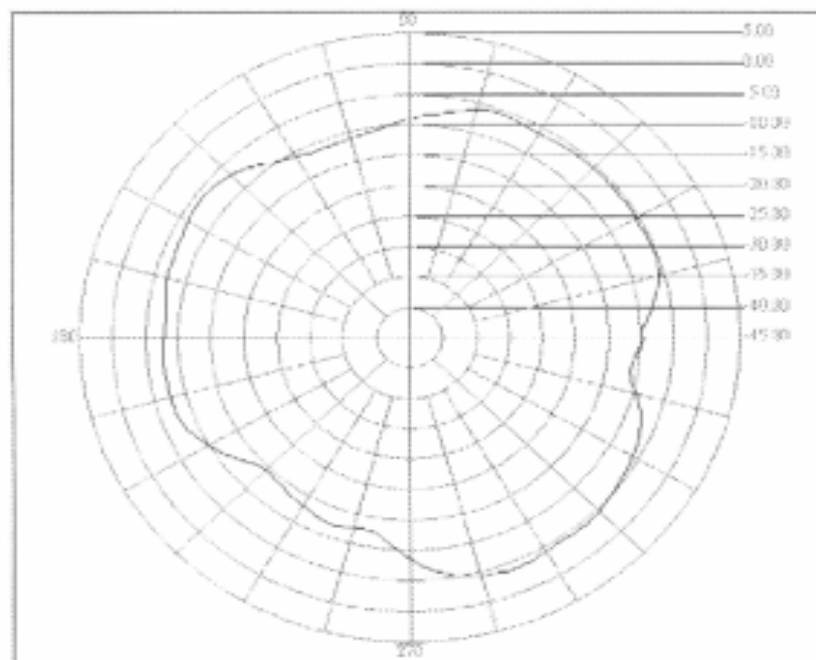
Job No.:100SRP-F-910-H

Date:2006/12/14

Time:下午 02:09

Temp.(°C)/Hum.(%):25°C/80%

Tested by:



Center freq.(MHz): 910

Polarization : H Plane

Max gain(dBi):-3.84

Min gain(dBi):-14.48

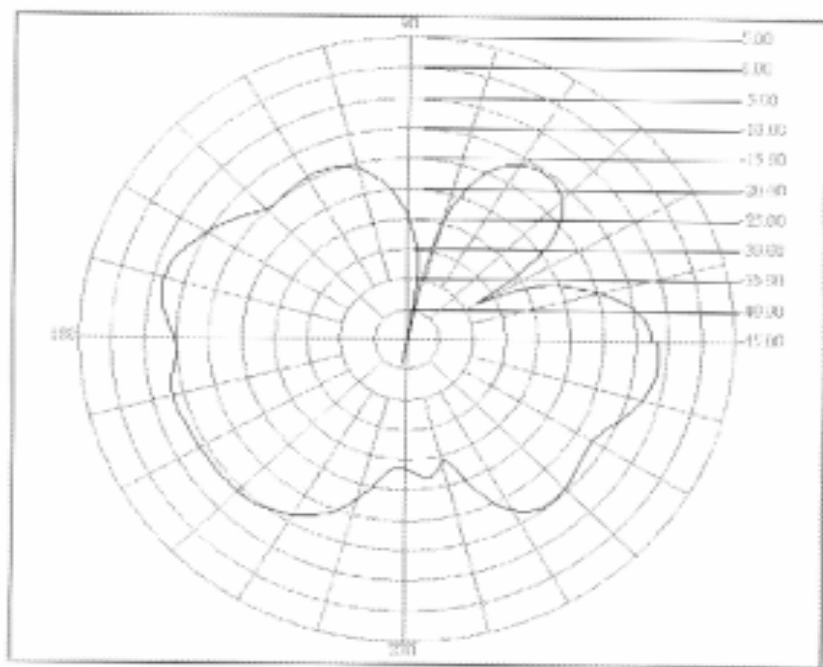
Avg gain(dBi):-7.34





### CCS WUGU Antenna Pattern

Job No.:100SRP-F-960-E  
Date:2006/12/14 Time:下午 02:13 Temp.(°C)/Hum.(%):25°C/80%  
Tested by:

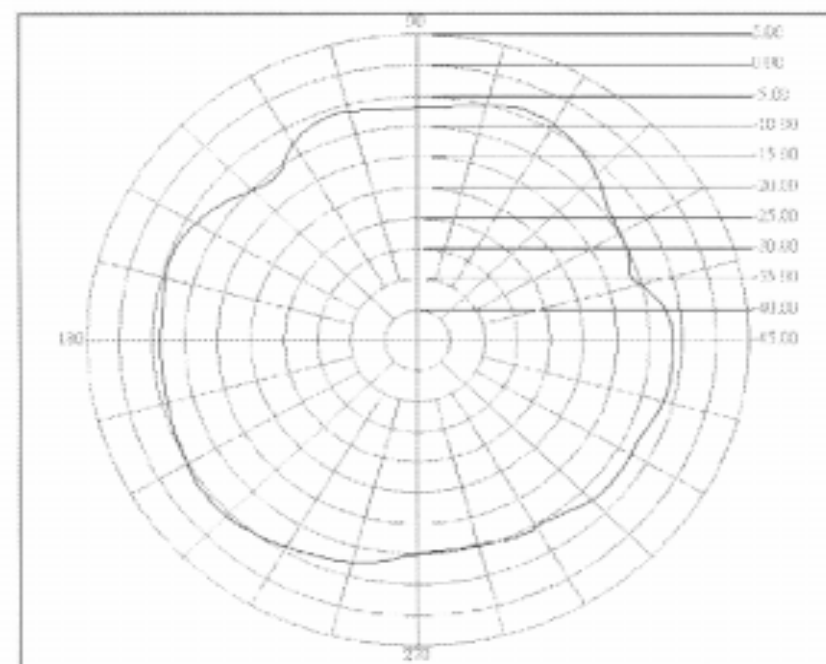


Center freq.(MHz): 960 Polarization : E Plane  
Max gain(dBi):-6.47 Min gain(dBi):-48.94 Avg gain(dBi):-11.32



### CCS WUGU Antenna Pattern

Job No.:100SRP-F-960-H  
Date:2006/12/14 Time:下午 02:10 Temp.(°C)/Hum.(%):25°C/80%  
Tested by:



Center freq.(MHz): 960 Polarization : H Plane  
Max gain(dBi):-4.00 Min gain(dBi):-11.30 Avg gain(dBi):-6.86