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## SAR Dipole Performance Measurement Report

**EUT Type:** SAR Validation Dipole and Waveguide

**Model Name:** DIP 0G835-332  
DIP 1G800-329  
DIP 1G900-333  
DIP 2G450-335

**Brand Name:** SATIMO

**Test Conclusion:** Pass

**Test Date:** 27 Jun. 2019

**Date of Issue:** 28 Jun. 2019

Testing Engineer : 

(Aaron Bu)

Technical Manager : 

(Jason Lu)

Authorized Signatory : 

(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	2017.12.15	2018.12.14
Dielectric Probe Kit	MVG	SCLMP	SN 32/14 OCPG67	2017.12.03	2018.12.02
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	2018.03.08	2019.03.07
Multi Meter	Keithley	Multi Meter 2000	4050073	2017.10.15	2018.10.14
Signal Generator	Agilent	N5182A	MY50140530	2017.10.15	2018.10.14
Power Amplifier	DESAY	ZHL-42W	9638	2017.10.15	2018.10.14
Power Meter	R&S	NRP	100510	2017.10.15	2018.10.14
Power Sensor	R&S	NRP-Z11	101919	2017.10.15	2018.10.14
Power Sensor	Agilent	E9301A	MY41497725	2017.10.15	2018.10.14
hygrothermograph	MiEO	HH660	N/A	2017.10.18	2018.10.17



## 2.<Justification of the extended calibration>

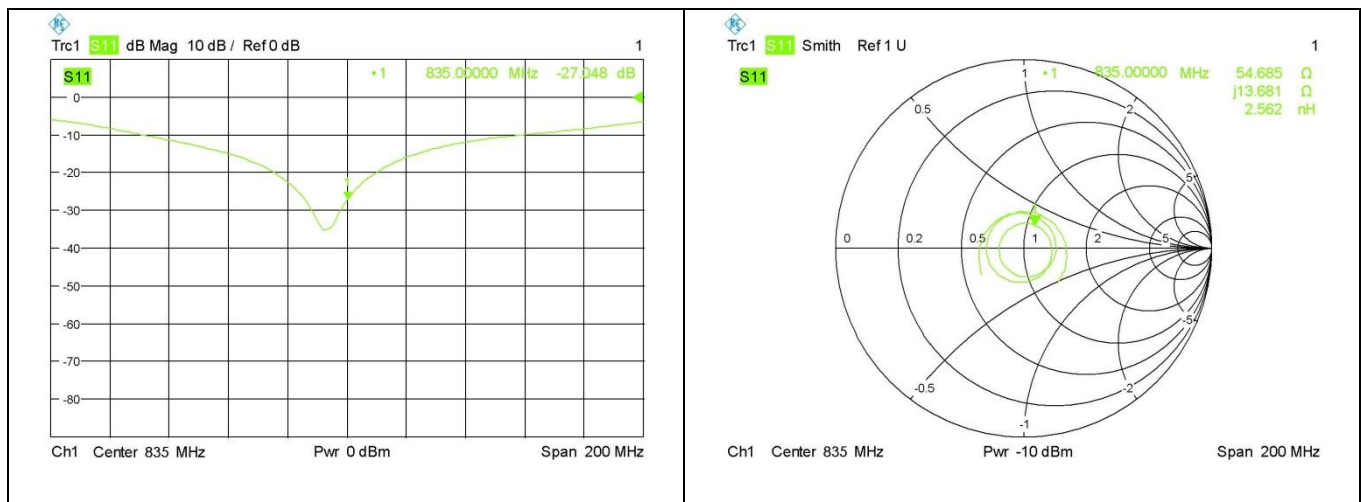
Referring to KDB 865664 D01, if dipoles are verified in return loss<-20dB, (within 20% of prior calibration),and in impedance (within 5 ohm of prior calibration), the annual calibration is not necessary and the calibration interval can be extended.

Head 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

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



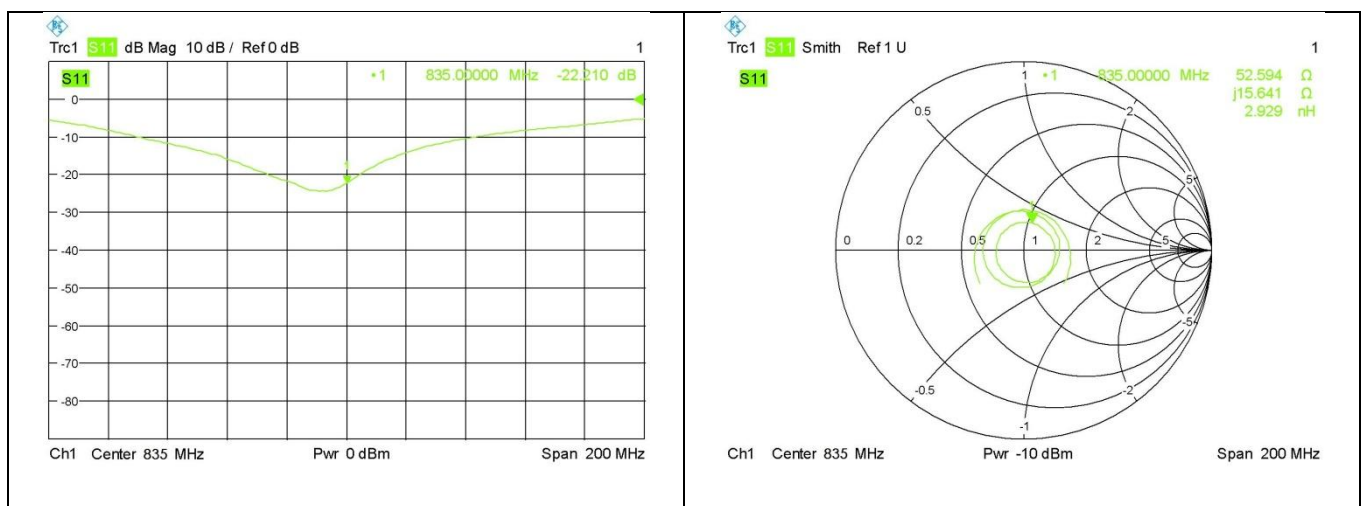


Body 835 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2017.08.15	-23.87	-	49.0	-
2018.08.15	-22.21	-6.95	52.59	3.59

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



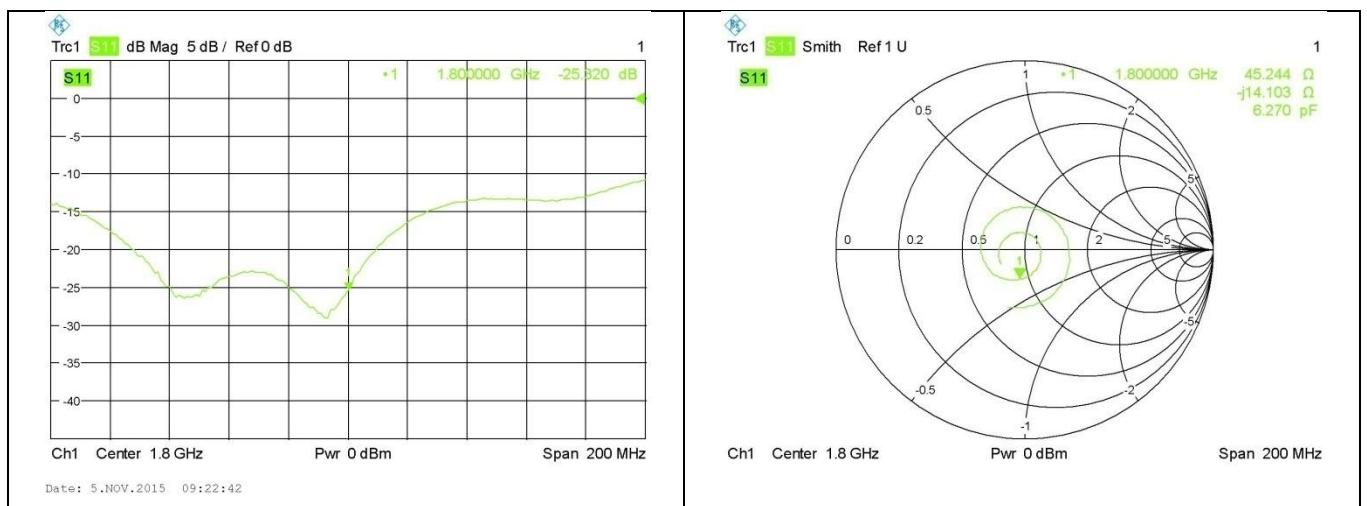


Head 1800 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2017.08.15	-29.51	-	46.7	-
2018.08.16	-25.32	-14.2	45.24	-1.46

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



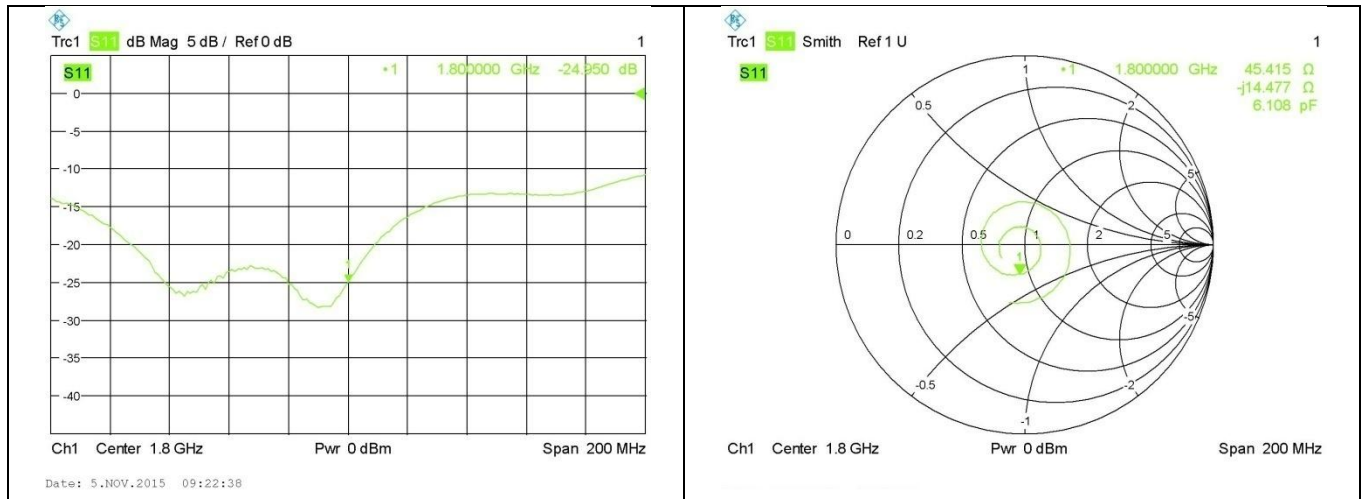


Body 1800 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2017.08.15	-24.59	-	48.8	-
2018.08.16	-24.95	1.46	45.42	-3.38

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



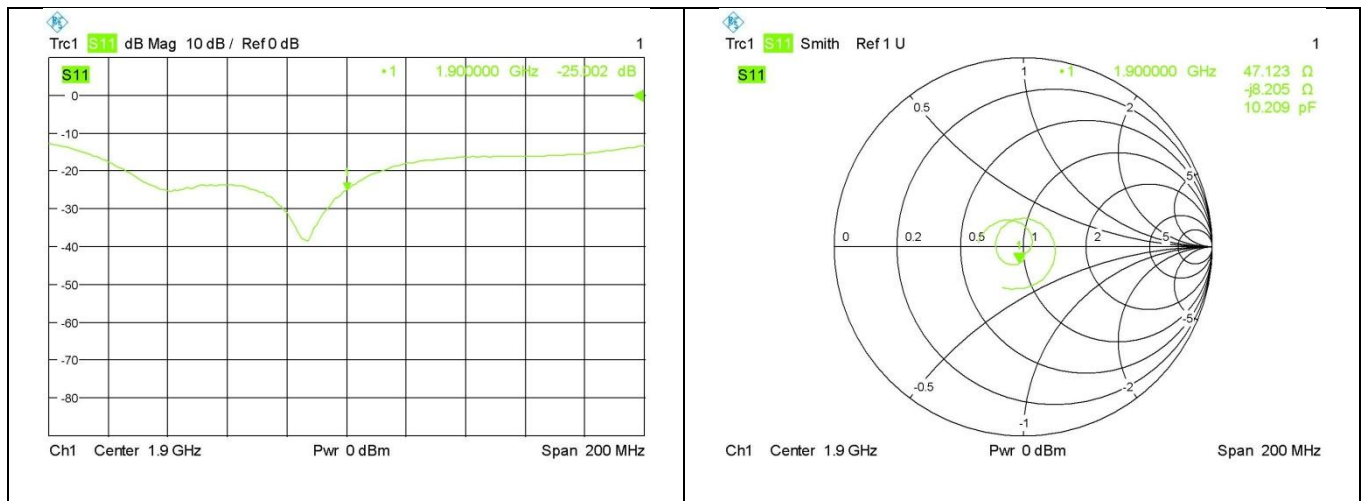


Head 1900 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2017.08.15	-23.68	-	51.2	-
2018.08.16	-25.00	5.57	47.12	-4.08

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



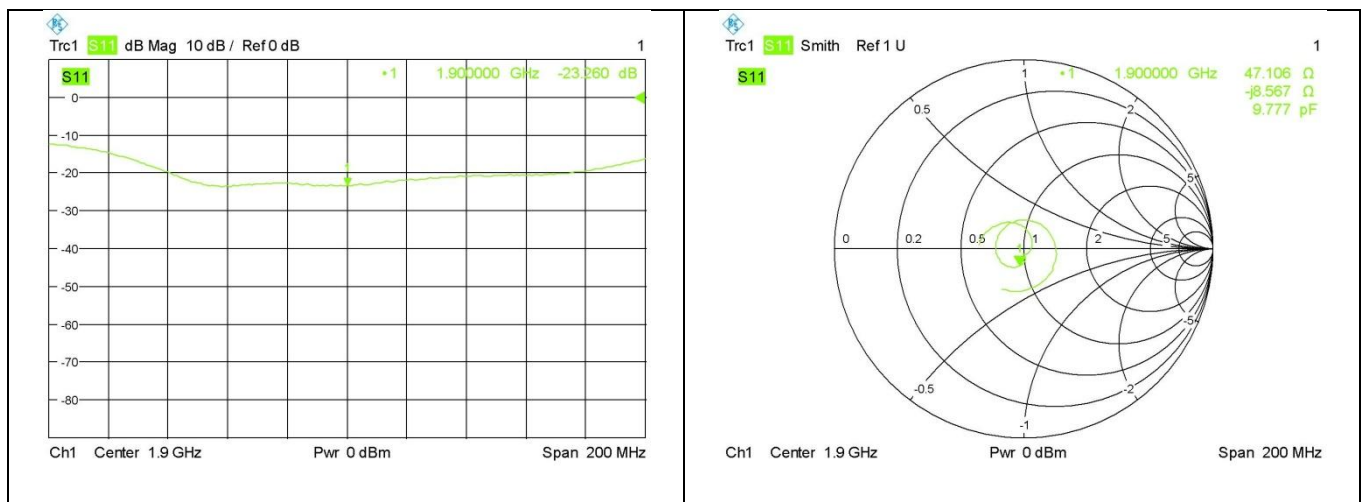


Body 1900 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2017.08.15	-20.22	-	48.8	-
2018.08.16	-23.26	15.03	47.11	-1.79

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





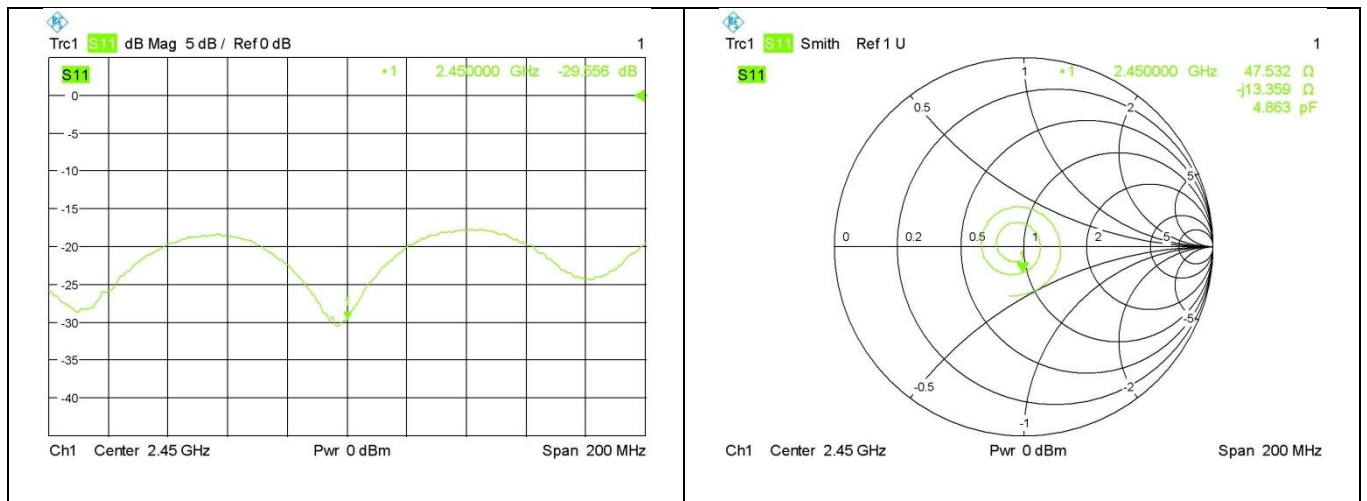


Head 2450 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2017.08.15	-26.00	-	46.1	-
2018.08.16	-29.56	13.69	47.53	1.43

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 2450 MHz





Body 2450 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2017.08.15	-32.75	-	48.8	-
2018.08.16	-31.06	-5.16	45.61	-3.19

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

