



**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
WAG32
Brand Name: SATIMO
Test Conclusion: Pass
Test Date: 14 Aug. 2019~16 Aug. 2019
Date of Issue: 17 Aug. 2019

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(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>

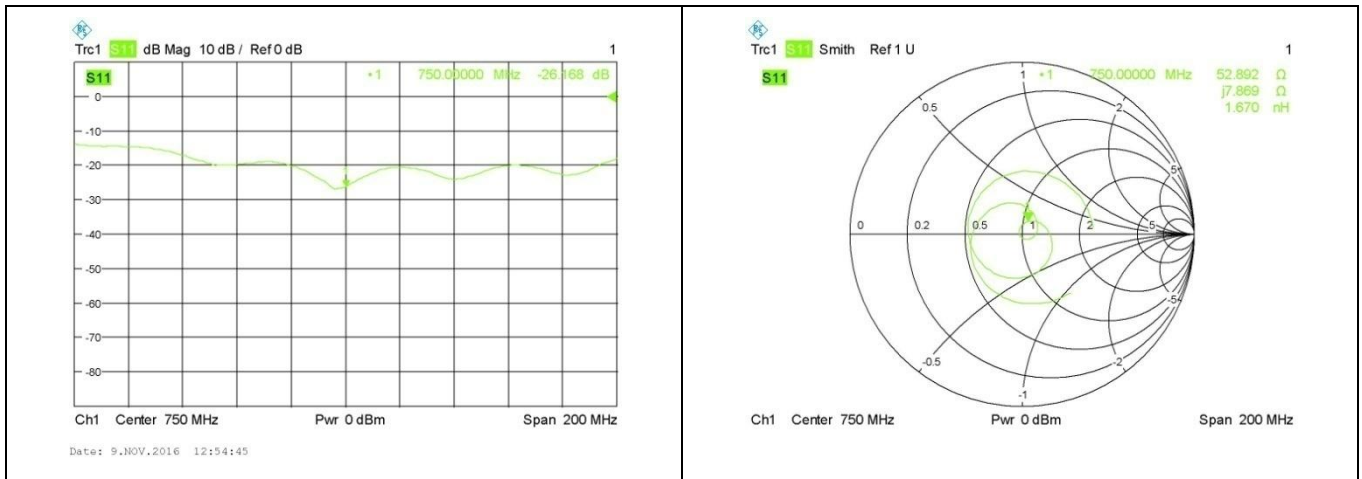
Referring to KDB 865664 D01, if dipoles are verified in return loss<-20dB, (within 20% of prior calibration),and in impedance (within 5 ohm of prior calibration), the annual calibration is not necessary and the calibration interval can be extended.

Body 750 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2017.08.15	-27.21	-	51.3	-
2018.08.15	-26.44	-2.82	51.50	0.20
2019.08.14	-26.17	-1.02	52.89	1.39

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



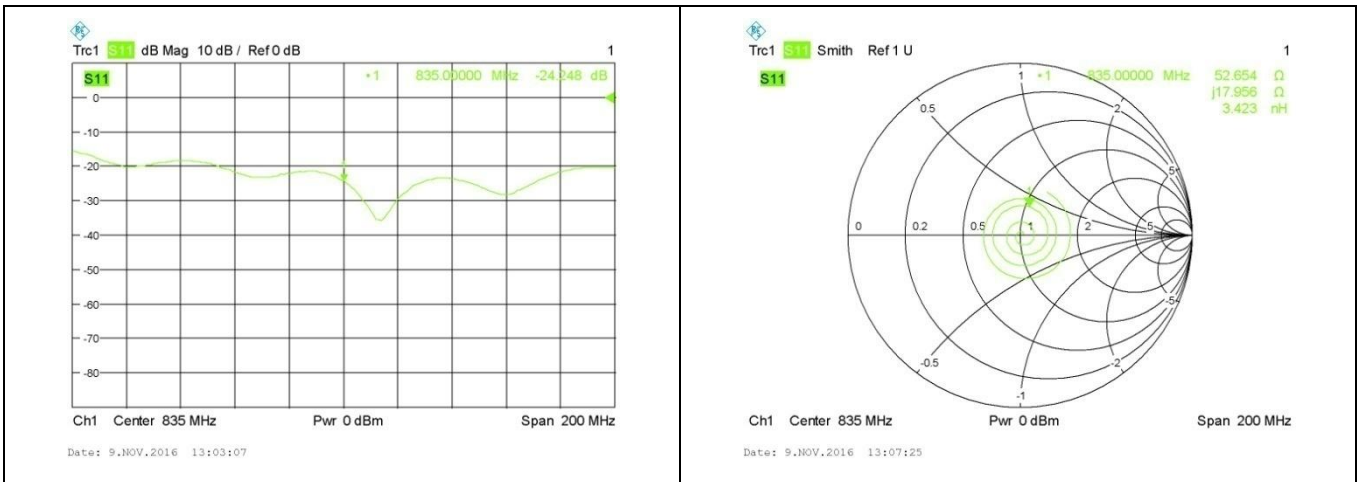


Body 835 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2017.08.15	-23.87	-	49.0	-
2018.08.15	-22.21	-6.95	52.59	3.59
2019.08.14	-24.25	9.19	52.65	0.06

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>

Body 835MHz



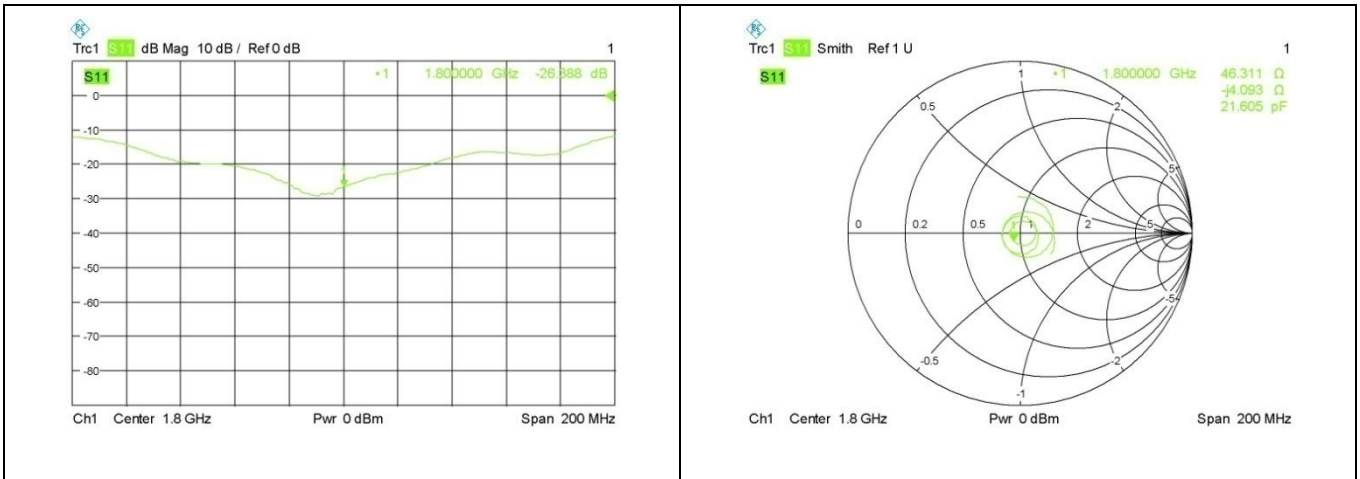


Body 1800 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2017.08.15	-24.59	-	48.8	-
2018.08.16	-24.95	1.46	45.42	-3.38
2019.08.15	-26.77	7.29	46.31	0.79

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 1800 MHz



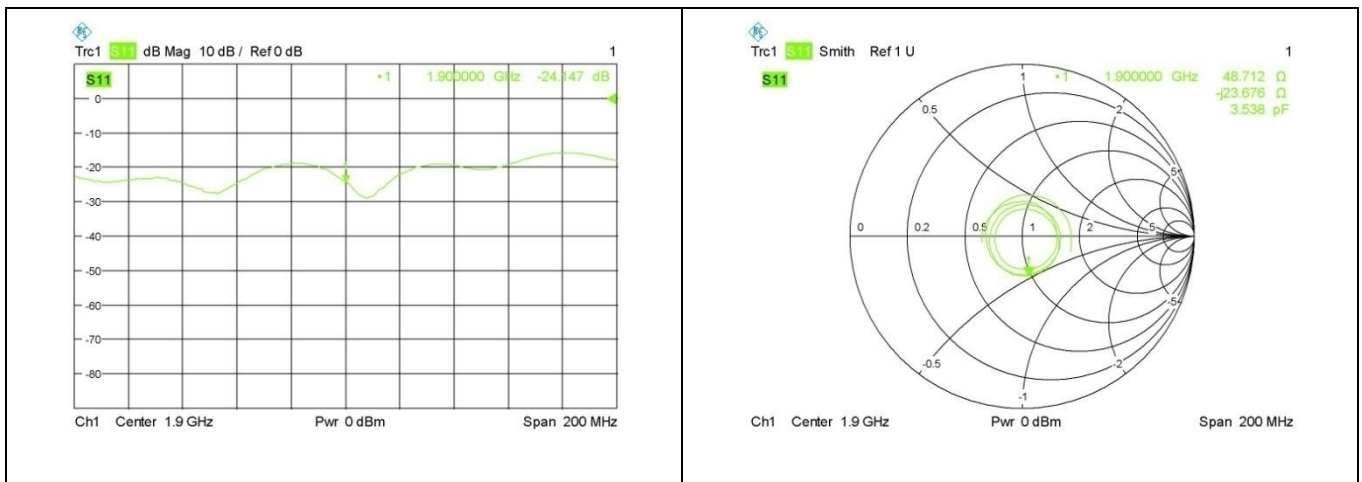


Body 1900 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2017.08.15	-20.22	-	48.8	-
2018.08.16	-23.26	15.03	47.11	-1.79
2019.08.15	-24.15	3.83	48.71	1.60

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



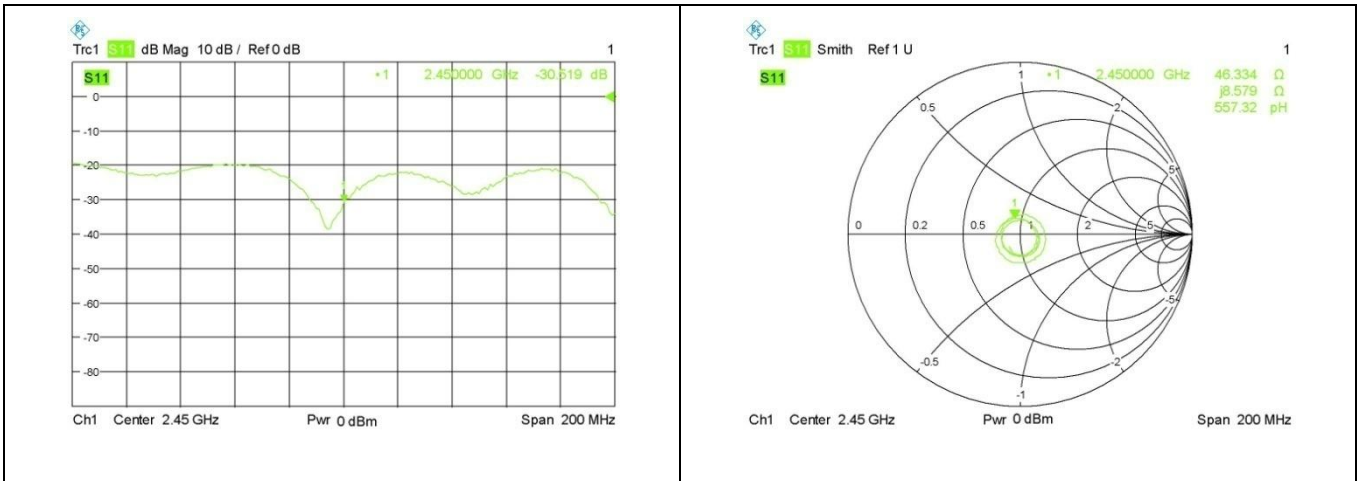


Body 2450 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2017.08.15	-32.75	-	48.8	-
2018.08.16	-31.06	-5.16	45.61	-3.19
2019.08.16	-30.52	-1.74	46.33	0.72

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



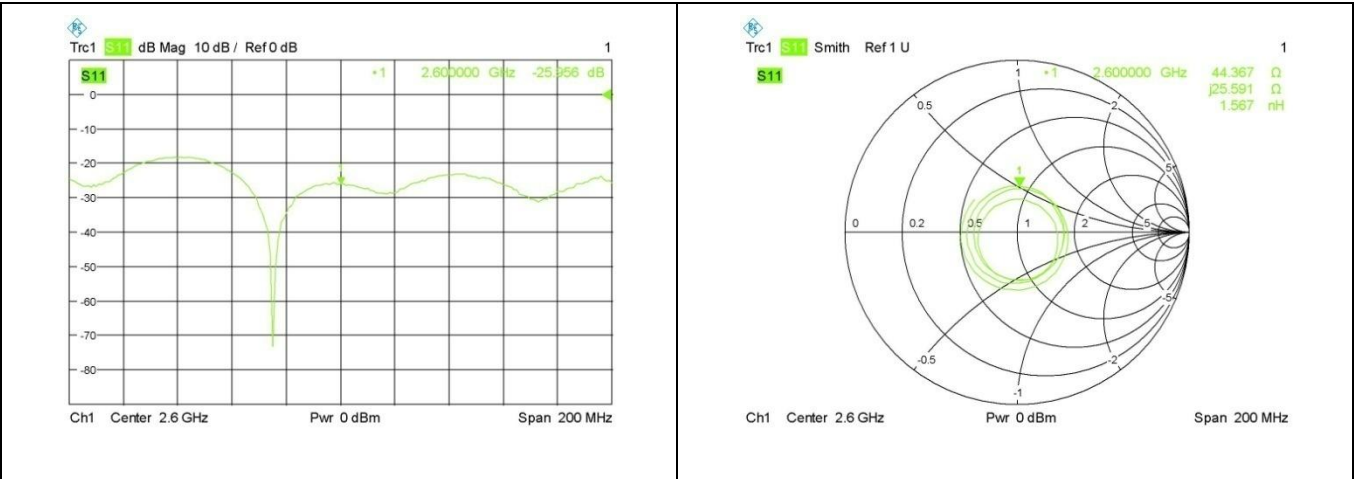


Body 2600 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2017.08.15	-24.18	-	45.7	-
2018.08.16	-23.36	-7.52	46.79	1.09
2019.08.16	-23.02	-1.46	44.37	-2.42

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





Body 5000 MHz				
Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
2017.08.15	< -13.94	-	-	-
2018.08.16	-14.41	-	-	-
2019.08.16	-14.61	-	-	-

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

<Dipole Verification Data>

Body 5000MHz

