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(UWB)

UWB

UWB

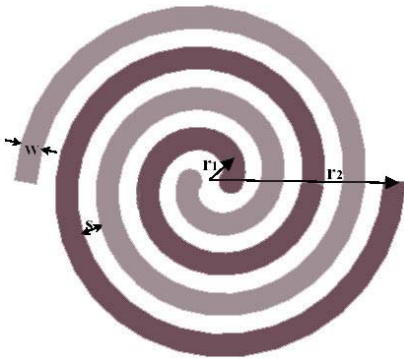
UWB

$$Z_{metal}Z_{air}=\frac{\eta^2}{4}$$

$$\eta$$

$$Z_m=\frac{\eta_o}{2}=188.5\Omega$$

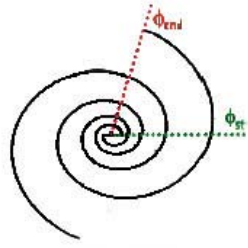
$$r=r_o\phi+r_1 \text{ and } r=r_o\left(\phi-\pi\right)+r_1$$



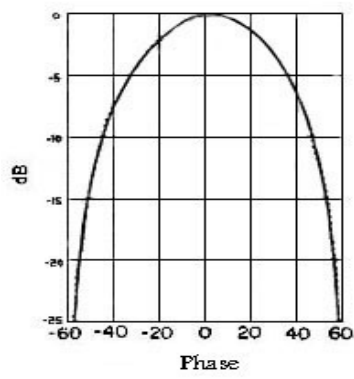
شکل_۱

$$f_{high}=\frac{c}{2\pi r_1} \qquad \qquad \qquad f_{low}=\frac{c}{2\pi r_2}$$

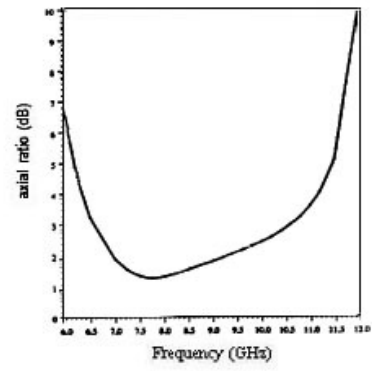
$$\phi_{st}\leq \phi \leq \phi_{end} \qquad r=ac^{b\phi}\left(1+\delta\left|\sin\phi\right|\right)$$



شکل ۲

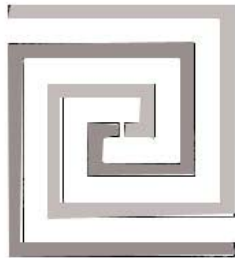


شکل ۴

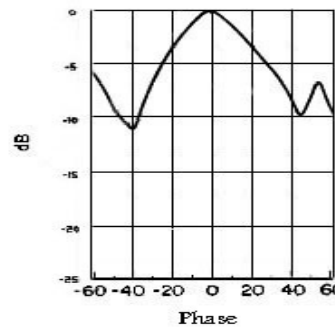


شکل ۳

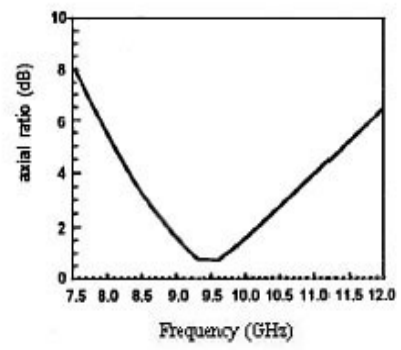
(Multiport Network)



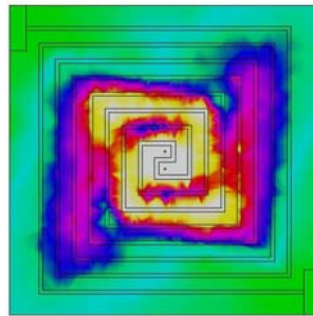
شکل ۵



شکل ٧



شکل ٦



شکل ٨

Equiangular Microstrip Spiral Antennas, Shih-Chang Wu 1995.IEEE [١]
 Design Of a Spiral-Mode Microstrip Antenna For Ultra-Band Receivers 2002 IEEE [٢]