



Specification For Approval

Antenna Type	Dipole – ANT
Model Name	CA-SMA90 – ANT
Part No	

SAE HAN ANTENNA CO.,LTD

CONTENTS

1. Specification	 3
2. Electrical Specification Test	
2.1 V.S.W.R	4
2.2 Beam Pattern	6
3. Antenna Drawing	9

1. Specification

1.1. General Specification

General specification	
Model name	CA – SMA90
Antenna type	1/2 Wavelength Dipole Antenna

1.2. Electrical Specification

Electrical specification	
Center Frequency	2438MHz
Frequency Range	2400MHz – 2500MHz
V.S.W.R	Less Than 2.0
Gain(dBi)	1.8dBi (Max)
Radiation pattern	Omni-directional
Polarization	Vertical
Impedance	50 Ω Normal $\pm$ 10

1.3. Mechanical Specification

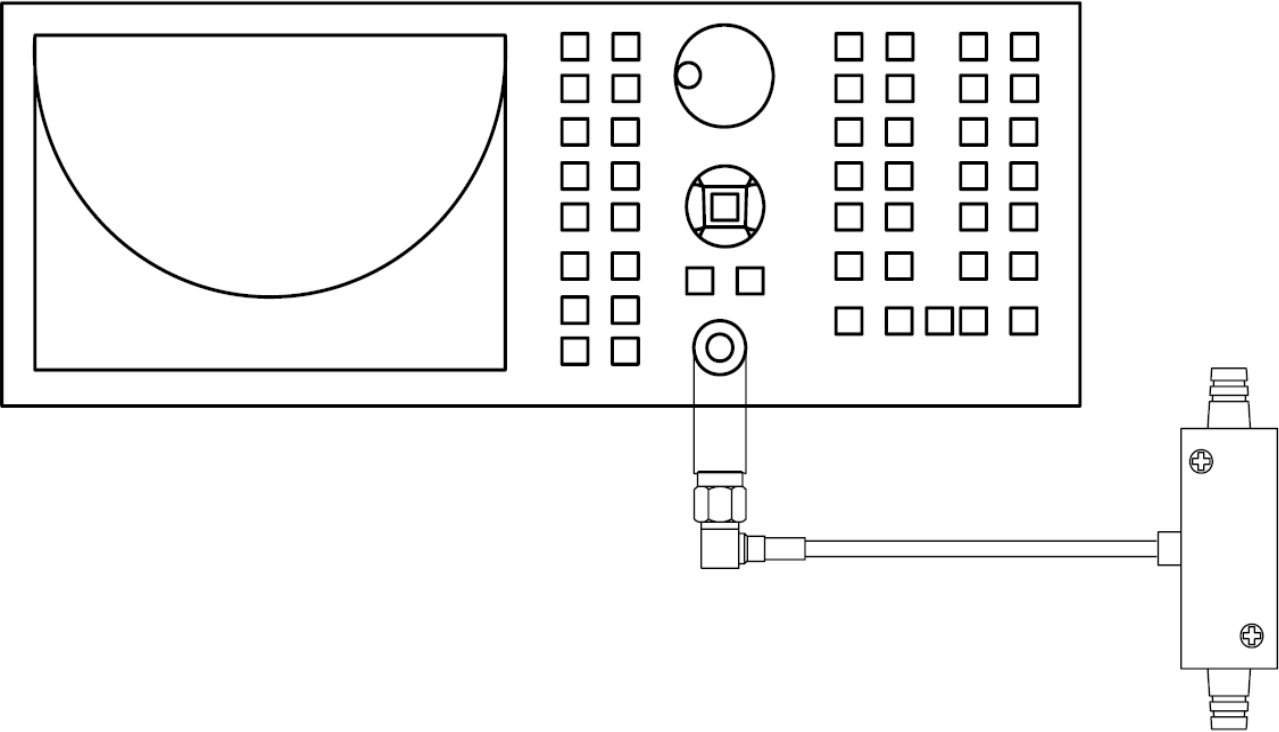
Mechanical specification	
Connector Type	SMA R/A Male
Cover Material	Drawing reference
Color	Black
Temperature Range	-45℃ ~ +85℃
Weight	22g $\pm$ 0.2g
Dimension	Drawing reference

2. V.S.W.R Test

① Network Analyzer Spec

Equipment	Model	Specification
Network Analyzer	HP8753ES	· Freq. Range : 300KHz ~ 6GHz
Calibration Kit	HP85032B	· DC ~ 6GHz (SMA-Type)

② Network Analyzer test method



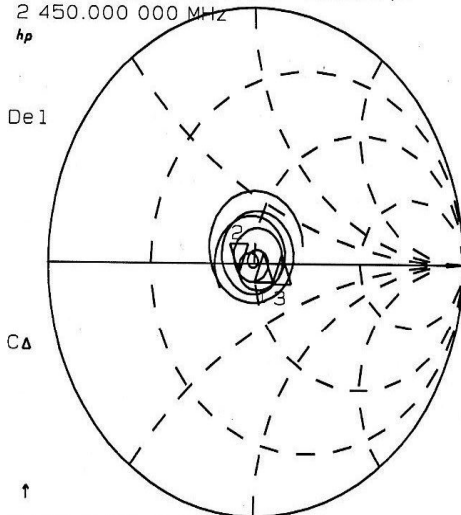
2.1 V.S.W.R

DATA

11 Aug 2010 17:50:06

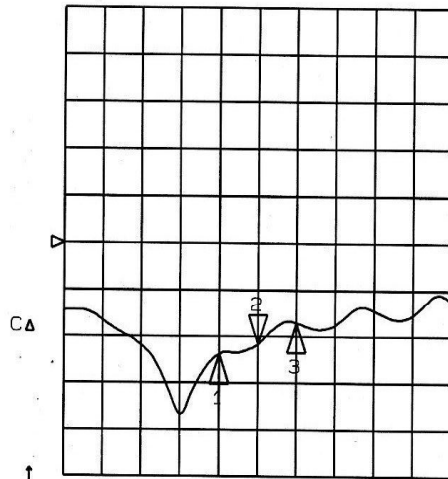
CH1 S11 1 U FS
2: 43.031 Ω -3.2441 Ω 20.024 pF
2 450.000 000 MHz

CH3 LOG 10 dB/ REF 0 dB
S11 2: -21.666 dB 2 450.000 000 MHz



CH1 Markers

1: 54.727 Ω
4.7910 Ω
2.40000 GHz
3: 65.250 Ω
5.0625 Ω
2.50000 GHz



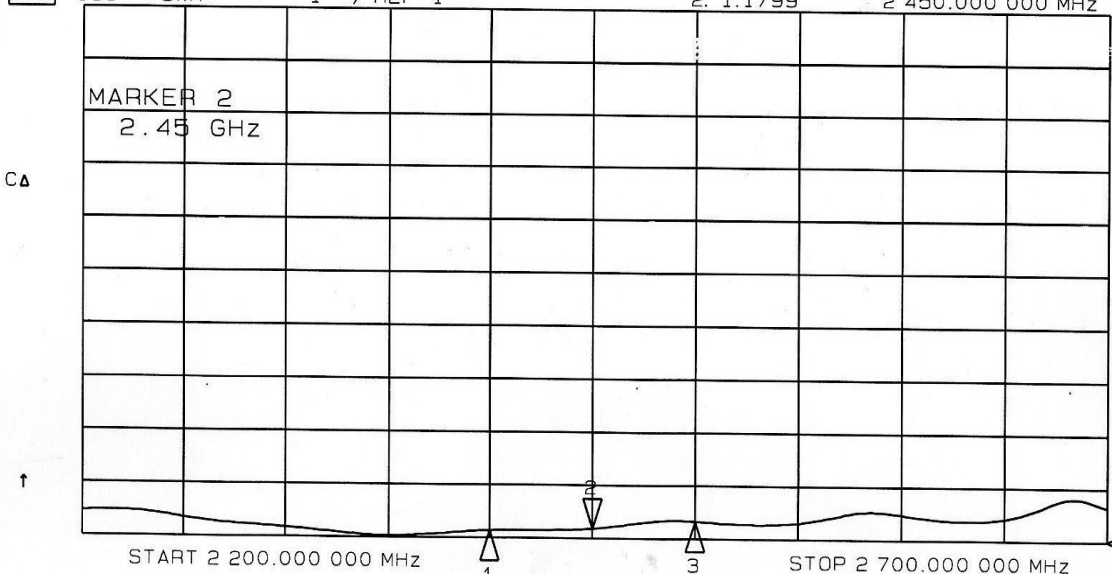
CH3 Markers

1: -23.845 dB
2.40000 GHz
3: -17.121 dB
2.50000 GHz

CENTR 2450.000 MHz SPAN 500.000 MHz

CENTR 2450.000 MHz SPAN 500.000 MHz

CH2 S11 SWR 1 / REF 1 2: 1.1799 2 450.000 000 MHz



CH2 Markers

1: 1.1373
2.40000 GHz
3: 1.3237
2.50000 GHz

START 2 200.000 000 MHz

STOP 2 700.000 000 MHz

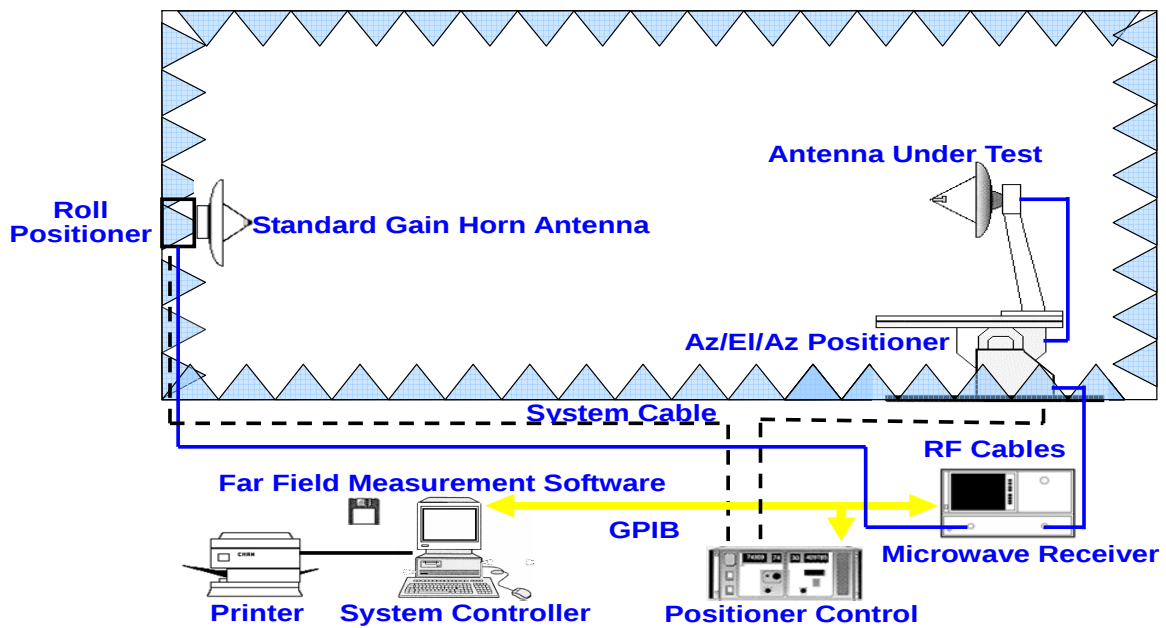
Frequency	V.S.W.R	비 고
2400 MHz	1.13	
2450MHz	1.17	
2500MHz	1.32	

2.2 Gain & Beam Pattern Test

① Chamber Spec

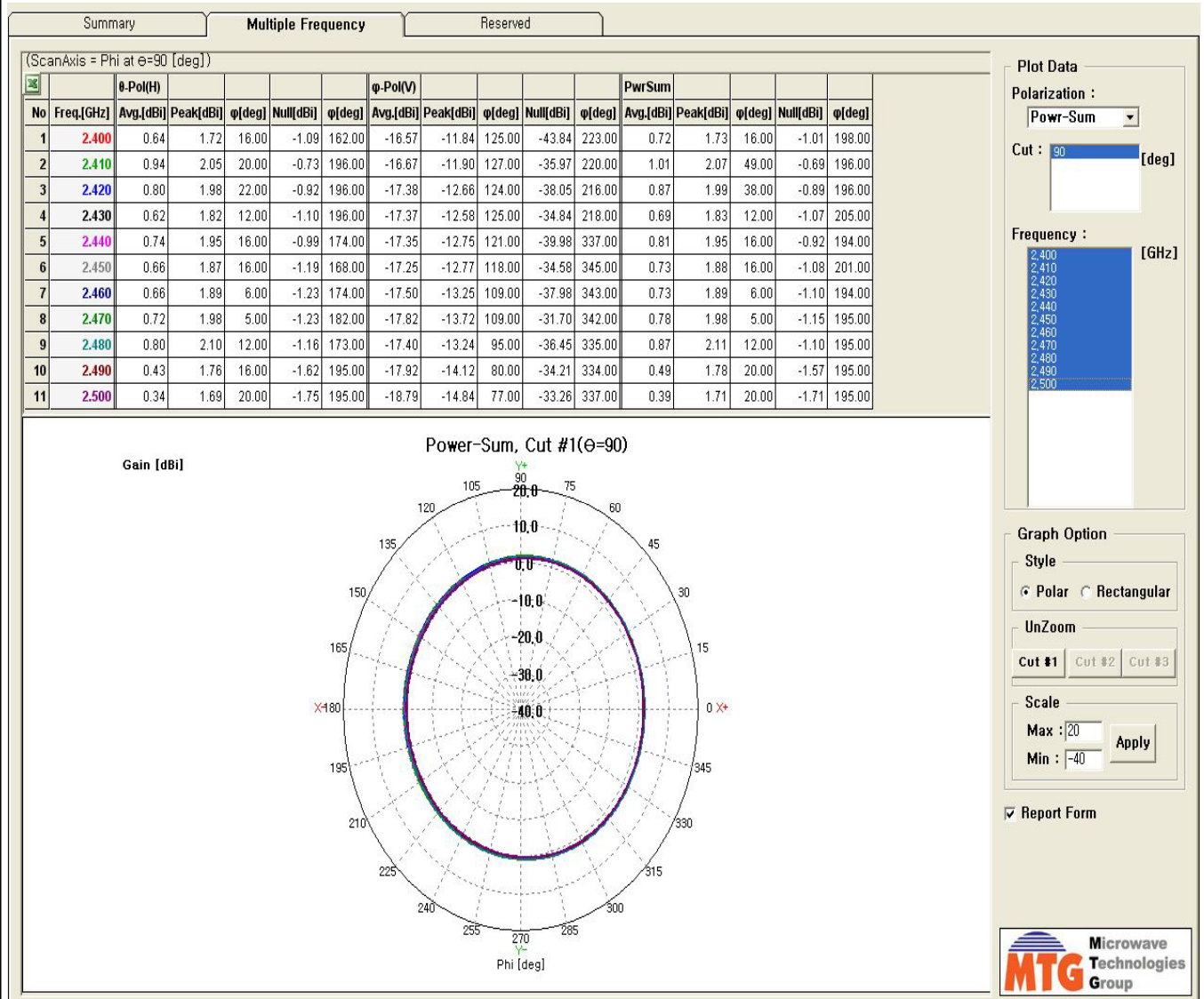
Section	Specification
Chamber Size	5(L)m X 5.5(W)m X 5(H)m
Frequency Range	800MHz – 60GHz (Far Field)
Quiet Zon	1m X 1 m @ 1GHz
Type	Rectangular
Antenna weight	< 50 kg

② Chamber Test method



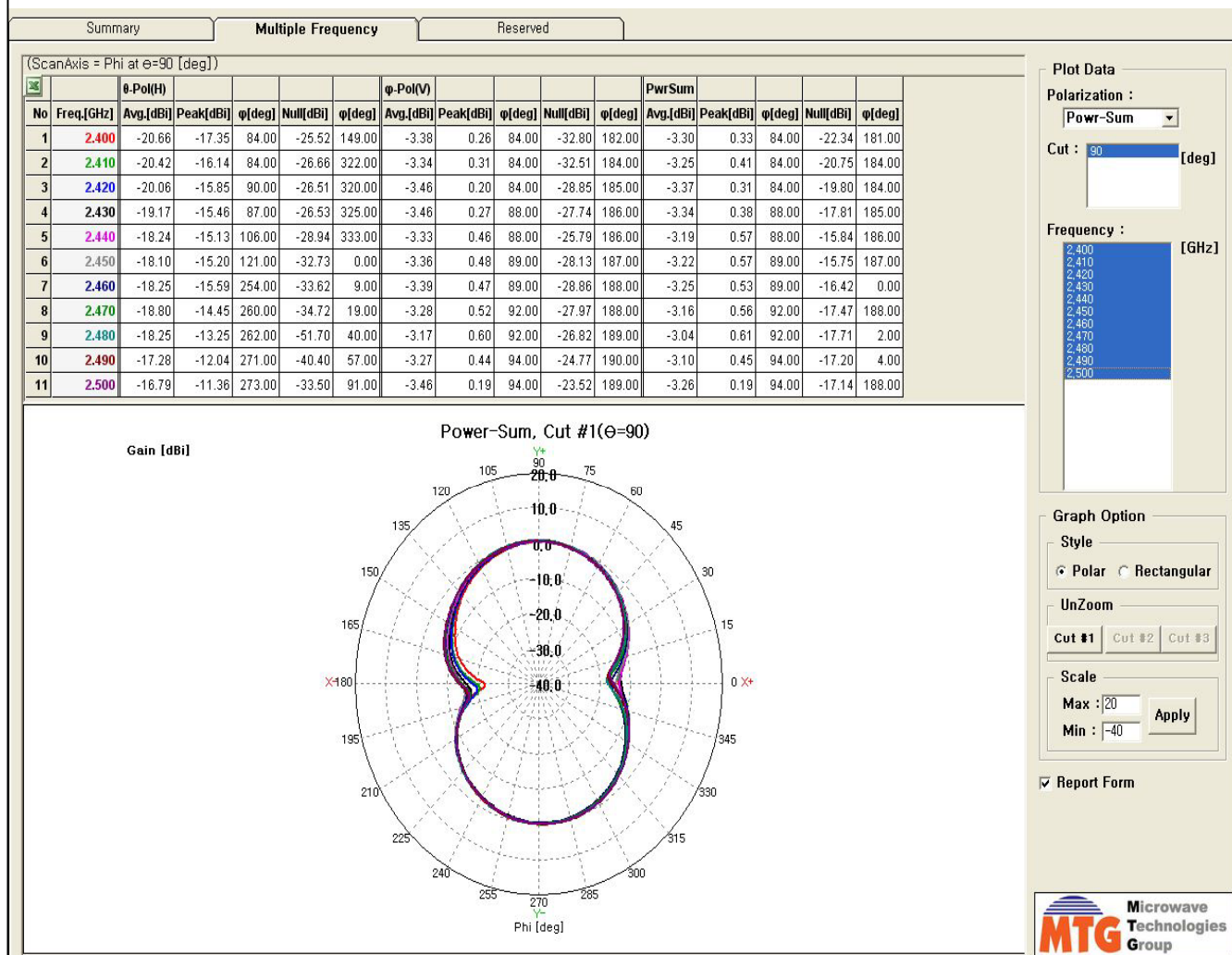
2.3. Gain & Beam Pattern

H-Plane



주 파 수	Gain(Max)	비 고
2400MHz	1.73dBi	
2450MHz	1.88dBi	
2500MHz	1.71dBi	

E-Plane



Frequency	Gain(Max)	비고
2400MHz	0.33dBi	
2450MHz	0.57dBi	
2500MHz	0.19dBi	

3. Drawing

