



Features

- Superior broadband performance
- Small design footprint
- Easy installation
- RoHS compliant

Applications

- Cellular phone / LTE / WIMAX full band
- Notebook / Laptop / UMPC
- PDA / Smart phone / iPhone
- Bluetooth devices
- Other handheld devices (Mobile, TV, USB...)

Key Specifications - Electrical

Impedance:	50 ohm
Gain:	0 / 2 / 2dBi
S/W/R:	≤ 3.0
Frequency:	790 - 960MHz 1710 - 2170MHz 2500 - 2700MHz
Radiation:	Omni Directional
Polarization:	Vertical

Key Specifications - Mechanical

Dimensions:	80 x 30 x 90.3mm
Weight:	26g
Cable:	1.37mm, 150mm length
Connector:	u.FL plug
Radome material:	PCB FR4
Radome colour:	Gold

Test Results

Return Loss

[r1] S11 Log Mag 10.00dB/ Ref 0.000dB [R0]

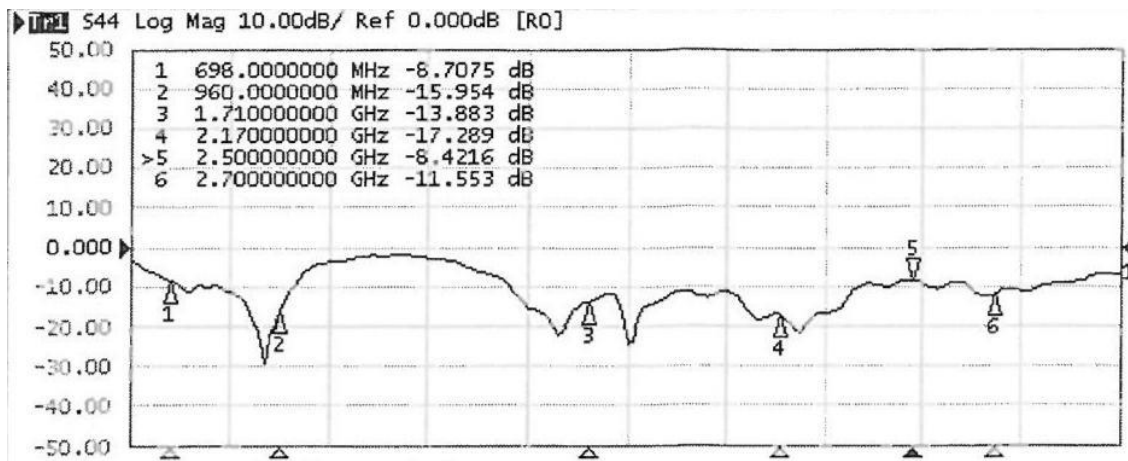


VSWR

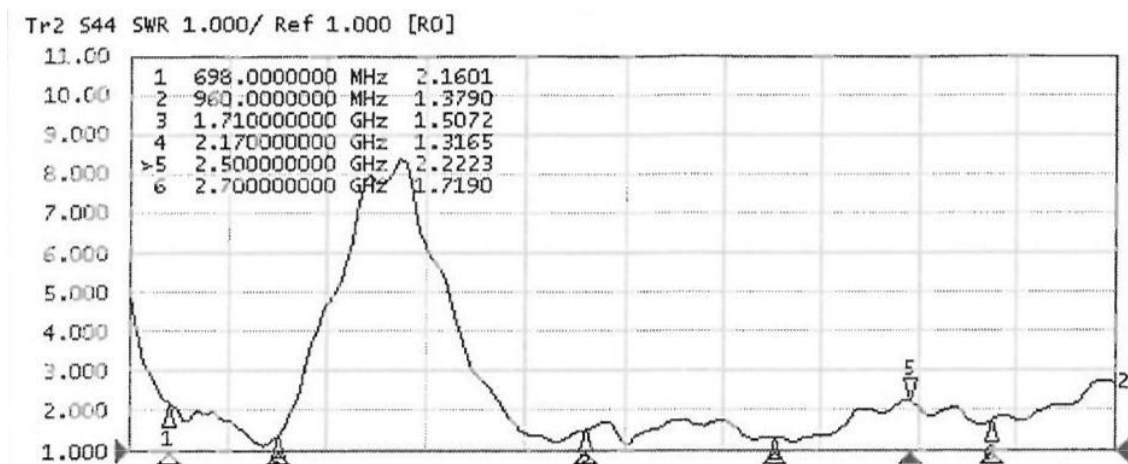
[r1] S11 Log Mag 10.00dB/ Ref 0.000dB [R0]



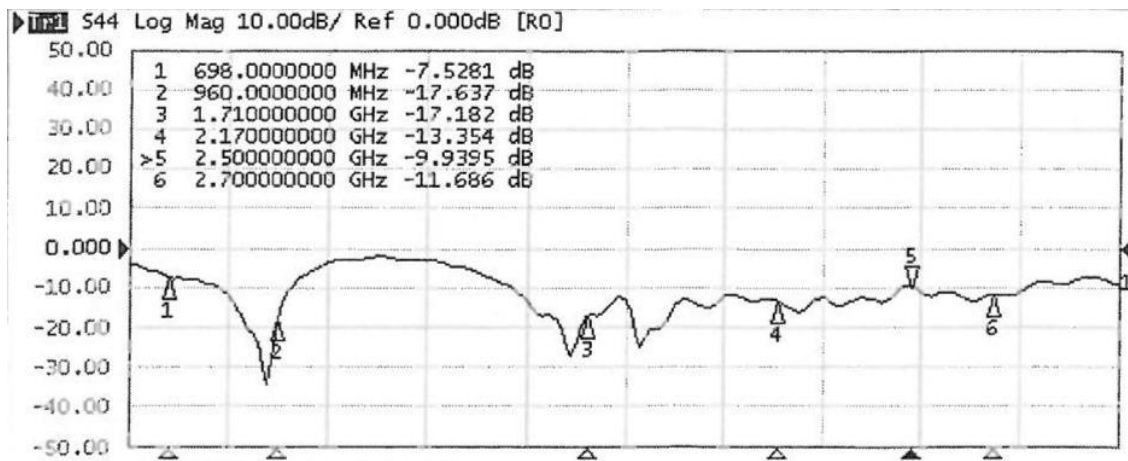
Return Loss - 50mm cable



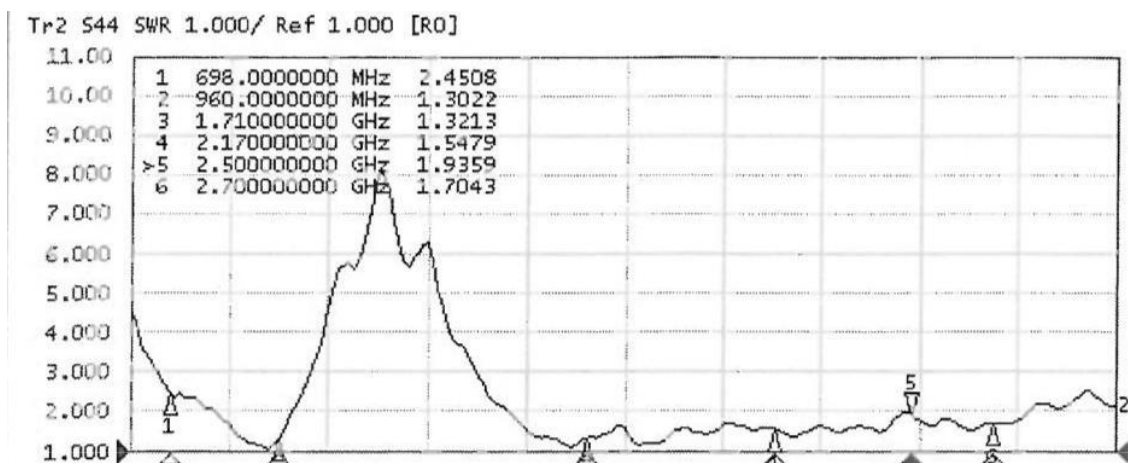
SWR - 50mm cable



Return Loss - 100mm cable



SWR - 100mm cable

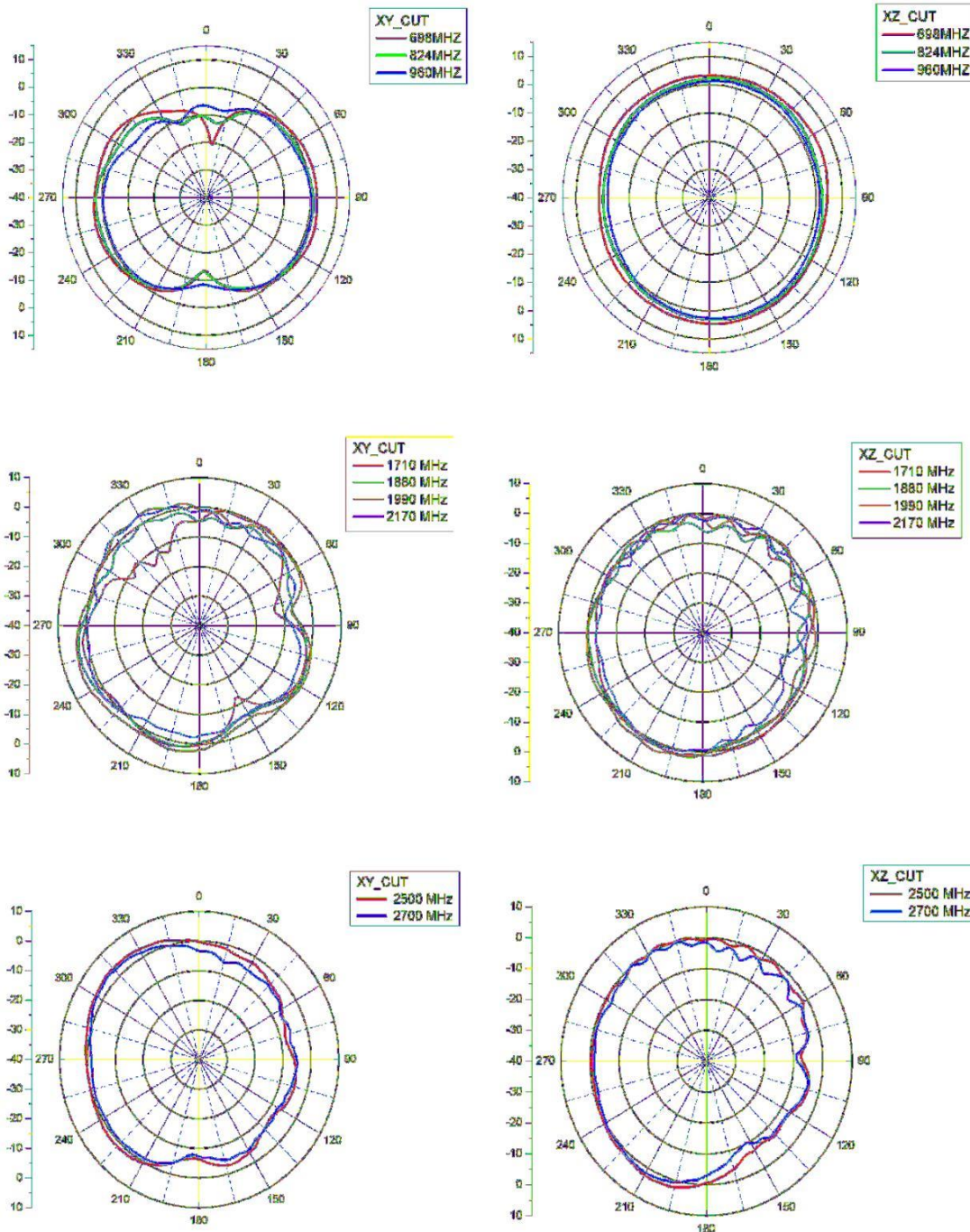


Ordering Details

Part number	Description
ECHO40/0.1M/uFL/S/S/32	Echo 40 PIFA type 4G/3G embedded antenna.

GSM / UMTS / 3G / Cellular Phone / LTE / WIMAX
2.5GHz Omni Directional PIFA Type Embedded Antenna

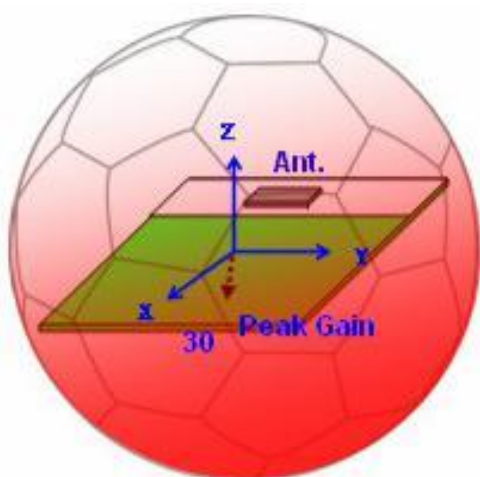
Pattern



Layout Considerations

Recommended antenna placement and PCB layout

Figure 1



Note:

1. The Echo 40 has the best radiation performance as measured from the center line of the PCB, to the beam angle (as shown in Figures 1, 2 and 3).
2. Mechanical Considerations
Antenna and housing distance: Top >8mm,
Side >3mm
PCB ground side: 150 x 145mm

Other preferred antenna placement and PCB layout

Figure 2

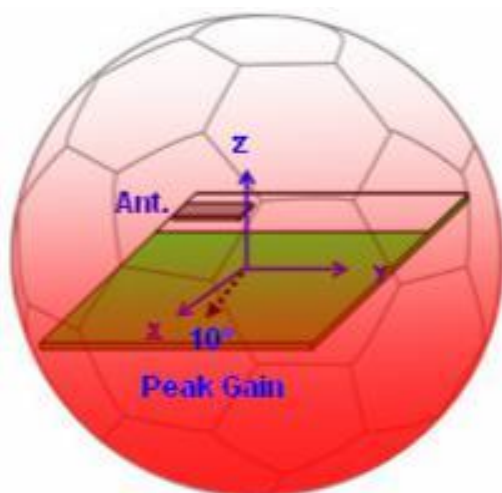


Figure 3

