

# Engineering Specification

**Product description:** 2.4G terminal Antenna

**Number :** HCS012ARF

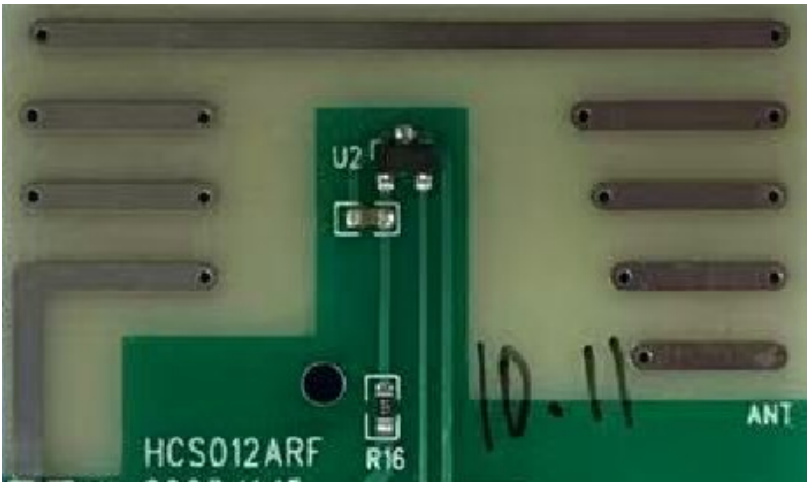
**Lssue date :** 2024-03-24

**Note :** 2400-2500MHZ,ROHS

Manufacturer: FUJIAN BALDR TECHNOLOGY CO.,LTD

Address: Floor 3-4, Building 2, No.71 Yangqi Road, Gaishan Town, Cangshan District,  
Fuzhou, 350007 Fujian, P.R. China

# Layout Guide & Electrical Specifications

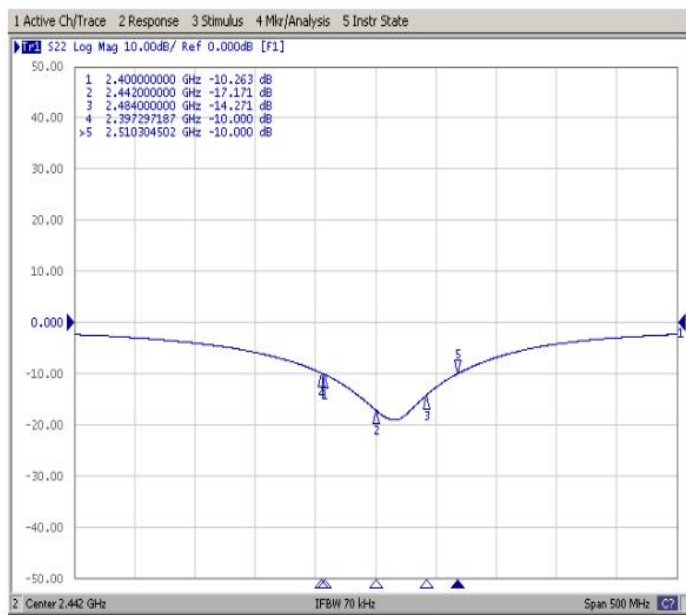


Electrical Specifications (Evaluation board dimensions: FR4 1.0MM 15.2 x 40.2 mm2 )

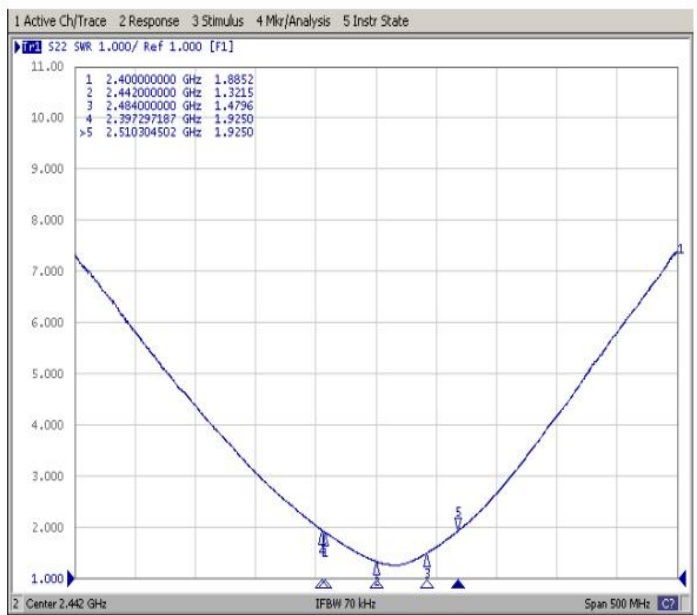
Characteristics	Specifcations	unit
Outline dimensions	105*MM±5MM	mm
Working Frequency	2400-2500	MHZ
VSWR(@centerfrequency)*	2.0 Max.	
Characteristic Impedance	50	Ω
Polarization	Linear Polarization	
Peak Gain	0.9 (typical**)	(@2450 MHz)/dBi
Efficiency	60 (typical**)	(@2450 MHz)%

## Return Loss & VSWR

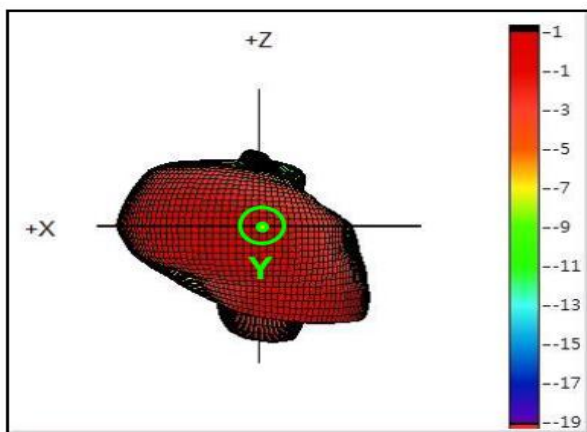
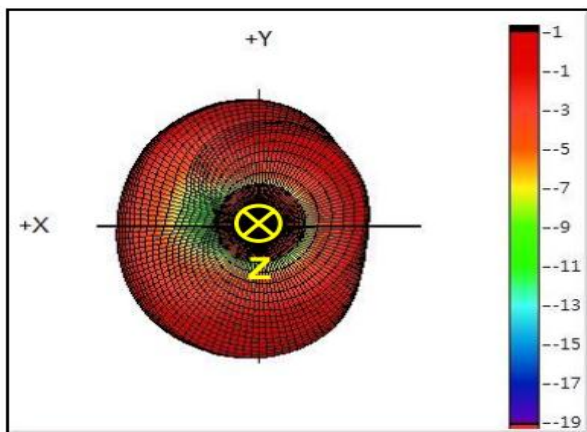
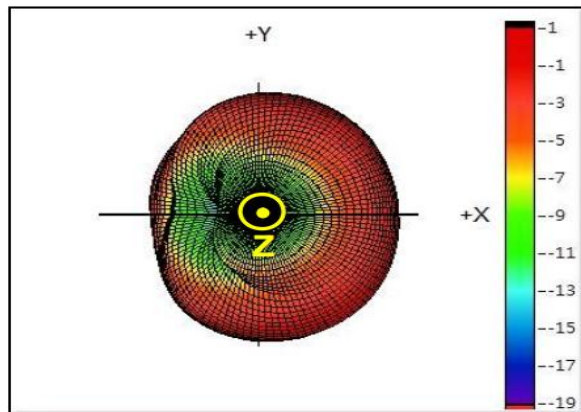
### Return Loss ( $S_{11}$ )



### VSWR ( $S_{11}$ )



**3D Radiation Gain Pattern (with 50 x 40 mm2 Evaluation Board)**  
**3D Radiation Gain Pattern @ 2450 MHz (Unit: dBi)**



Efficiency Table

Frequency(MHz)	2400	2412	2417	2422	2427	2432	2437	2442	2447	2452	2457	2462	2467	2472	2484	2500
Efficiency(dB)	-2.7	-2.5	-2.4	-2.4	-2.3	-2.2	-2.2	-2.2	-2.3	-2.4	-2.5	-2.6	-2.6	-2.6	-2.7	-2.9
Efficiency(%)	53.4	56.3	57.3	57.4	59.2	59.7	60.5	60.7	58.8	56.9	56.7	55.3	54.7	55.4	53.7	51.8
Peak Gain(dBi)	0.4	0.6	0.7	0.7	0.9	0.9	0.9	0.9	0.8	0.8	0.7	0.6	0.7	0.6	0.5	0.4

Efficiency vs. Frequency

