



SAR Dipole Performance Measurement Report

EUT Type: SAR Validation Dipole and Waveguide
Model Name: DIP 2G450-335 WGA32
Brand Name: SATIMO
Test Conclusion: Pass
Test Date: 16 Aug. 2019
Date of Issue: 17 Aug. 2019

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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>

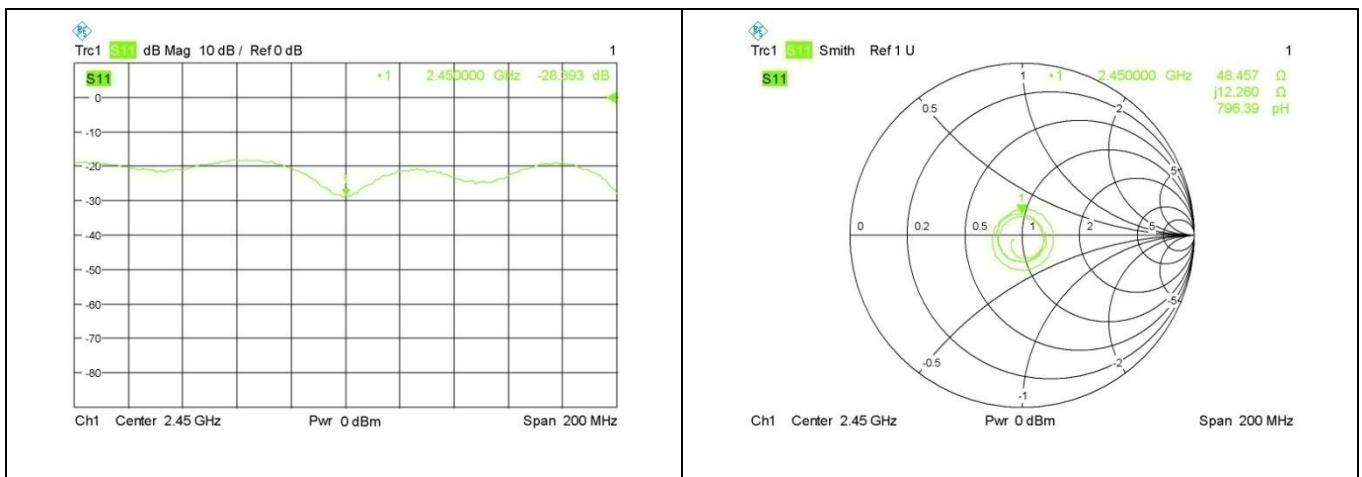
Referring to KDB 865664 D01, if dipoles are verified in return loss <math><-20\text{dB}</math>, (within 20% of prior calibration), and in impedance (within 5 ohm of prior calibration), the annual calibration is not necessary and the calibration interval can be extended.

| Head 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 <math><-20\text{dB}</math>, 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 5000 MHz | | | | |
|---------------------|------------------|-----------|-----------|------------|
| Date of Measurement | Return Loss (dB) | Delta (%) | Impedance | Delta(ohm) |
| 2017.08.15 | < -8.24 | - | - | - |
| 2018.08.16 | -10.25 | - | - | - |
| 2019.08.16 | -15.77 | | | |

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

<Dipole Verification Data>

Head 5000MHz

