



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



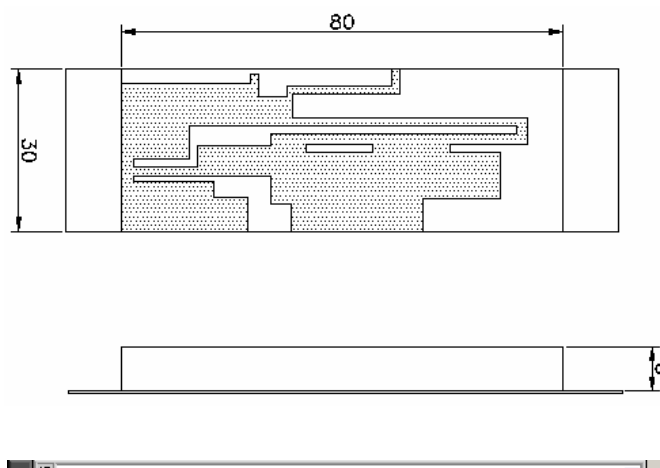
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Features

- 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

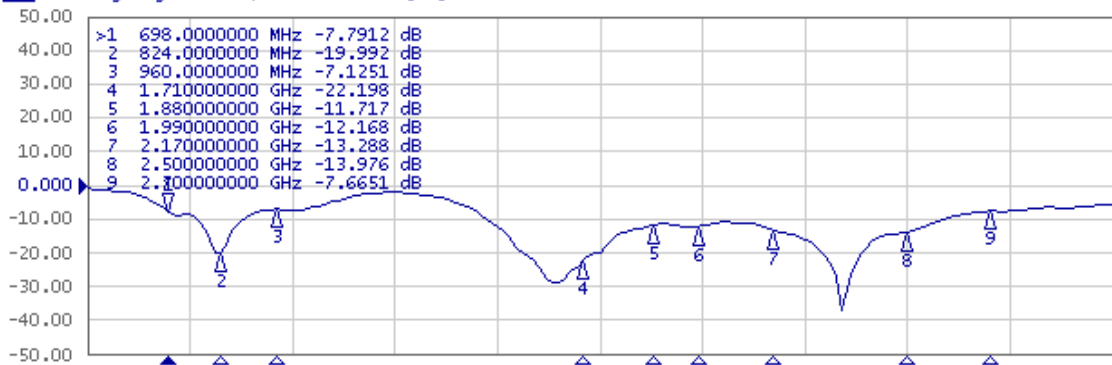
Key Specifications - Mechanical

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

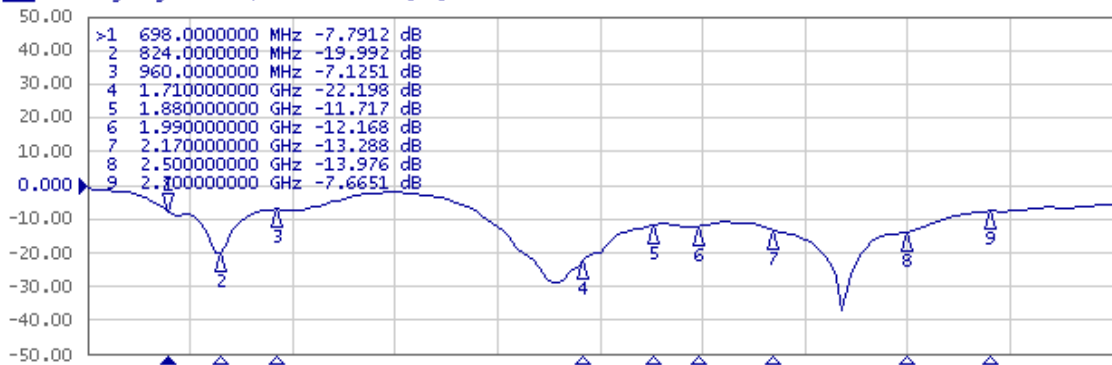
Return Loss

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

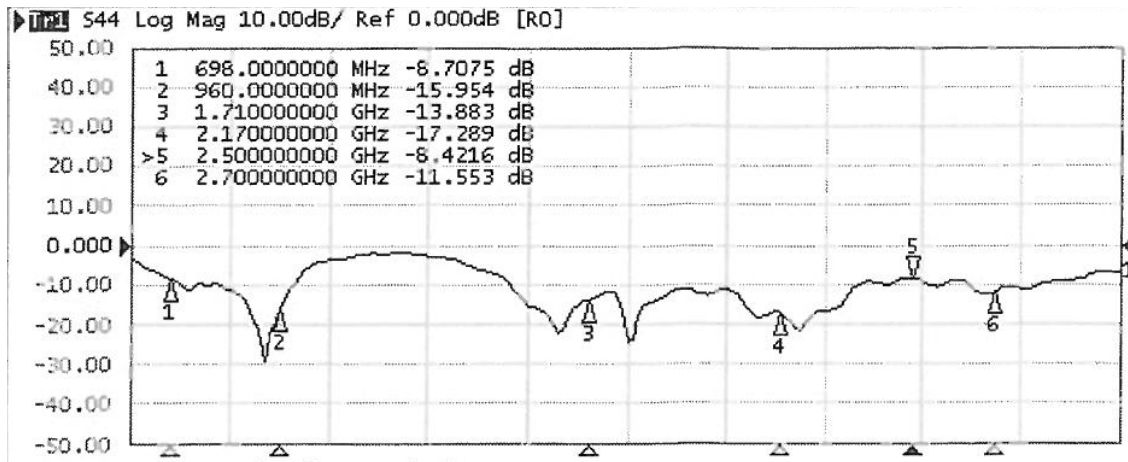


VSWR

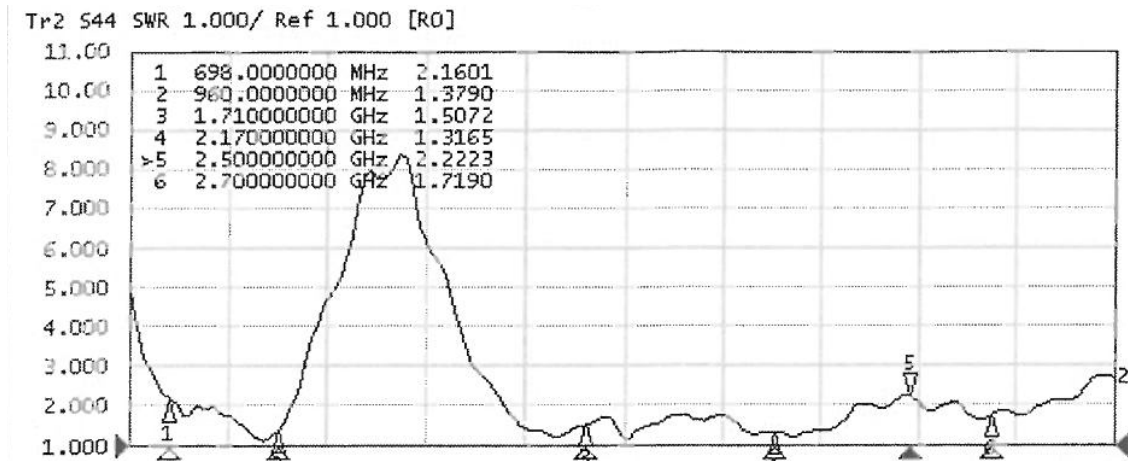
[r] S11 Log Mag 10.00dB/ Ref 0.000dB [R0]



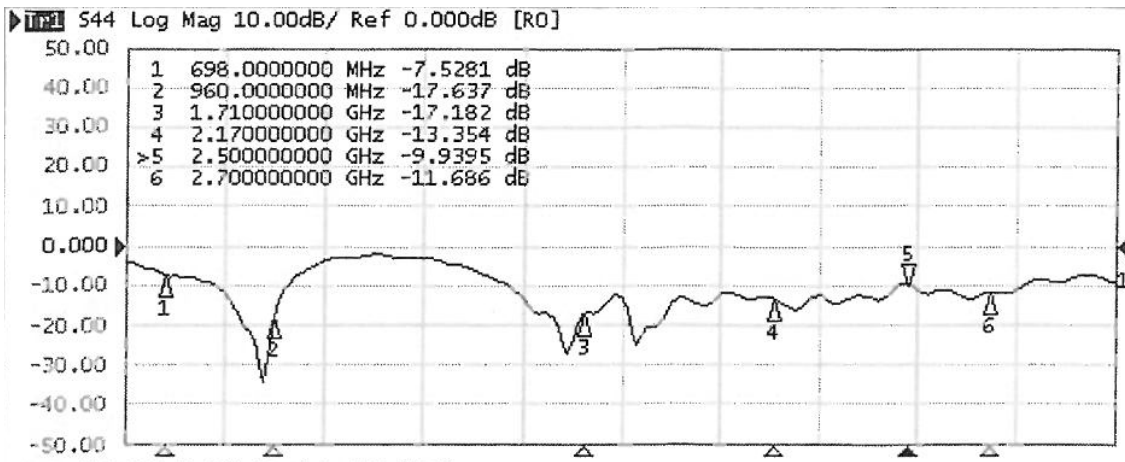
Return Loss - 50mm cable



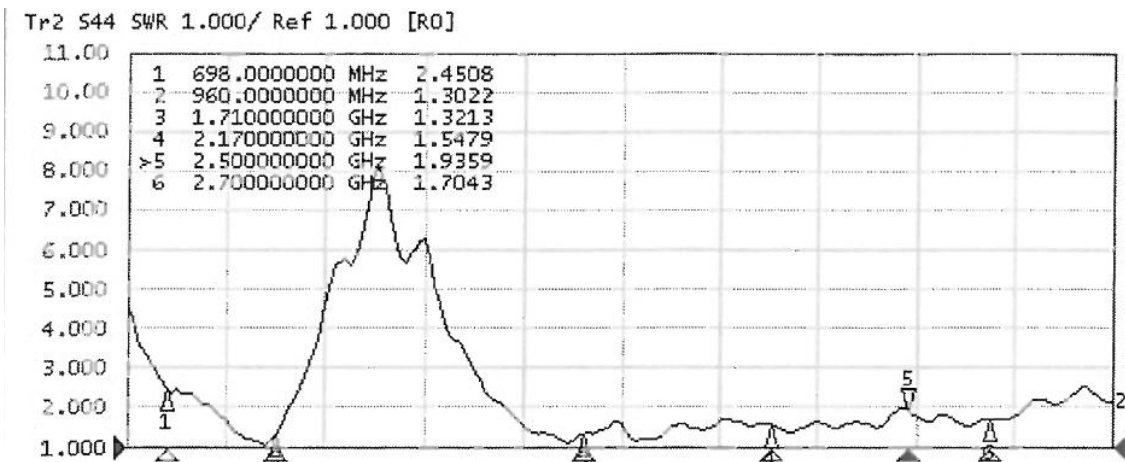
SWR - 50mm cable



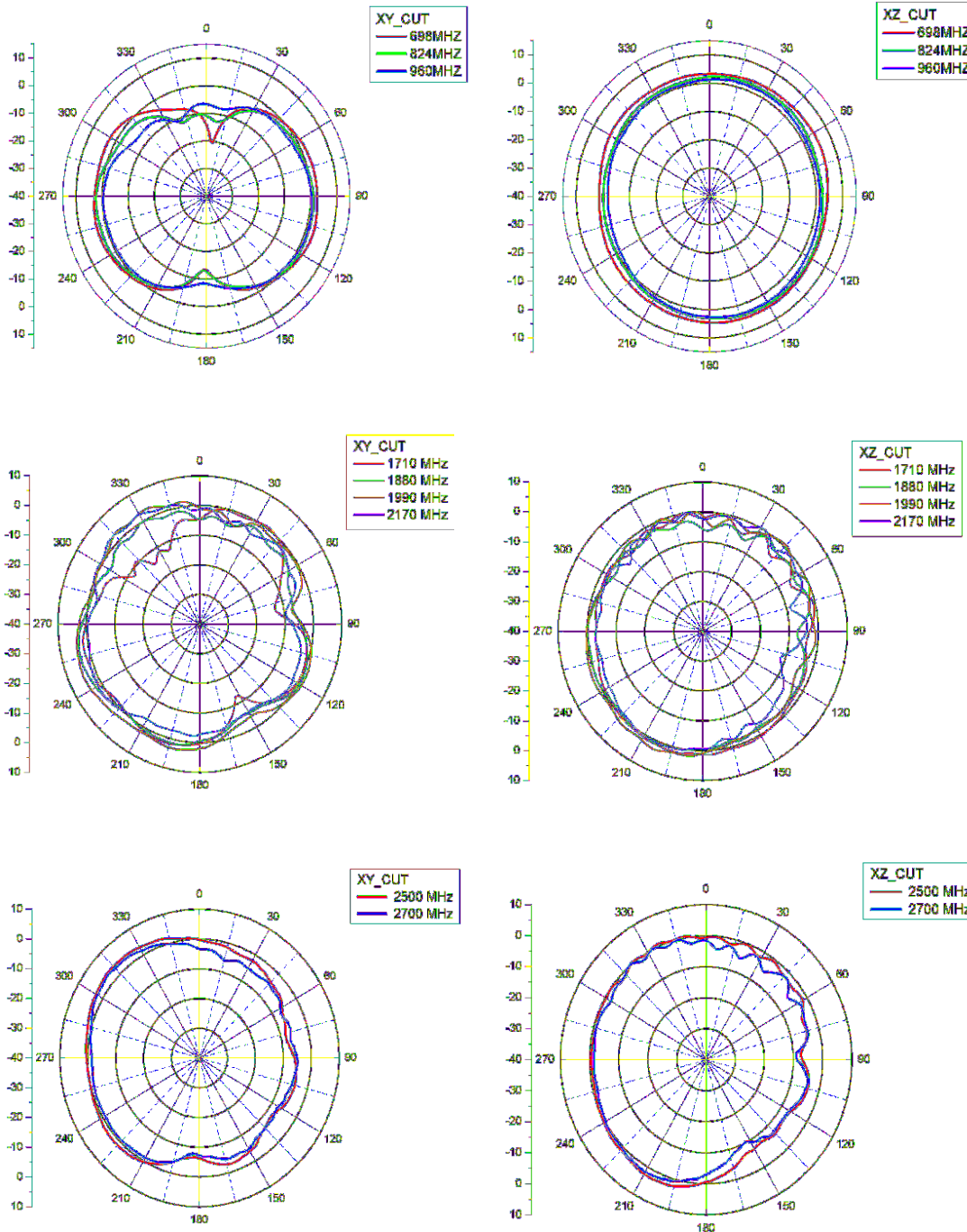
Return Loss - 100mm cable



SWR - 100mm cable



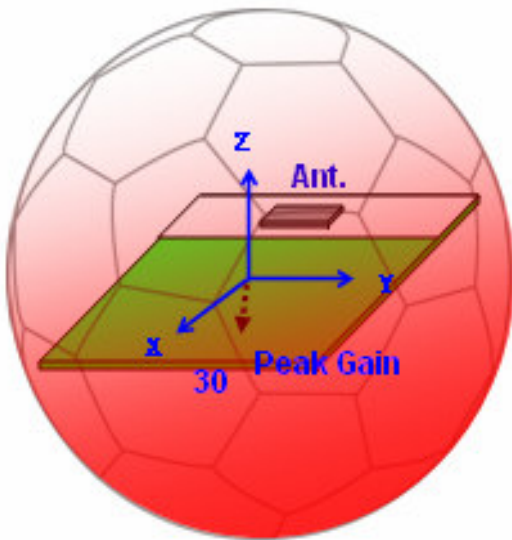
Pattern



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

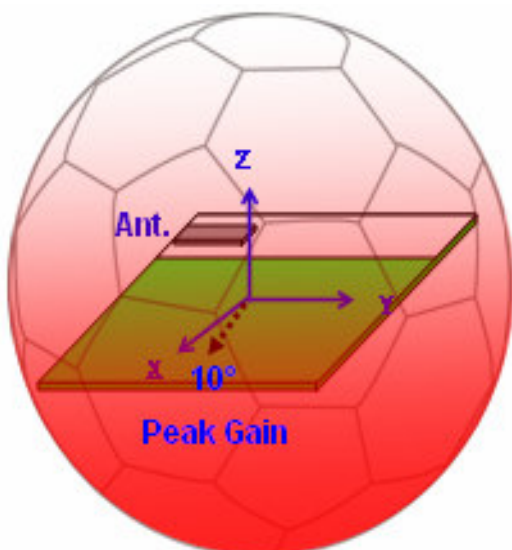


Figure 3

