

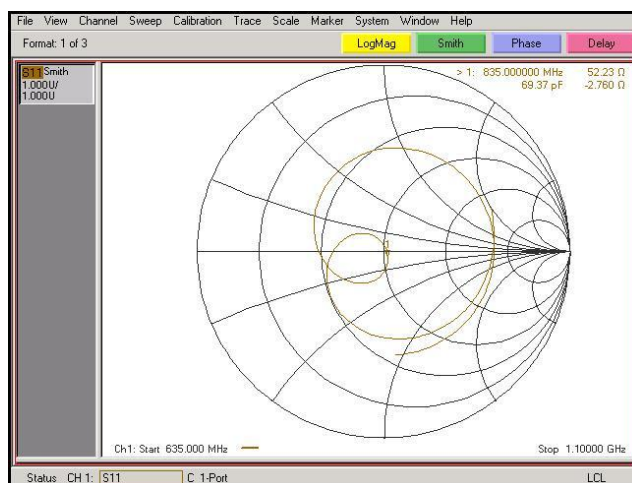


Extended Dipole Calibrations

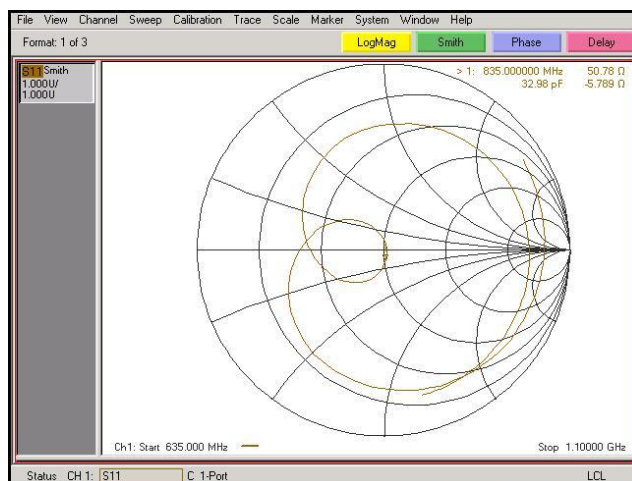
Referring to KDB 450824, if dipoles are verified in return loss (< -20 dB, within 20% of prior calibration), and in impedance (within 5 ohm of prior calibration), the annual calibration is not necessary and the calibration interval can be extended.

<Dipole Verification Data> - D835V2, serial no. 499

835MHz - Head



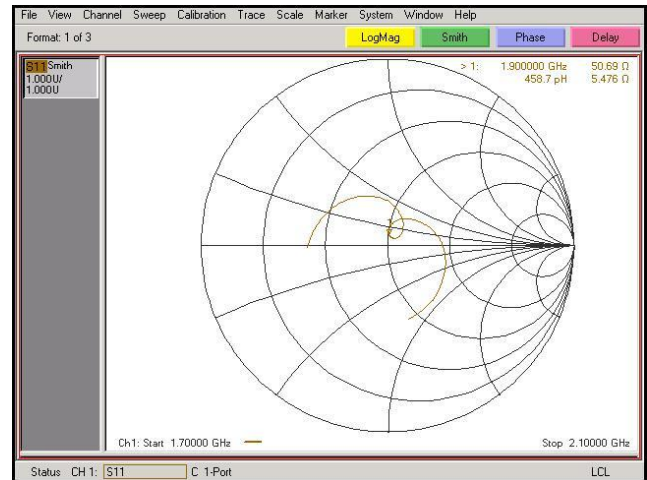
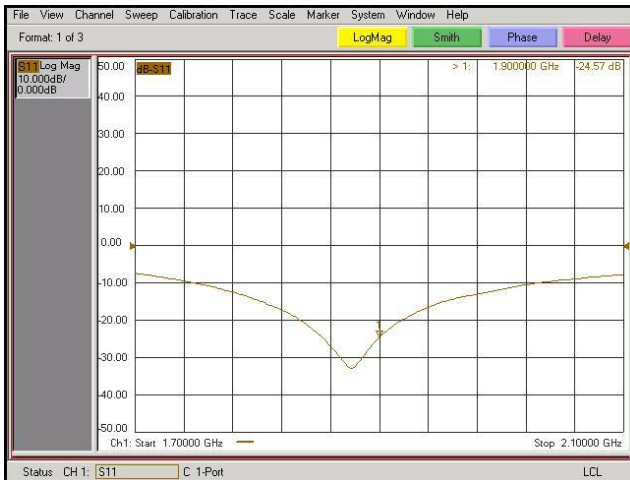
835MHz – Body



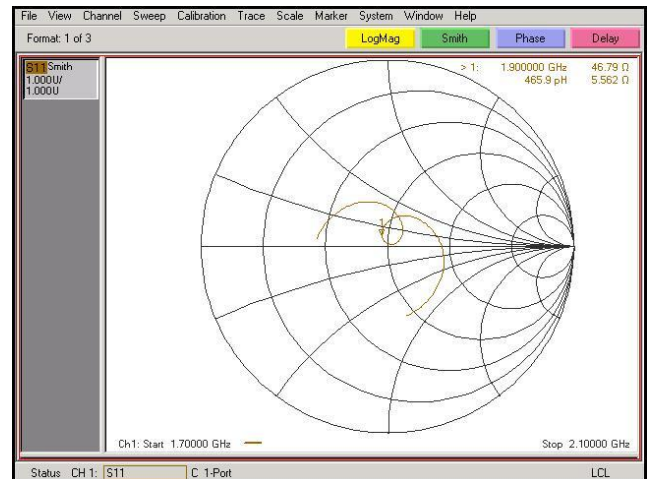
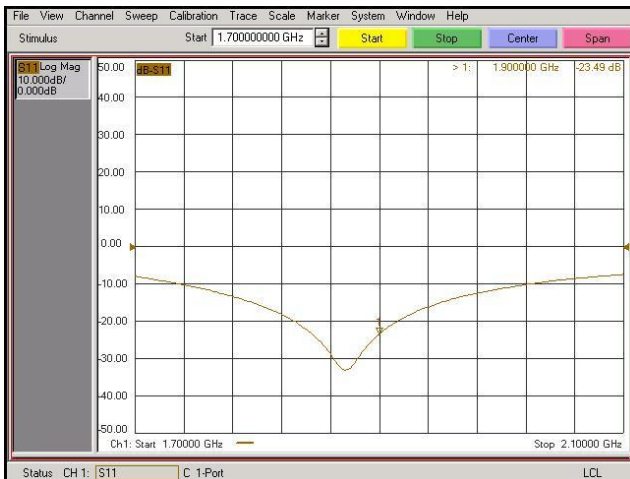


<Dipole Verification Data> - D1900V2, serial no. 5d041

1900MHz - Head



1900MHz - Body



**<Justification of the extended calibration>**

D835V2 – serial no. 499												
	835 Head						835 Body					
Date of Measurement	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)
03.22.2010	-28.352		52.17		-3.25		-24.664		50.066		-5.87	
03.22.2011	-28.49	4.86	52.23	1.15	-2.76	0.51	-24.67	0.02	50.78	1.43	-5.79	0.08

D1900V2 – serial no. 5d041												
	1900 Head						1900 Body					
Date of Measurement	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)
03.22.2010	-24.549		50.896		5.91		-23.108		46.342		5.67	
03.22.2011	-24.57	0.08	50.69	-0.4	5.48	-0.43	-23.49	1.65	46.79	0.96	5.56	-0.11

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.