

Approval Sheet

HS16-D150

	Date	2016.10.11	Version No.	1.0
	Subject	HS16-D150		

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1. Approval Sheet Check List

Version		Date	Description	Remarks
Approval issue	Set issue			
Ver 1.0	Ver 1.0	2016.10.11	Initial apply	

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2. APPLICATION

2.1. Application

This specification was described for the HS16-D150 specifications.

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3. Specification

3.1. General Specification

General specification	
Model name	HS16-D150
Antenna type	Helical Antenna

3.2. Electrical Specification

Electrical specification	
Frequency range	150MHz
V.S.W.R	2.0 : 1 Max.
Gain(dBi)	0±0.5
Radiation pattern	Omni-directional
Polarization	Vertical
Max Power(W)	5W Max.
Impedance	50Ω Normalizer

3.3. Material Specification

Mechanical specification	
Connector type	SMA(M)
Cover material	Polyurethane
Color	Black
Temperature range	-30°C ~ 70°C
Weight	± 1.0g
Dimension	See Drawing

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4. Test Procedure & Measurement

4.1. Visual inspection

Appearance and dimensions of the Antenna, Connector etc, and make sure it matches the "6" once protested outside attachments.

4.2. Electrical Test

4.2.1. Materials

Device	Model	Quantity	Spec
Network Analyzer	HP8753E	1EA	· Freq. Range : 300KHz ~ 3GHz · Accuracy : <5ppm · Dynamic Range : 105dB · Trace at $\pm 200\text{dB}$ · Resolution : 1Hz · Impedance : 50Ω
Adaptor		1EA	· N(M)
Calibration Kit	HP85032B	1Set	· DC ~ 6GHz (N-Type)

4.2.2. Test

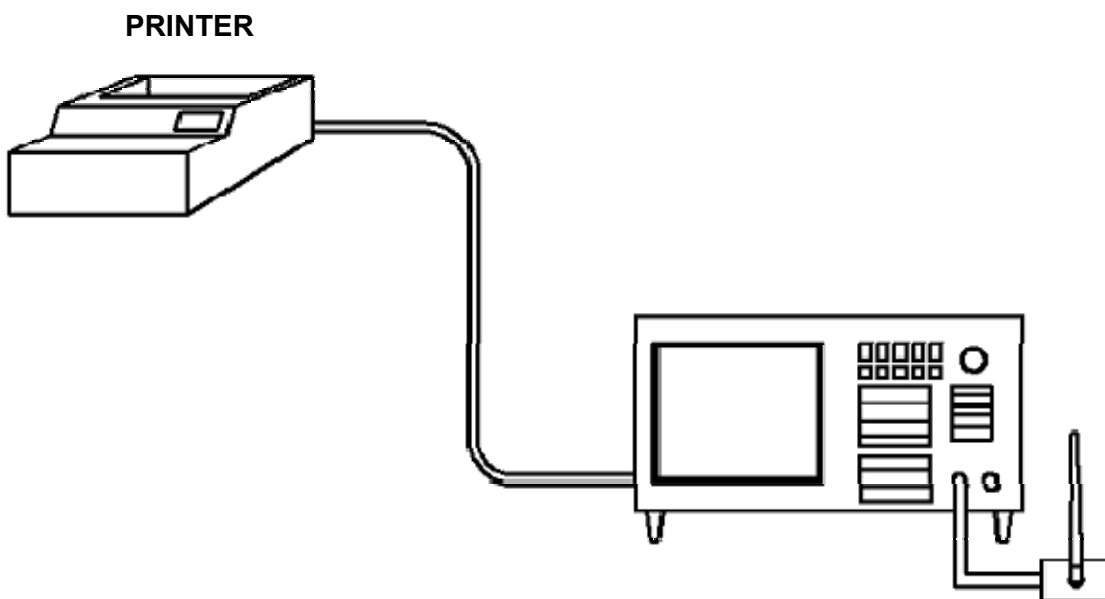


Figure 1. Test Condition of Network Analyzer

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4.2.2.1. Test

A. Device Setting and Calibration

1) Device Setting

- Ⓐ Frequency Band : Center Frequency: 150.0MHz, Span :120.0MHz
- Ⓑ Source Power : 10dBm,
- Ⓒ IF Bandwidth : 1000Hz
- Ⓓ Number of Point : 401

2) Calibration

Using the N-Type Cal Kit and 1 Port Calibration to O.S.L method.

- Ⓐ S_{11} Calibration : The Port 1 Calibration (Open, Short, Load)

3) Calibration Verification

- Ⓐ Port 1 connect is Load, and S_{11} VSWR check less than 1.02 : 1.
- Ⓑ Port 1 connect is Load, and S_{21} Value check less than -80.0dB.

If the check result fails to meet the criteria above, repeatedly performs the 2) above, wherein Calibration.

B. Test Description

List	Description	Spec
VSWR	As shown in the above figure 1, connect to Network Analyzer Port 1 of ANT, and then measures the value of S_{11} in the Operating Band.	1.9:1 Max.
Impedance	As shown in the above figure 1, connect to Network Analyzer Port 1 of ANT, and then measures the value of Smith-Chart S_{11} in the Operating Band.	$50 \pm 20\Omega$

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5. Packing, Shipping, Handling

5.1. Exterior Specifications

- A. Should be apply the Purchaser and Manufacturer name.
- B. Should be apply the Model name and Lot NO, Quantity.
- C. The above specifications agreed upon by the purchaser and the manufacturer may be subject to change.

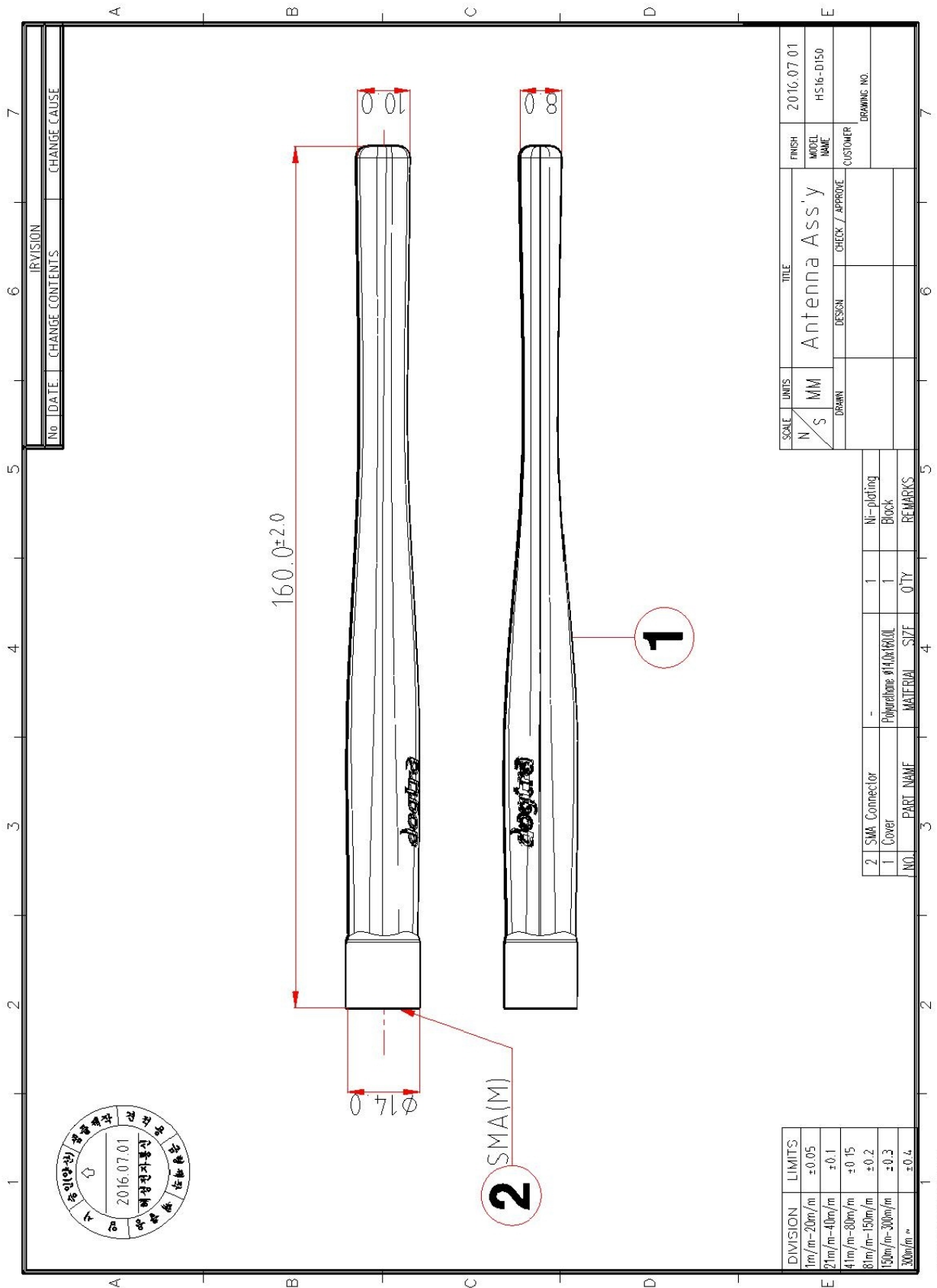
5.2. Packing

- A. Packing is can be protected from vibration, shock, according to the storage and transport.
- B. The above specifications agreed upon by the purchaser and the manufacturer may be subject to change..

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6. Appearance

No.	DWG No.	TITLE	REV.	Page	Remarks
1	HS16-D150	ASS'Y	1.0	1/1	



HYESUNG E&C CO.,

HYESUNG E&C CO. A4 (297 X 210)

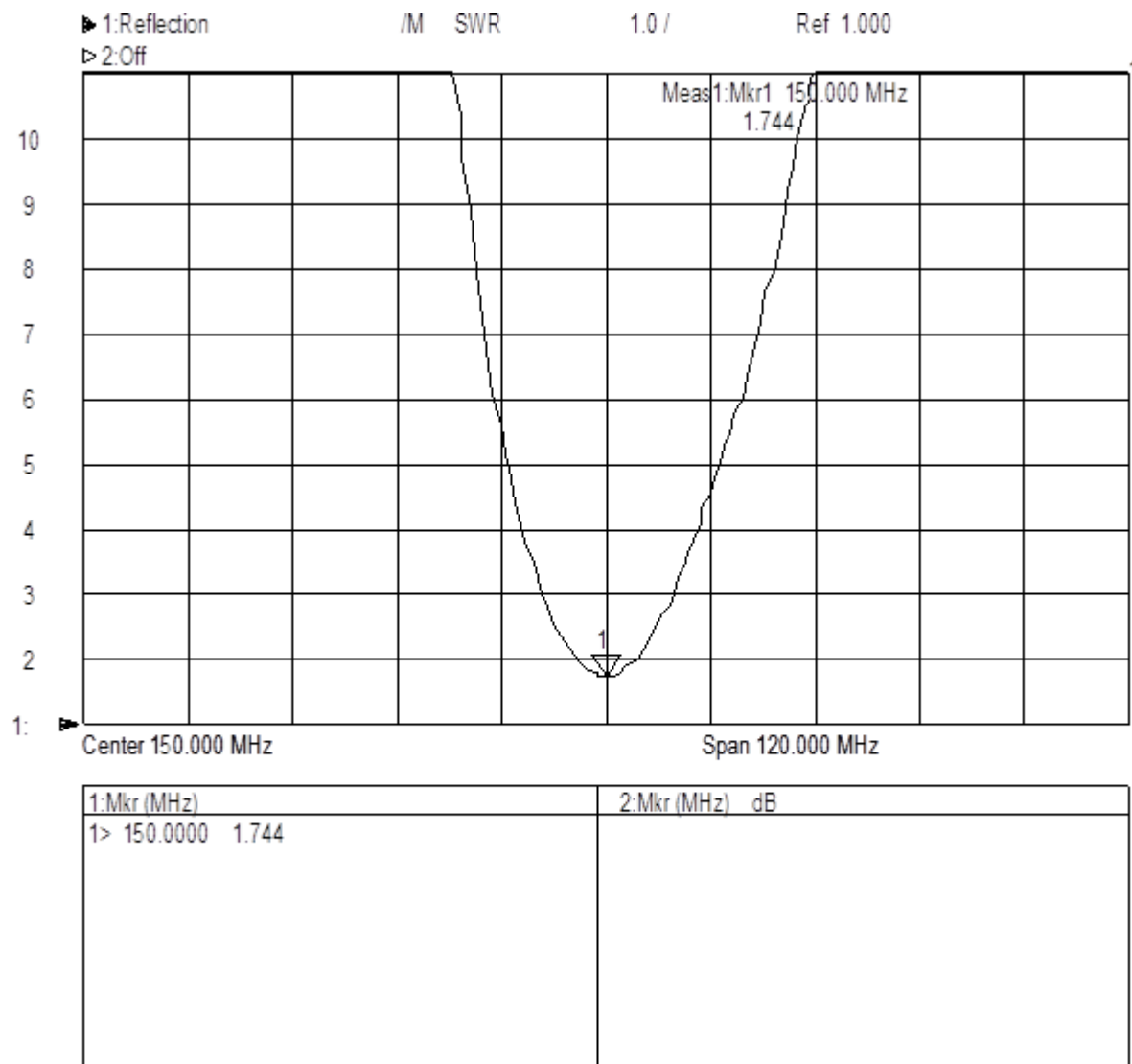
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7. Test Data Sheet

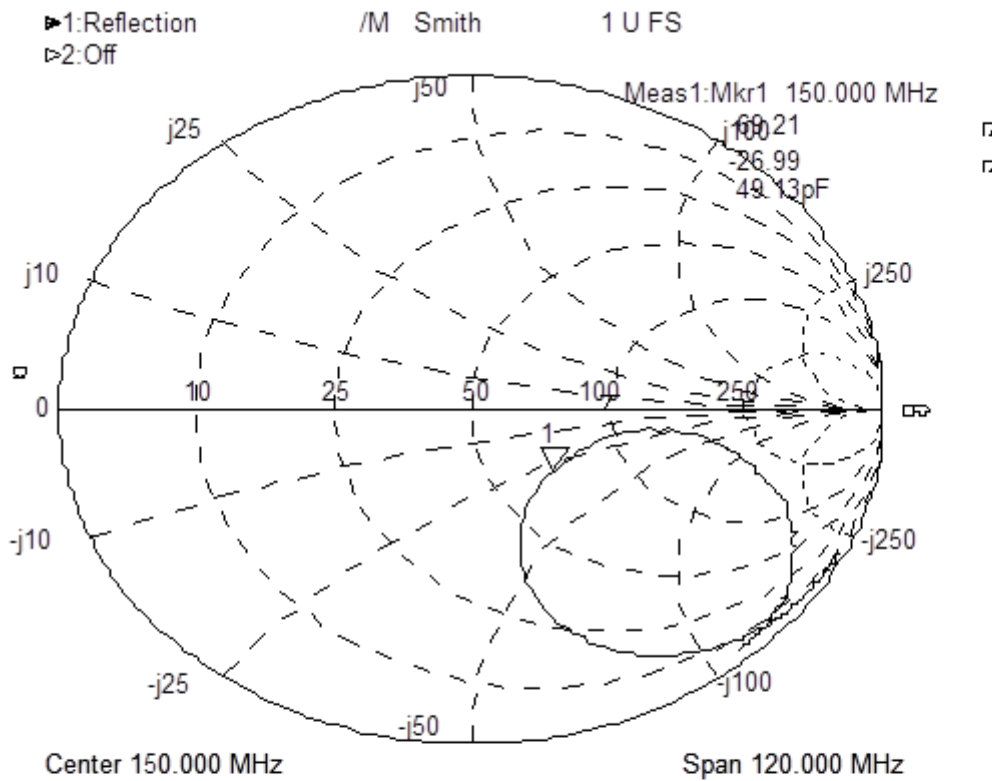
Parameter	Specification	Data
		25°C
V.S.W.R	2.0 : 1 Max.	1.7444 : 1
Impedance	50 ± 20Ω	69.21

8. Data Sheet

8.1. V.S.W.R



8.2. Impedance



1:Mkr (MHz)	Ohm	Ohm	2:Mkr (MHz)	dB
1> 150.000	69.21	-26.99		