Parameters of Probe: EUmmWV4 - SN:9533

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B $dB\sqrt{\mu V}$	C	D dB	VR mV	Max dev.	Max Unc^E $k = 2$
0	CW	X	0.00	0.00	1.00	0.00	121.9	±3.3%	±4.7%
		Y	0.00	0.00	1.00		62.9		
10352	Pulse Waveform (200Hz, 10%)	X	3.01	60.00	14.93	10.00	6.0	±1.2%	±9.6%
		Y	2.66	60.00	15.32		6.0		
10353	Pulse Waveform (200Hz, 20%)	X	2.11	60.00	13.70	6.99	12.0	±1.3%	±9.6%
		Y	1.81	60.00	14.32		12.0		
10354	Pulse Waveform (200Hz, 40%)	X	1.30	60.25	12.47	3.98	23.0	±1.7%	±9.6%
		Y	1.10	60.00	13.15		23.0		
10355	Pulse Waveform (200Hz, 60%)	X	0.75	60.00	11.62	2.22	27.0	±1.2%	±9.6%
		Y	0.77	60.00	12.10		27.0		
10387	QPSK Waveform, 1 MHz	X	1.21	60.00	12.07	1.00	22.0	±1.5%	±9.6%
		Y	1.30	60.00	11.92		22.0		
10388	QPSK Waveform, 10 MHz	X	1.29	60.00	11.83	0.00	22.0	±0.8%	±9.6%
		Y	1.50	60.00	11.74		22.0		
10396	64-QAM Waveform, 100 kHz	X	3.36	65.76	16.16	3.01	17.0	±0.6%	±9.6%
		Y	3.71	66.08	16.26		17.0		
10399	64-QAM Waveform, 40 MHz	X	2.10	60.00	12.35	0.00	19.0	±1.0%	±9.6%
		Y	2.26	60.00	12.34		19.0		
10414	WLAN CCDF, 64-QAM, 40 MHz	X	3.25	60.00	12.79	0.00	12.0	±0.9%	±9.6%
		Y	3.36	60.00	12.80		12.0		

Note: For details on UID parameters see Appendix

^{E} Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

Parameters of Probe: EUmmWV4 - SN:9533

Calibration Results for Linearity Response

Frequency GHz	Target E-Field V/m	Deviation Sensor X dB	Deviation Sensor Y dB	Unc ($k = 2$) dB
0.9	50.0	−0.00	−0.11	±0.2
0.9	100.0	−0.06	−0.04	±0.2
0.9	500.0	0.02	0.05	±0.2
0.9	1000.0	0.06	0.06	±0.2
0.9	1500.0	0.05	0.06	±0.2
0.9	2100.0	0.04	0.06	±0.2

Sensor Frequency Model Parameters (750 MHz – 55 GHz)

	Sensor X	Sensor Y
R (Ω)	122.24	83.30
R_p (Ω)	129.64	83.67
L (nH)	0.14656	0.08971
C (pF)	0.1800	0.3845
C_p (pF)	0.0505	0.0808

Sensor Frequency Model Parameters (55 GHz – 110 GHz)

	Sensor X	Sensor Y
R (Ω)	39.29	51.99
R_p (Ω)	157.40	170.97
L (nH)	0.07792	0.08076
C (pF)	0.0604	0.0644
C_p (pF)	0.0670	0.0585

Sensor Model Parameters

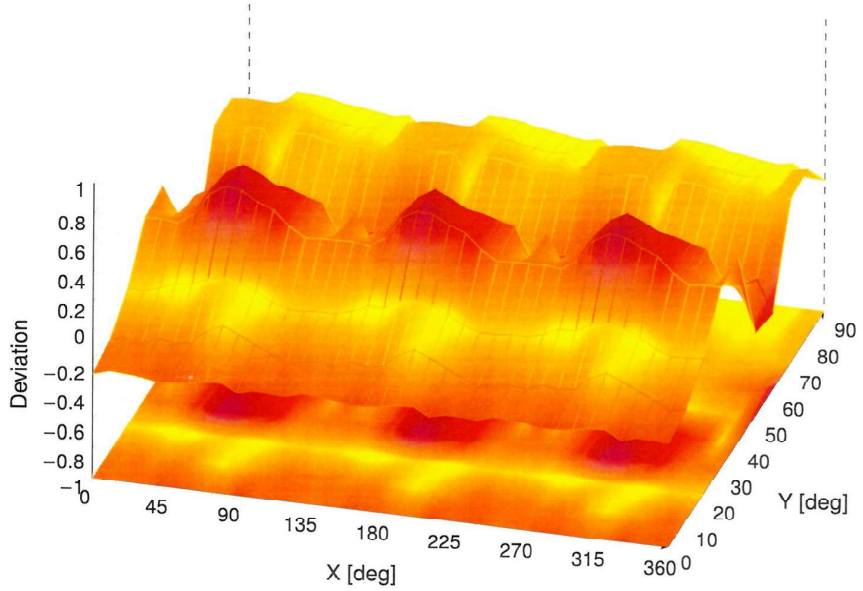
	C1 fF	C2 fF	α V^{-1}	T1 $ms\,V^{-2}$	T2 $ms\,V^{-1}$	T3 ms	T4 V^{-2}	T5 V^{-1}	T6
x	54.8	397.17	33.57	1.92	8.09	5.01	0.00	1.70	1.01
y	45.8	328.51	33.01	2.66	6.85	5.02	0.00	2.00	1.01

Other Probe Parameters

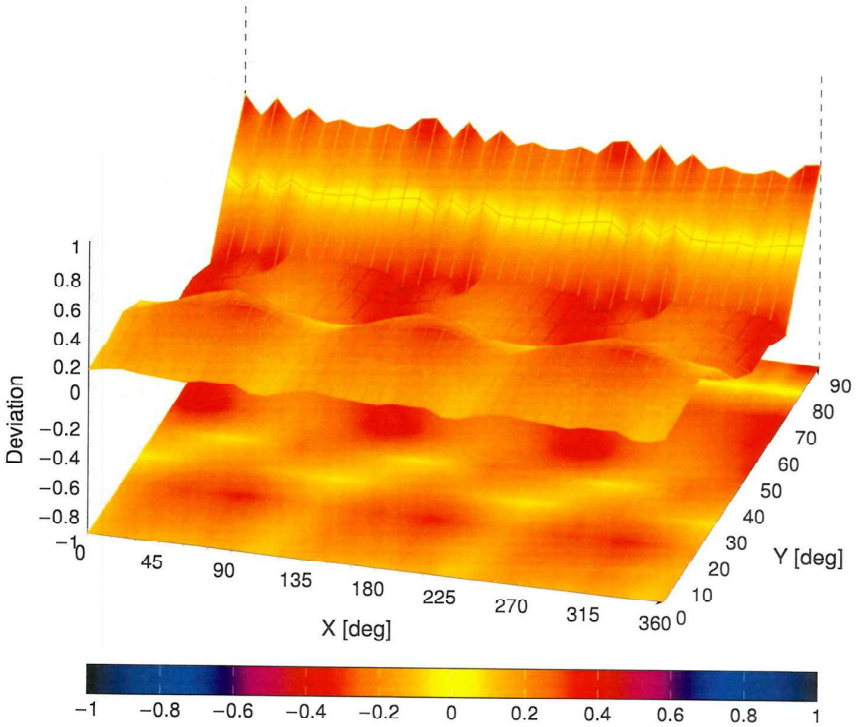
Sensor Arrangement	Rectangular
Connector Angle	124.5°
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	320 mm
Probe Body Diameter	8 mm
Tip Length	23 mm
Tip Diameter	8.0 mm
Probe Tip to Sensor X Calibration Point	1.5 mm
Probe Tip to Sensor Y Calibration Point	1.5 mm

Deviation from Isotropy in Air

30GHz: 3D isotropy, E-field parallel to probe axis



60GHz: 3D isotropy, E-field parallel to probe axis



Probe isotropy for E_{tot}: probe rotated $\phi = 0°$ to 360°, tilted from field propagation direction $\vec{k}$
Parallel to the field propagation ($\psi = 0° - 90°$) at 30 GHz: deviation within ±0.49 dB
Parallel to the field propagation ($\psi = 0° - 90°$) at 60 GHz: deviation within ±0.40 dB