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SAR Dipole Performance Measurement Report

EUT Type: SAR Validation Dipole and Waveguide
Model Name: DIP0G750, DIP0G835, DIP1G800, DIP1G900, DIP2G450,
DIP2G600, WGA32
Brand Name: SATIMO
Test Conclusion: Pass
Test Date: 04 Jul. 2024&11 Dec. 2024
Date of Issue: 12 Dec. 2024

Testing Engineer :

Xin Liu

(Xin.Liu)

Technical Manager :

Shi fan-long

(Shifan. Long)

Authorized Signatory :

Bovey Yang

(Bovey Yang)



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ShenZhen STS Test Services Co.,Ltd.

A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China

TEL: +86-755 3688 6288 FAX: +86-755 3688 6277 E-mail: sts@stsapp.com



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Shenzhen STS Test Services Co., Ltd.

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	2024.02.14	2025.02.13
Dielectric Probe Kit	MVG	SCLMP	SN 32/14 OCPG67	2023.10.08	2024.10.09
Phantom1	MVG	SAM	SN 32/14 SAM115	N/A	N/A
Phantom2	MVG	SAM	SN 32/14 SAM116	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	2023-09-26	2024-09-25
Multi Meter	Keithley	Multi Meter 2000	4050073	2023-09-26	2024-09-25
Signal Generator	Agilent	N5182A	MY50140530	2023-09-26	2024-09-25
Wireless Communication Test Set	Agilent	8960-E5515C	MY48360751	2023-09-26	2024-09-25
Wireless Communication Test Set	R&S	CMW500	156324	2023-09-26	2024-09-25
Power Amplifier	DESAY	ZHL-42W	9638	2023.10.07	2024.10.06
Power Meter	R&S	NRP	100510	2023-09-26	2024-09-25
Power Sensor	R&S	NRP-Z11	101919	2023-09-26	2024-09-25
Power Sensor	Keysight	U2021XA	MY56280002	2023-09-26	2024-09-25



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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 08/21 EPGO352	2024.09.18	2025.09.17
Dielectric Probe Kit	MVG	SCLMP	SN 32/14 OCPG67	2024.09.18	2025.09.17
Phantom1	MVG	SAM	SN 32/14 SAM115	N/A	N/A
Phantom2	MVG	SAM	SN 32/14 SAM116	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	E5071C	MY46520378	2024-09-25	2025-09-26
Multi Meter	Keithley	Multi Meter 2000	4050073	2024-09-25	2025-09-26
Signal Generator	Agilent	N5182A	MY50140530	2024-09-25	2025-09-26
Power Amplifier	DESAY	ZHL-42W	9638	2024-09-25	2025-09-26
Power Meter	R&S	NRP	100510	2024-09-25	2025-09-26
Power Sensor	R&S	NRP-Z11	101919	2024-09-25	2025-09-26
Power Sensor	Keysight	U2021XA	MY56280002	2024-09-25	2025-09-26
Temperature hygrometer	SuWei	SW-108	N/A	2024.10.15	2025.10.14
Thermograph	Elitech	RC-4	S/N EF7176501537	2024.10.15	2025.10.14



2. <Justification of the extended calibration>

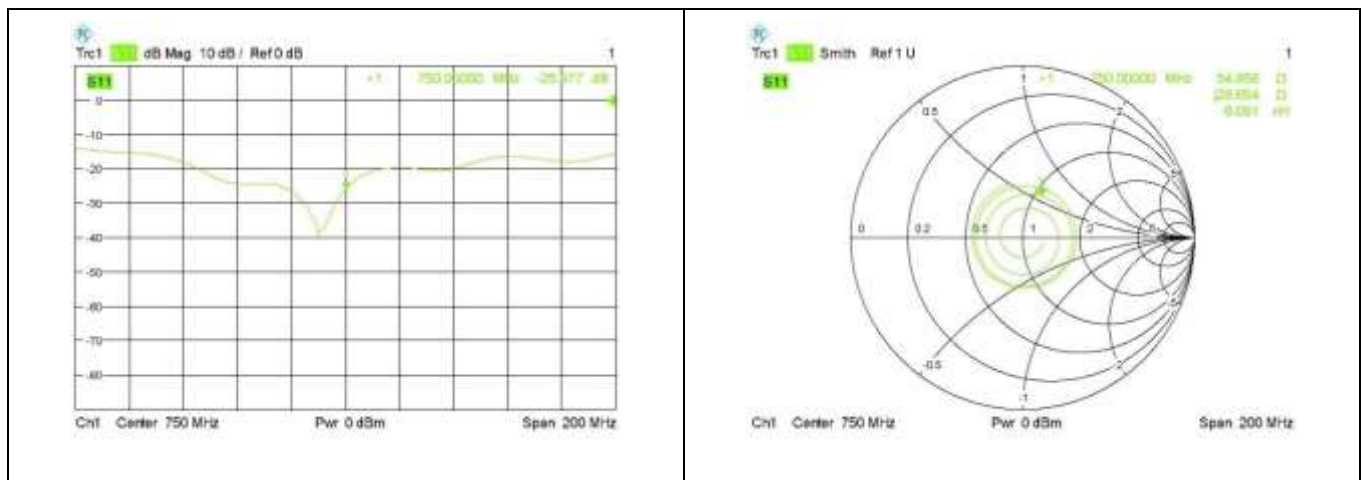
Referring to KDB 865664 D01, if dipoles are verified in return loss $< -20\text{dB}$, (within 20% of prior calibration), and in impedance (within 5 ohm of prior calibration), the annual calibration is not necessary and the calibration interval can be extended.

Head 750 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2023.07.04	-25.47	-	55.2	-
2024.07.01	-25.98	2.00	54.86	-0.62

The return loss is $< -20\text{dB}$, 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



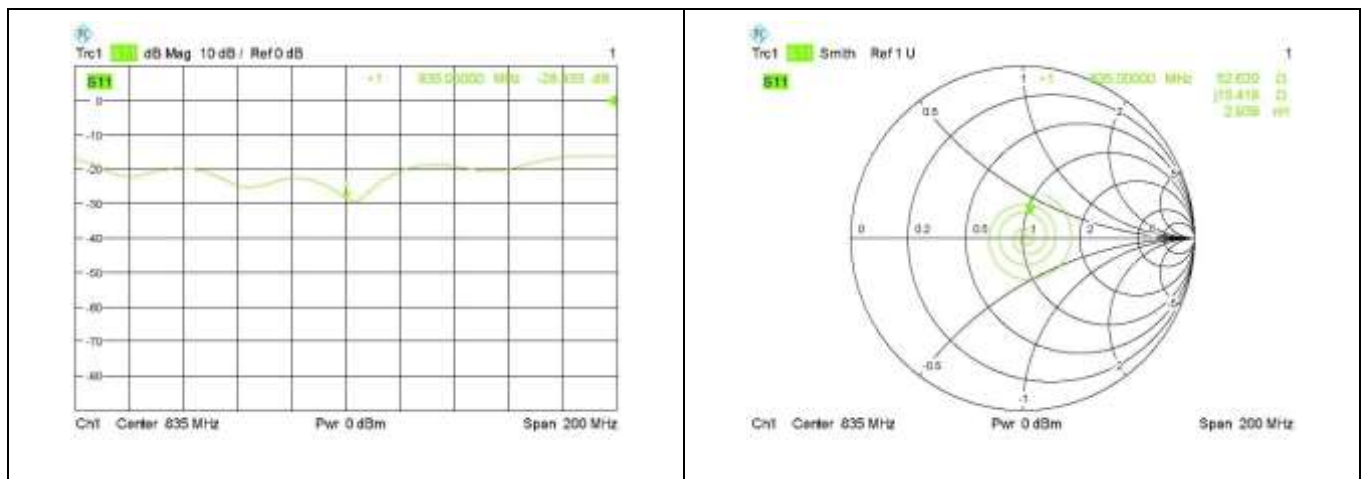


Head 835 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2023.07.04	-28.13	-	51.4	-
2024.07.01	-28.43	1.07	52.62	2.37

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



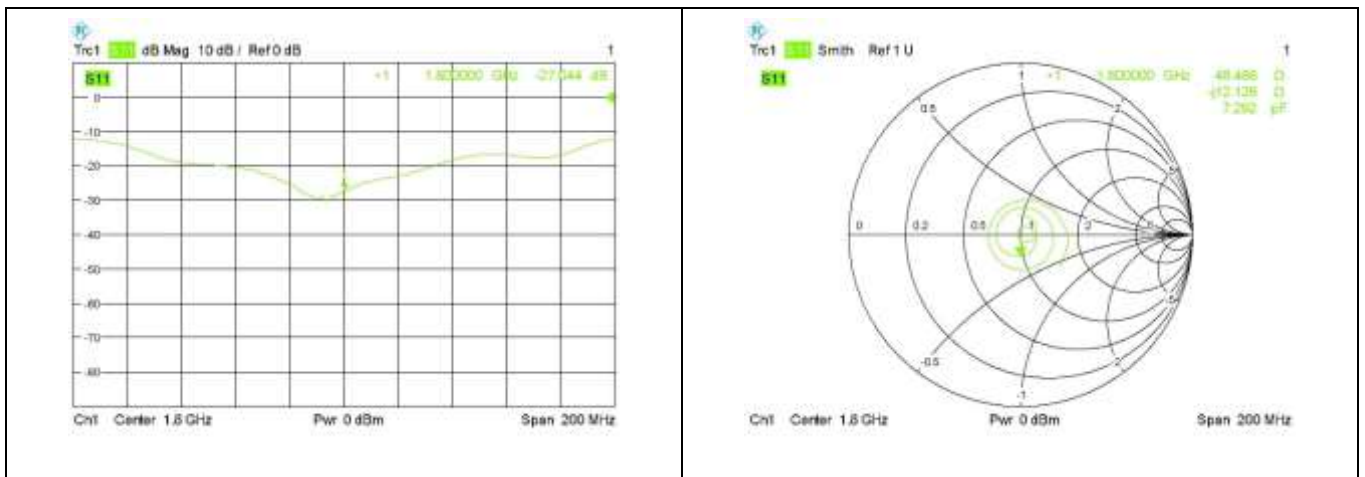


Head 1800 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2023.12.20	-27.38	/	50.2	/
2024.12.11	-27.04	-1.23	48.48	-3.43

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



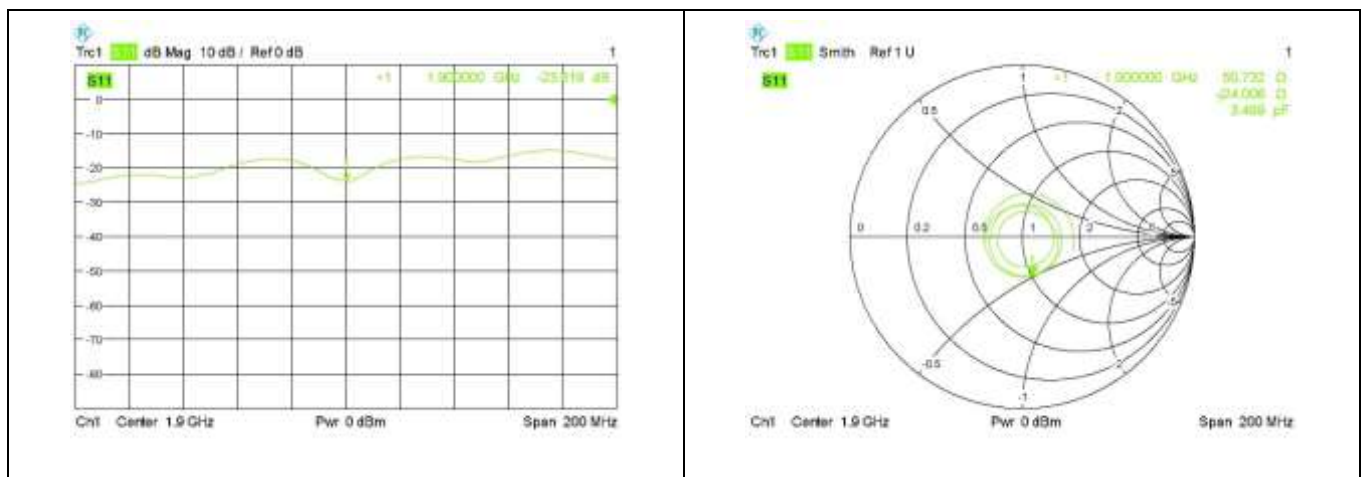


Head 1900 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2023.07.04	-23.66	-	51.4	-
2024.07.01	-23.62	-0.17	50.73	-1.30

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



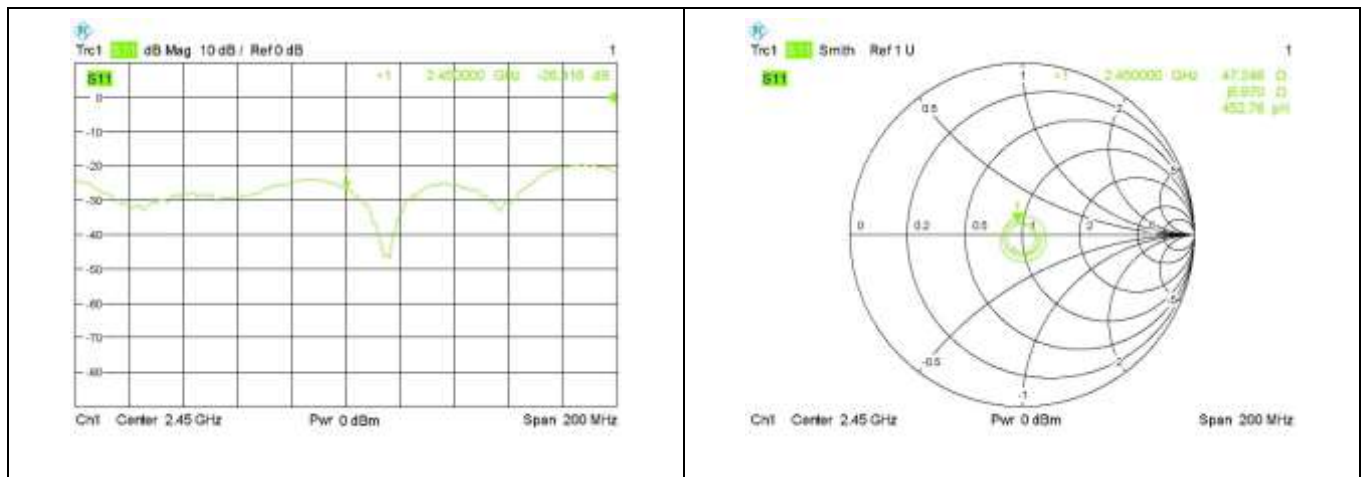


Head 2450 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2023.07.04	-26.03	-	46.3	-
2024.07.01	-26.42	1.50	47.25	2.05

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





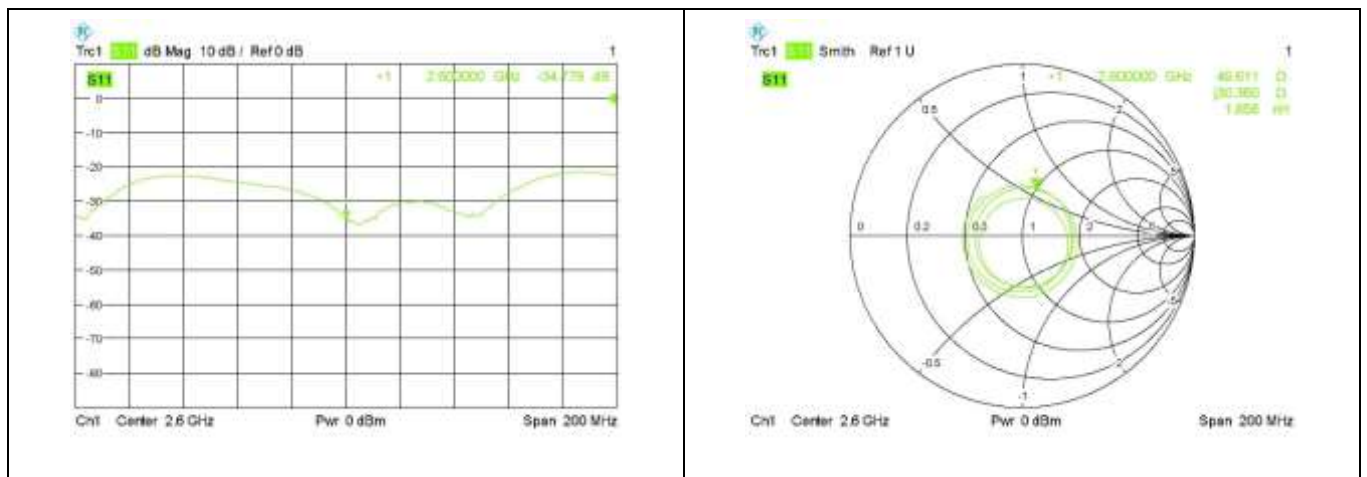
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Head 2600 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2023.07.04	-34.32	-	50.3	-
2024.07.01	-34.78	1.34	49.61	-1.37

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





Head 5000 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2023.07.04	< -8.23	-	-	-
2024.07.01	-13.17	-	-	-

The return loss is <-8dB, within 20% of prior calibration; Therefore the verification result should support extended calibration.

<Dipole Verification Data>

Head 5000MHz

