



RFID Antenna

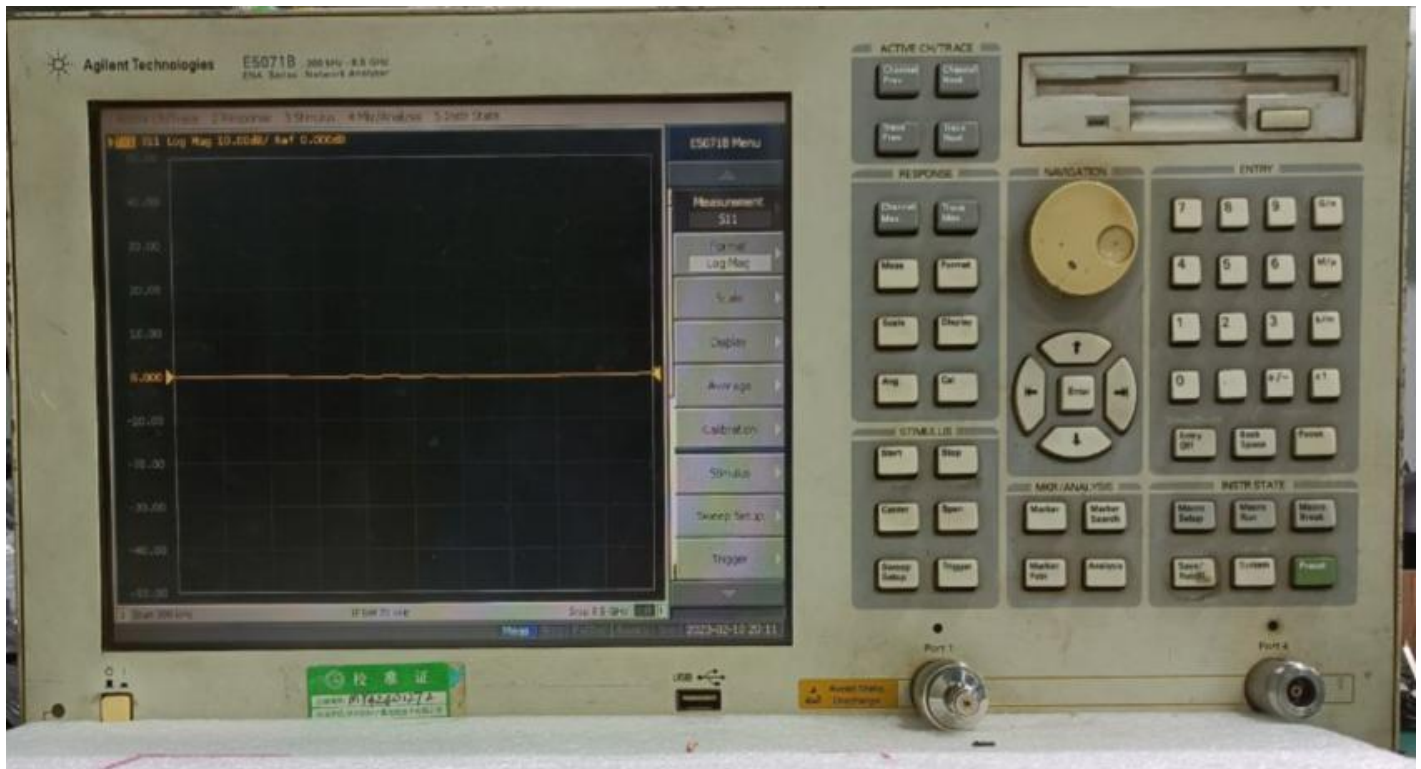
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Project name:	T2U
Material name:	RFID antenna
Material specification:	RFID antenna , 90.0*90.0*13mm

Specification parameter

技术要求 technical requirement	技术指标 Technical indicators
产品类型(Model Type)	T2U_UHF_ANT
频率范围 (Frequency range)	900MHz-940MHz
增益 (Gain)	2.7dBi
天线效率(Antenna Efficiency)	63%@915MHz
驻波比 (SWR)	≤ 1.5
轴比(Axial Ratio)	1.5dB@915MHz
极化方式(Polarization)	right handed elliptically polarized wave
3dB 波瓣宽度(3dB Beamwidth)	$110 \pm 6@ \Phi=0^\circ$, $120 \pm 6@ \Phi=90^\circ$
辐射方向(Radiation Pattern)	directional
阻抗(Impedance)	50 Ω
功率容量(Power Handling)	10W
天线接口(Interface)	MMCX1.78
馈线长度(Cable Length)	50 $\pm$ 2mm
外形尺寸(Dimensions)	90mm*90mm*13mm
工作温度(Operation Temp)	-35 - 70° C
储存温度(Storing Temp)	-35 - 70° C

Antenna test environment

The input characteristics of antenna are tested by Agilent E5071B vector



Antenna radiation characteristics test uses antenna darkroom test.

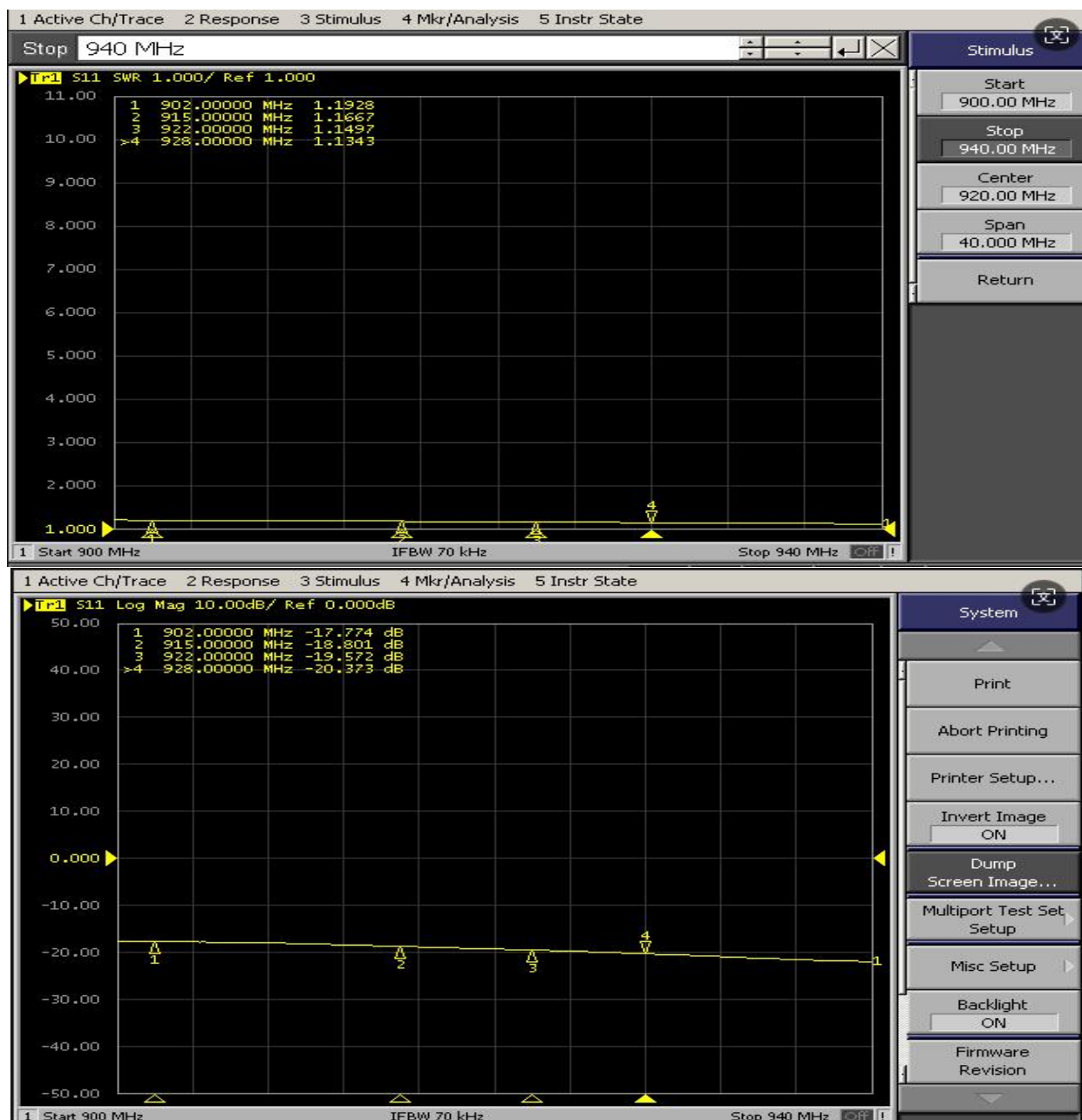


Antenna test results

1. Reflection coefficient and voltage standing wave ratio

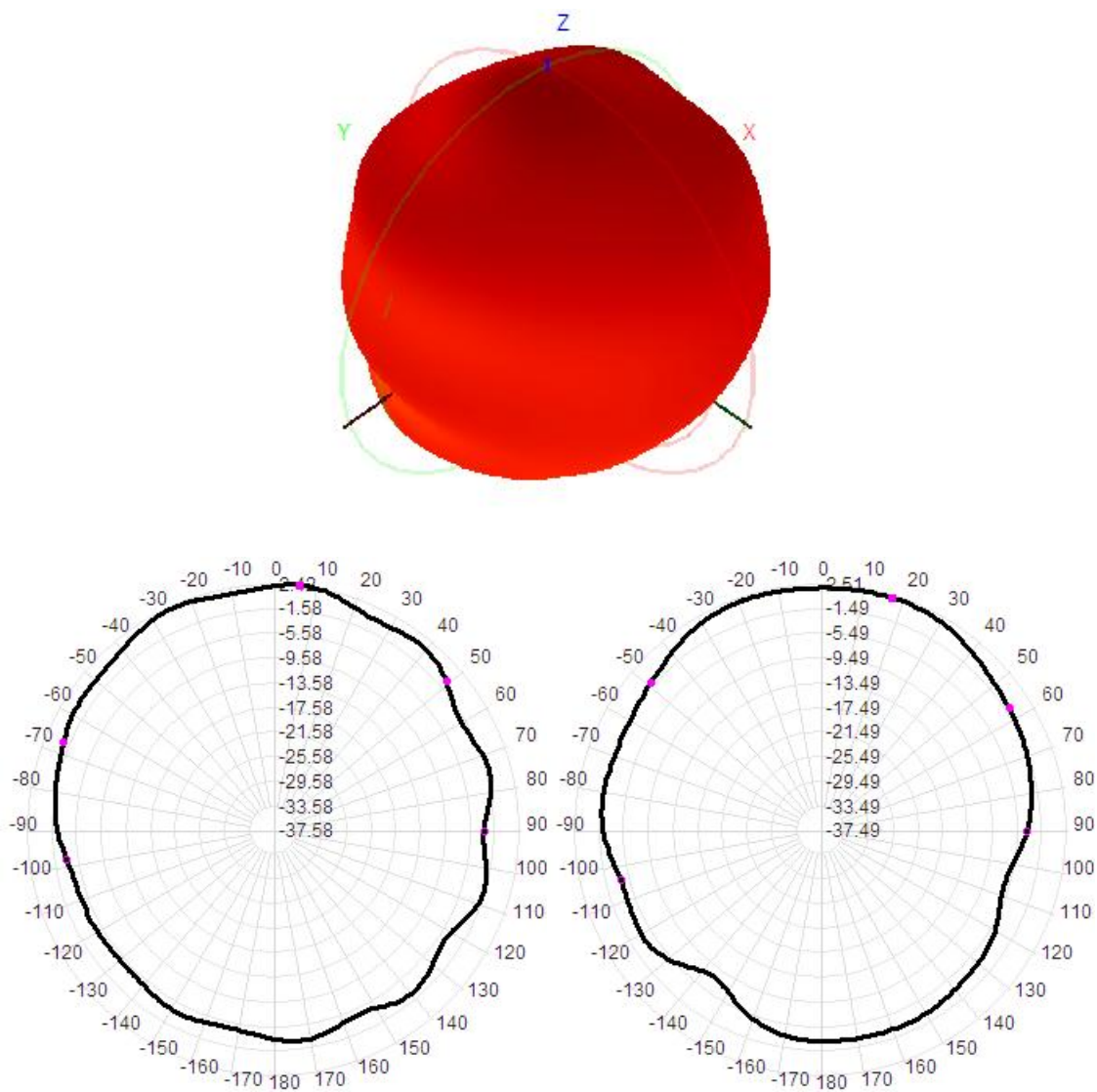
频率 (Frequency range)	反射系数reflectance	驻波比 standing-wave ratio
915MHz	-18.8dB	1.12

Reflectance



Frequency ID	1	2	3	4	5	6	7	8	9
Frequency (MHz)	900.0	905.0	910.0	915.0	920.0	925.0	930.0	935.0	940.0
Efficiency (dBi)	-2.14	-2.19	-2.13	-2.11	-2.15	-2.33	-2.45	-2.57	-2.73
Gain (dBi)	2.29	2.33	2.51	2.63	2.70	2.56	2.43	2.27	2.04
Efficiency (%)	61.08	60.42	61.25	61.45	60.92	58.53	56.86	55.30	53.30
Directivity (dB)	4.43	4.52	4.64	4.74	4.83	4.88	4.88	4.84	4.77
Peak Gain Position (Theta)	8.00	8.00	9.00	10.00	10.00	11.00	11.00	11.00	10.00
Peak Gain Position (Phi)	211.00	215.00	221.00	226.00	228.00	231.00	232.00	234.00	233.00
Efficiency ThetaPol (%)	30.27	30.46	31.15	31.37	30.93	29.51	28.29	27.14	25.74
Efficiency PhiPol (%)	30.82	29.96	30.09	30.08	29.98	29.02	28.57	28.16	27.55
Upper Hem. Efficiency (%)	43.73	43.23	43.69	43.64	43.04	41.11	39.71	38.42	36.85
Lower Hem. Efficiency (%)	17.36	17.19	17.56	17.81	17.87	17.42	17.16	16.88	16.45

Radiation pattern of antenna



Antenna structure engineering drawing

