



SAR Dipole Performance Measurement Report

EUT Type: SAR Validation Dipole and Waveguide
Model Name: DIP0G750, DIP0G835, DIP1G800, DIP1G900, DIP2G450, DIP2G600
Brand Name: SATIMO
Test Conclusion: Pass
Test Date: 08 July 2022
Date of Issue: 11 July 2022

Testing Engineer : Shi fan-long
((Shifan. Long)

Technical Manager : Sean she
(Sean she)

Authorized Signatory : Bovey Yang
(Bovey Yang)



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## 1. Equipment List

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
PC	Acer	N/A	N/A	N/A	N/A
E-Field Probe	MVG	SSE2	SN 07/21 EPGO352	2022.02.28	2023.02.27
Dielectric Probe Kit	MVG	SCLMP	SN 32/14 OCPG67	2021.11.23	2022.11.22
Phantom1	MVG	SAM	SN 32/14 SAM115	N/A	N/A
Phantom3	MVG	SAM	SN 21/21 ELLI48	N/A	N/A
Attenuator	Agilent	99899	DC-18GHz	N/A	N/A
Directional coupler	Narda	4226-20	3305	N/A	N/A
Network Analyzer	Agilent	8753ES	US38432810	2021.09.29	2022.09.28
Multi Meter	Keithley	Multi Meter 2000	4050073	2021.10.08	2022.10.07
Signal Generator	Agilent	N5182A	MY50140530	2021.09.30	2022.09.29
Power Amplifier	DESAY	ZHL-42W	9638	2021.10.09	2022.10.08
Power Meter	R&S	NRP	100510	2021.09.29	2022.09.28
Power Sensor	R&S	NRP-Z11	101919	2021.09.29	2022.09.28
Temperature hygrometer	SuWei	SW-108	N/A	2021.10.09	2022.10.08
Thermograph	Elitech	RC-4	S/N EF7176501537	2021.10.09	2022.10.08



## 2. <Justification of the extended calibration>

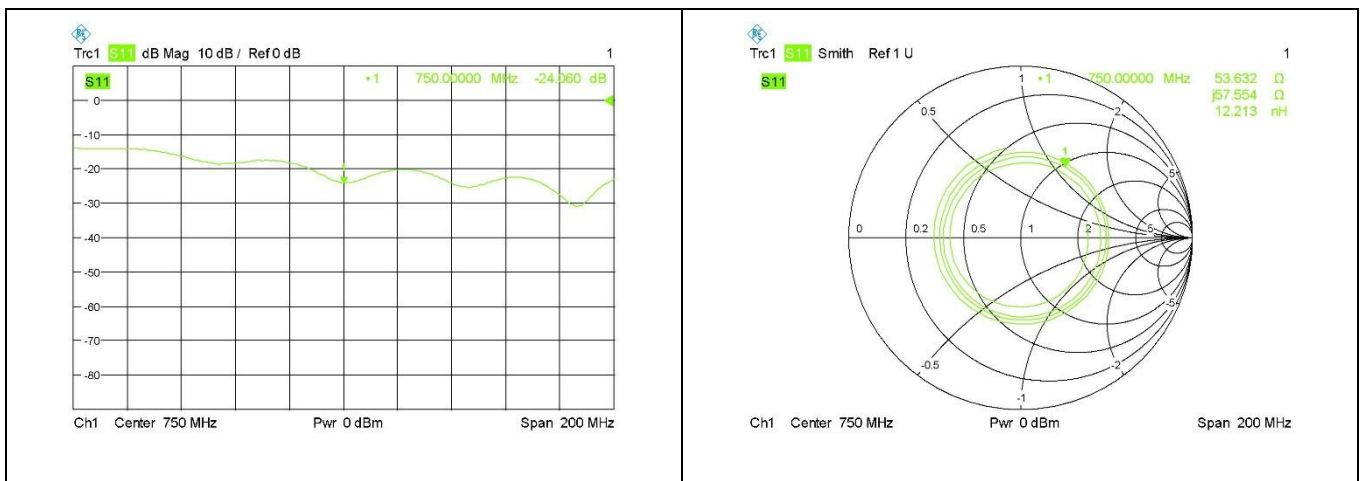
Referring to KDB 865664 D01, if dipoles are verified in return loss <-20dB, (within 20% of prior calibration), and in impedance (within 5 ohm of prior calibration), the annual calibration is not necessary and the calibration interval can be extended.

Head 750 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2020.07.14	-25.47	-	55.2	-
2021.07.11	-25.98	2.00	54.86	-0.34
2022.07.08	-24.06	-5.54	53.63	-1.57

The return loss is <-20dB, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

### <Dipole Verification Data>

#### Head 750 MHz



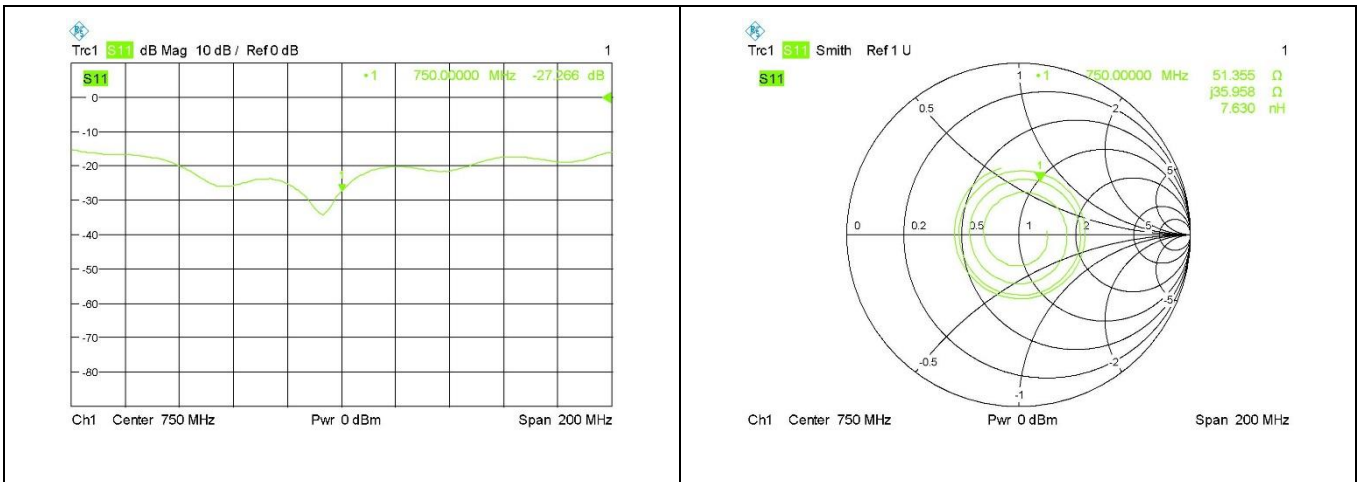


Body 750 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2020.07.14	-27.25	-	51.4	-
2021.07.11	-26.17	-3.96	51.56	0.16
2022.07.08	-27.27	0.07	51.36	-0.04

The return loss is <-20dB, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

<Dipole Verification Data>

Body 750 MHz



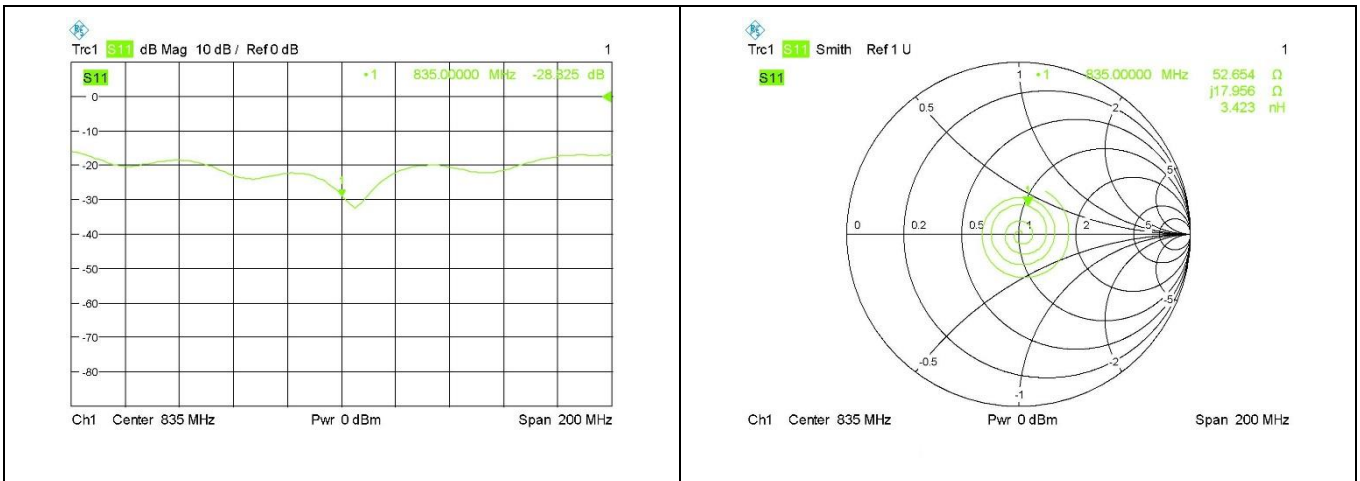


Head 835 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2020.07.14	-28.13	-	51.4	-
2021.07.11	-28.43	1.07	52.62	1.22
2022.07.08	-28.83	2.49	52.65	1.25

The return loss is <-20dB, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

<Dipole Verification Data>

Head 835MHz



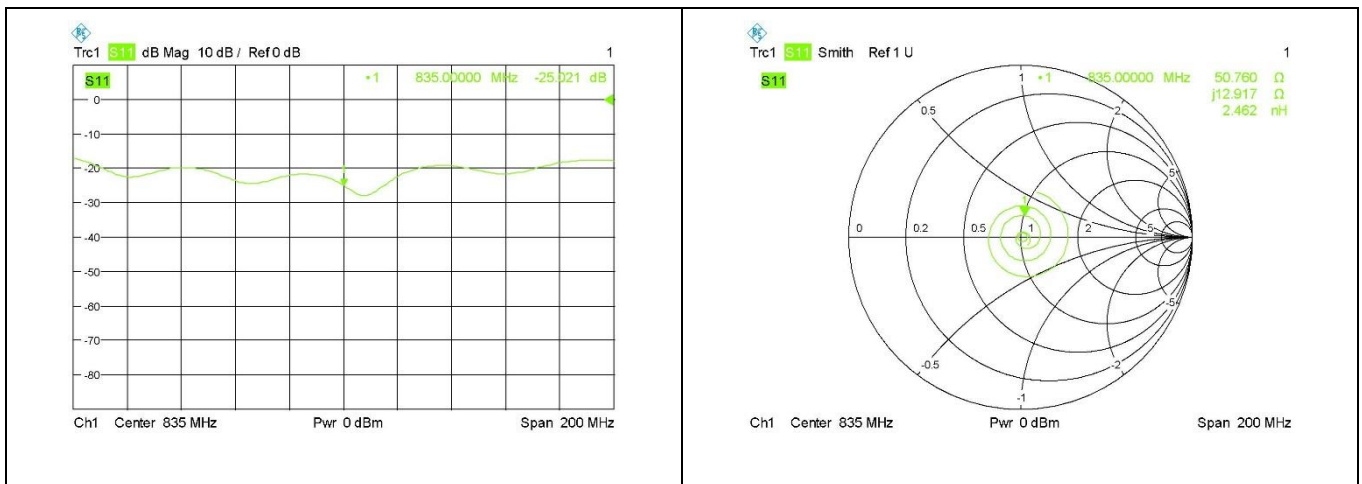


Body 835 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2020.07.14	-23.88	-	49.2	-
2021.07.11	-24.25	1.55	50.26	1.06
2022.07.08	-25.02	4.77	50.76	1.56

The return loss is <-20dB, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

<Dipole Verification Data>

Body 835MHz



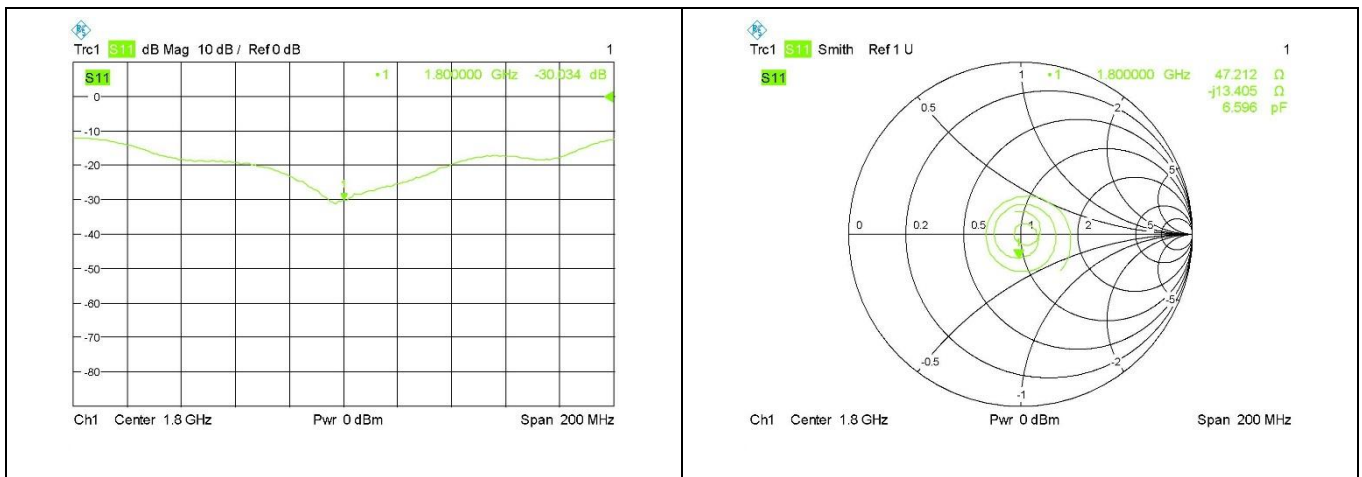


Head 1800 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2020.07.14	-29.49	-	46.9	-
2021.07.11	-29.08	-1.39	46.36	-0.54
2022.07.08	-30.03	1.83	47.21	0.31

The return loss is <-20dB, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

<Dipole Verification Data>

Head 1800 MHz



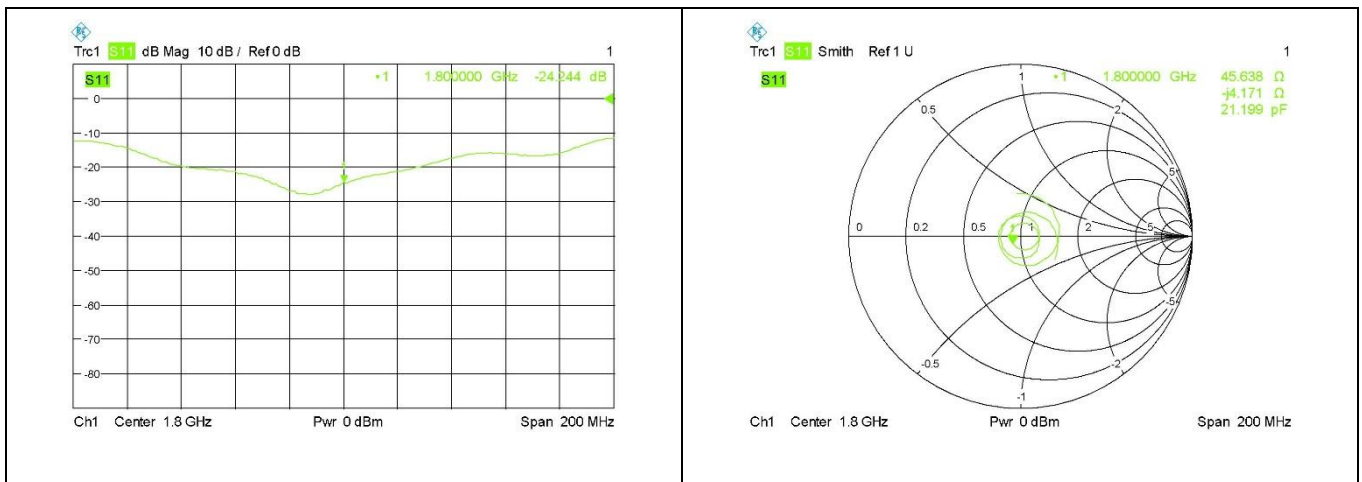


Body 1800 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2020.07.14	-24.55	-	44.7	-
2021.07.11	-25.54	4.03	45.55	0.85
2022.07.08	-24.24	-1.26	45.64	0.94

The return loss is <-20dB, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

<Dipole Verification Data>

Body 1800 MHz







Head 1900 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2020.07.14	-23.66	-	51.4	-
2021.07.11	-23.62	-0.17	50.73	-0.67
2022.07.08	-23.89	0.97	51.23	-0.17

The return loss is <-20dB, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

<Dipole Verification Data>

Head 1900 MHz



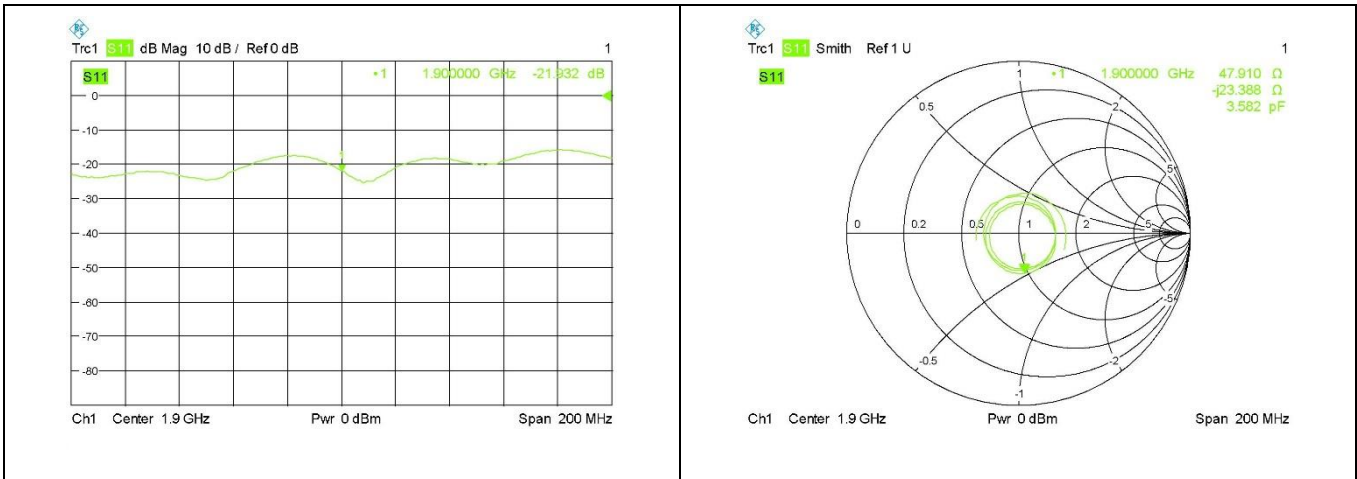


Body 1900 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2020.07.14	-20.20	-	48.7	-
2021.07.11	-21.12	4.55	47.02	-1.68
2022.07.08	-21.93	8.56	47.91	-0.79

The return loss is <-20dB, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

<Dipole Verification Data>

Body 1900 MHz



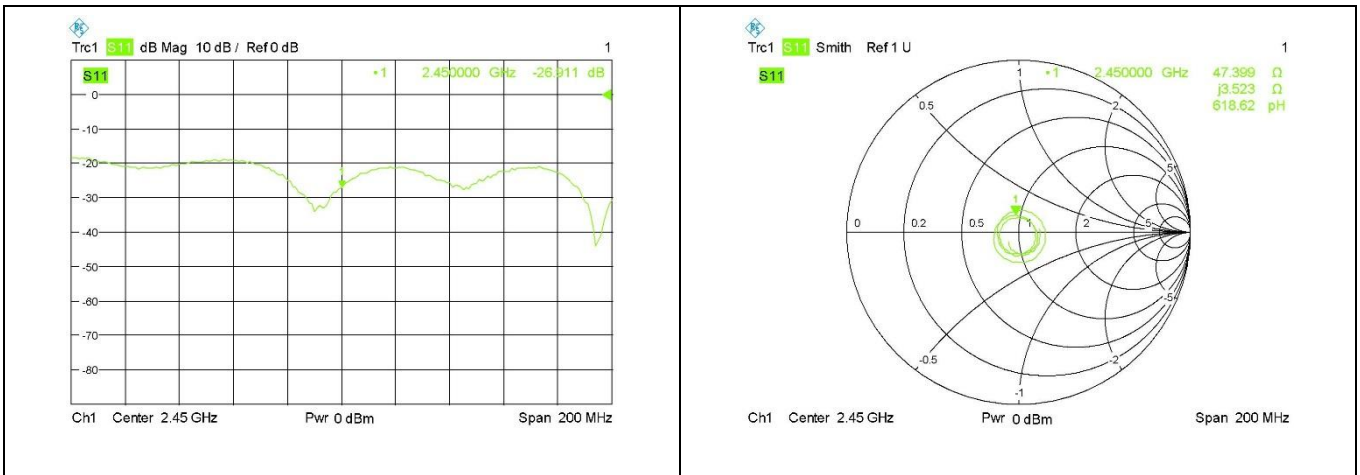


Head 2450 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2020.07.14	-26.03	-	46.3	-
2021.07.11	-26.42	1.50	47.25	0.95
2022.07.08	-26.91	3.38	47.40	1.1

The return loss is <-20dB, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

<Dipole Verification Data>

Head 2450 MHz



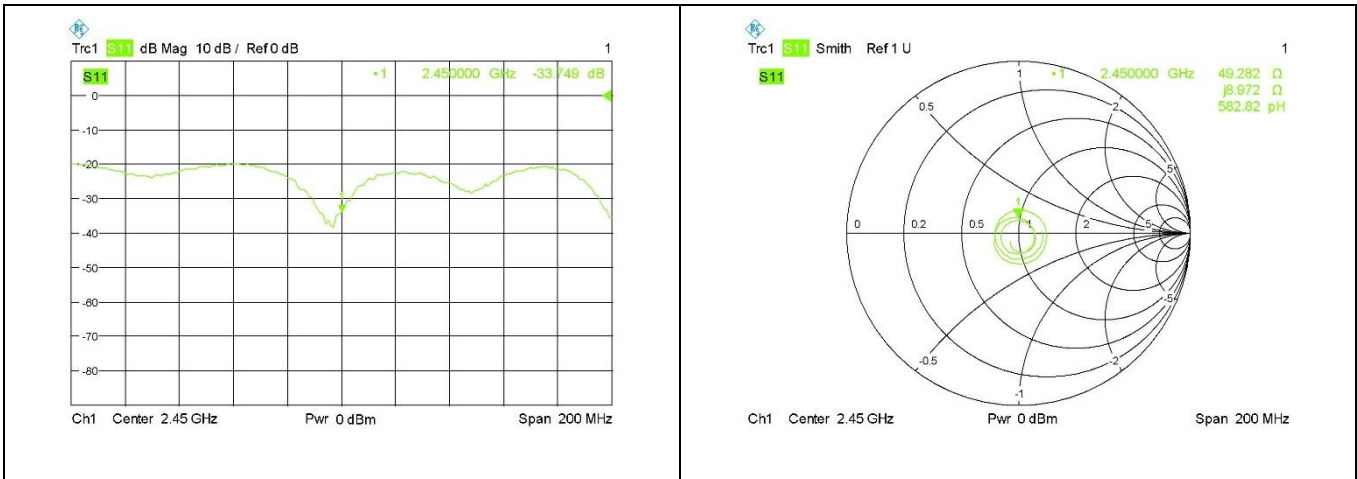


Body 2450 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2020.07.14	-32.76	-	48.7	-
2021.07.11	-32.55	-0.64	47.25	-1.45
2022.07.08	-33.75	3.02	49.28	0.58

The return loss is <-20dB, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

<Dipole Verification Data>

Body 2450 MHz



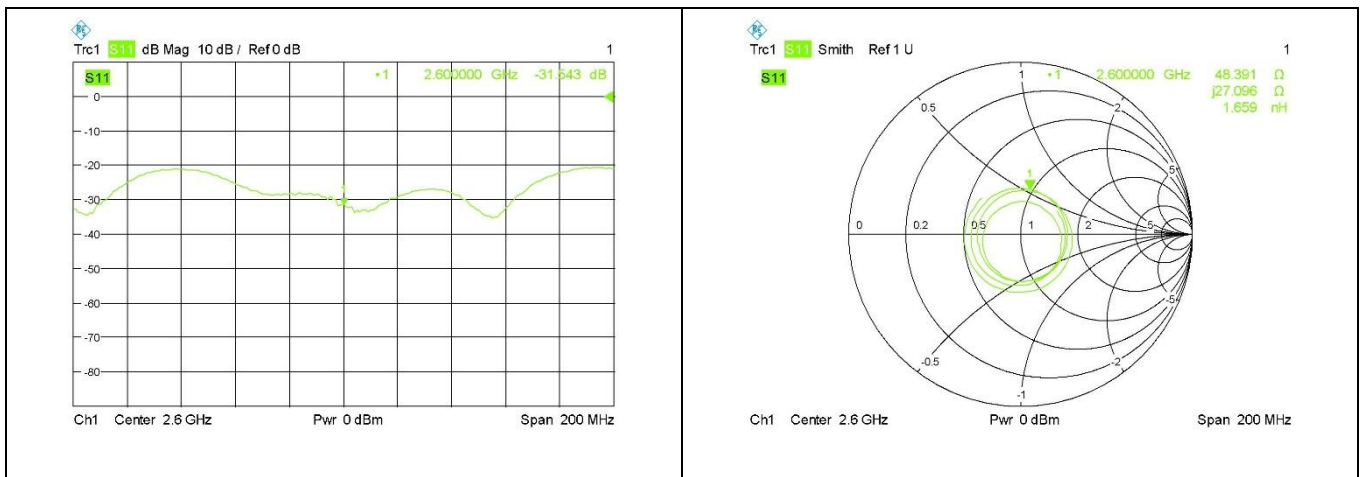


Head 2600 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2020.07.14	-34.32	-	50.3	-
2021.07.11	-34.78	1.34	49.61	-0.69
2022.07.08	-31.54	-8.10	48.39	-1.91

The return loss is <-20dB, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

<Dipole Verification Data>

Head 2600 MHz





Body 2600 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2020.07.14	-24.15	-	45.6	-
2021.07.11	-23.83	-1.33	43.91	-1.69
2022.07.08	-24.49	1.41	44.66	0.94

The return loss is <-20dB, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

<Dipole Verification Data>

Body 2600 MHz

