

# SPK ELECTRONICS CO., LTD.

## SPECIFICATION

SPEC NO. : \_\_\_\_\_

PART NO. : **SPK-GGSGNA100**

PRODUCT NAME : **SPK-GGSGNA100**

DESCRIPTION : **3V/28dB/100mm/TNC**  
**RoHS Compliant Product**

### REVISION STATUS

VERSION	DATE	PAGE	REVISION DESCRIPTION	PREPARED	CHECKED	APPROVED
d01	2011/6/23	Whole	New Issued			

Prepared By	Checked By	Approved By

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## SPECIFICATION FOR GPS ANTENNA WITH LOW NOISE AMPLIFIER

### 1.0 SYSTEM:

This antenna system consists of two functional blocks, the LNA portion and the patch antenna.

### 2.0 GENERAL

#### 2.1 ENVIRONMENTAL CONDITIONS

2.1.1	Operation Temperature	- 40°C to + 85°C
2.1.2	Storage Temperature	- 40°C to + 85°C
2.1.3	Relative Humidity	40% to 95%

#### 2.2 ELECTRICAL SPECIFICATIONS

2.2.1	Input Voltage	Min: 2.5V	Typ: 3.0V	Max: 5.5V
2.2.2	Current Consumption	Typ: 10mA	Max: 15mA	@ 3.0V

#### 2.3 CABLE & CONNECTOR

2.3.1	RF Cable	RF Coaxial Cable, $\varphi 2.7 \pm 0.2\text{mm}$ , L = 100mm $\pm 2\text{mm}$
2.3.2	RF Connector	TNC(M)

### 3.0 ANTENNA

3.1	Antenna Dimensions	25mm*25mm*4mm
3.1	Frequency Range	1575.42 $\pm 1.023$ MHz. 1602 $\pm 8$ MHz.
3.2	GAIN	1575.42MHz: +2 dBic Typ. @zenith 1602MHz: +2 dBic Typ. @zenith
3.3	Polaration	RHCP
3.4	Axial Ratio	3dBic(at Elevation 90°-Zenith)

### 4.0 LNA and FILTER

4.1	Frequency Range	1575.42 $\pm 1.023$ MHz 1602 $\pm 8$ MHz.
4.2	Gain(without Cable)	1575.42MHz: 26 dB Min. 28 dB Typ. ( + 25 °C $\pm 5^{\circ}\text{C}$ ) 1602MHz: 26 dB Min. 28 dB Typ. ( + 25 °C $\pm 5^{\circ}\text{C}$ )
4.3	Noise Figure	2.0 dB Typ. ( + 25 °C $\pm 5^{\circ}\text{C}$ ) 2.6 dB Max. ( + 85 °C)
4.4	Output Impedance	50 $\Omega$
4.5	Output VSWR	2.0 Max
4.6	Out Band Rejection	1587.5 $\pm 140$ MHz 15dB Min

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## 5.0 TOTAL SPECIFICATIONS (Through Antenna, LNA, Cable and Connector)

5.1	Frequency Range	1575.42 ±1.023 MHz. 1602±8 MHz.
5.2	Gain	At 90° 30± 3dBic
5.3	Output Impedance	50Ω
5.4	Output VSWR	2.0 Max

## 6.0 OUTLINE

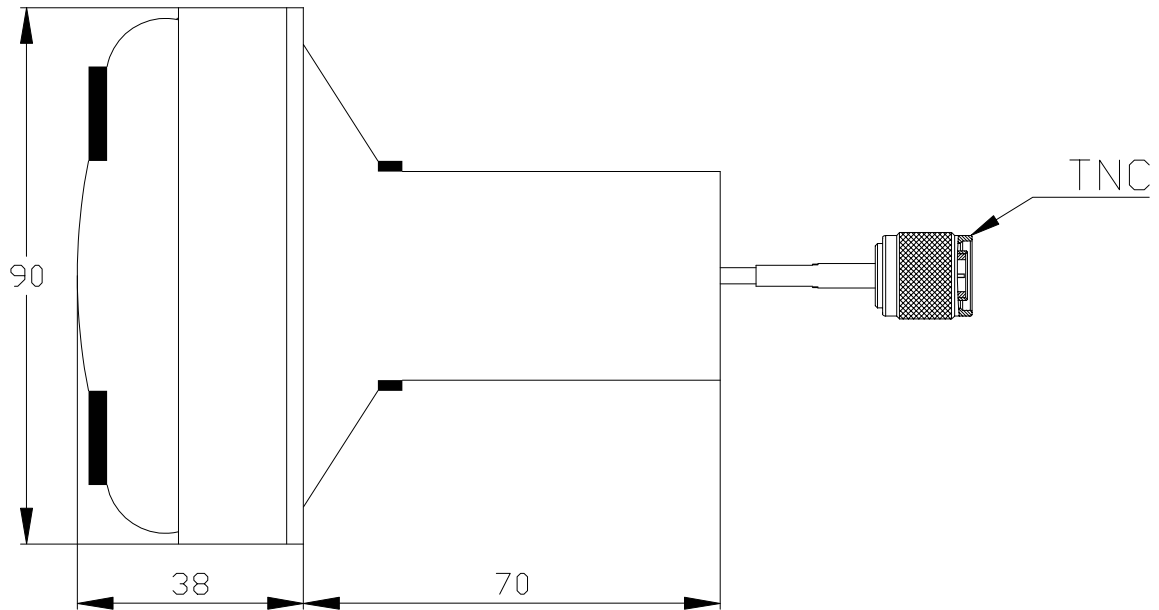


Fig. 2

Unit:mm



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