

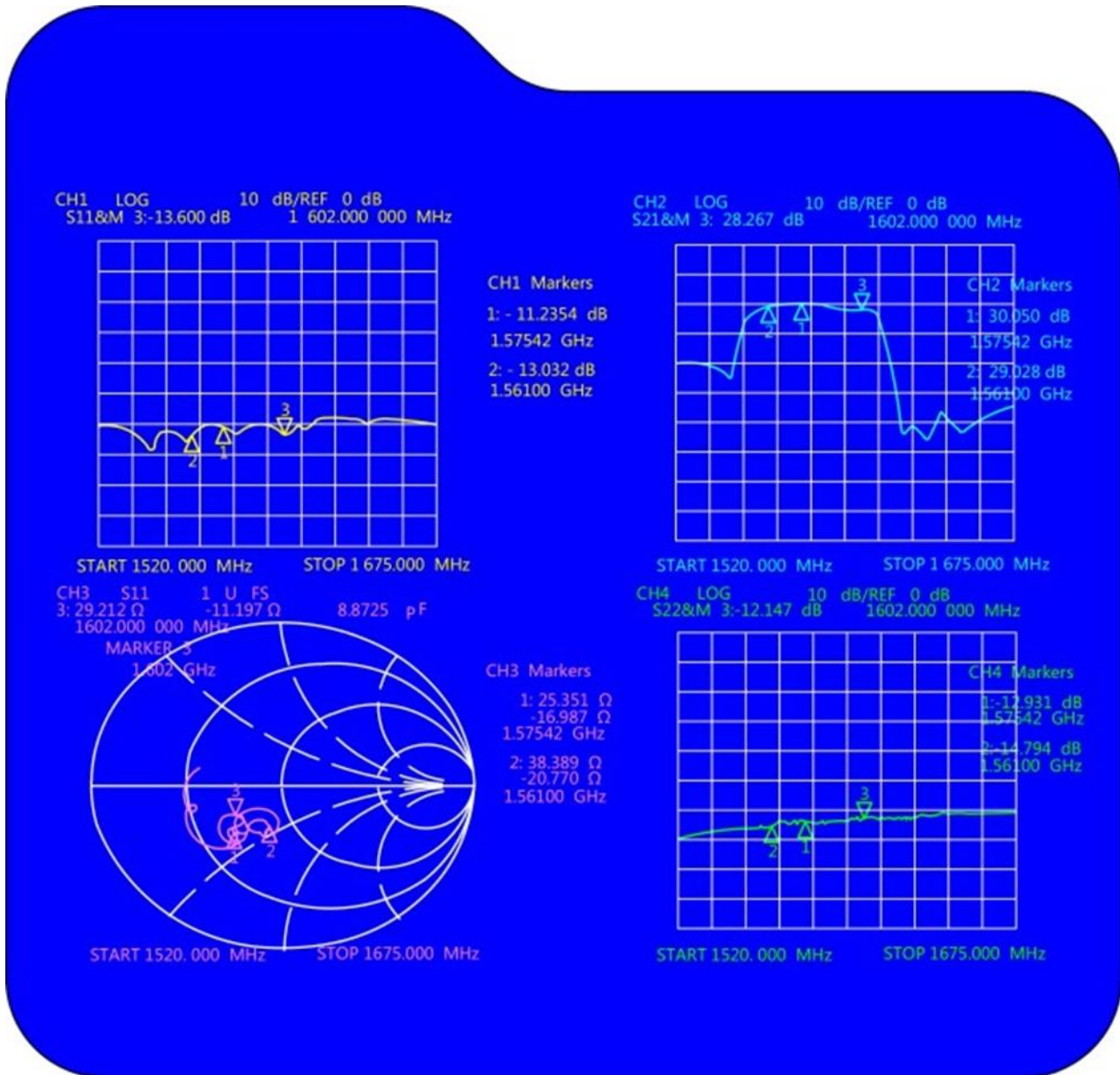
**GPS/GLONASS & 4G LTE External Antenna
ATGGLTE80014M-CD**

1. Specification

Item		Specifications	
GPS/GLONASS Antenna	Dielectric Antenna	Center Frequency	1575.42MHz & 1602MHz
		Band Width	10MHz Min (Return loss -10dB)
		Polarization	RHCP
		Gain	4dBic (Zenith)
		V.S.R.W	2.0
		Impedence	50Ω
	LNA	Gain	28±3 dB
		Noise Figure	<1.5
		V.S.R.W	<2.0
		Supply Voltage	3.3 Typ.
Current Consumption		14mA	
LTE Antenna	Frequency Range		750~960MHz & 1710~2690MHz
	V.S.R.W		<2.0
	Polarization		Linear
	Gain		3dBi
	Impedence		50Ω

Item		Specifications
Mechanical	Cable	RG174,3m
	Connector	GNSS: FAKRA-C Blue 4G: FAKRA-D Violet
	Material	ABS
	sheathing	80x14±1mm
	Mounting	Magnetic
Environmental	Operating Temperature	-40°C~+85°C
	Relative Humidity	Up to 95%~100%
	Waterproof	IP67
	Vibration	10 to 55Hz

2. LNA & S22 Return Loss

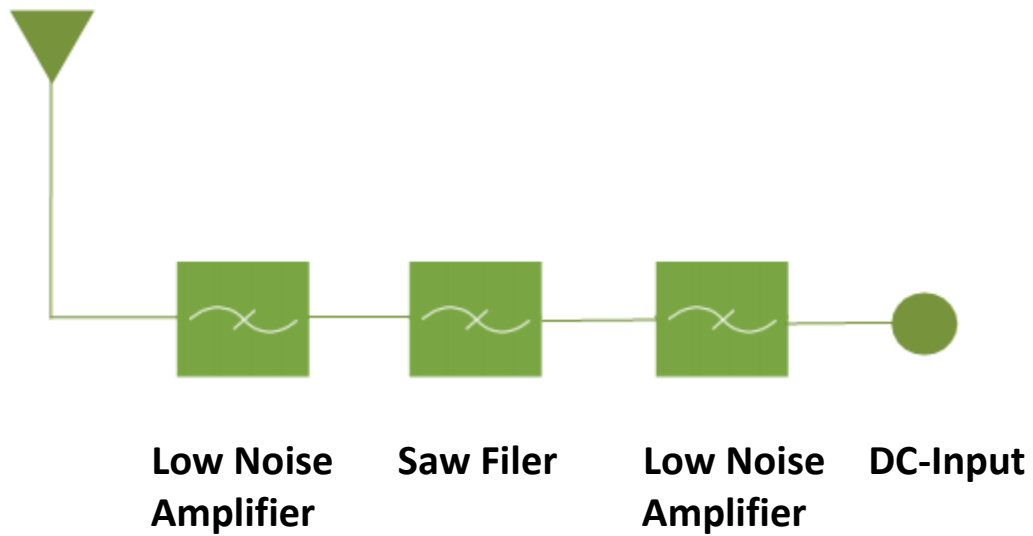


*all measurements were conducted with 0.5m RG174 cable

*Formula = Patch Antenna Average Gain + LNA typical gain-RG174 cable loss

@1.2dB per meter = Gain at connector

3. Circuit Diagram



4. Antenna Field Trial Results



5. V.S.W.R for 4G LTE

Table 5-1

Frequency Band(MHz)	750	960	1710	2960
V.S.W.R	1.4	1.4	1.2	1.1

Table 5-2

Frequency Band(MHz)	750	960	1710	2690
Typical Value	≤2.5	≤2.5	≤2.0	≤2.0
Measuring Method	<ol style="list-style-type: none"> 1. A 50Ωcoaxial cable is connected to the Antenna. Then this cable is connected to a network analyzer to measure the VSWR. 2. Keeping this jig away from metal at least 20 cm 			

6. Efficiency and Gain

Frequency(MHz)	Efficiency (%)	Peak GAIN (dBi)
824	37.55	0.36
960	39.48	0.86
1710	42.68	2.05
2170	45.02	3.18
2690	41.65	2.96

7. Drawing

