



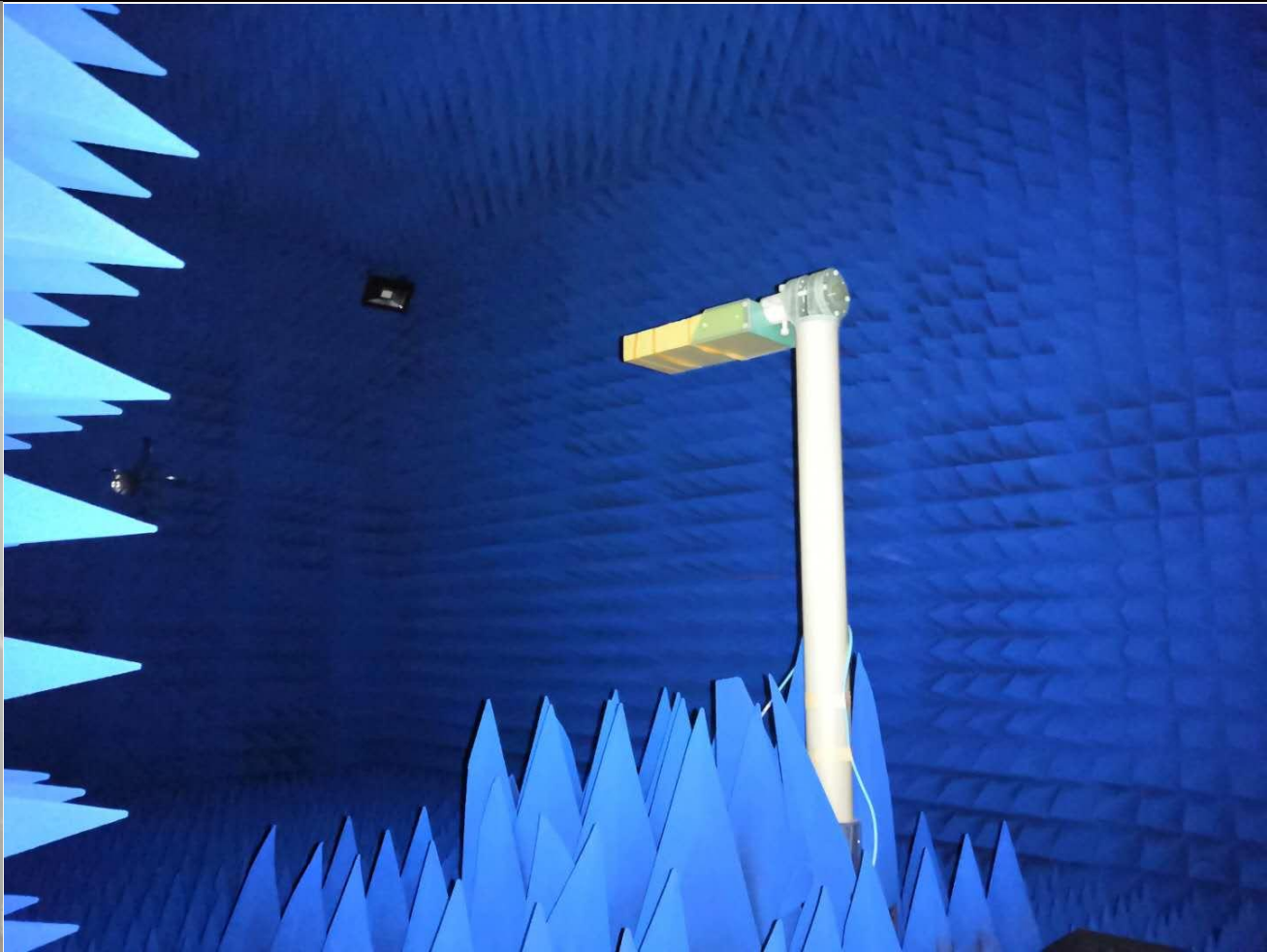
M91-Bluetooth Antenna Test Report

Antenna Test Report

◆ Date: September 1, 2026

1.Test Equipment

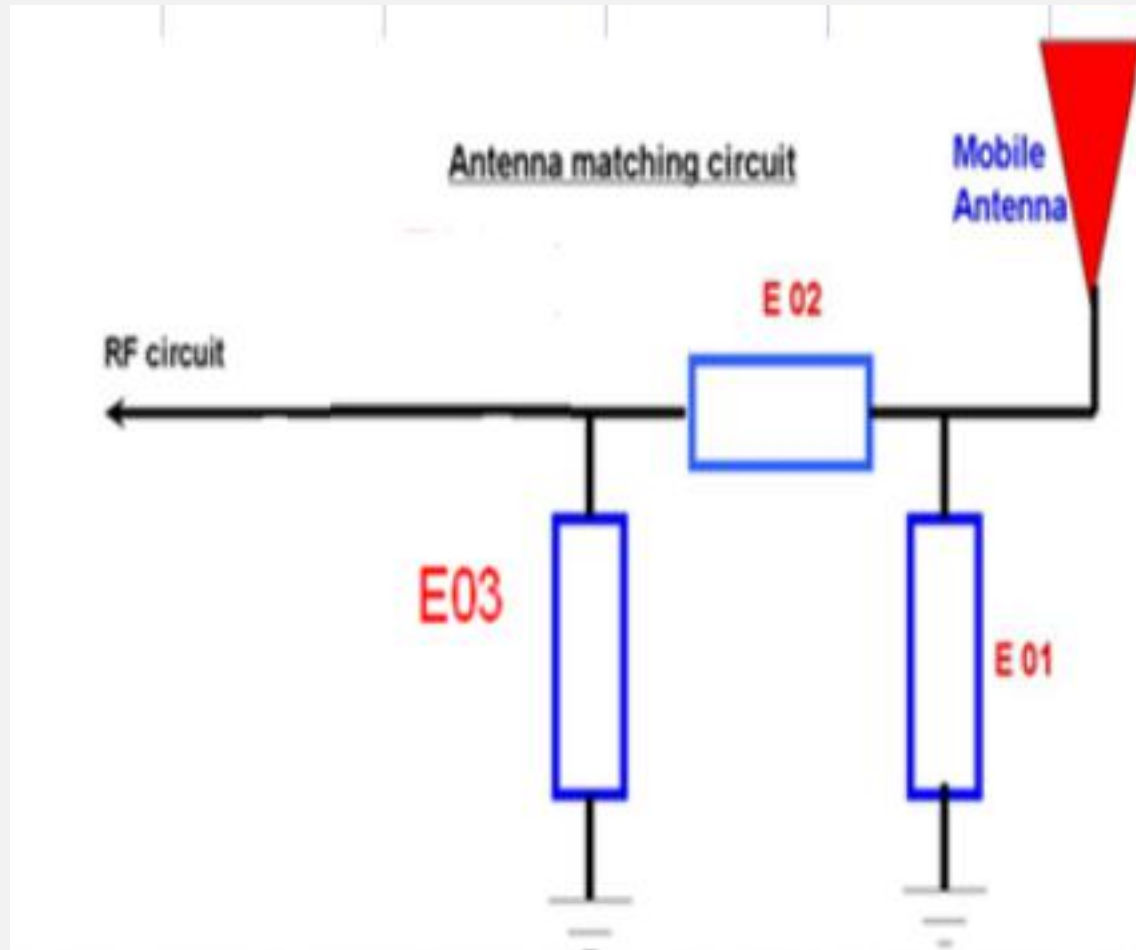
Vector Network Analyzer & Wireless Tester	Agilent Technologies E5071B & R&S CMW500
Anechoic Chamber	ETS 5*4*3
Temperature	25℃
Humidity	65% (RH)





Customer	Meishifu Electronics Co.,Ltd.	Project	M91
Frequency Band	2400MHZ-2500MHZ	Date	2026/09/01

L/R Matching Circuit:



E01

2NH

E02

1.5NH

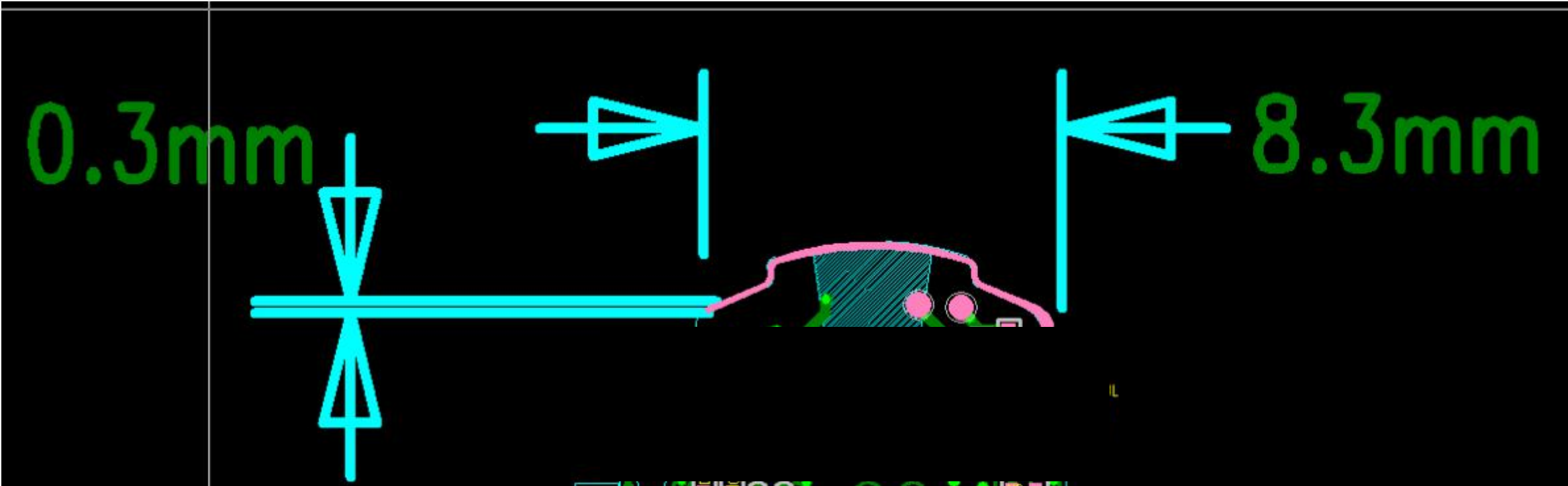
E03

ESD

On-board Antenna



Device Model:	M91
Frequency Band:	2400MHZ 2485MHZ
Antenna Type:	On-board Antenna
Feed Type:	Single Feed
Feed Pin(s):	Feed Point
Mainboard Version:	M91

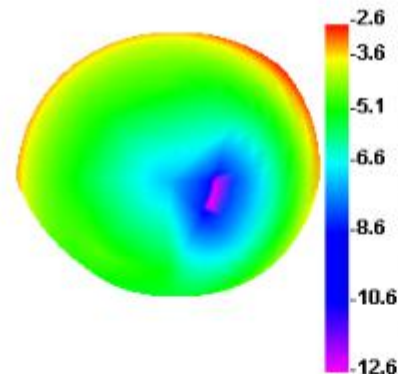


R/L Efficiency and Gain

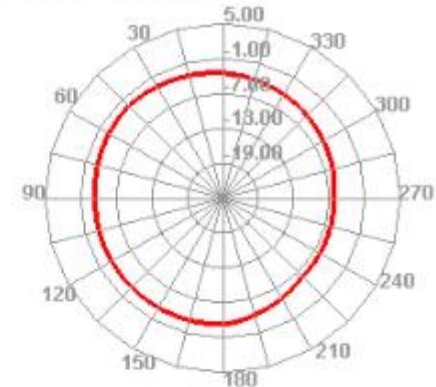


Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)
2400	29.9	-5.24	-2.57	-4.72
2410	28.24	-5.49	-2.83	-4.98
2420	27.67	-5.58	-2.95	-5.1
2430	26.58	-5.75	-3.02	-5.17
2440	27.44	-5.62	-2.91	-5.06
2450	29.72	-5.27	-2.55	-4.7
2460	29.76	-5.26	-2.65	-4.8
2470	27.1	-5.67	-3.24	-5.39
2480	29.42	-5.31	-3.09	-5.24
2490	30	-5.23	-3.04	-5.19
2500	30.71	-5.13	-2.88	-5.03

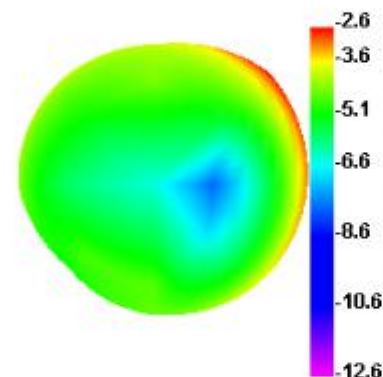
2400.000MHz



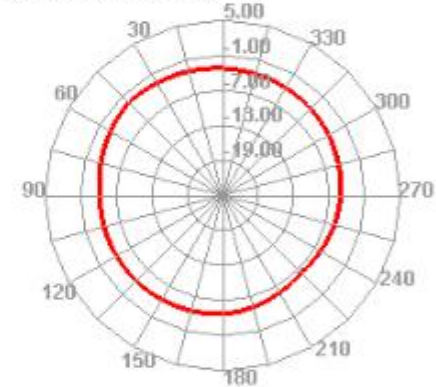
2400.000MHz H



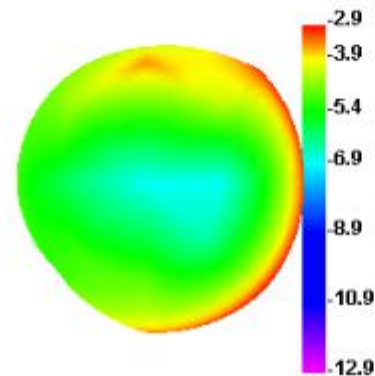
2450.000MHz



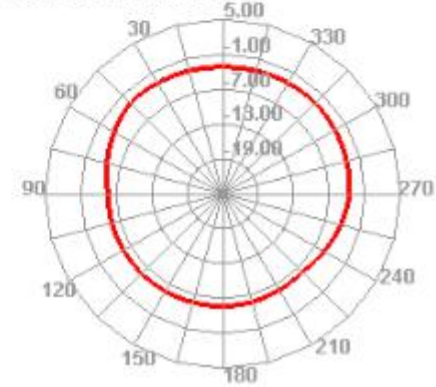
2450.000MHz H



2500.000MHz



2500.000MHz H



M91 Antenna OTA Active Test Data

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Test Result	Bluetooth TRP				Test Result	Bluetooth TRP				Test Result	Bluetooth TRP				Test Result	Bluetooth TRP			
	0	39	78			0	39	78			0	39	78			0	39	78	
Frequency (MHz)	2402	2441	2480		Frequency (MHz)	2402	2441	2480		Frequency (MHz)	2402	2441	2480		Frequency (MHz)	2402	2441	2480	
TRP(dBm)	-1.43	-1.15	-0.96		TRP(dBm)	-2.75	-2.84	-3.03		TRP(dBm)	-2.21	-0.79	-0.15		TRP(dBm)	-3.44	-2.17	-1.54	
NHPRP(dBm) 45	-1.43	-1.15	-0.96		NHPRP(dBm) 45	-2.75	-2.84	-3.03		NHPRP(dBm) 45	-2.21	-0.79	-0.15		NHPRP(dBm) 45	-3.44	-2.17	-1.54	
MAX(dBm)	1.64	1.88	2.29		MAX(dBm)	2.02	1.99	2.37		MAX(dBm)	1.02	2.55	2.96		MAX(dBm)	-0.31	1.91	3.61	
EIRP peak	1.64	1.88	2.29		EIRP peak	2.02	1.99	2.37		EIRP peak	1.02	2.55	2.96		EIRP peak	-0.31	1.91	3.61	
Min(dBm)	-8.67	-7.86	-8.07		Min(dBm)	-14.32	-9.18	-11.7		Min(dBm)	-11.86	-10.2	-10.79		Min(dBm)	-9.75	-10.12	-7.95	
Test Result	Bluetooth TIS				Test Result	Bluetooth TIS				Test Result	Bluetooth TIS				Test Result	Bluetooth TIS			
	0	39	78			0	39	78			0	39	78			0	39	78	
Frequency (MHz)	2402	2441	2480		Frequency (MHz)	2402	2441	2480		Frequency (MHz)	2402	2441	2480		Frequency (MHz)	2402	2441	2480	
TIS(dBm)	-83.06	-82.49	-84.56		TIS(dBm)	-81.08	-79.89	-81.27		TIS(dBm)	-80.8	-80.49	-80.58		TIS(dBm)	-79.94	-79.17	-79.99	
NHPIS(dBm) 45	-83.06	-82.49	-84.56		NHPIS(dBm) 45	-81.08	-79.89	-81.27		NHPIS(dBm) 45	-80.8	-80.49	-80.58		NHPIS(dBm) 45	-79.94	-79.17	-79.99	
RSSIAve	-0.57	-1.47	-0.89		RSSIAve	-1.89	-3.16	-2.96		RSSIAve	-1.35	-1.11	-0.08		RSSIAve	-2.58	-2.49	-1.47	
MaxPosRSSI	2.14	0.81	2		MaxPosRSSI	1.81	0.95	1.92		MaxPosRSSI	1.88	2.18	2.79		MaxPosRSSI	-0.25	1.12	3	
MaxPosSens	-85.77	-84.78	-87.46		MaxPosSens	-84.77	-83.99	-86.15		MaxPosSens	-84.03	-83.78	-83.46		MaxPosSens	-82.27	-82.78	-84.46	
MAX(dBm)	2.5	1.56	2.36		MAX(dBm)	2.88	1.67	2.44		MAX(dBm)	1.88	2.23	3.03		MAX(dBm)	0.55	1.59	3.68	
EIS peak	2.5	1.56	2.36		EIS peak	2.88	1.67	2.44		EIS peak	1.88	2.23	3.03		EIS peak	0.55	1.59	3.68	
Min(dBm)	-7.81	-8.18	-8		Min(dBm)	-13.46	-9.5	-11.63		Min(dBm)	-11	-10.52	-10.72		Min(dBm)	-8.89	-10.44	-7.88	
1# Right-Ear Free-Space					1#Right-Ear Head Model					8#Right-Ear Free-Space					8#Right-Ear Head Model				



M91

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M91 Mainboard Conducted Test Data

Cable Loss Compensation 1dB						
Frequency Band	M91-(1#R)			M91-(8#L)		
Channel	0	39	78	0	39	78
Power (dBm)	9.10	9.31	9.03	9.30	9.63	9.32
RX Sensitivity (dBm)	-90.30	-89.30	-90.0	-90.10	-89.70	-90.0