

GPM-01-01

Dual GSM/GPS disc antenna



Product Specifications

Application:

This application shall apply for antenna unit which shall be used with an engine for an automobile.

Appearance:

Antenna Unit (with radome , connector , and cable – refer to an attached drawing)

Dimensions : 55.15x12mm

Weight : 60 g (typ)

Color : Black

Operating Condition:

Temperature : -40 to +85 °C

Humidity : 40 to 95% RH

Storage Condition:

Temperature -40 to +85 °C

Humidity 40 to 95% RH

Output Terminal:

Connector (GPS or GSM)

(Option : MMCX , MCX , SMA , BNC , SMB ...)

Cable RG-174 2000~5000±100 mm

Cable Color Black

Electrical Specifications

**All value are defined at 25±15 °C ,65±20 % RH unless otherwise noted.*

**Antenna characteristics are measured with 70x70 mm ground plane in an anechoic chamber*

GPS ANTENNA

Center Frequency: 1575.42±1.023MHz

Bandwidth: 10 MHz min

Gain at Zenith: 2.0dBi min

Gain at 10°elevation: -4.0 dBi min

Polarization: R.H.C.P

Axial Ratio: 2.0tdB max

GSM Antenna:

Frequency CDMA:824~896 MHZ,PCS:1850~1990 MHZ

GSM:880~960 MHZ,DCS:1710~1880 MHZ

VSWR 2.5MAX

IMPEDENCE 50Ω

Polarization R.H.C.P

LNA

Center Frequency: 1575.42±1.023MHz

Gain: 30±2dB

Noise Figure: 1.5 dB max

Out band attenuation: 30dB min fo±50MHz

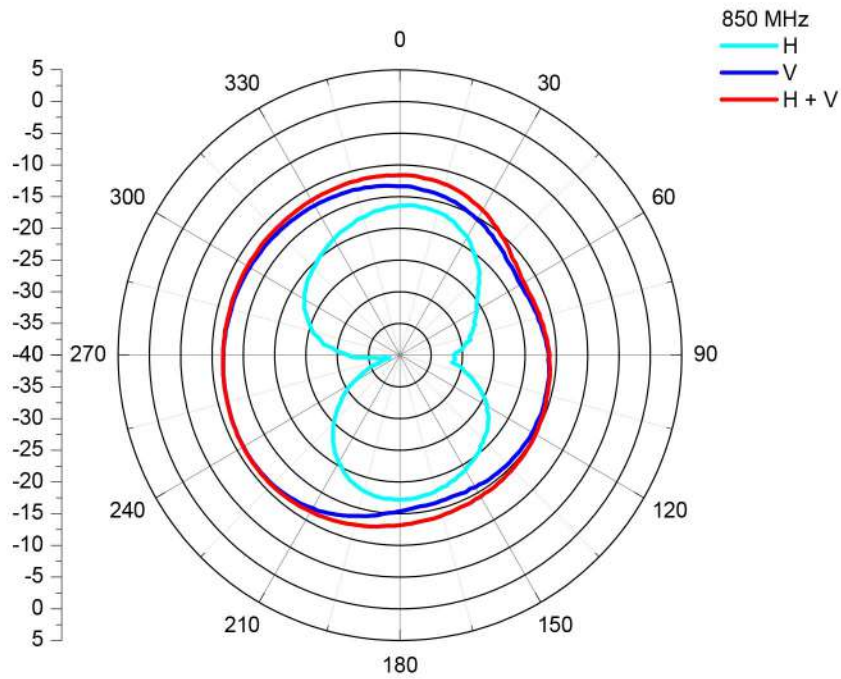
(fo=1575.42MHz)

Output V.S.W.R: 2.0 dB max

Voltage: 3.0~5.0V

Current: 19mA±2

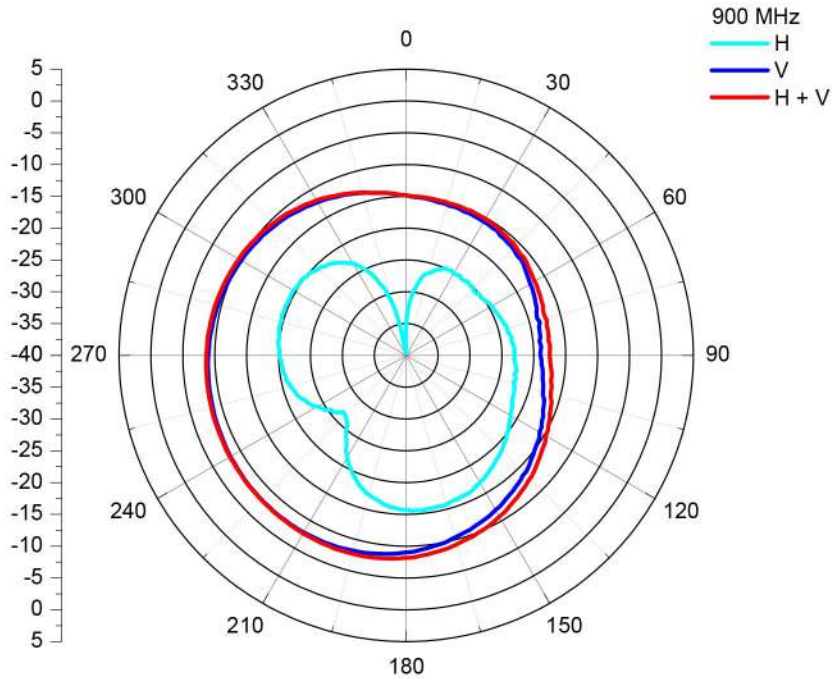
850MHz



Center Frequency	850MHz
Horizontal Peak	-16.30
Vertical Peak	-11.10
Horizontal + Vertical Peak	-10.99

Center Frequency	850MHz
Horizontal Average	-20.60
Vertical Average	-13.68
Horizontal + Vertical Average	-12.88

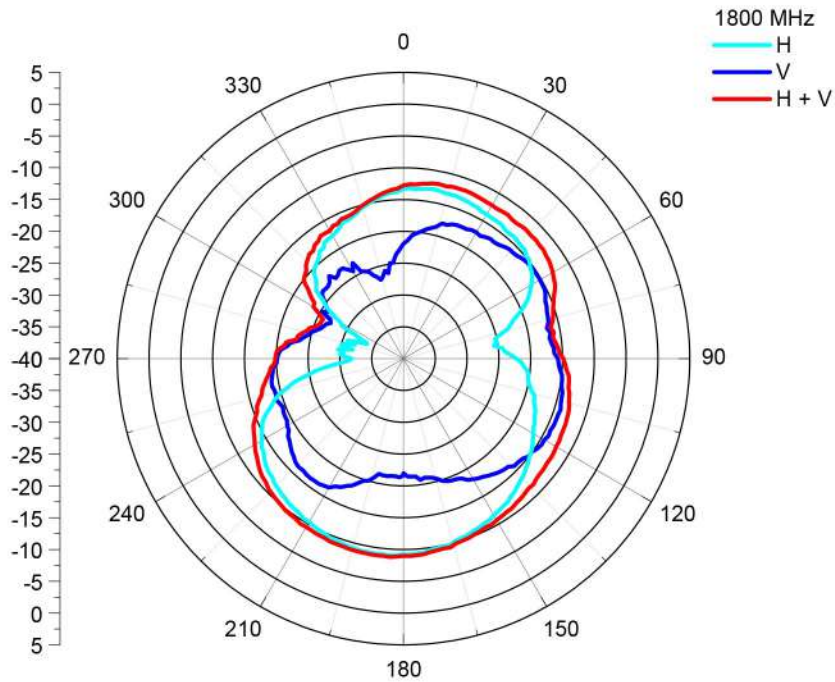
900MHz



Center Frequency	900MHz
Horizontal Peak	-15.51
Vertical Peak	-7.85
Horizontal + Vertical Peak	-7.61

Center Frequency	900MHz
Horizontal Average	-20.63
Vertical Average	-11.23
Horizontal + Vertical Average	-10.75

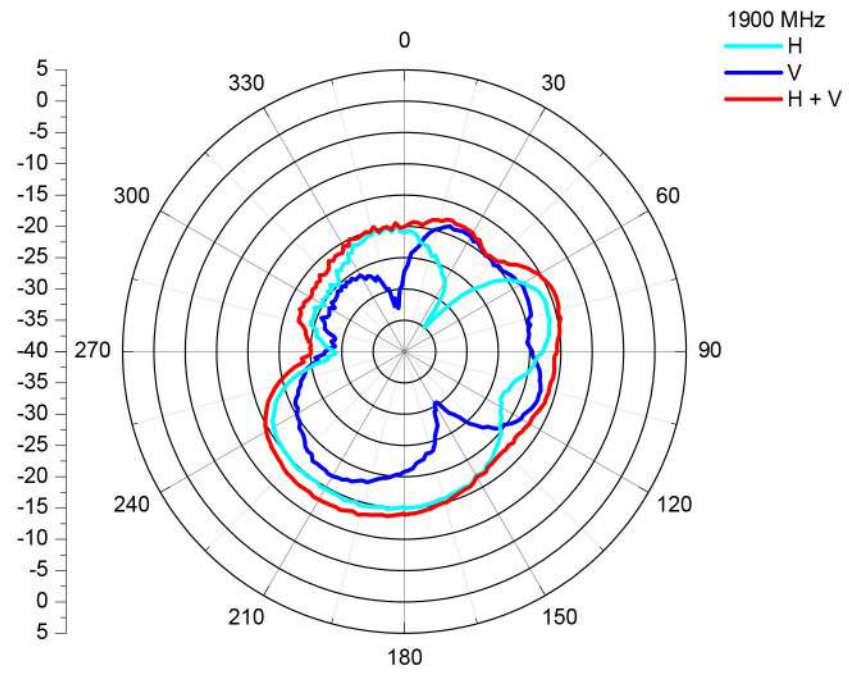
1800MHz



Center Frequency	1800MHz
Horizontal Peak	-9.00
Vertical Peak	-14.04
Horizontal + Vertical Peak	-8.76

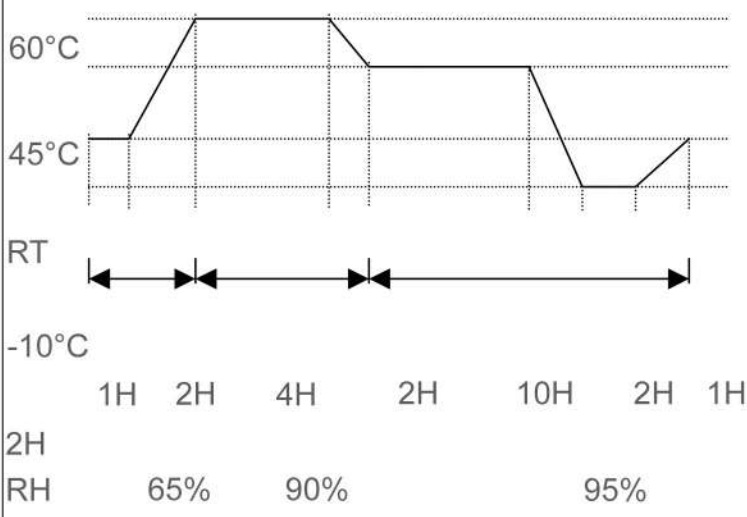
Center Frequency	1800MHz
Horizontal Average	-13.95
Vertical Average	-18.04
Horizontal + Vertical Average	-12.52

1900MHz



Center Frequency	1900MHz
Horizontal Peak	-14.38
Vertical Peak	-16.99
Horizontal + Vertical Peak	-14.38

Center Frequency	1900MHz
Horizontal Average	-18.49
Vertical Average	-20.86
Horizontal + Vertical Average	-16.51

	Stored at standard evaluation condition for more than 2hours	According note 2
Heat/Humidity Cycle Test 2	 <p>60°C 45°C RT -10°C</p> <p>1H 2H 4H 2H 10H 2H 1H</p> <p>2H RH 65% 90% 95%</p> <p>5 cycles, then stored at standard evaluation condition for +/-60 minutes</p>	Standard Item According note 2
Thermal Shock Test	-40°C 2H ↔ (5minutes) ↔ 85°C 2H. 30 cycles then stored at standard evaluation condition for more than 2hours	Standard item According Note 2
High Temperature Storage Test	The specimens are subject to 85°C for 96hours, then stored at standard evaluation condition for more than 2hours	Standard Item According Note 2

Low Temperature Storage Test	The specimens are subject to -40°C for 72 hours then stored at standard evaluation condition for more than 2 hours	Standard Item According Note 2
Water Proofing Test	The specimens are subject to 80°C for 1 hour, then sprays water at more than 600mm/H for 1 hour, then stored at Standard evaluation condition for more than 2 hours	Standard Item According Note 2
Moisture Resisitance Test	The specimens are subject to 60°C, 90%RH for 96 hours, then stored at standard evaluation condition for more than 2 hours	Standard Item According Note 2
Heat/Vibration Test	Vibration: 33 to 50 Hz 15min, sweep 16 for 4 hours Heat Cycle: -40° 25m ↔ 5min ↔ 85°C 25min	Standard Item According Note 2

Low Temperature Test (operation)	Specimens ar subject to DC 4.5V at 40°C for 72 hours, then stored at standard evaluation condition for more than 2 hours.	Standard Item According Note 2
Salt Atmosphere Test	Spray 5+/-1% NaCl solvent (35+/-2°C) to the specimens for 16 hours then stop spraying 8hours for 20 cycles.	

Note 1: Standard evaluation condition

Low Temperature Test (operation)	Specimens are subject to DC 4.5V at 40°C for 72 hours, then stored at standard evaluation condition for more than 2 hours.	Standard Item According Note 2
Salt Atmosphere Test	Spray 5+/-1% NaCl solvent (35+/-2°C) to the specimens for 16 hours then stop spraying 8 hours for 20 cycles.	Standard Item According Note 2
Package Drop Test	Packaged specimens are dropped on a common floor from 1m height in each direction along six surfaces, 3 mutually perpendicular and one corner.	Standard Item According Note 2
Long Time Operating Test	The specimens are subject to DC 3.3V for more than 1000 hours, then stored at standard evaluation condition for more than 2 hours.	Standard Item According Note 2
Static Electrical Resistance Test	Adding +/-10kV to every touchable place at 10 times, then stored at standard evaluation condition	Standard Item According Note 2

Note 1- Standard evaluation condition

Temperature: 25+/-15°C

Humidity: 65+/-20%RH

Note 2- Standard Evaluation items

Appearance

Gain

V.S.W.R

Electric Power

Dimensions

