



SAR
Dipole Performance Measurement
Report

EUT Type: SAR Validation Dipole and Waveguide

Model Name: DIP0G750-331
DIP0G835-332
DIP1G800-329
DIP1G900-333
DIP 2G450-335
DIP2G600-336

Brand Name: SATIMO

Test Conclusion: Pass

Test Date: 16 Aug. 2019

Date of Issue: 17 Aug. 2019

Testing Engineer : Aaron Bu.

(Aaron Bu)

Technical Manager : Jason Lu

(Jason Lu)

Authorized Signatory : Vita Li

(Vita Li)



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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	SSE5	SN 14/16 EP309	2018.12.13	2019.12.12
Dielectric Probe Kit	MVG	SCLMP	SN 32/14 OCPG67	2018.12.01	2019.11.30
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	2019.03.02	2020.03.01
Multi Meter	Keithley	Multi Meter 2000	4050073	2018.10.13	2019.10.12
Signal Generator	Agilent	N5182A	MY50140530	2018.10.16	2019.10.15
Power Amplifier	DESAY	ZHL-42W	9638	2018.10.13	2019.10.12
Power Meter	R&S	NRP	100510	2018.10.26	2019.10.25
Power Sensor	R&S	NRP-Z11	101919	2018.10.13	2019.10.12
Power Sensor	Agilent	E9301A	MY41497725	2018.10.13	2019.10.12
hygrothermograph	MiEO	HH660	N/A	2018.10.11	2019.10.10
Thermograph	Elitech	RC-4	S/N EF7176501537	2018.10.15	2019.10.14



2. <Justification of the extended calibration>

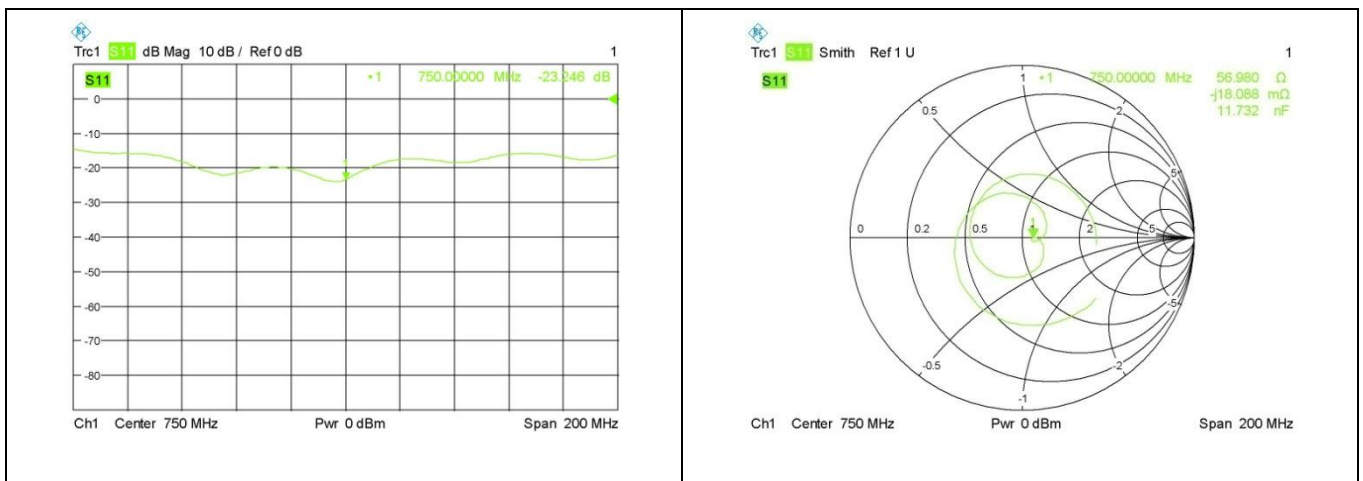
Referring to KDB 865664 D01, if dipoles are verified in return loss $< -20\text{dB}$, (within 20% of prior calibration), and in impedance (within 5 ohm of prior calibration), the annual calibration is not necessary and the calibration interval can be extended.

Head 750 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2017.08.15	-25.42	-	55.1	-
2018.08.15	-23.45	-7.75	55.84	0.74
2019.8.14	-23.25	-0.85	56.98	1.14

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



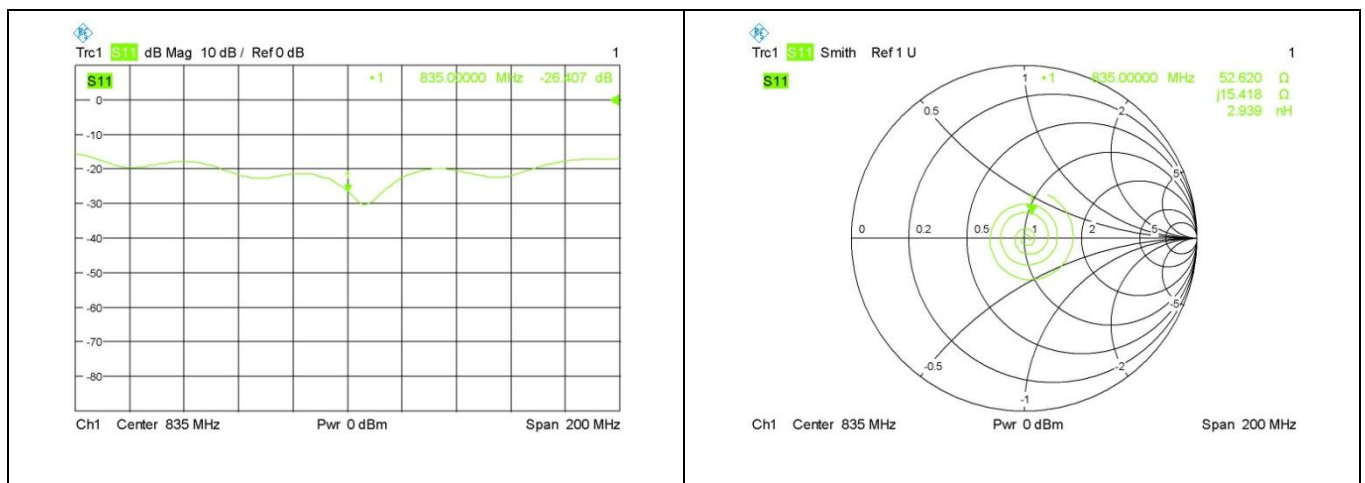


Head 835 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2017.08.15	-28.11	-	51.6	-
2018.08.15	-27.05	-3.77	54.69	3.09
2019.08.14	-26.41	-2.37	52.62	-2.07

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



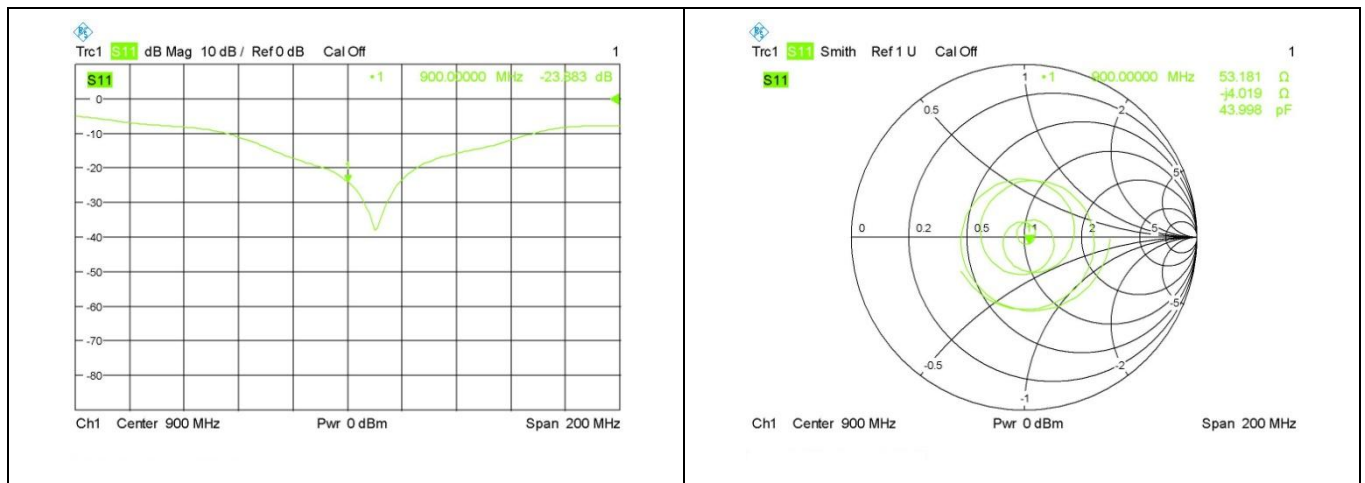


Head 900 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2017.08.15	-27.32	-	53.9	-
2018.08.15	-26.28	-3.8	52.5	-1.4
2019.08.14	-23.88	-9.13	53.18	0.68

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 900MHz



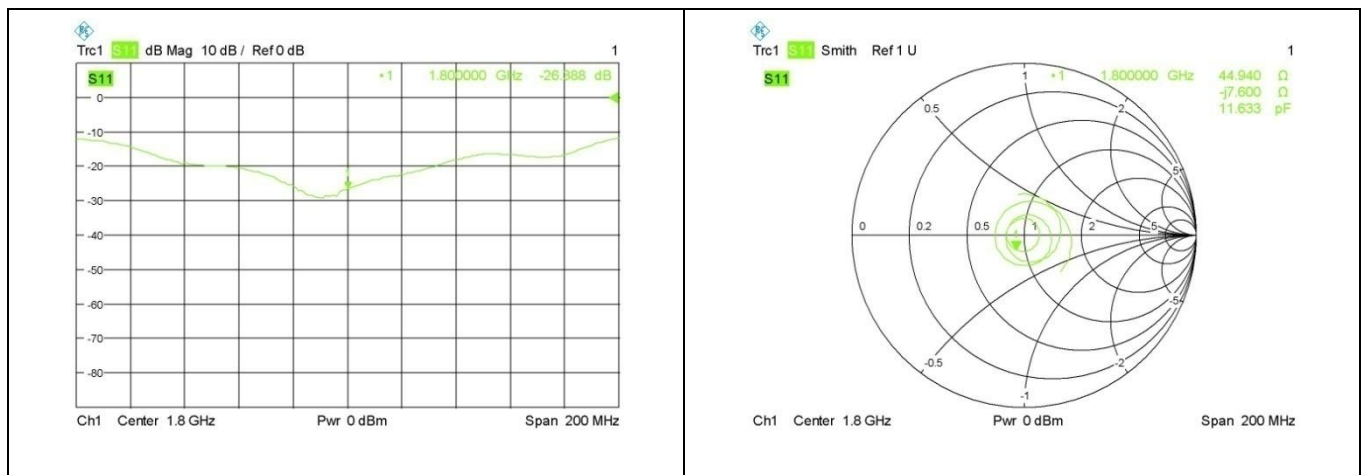


Head 1800 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2017.08.15	-29.51	-	46.7	-
2018.08.16	-25.32	-14.2	45.24	-1.46
2019.08.15	-26.39	4.23	44.94	-0.30

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 1800 MHz



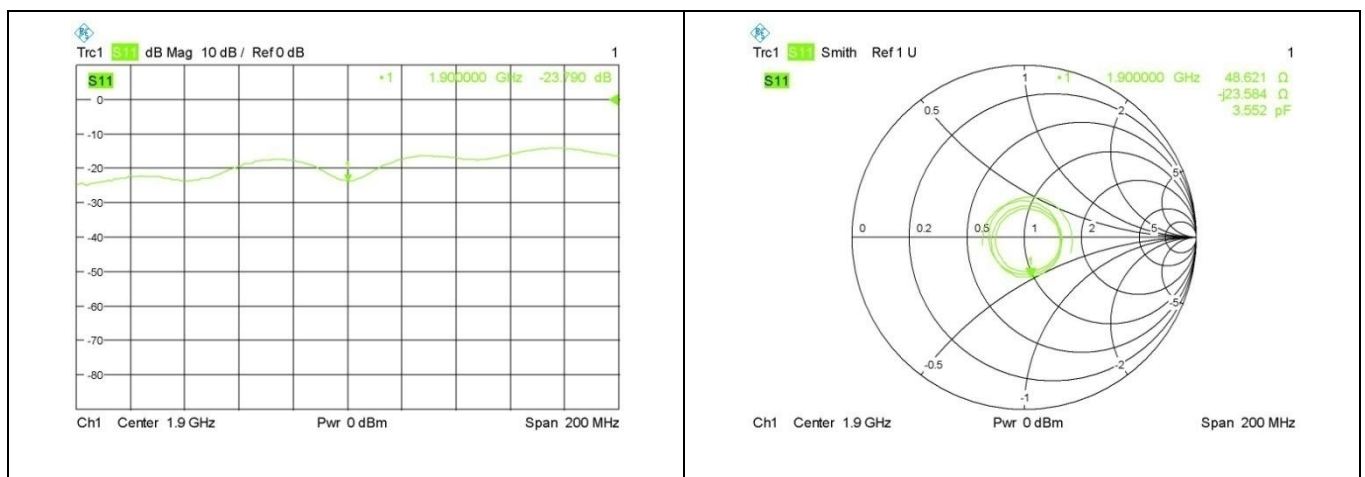


Head 1900 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2017.08.15	-23.68	-	51.2	-
2018.08.16	-25.00	5.57	47.12	-4.08
2019.08.15	-23.79	-4.84	48.62	1.50

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



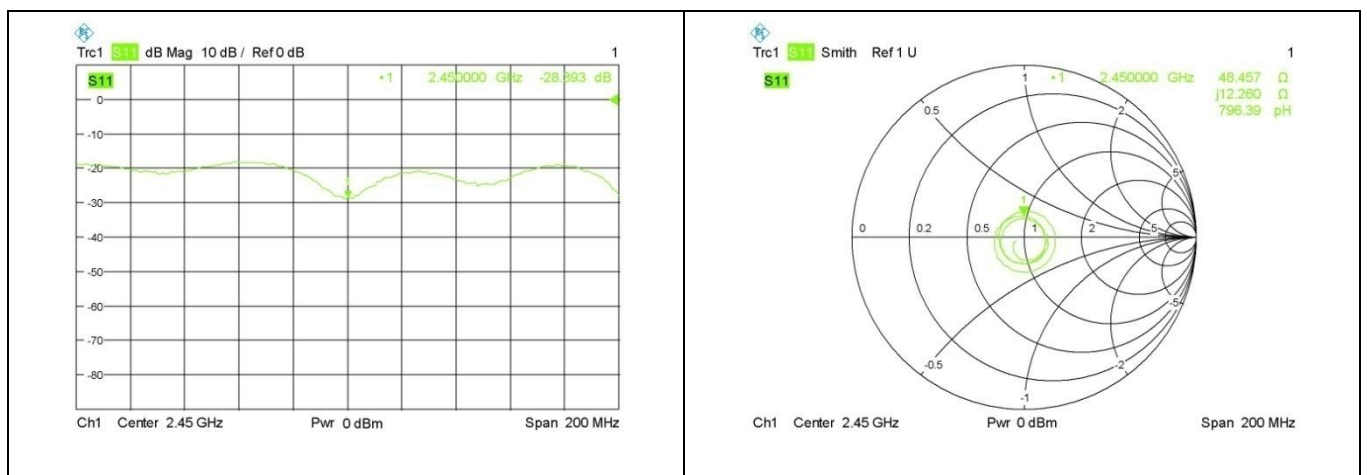


Head 2450 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2017.08.15	-26.00	-	46.1	-
2018.08.16	-29.56	13.69	47.53	1.43
2019.08.16	-28.39	-3.96	48.46	0.93

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





Head 2600 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2017.08.15	-34.35	-	50.2	-
2018.08.16	-31.25	-9.02	53.76	3.56
2019.08.16	-31.54	0.93	53.82	0.06

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

