<Justification of the extended calibration>

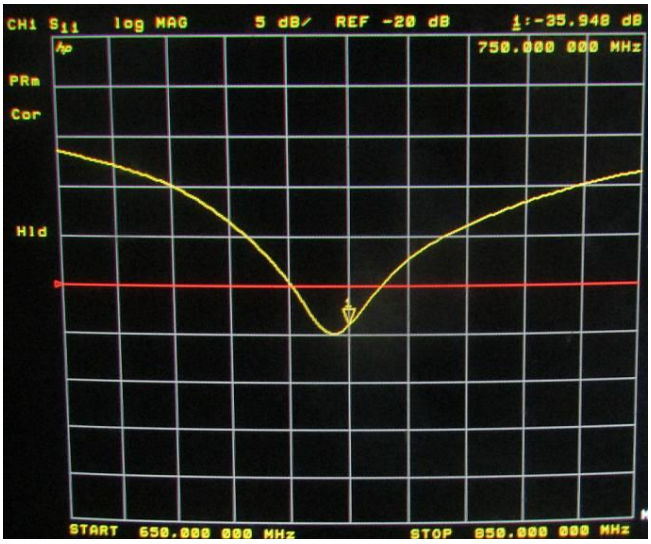
If dipoles are verified in return loss (<-20dB, within 20% of prior calibration for below 3GHz, and <-8dB, within 20% of prior calibration for 5GHz to 6GHz), and in impedance (within 5 ohm of prior calibration), the annual calibration is not necessary and the calibration interval can be extended.

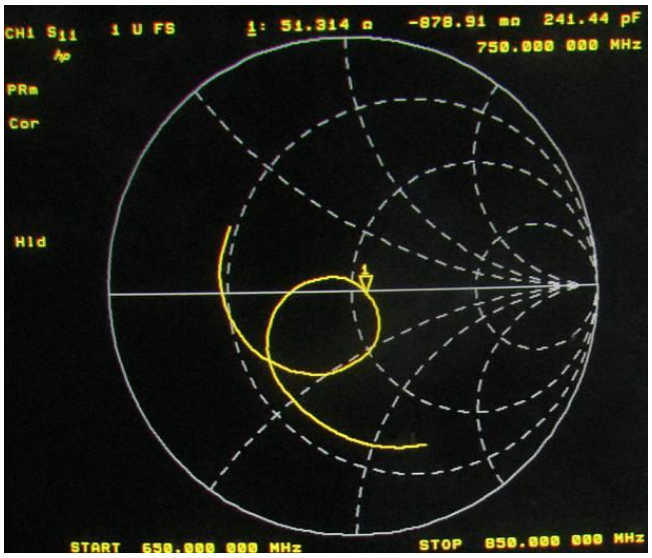
<Head 750MHz>

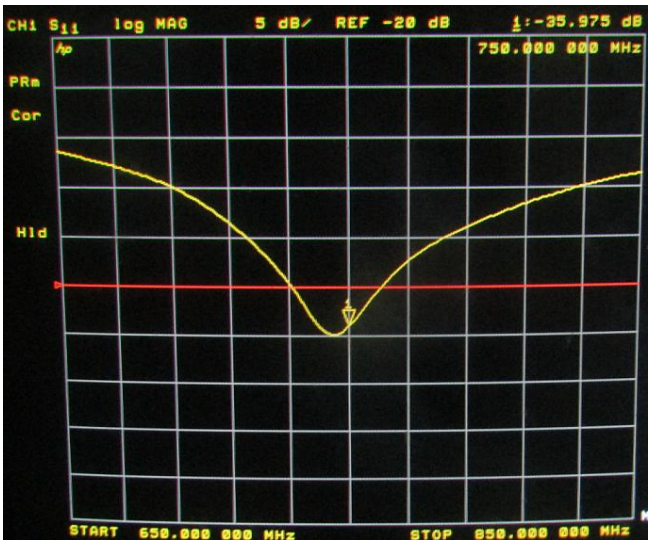
Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)	Date of Measurement
-35.83	-	51.3	-	Apr. 19, 2018
-35.948	0.329	51.314	0.014	Apr. 18, 2019
-35.975	0.405	51.341	0.041	Apr. 17, 2020

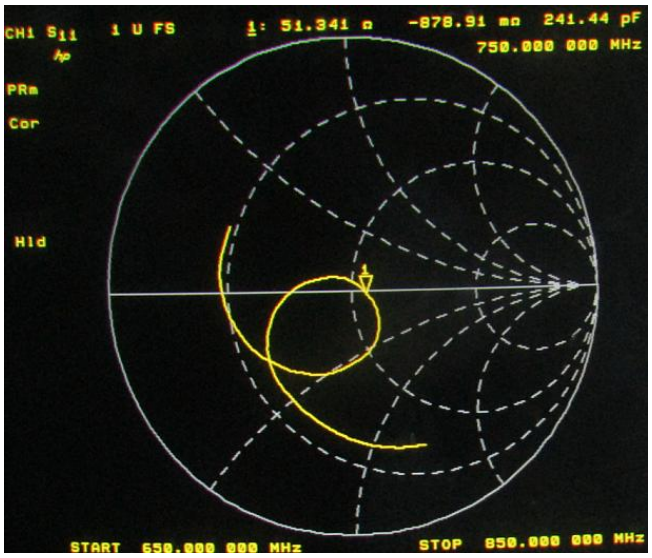
The return loss is <-20dB, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

Dipole Verification Data







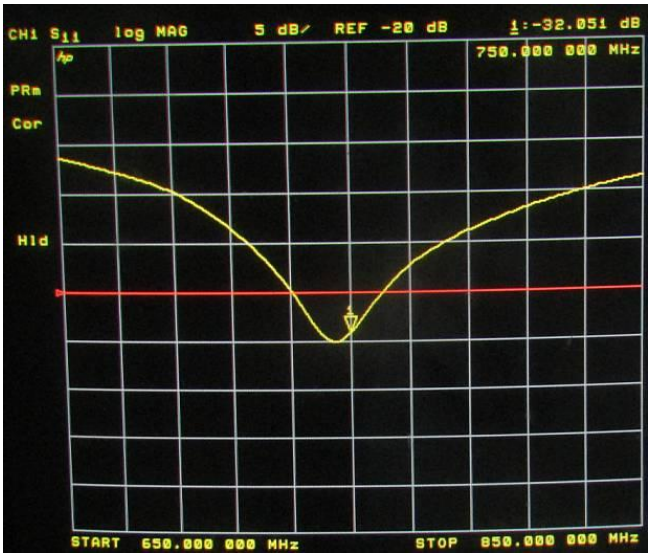


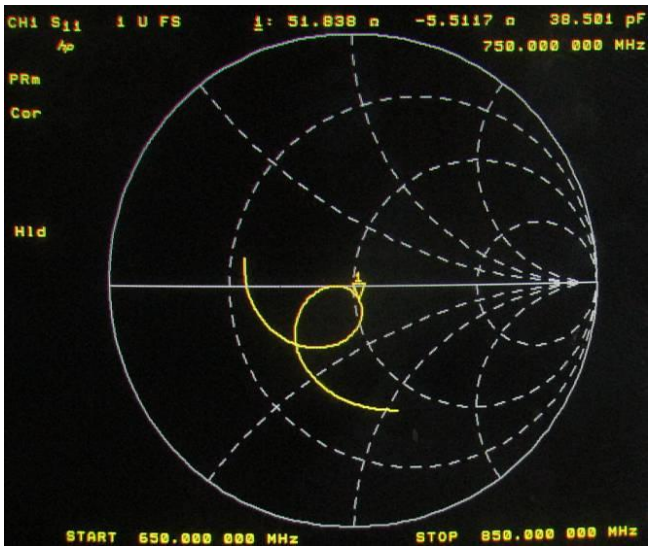
<Body 750MHz>

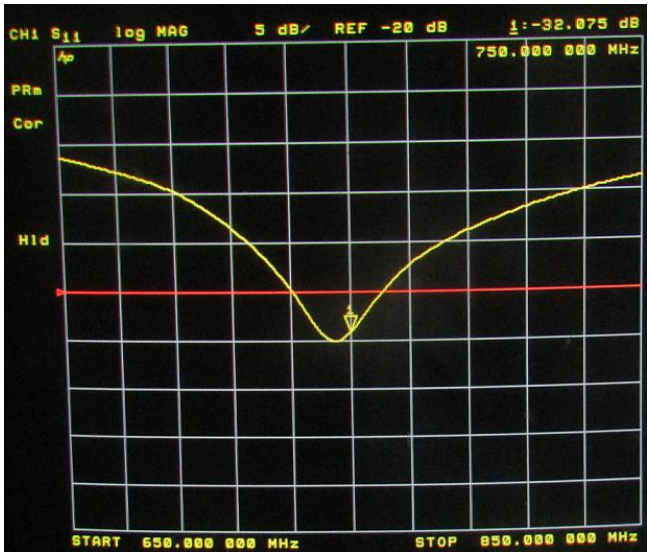
Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)	Date of Measurement
-32.65	-	50.8	-	Apr. 19, 2018
-32.051	1.835	51.838	1.038	Apr. 18, 2019
-32.075	1.761	51.817	1.017	Apr. 17, 2020

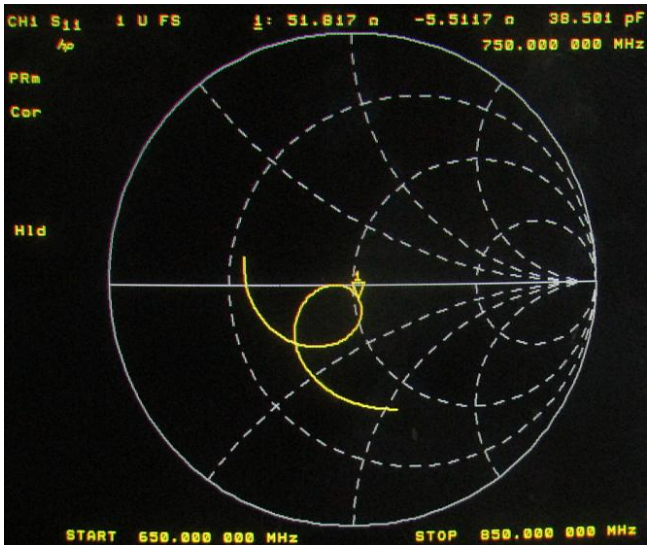
The return loss is <-20dB, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

Dipole Verification Data







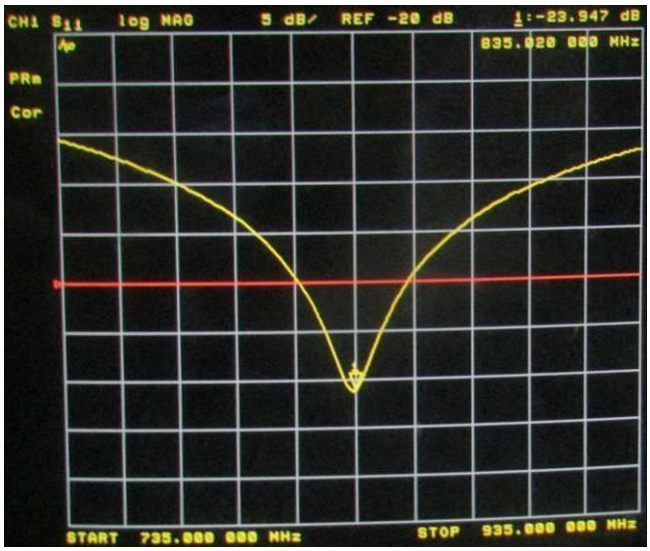


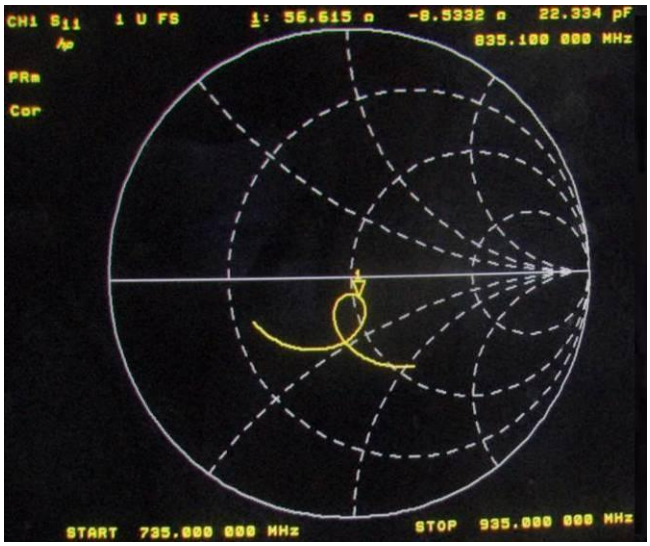
<Head 835MHz>

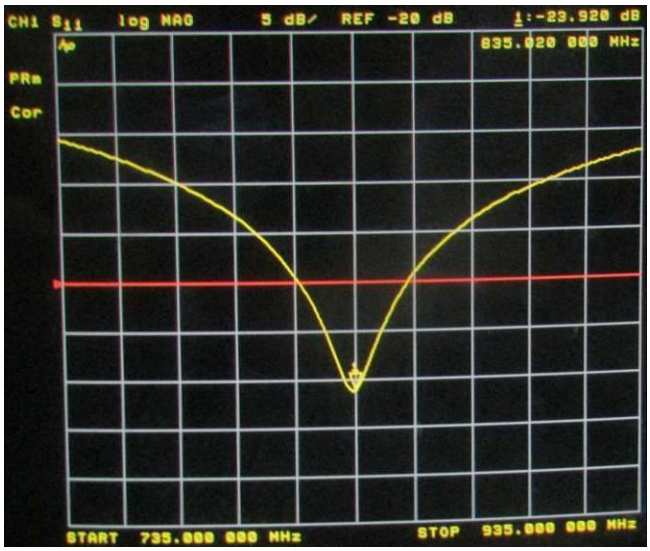
Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)	Date of Measurement
-23.67	-	56.8	-	Apr. 19, 2018
-23.947	1.17	56.615	0.185	Apr. 18, 2019
-23.920	1.056	56.632	0.168	Apr. 17, 2020

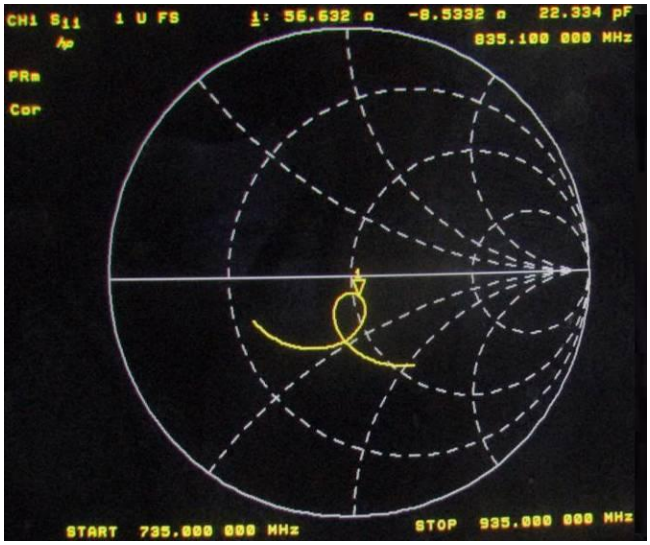
The return loss is <-20dB, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

Dipole Verification Data







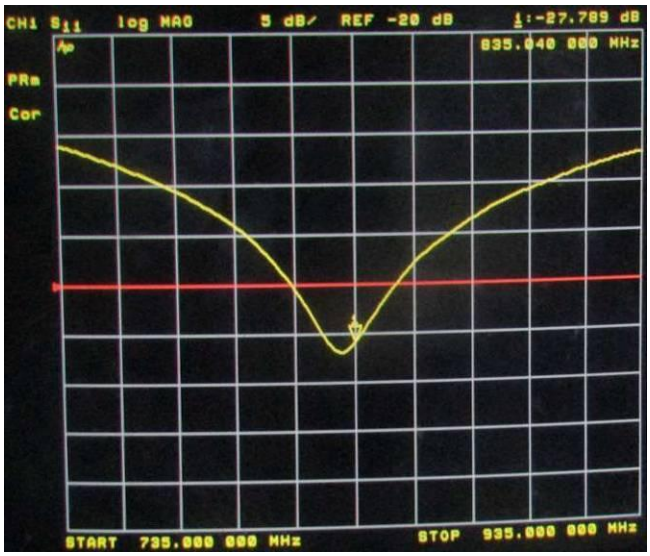


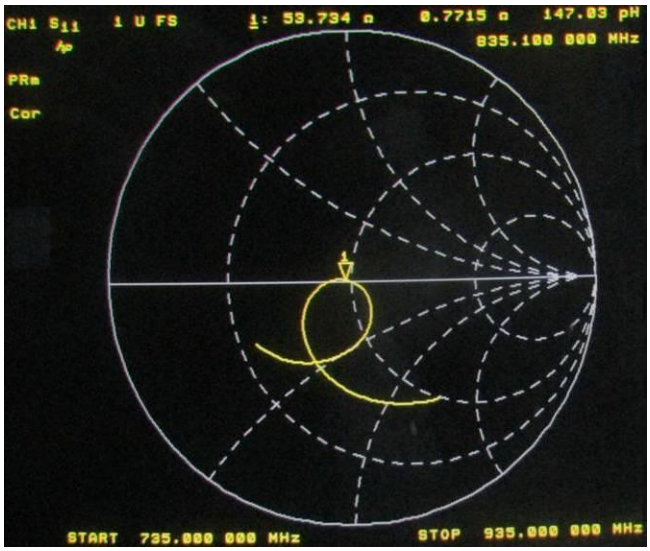
<Body 835MHz>

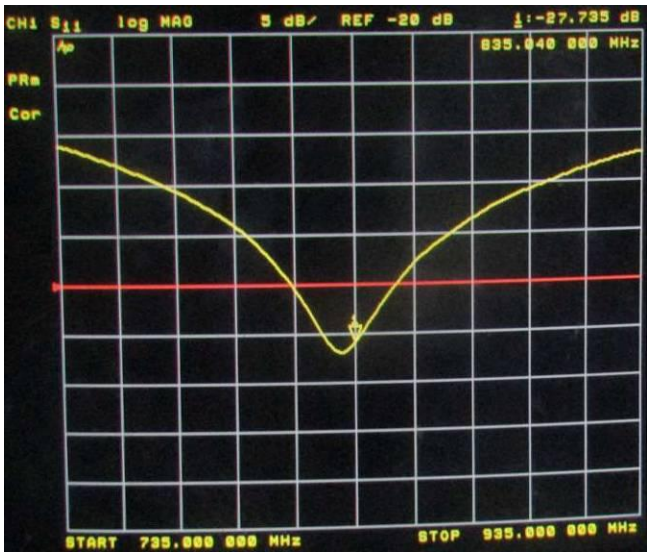
Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)	Date of Measurement
-27.64	-	53.5	-	Apr. 19, 2018
-27.789	0.54	53.734	0.234	Apr. 18, 2019
-27.735	0.344	53.747	0.247	Apr. 17, 2020

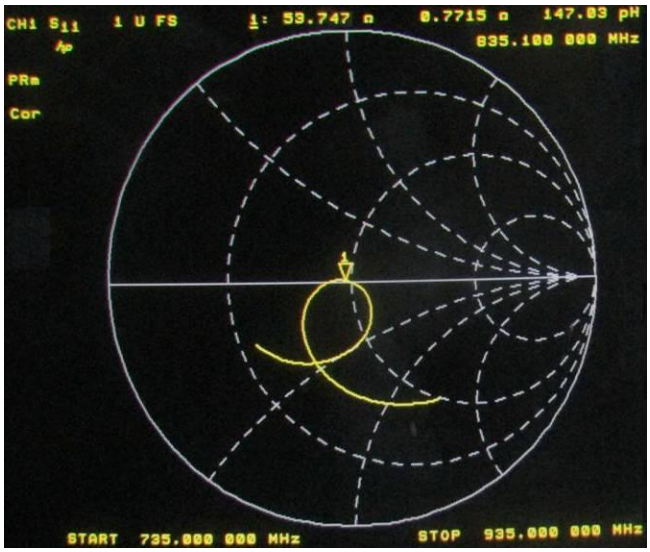
The return loss is <-20dB, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

Dipole Verification Data







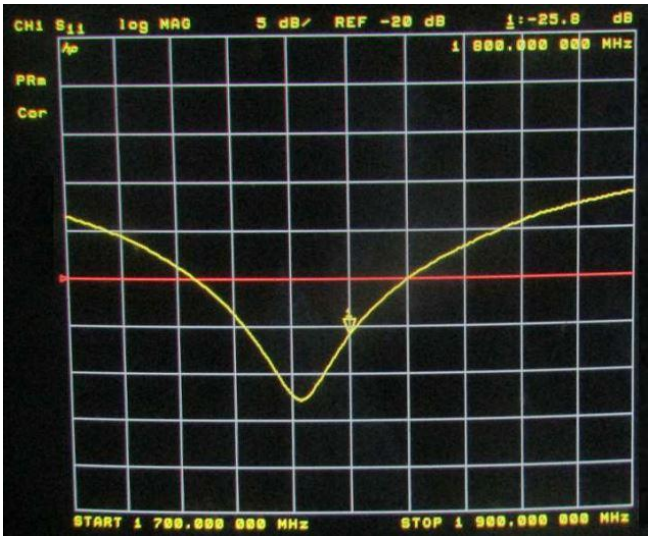


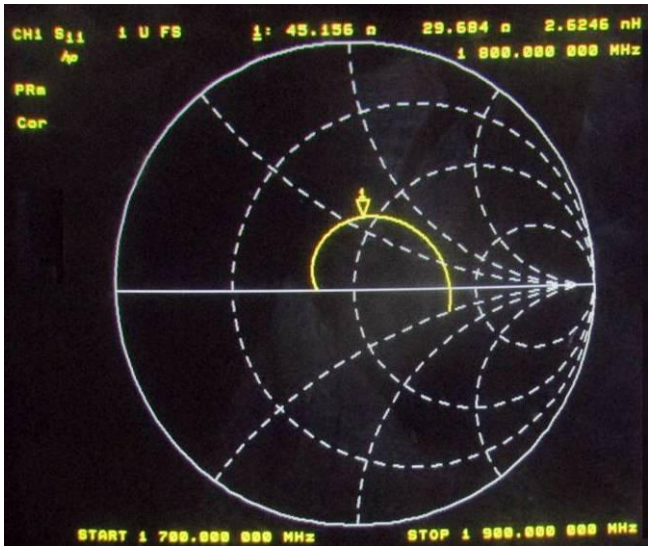
<Head 1800MHz>

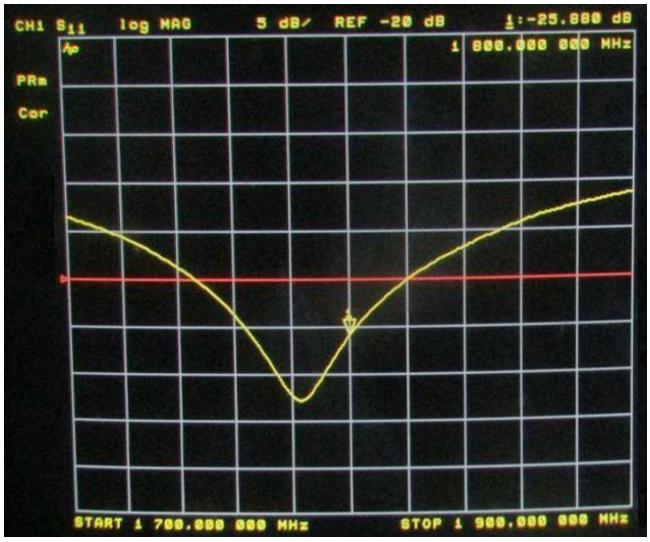
Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)	Date of Measurement
-26.62	-	47.3	-	Apr. 19, 2018
-25.8	3.080	45.156	2.144	Apr. 18, 2019
-25.880	2.780	45.246	2.054	Apr. 17, 2020

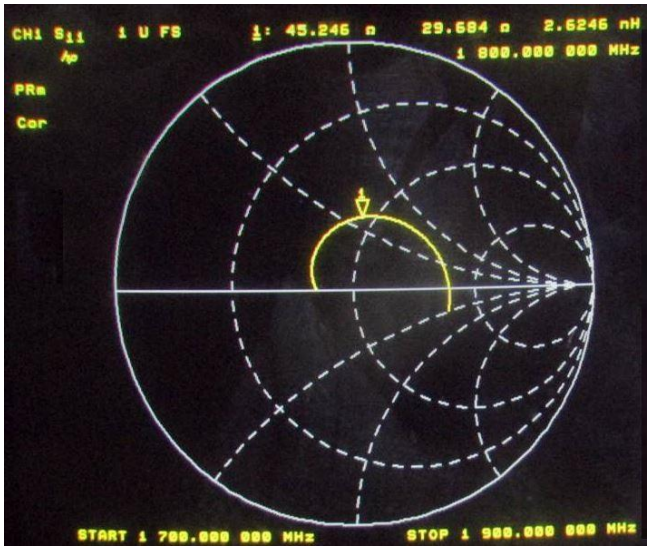
The return loss is <-20dB, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

Dipole Verification Data







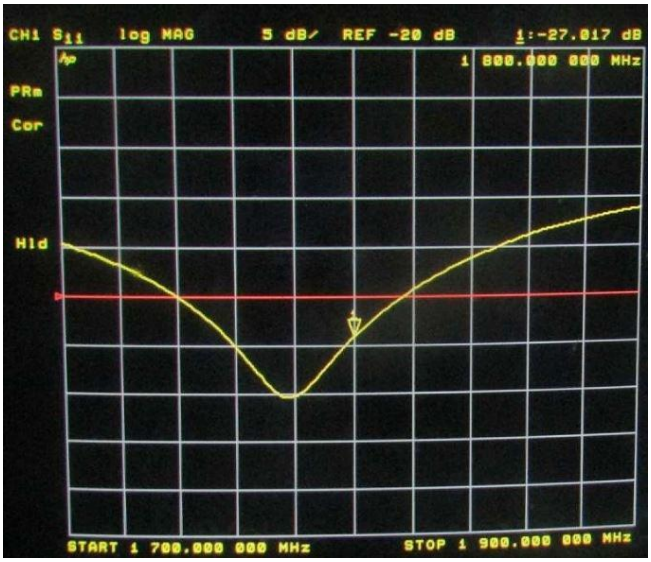


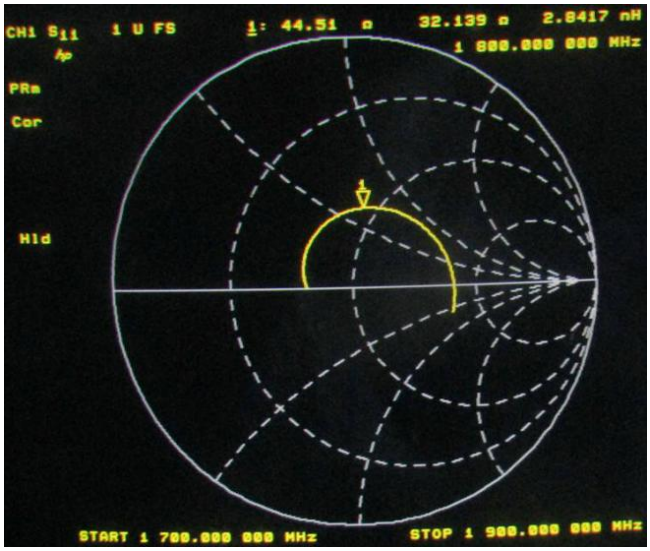
<Body 1800MHz>

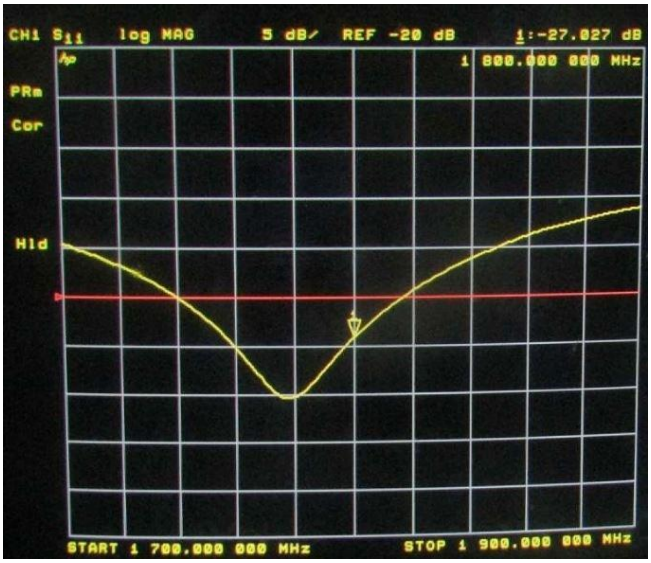
Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)	Date of Measurement
-27.86	-	46.2	-	Apr. 19, 2018
-27.017	3.026	44.51	1.69	Apr. 18, 2019
-27.027	2.990	44.32	1.88	Apr. 17, 2020

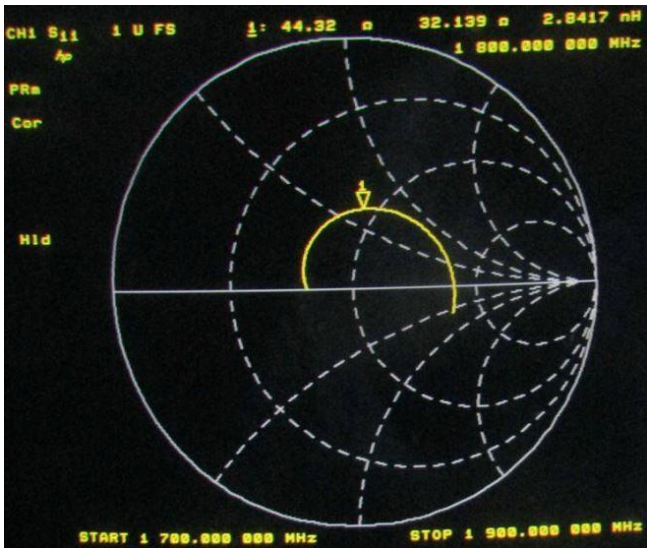
The return loss is <-20dB, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

Dipole Verification Data







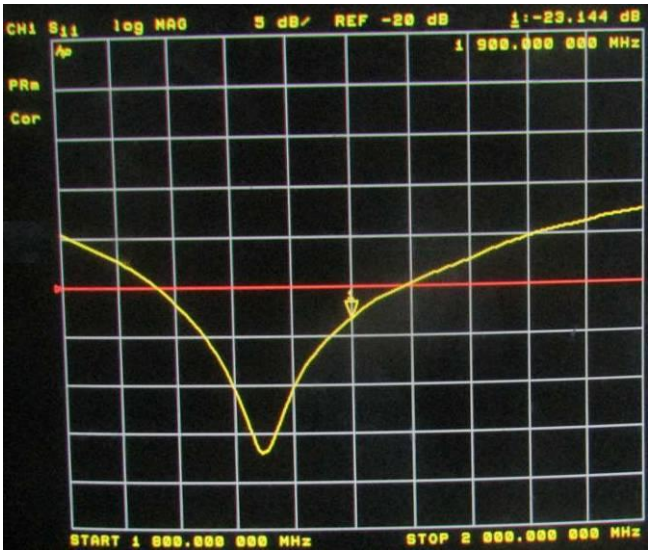


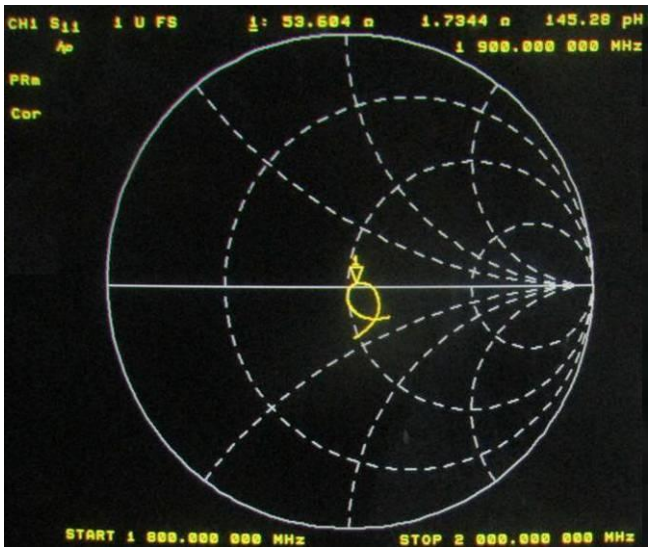
<Head 1900MHz>

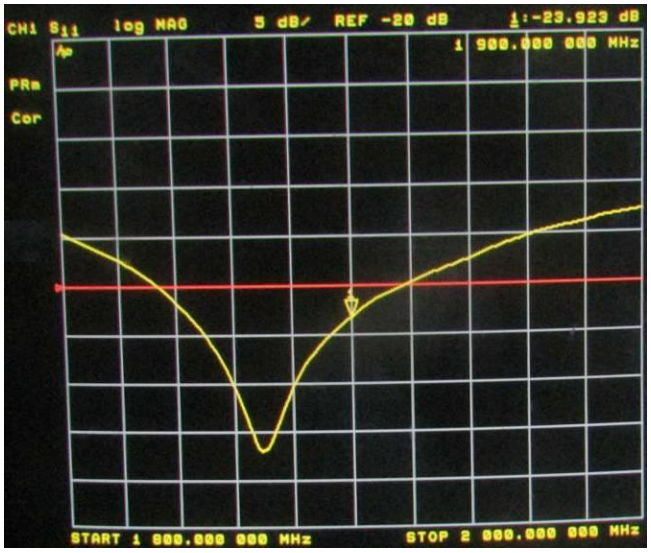
Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)	Date of Measurement
-25.15	-	52.6	-	Apr. 19, 2018
-23.144	7.976	53.604	1.004	Apr. 18, 2019
-23.923	4.879	53.344	0.744	Apr. 17, 2020

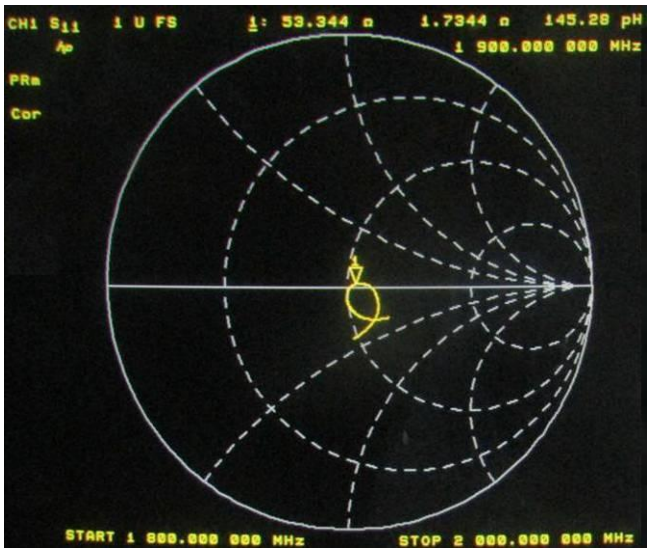
The return loss is <-20dB, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

Dipole Verification Data







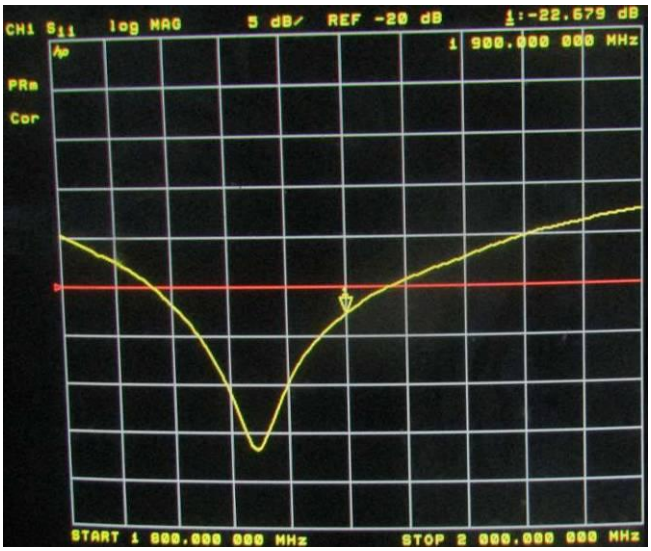


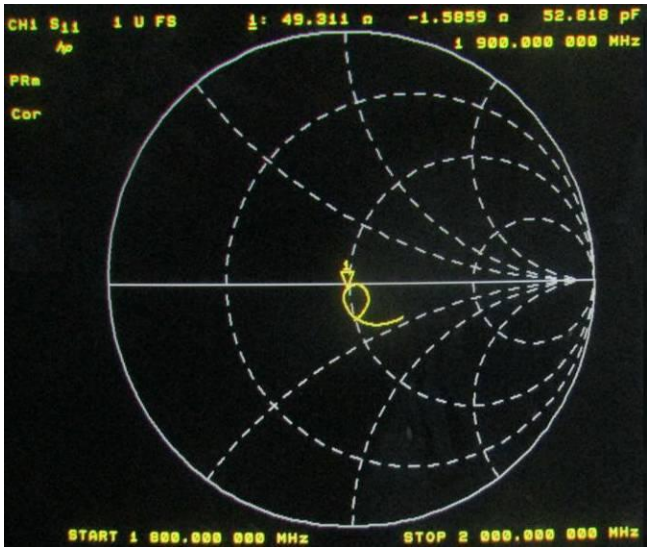
<Body 1900MHz>

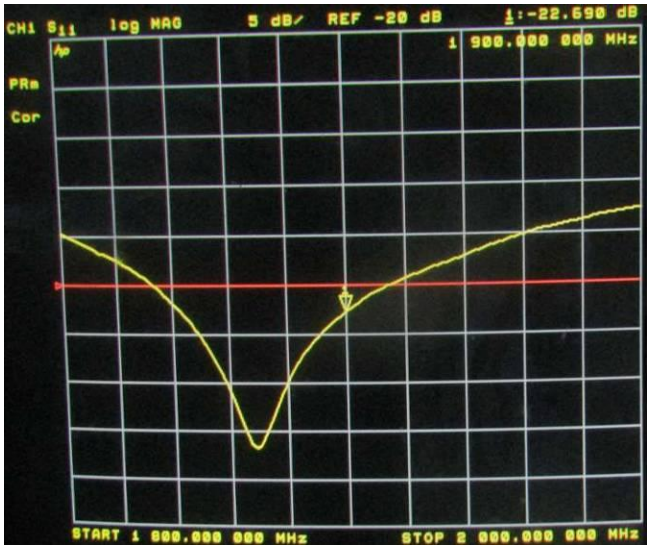
Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)	Date of Measurement
-22.99	-	47.6	-	Apr. 19, 2018
-22.679	1.353	49.311	1.711	Apr. 18, 2019
-22.690	1.305	49.385	1.785	Apr. 17, 2020

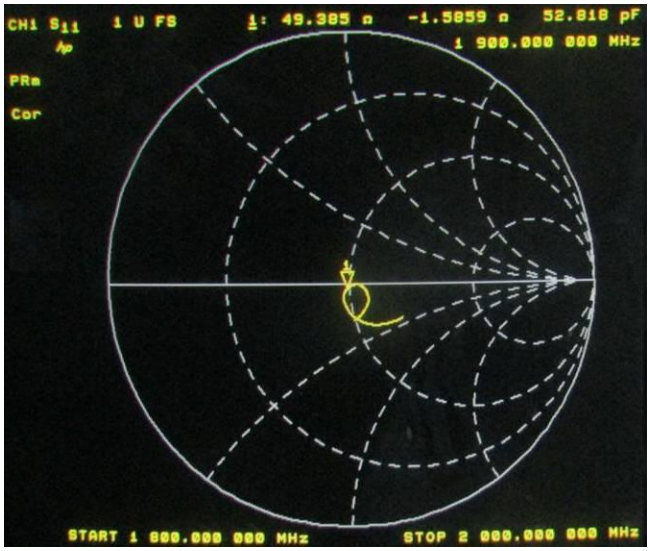
The return loss is <-20dB, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

Dipole Verification Data







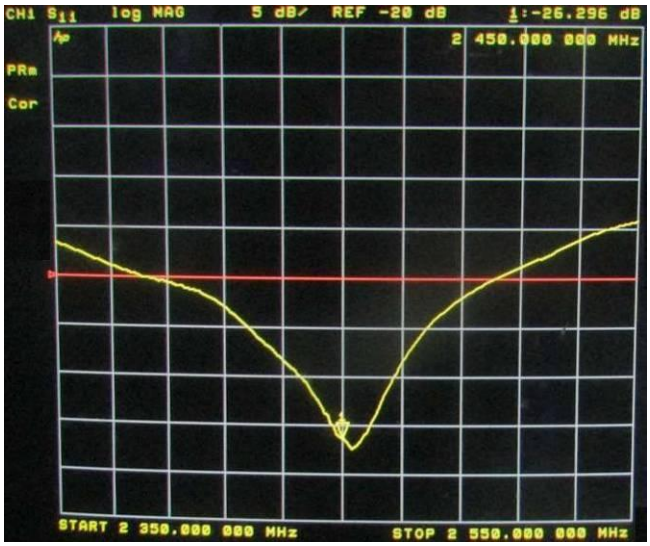


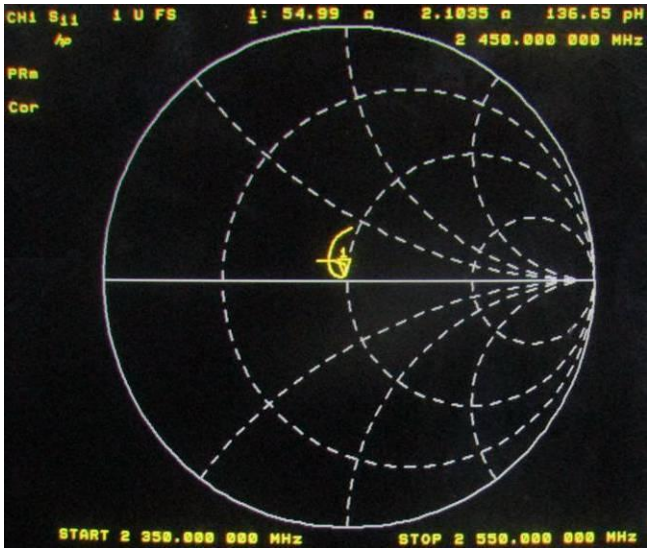
<Head 2450MHz>

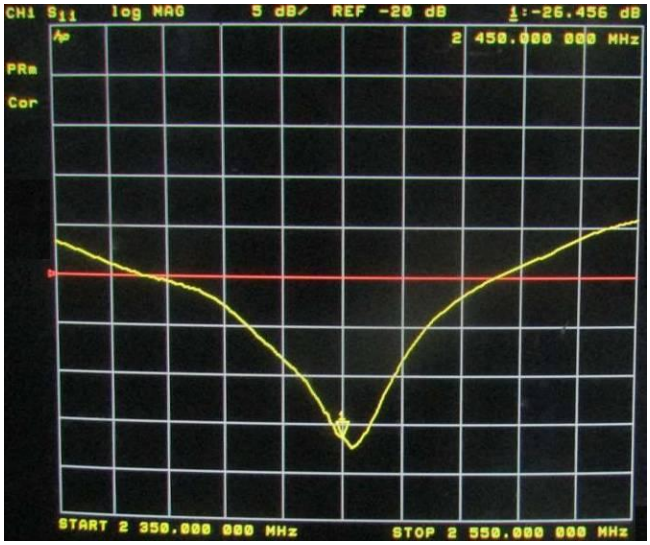
Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)	Date of Measurement
-28.15	-	53.9	-	Apr. 19, 2018
-26.296	6.586	54.99	1.09	Apr. 18, 2019
-26.456	6.018	54.65	0.75	Apr. 17, 2020

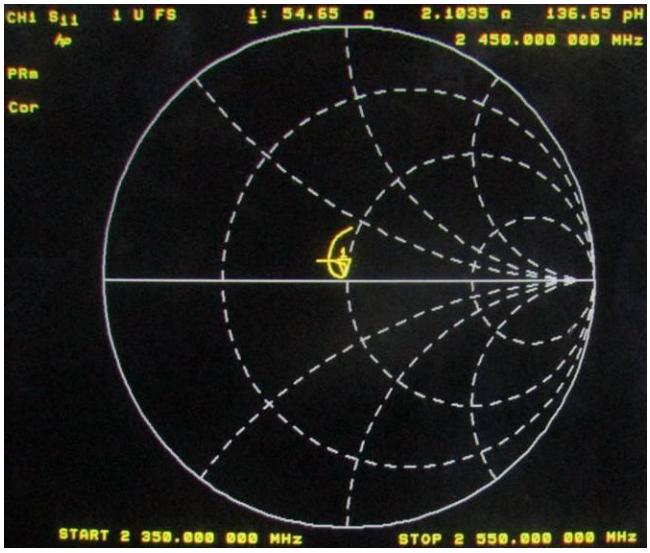
The return loss is <-20dB, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

Dipole Verification Data







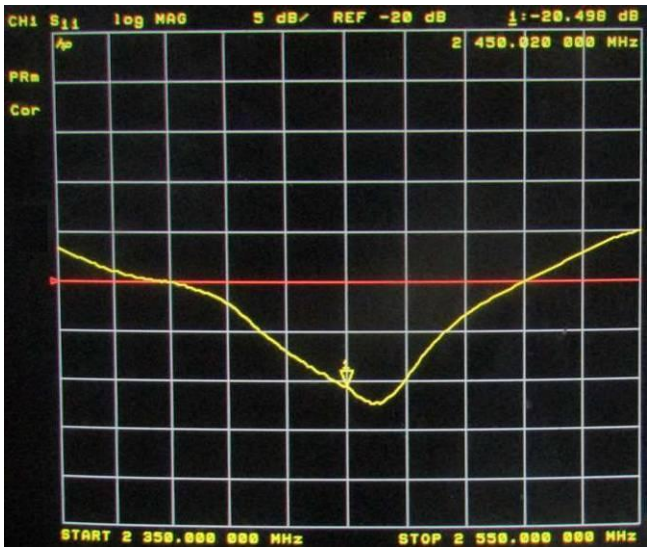


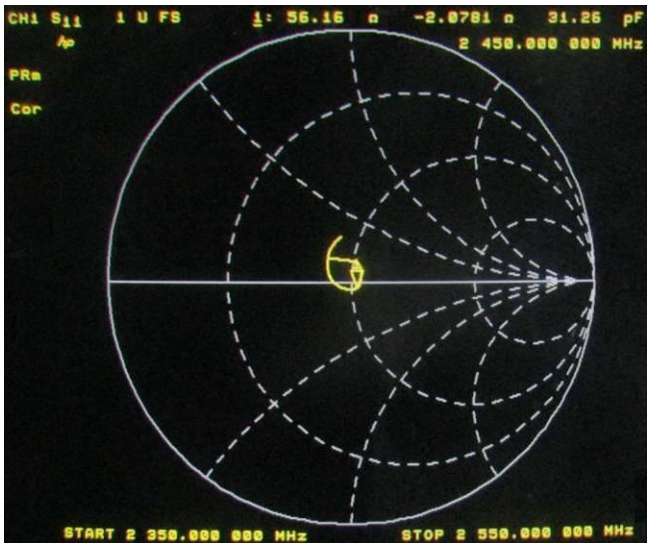
<Body 2450MHz>

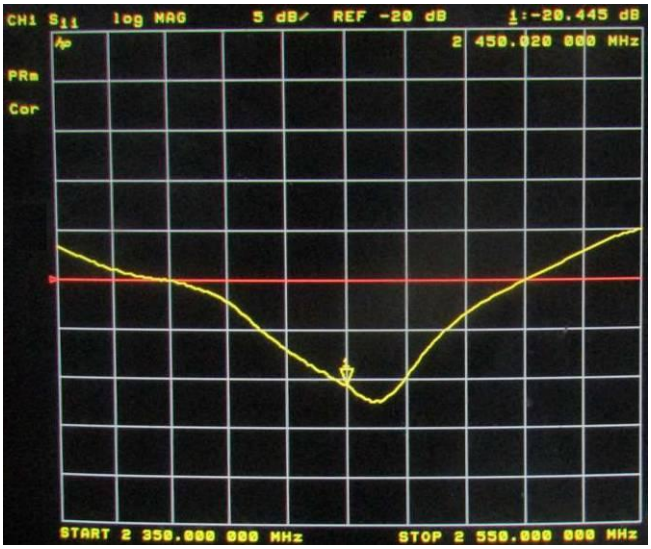
Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)	Date of Measurement
-22.99	-	57.6	-	Apr. 19, 2018
-20.498	10.840	56.16	1.44	Apr. 18, 2019
-20.445	11.07	56.26	8.66	Apr. 17, 2020

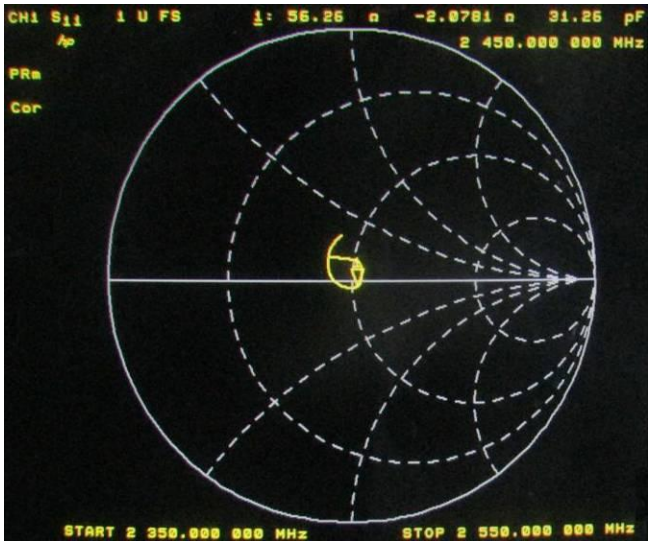
The return loss is <-20dB, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

Dipole Verification Data







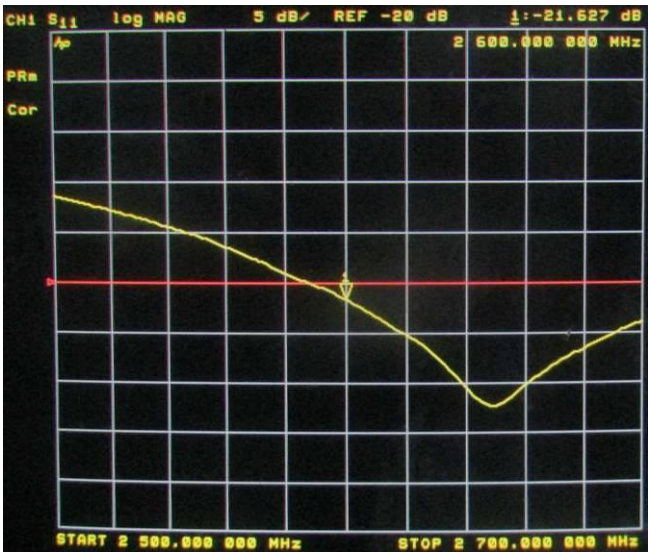


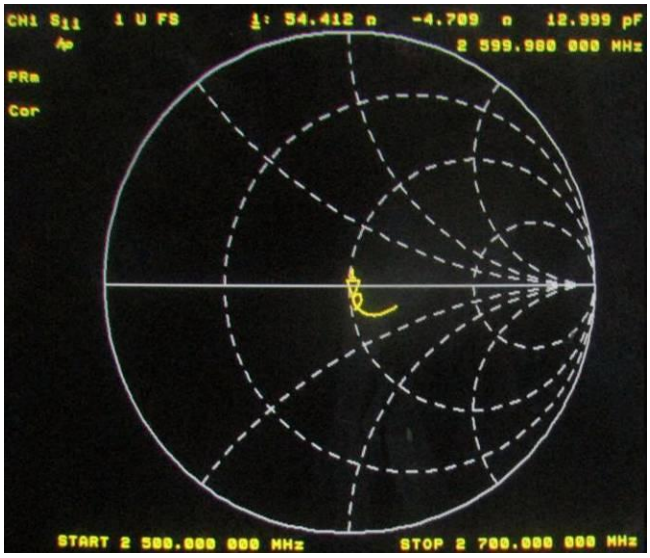
<Head 2600MHz>

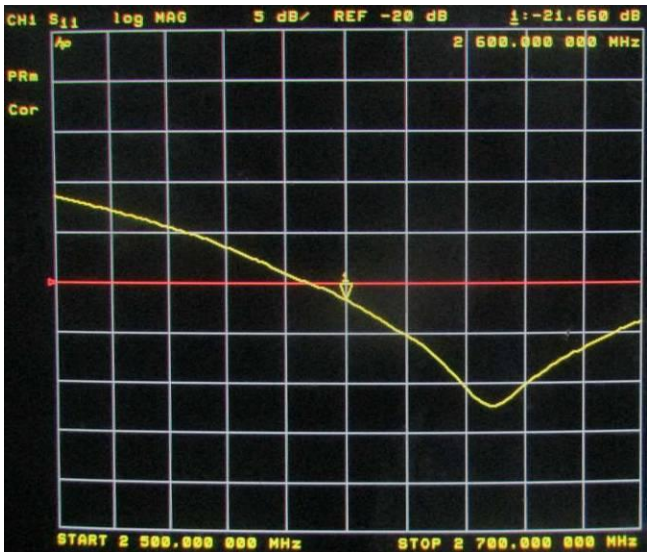
Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)	Date of Measurement
-20.85	-	54.9	-	Apr. 19, 2018
-21.627	3.727	54.412	0.488	Apr. 18, 2019
-21.660	3.885	54.470	0.43	Apr. 17, 2020

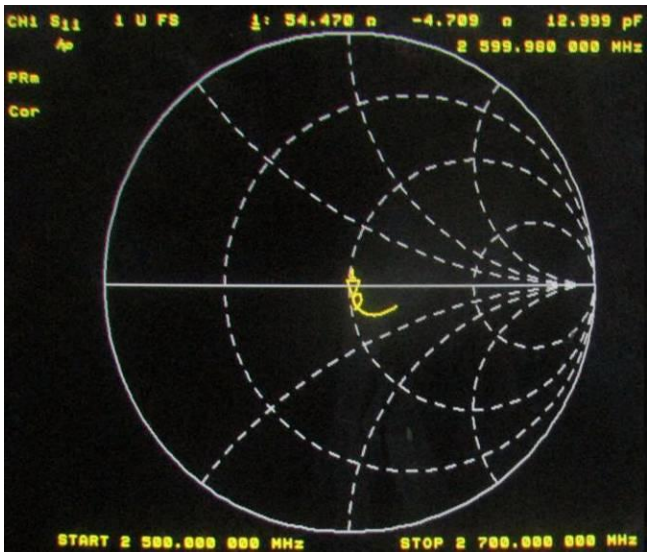
The return loss is <-20dB, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

Dipole Verification Data







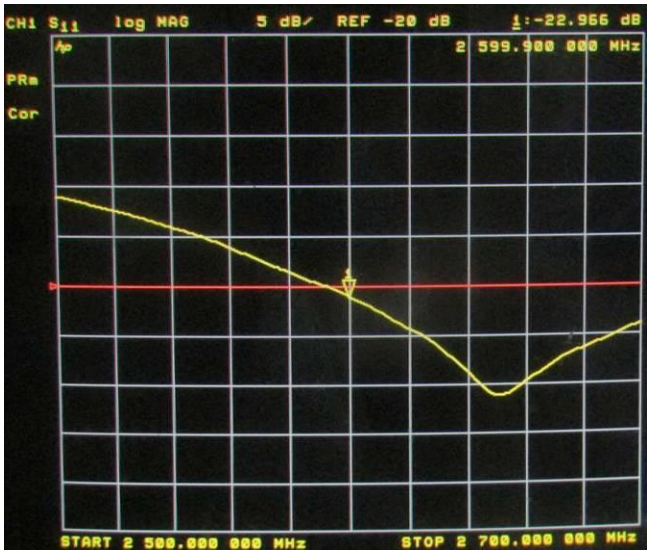


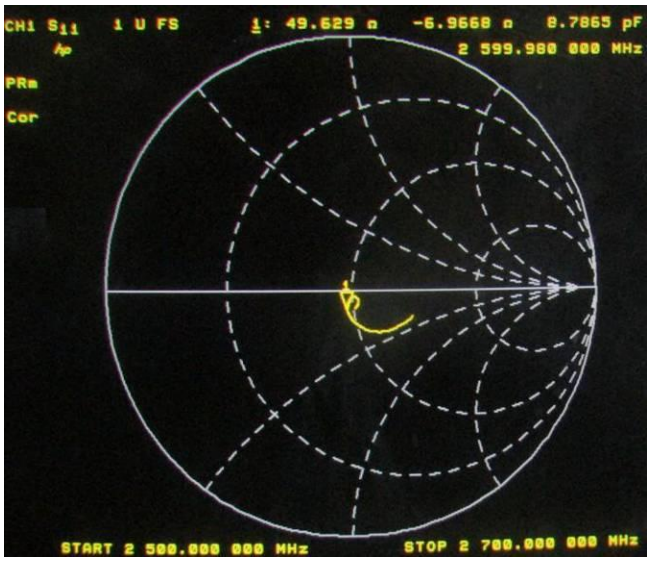
<Body 2600MHz>

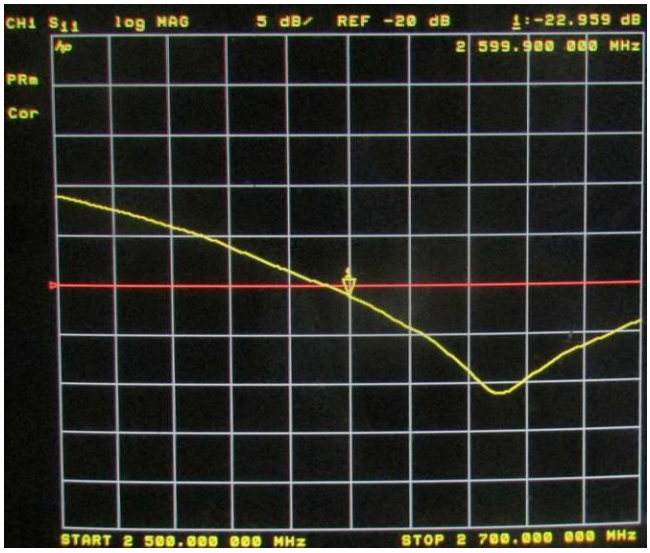
Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)	Date of Measurement
-23.23	-	50.6	-	Apr. 19, 2018
-22.966	1.136	49.629	0.971	Apr. 18, 2019
-22.959	1.1666	49.865	0.735	Apr. 17, 2020

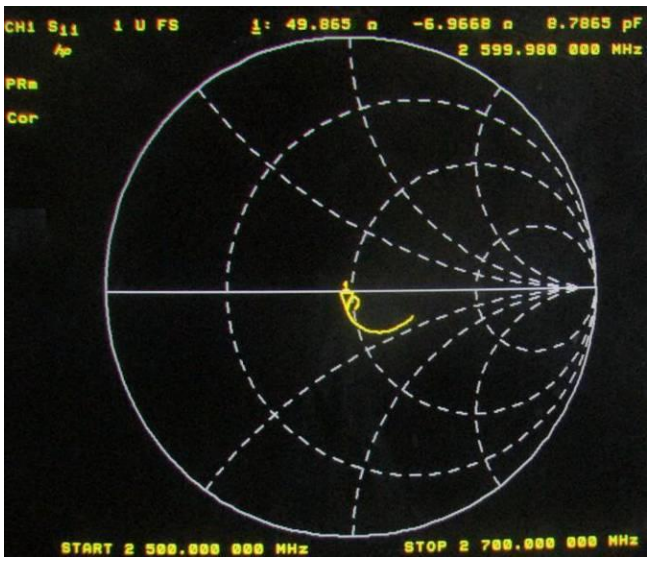
The return loss is <-20dB, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

Dipole Verification Data







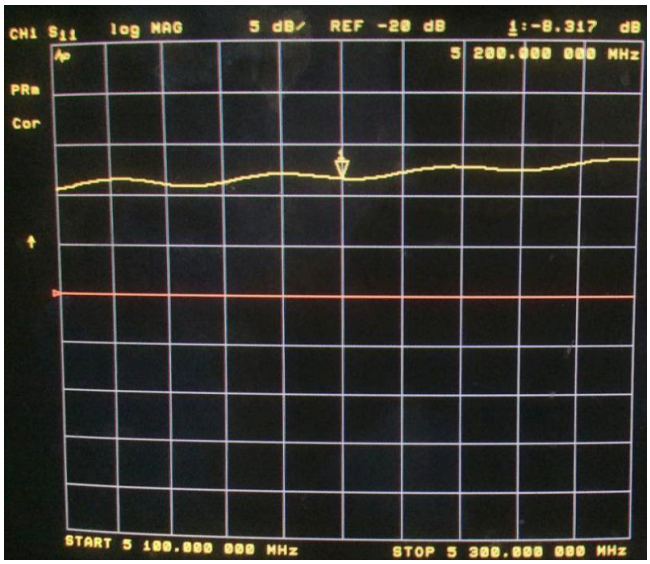


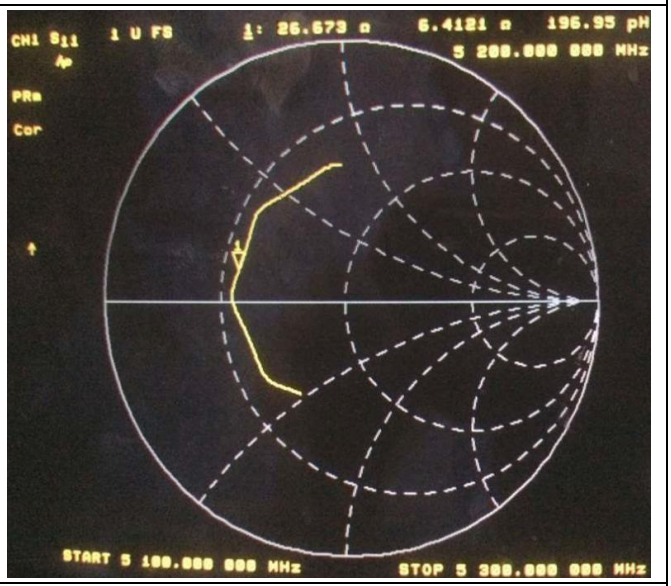
<Head 5200MHz>

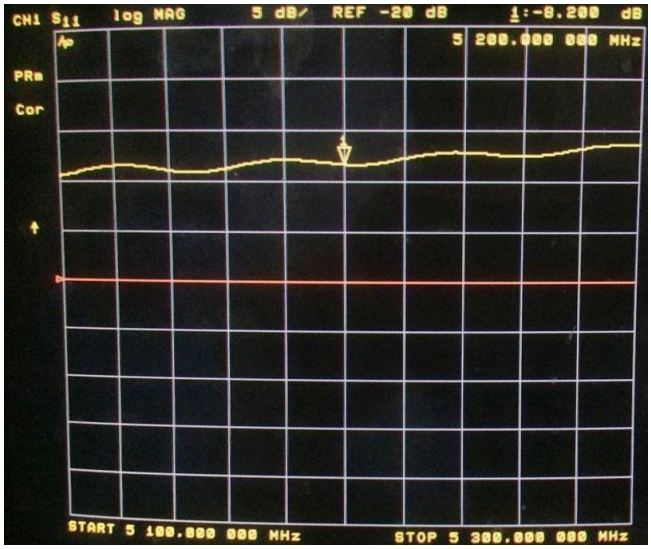
Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)	Date of Measurement
-8.23	-	26.31	-	Apr. 19, 2018
-8.317	1.057	26.673	0.363	Apr. 18, 2019
-8.200	0.365	26.412	0.102	Apr. 17, 2020

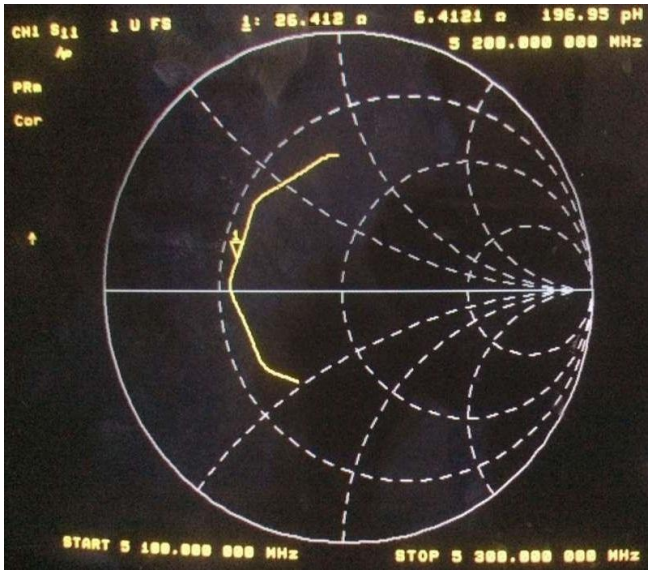
The return loss is <-8dB, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

Dipole Verification Data







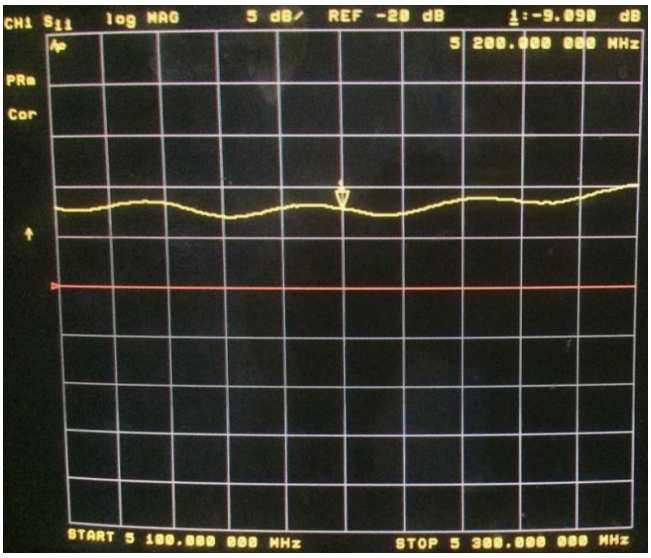


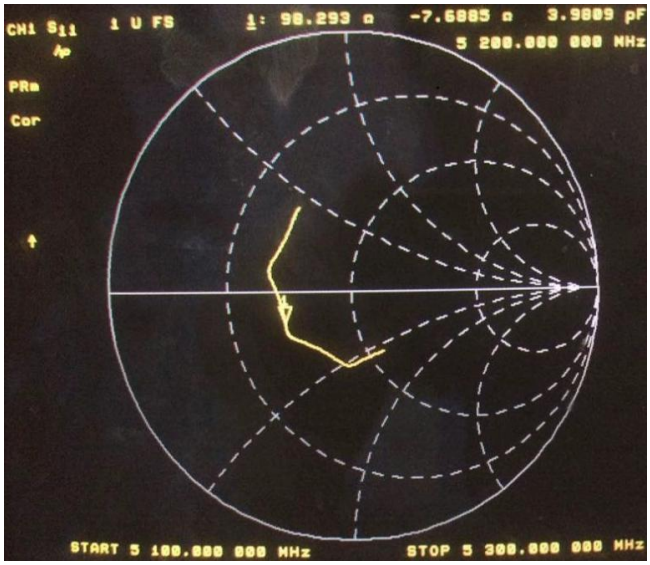
<Body 5200MHz>

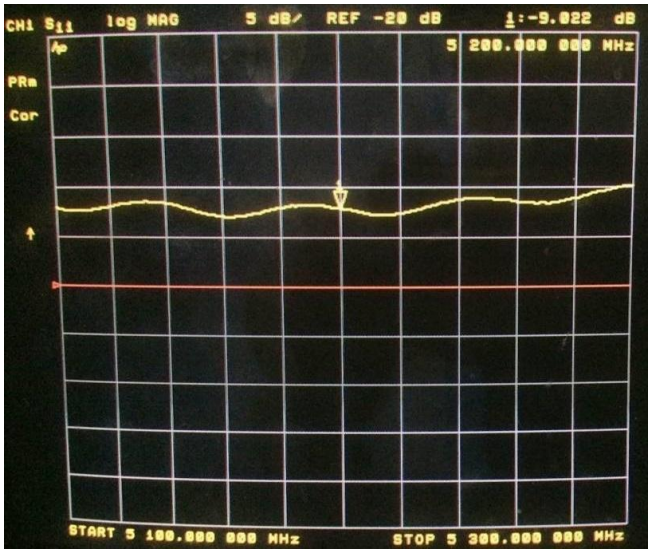
Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)	Date of Measurement
-9.40	-	97.78	-	Apr. 19, 2018
-9.090	3.298	98.293	0.513	Apr. 18, 2019
-9.022	4.021	98.688	0.908	Apr. 17, 2020

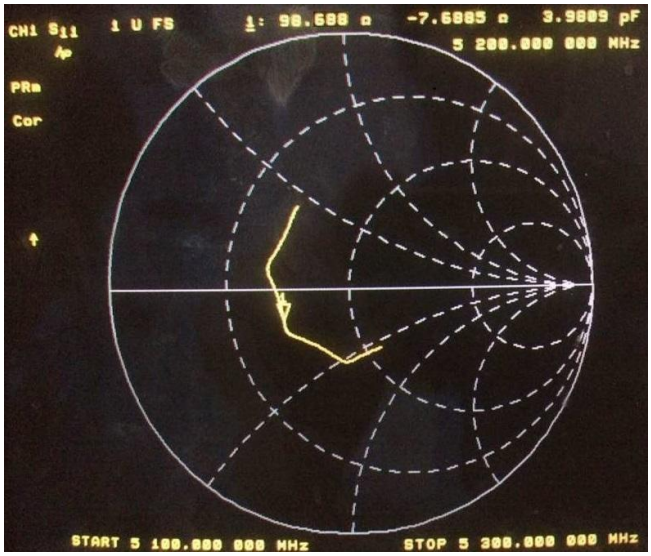
The return loss is <-8dB, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

Dipole Verification Data







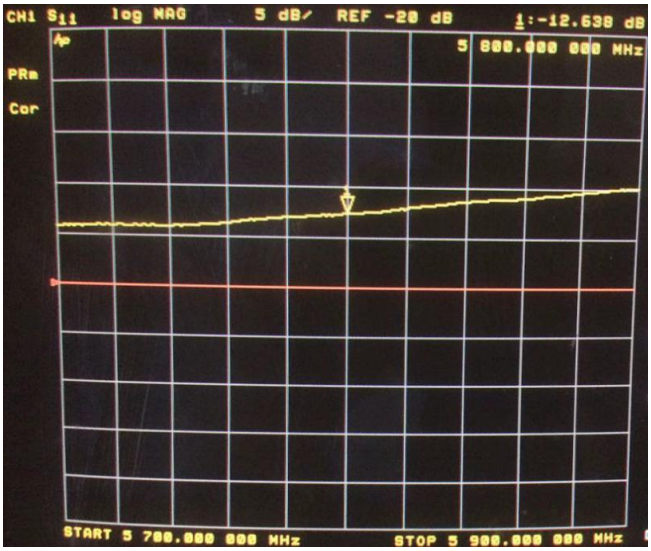


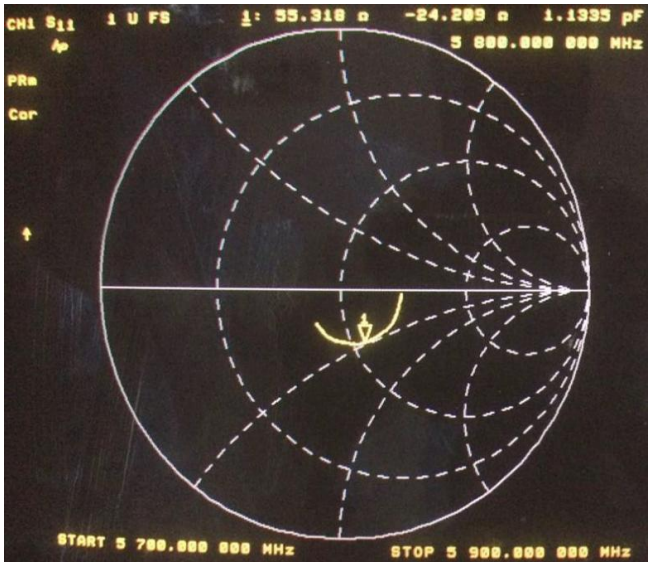
<Head 5800MHz>

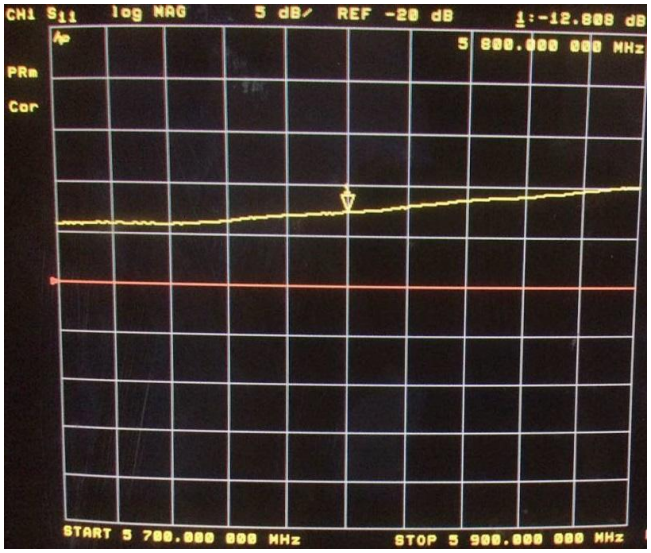
Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)	Date of Measurement
-12.03	-	59.85	-	Apr. 19, 2018
-12.638	5.054	55.318	4.532	Apr. 18, 2019
-12.808	6.467	55.209	4.641	Apr. 17, 2020

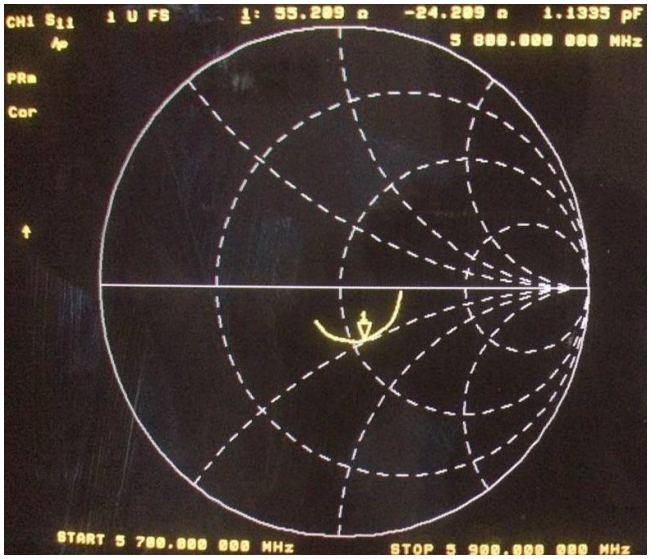
The return loss is <-8dB, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

Dipole Verification Data







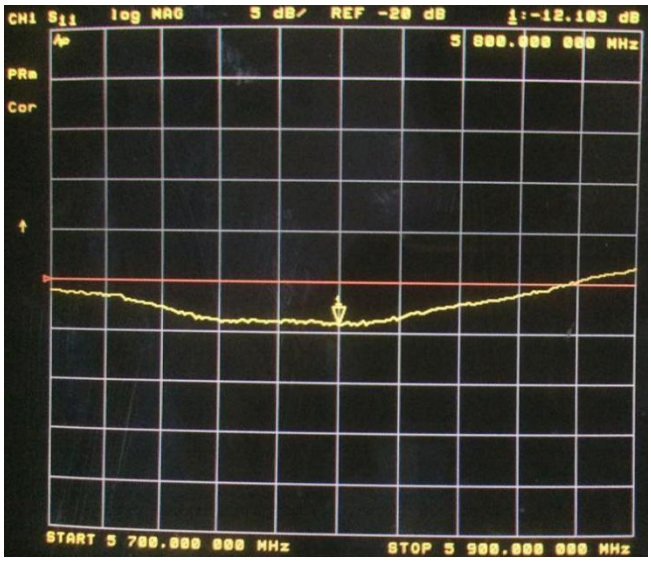


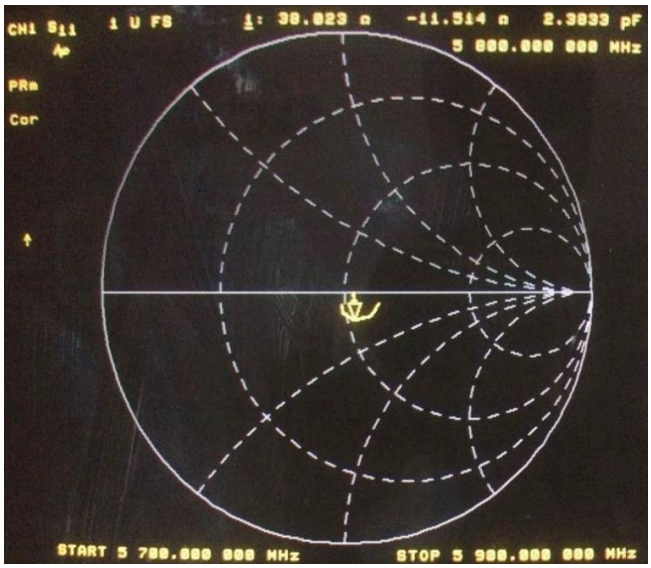
<Body 5800MHz>

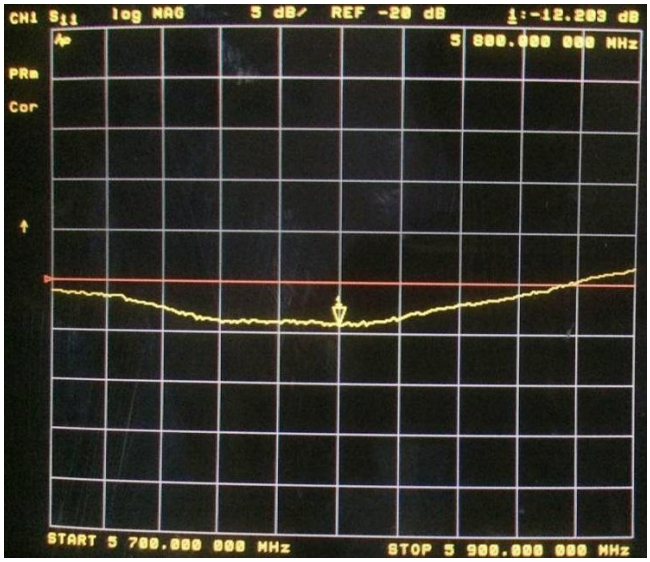
Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)	Date of Measurement
-12.37	-	36.66	-	Apr. 19, 2018
-12.103	2.158	38.023	1.363	Apr. 18, 2019
-12.203	1.350	38.143	1.483	Apr. 17, 2020

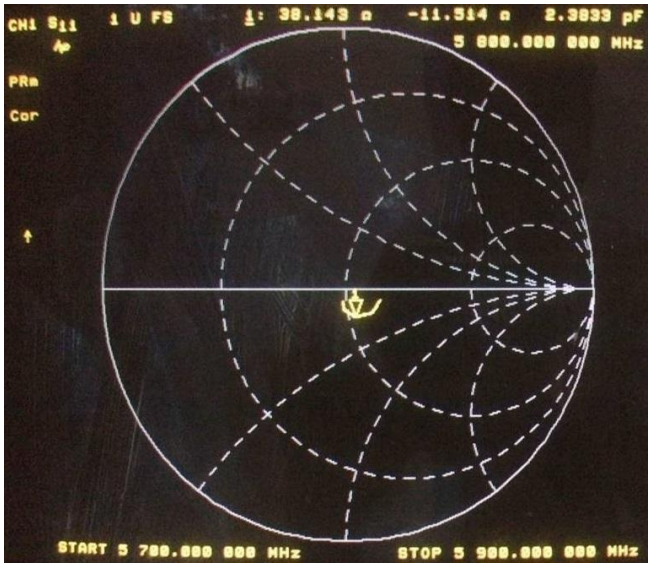
The return loss is <-8dB, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

Dipole Verification Data









END