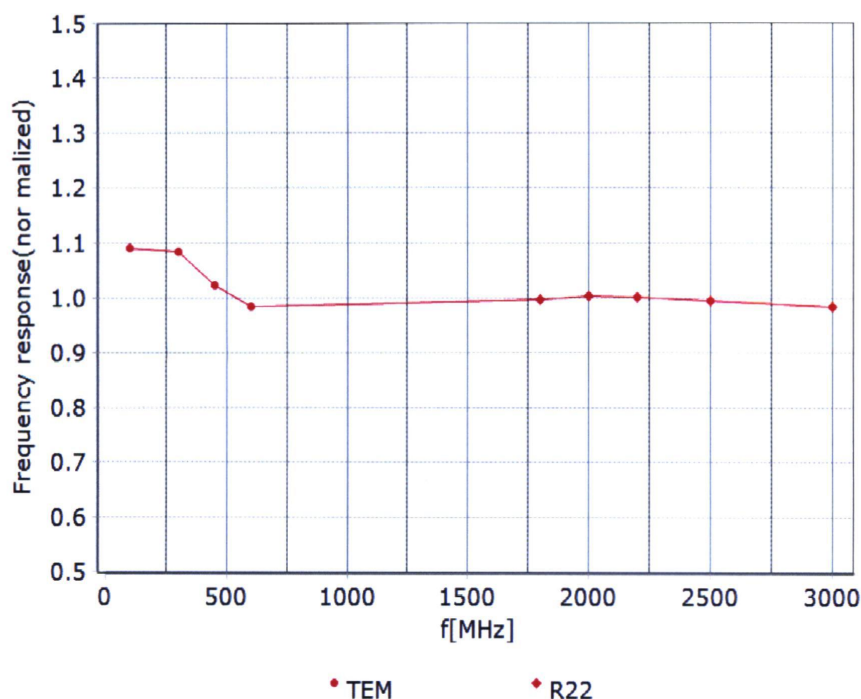




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Add: No.51 Xueyuan Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2512 Fax: +86-10-62304633-2504
E-mail: cttl@chinattl.com [Http://www.chinattl.cn](http://www.chinattl.cn)

Frequency Response of E-Field (TEM-Cell: ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field: $\pm 7.4\%$ ($k=2$)

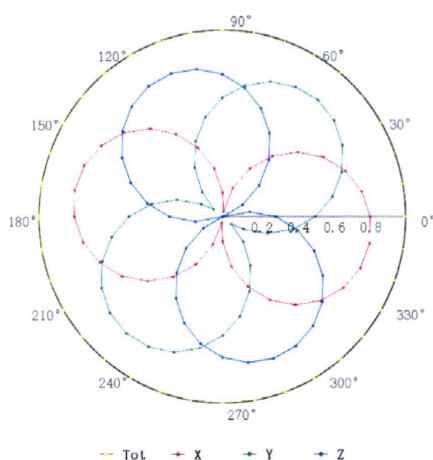


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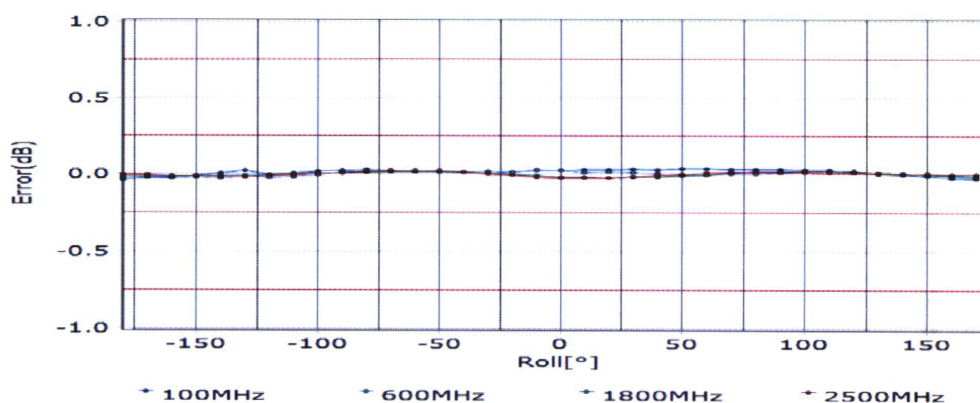
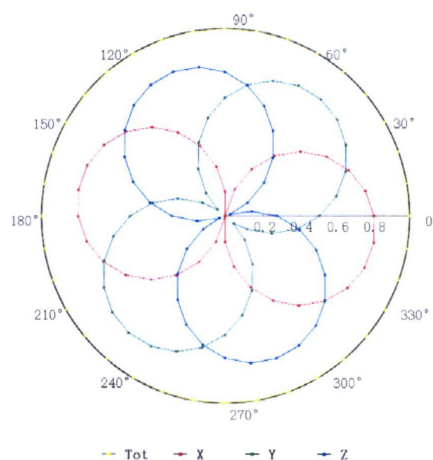
Add: No.51 Xueyuan Road, Haidian District, Beijing, 100191, China
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Receiving Pattern (Φ), $\theta=0^\circ$

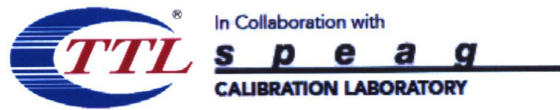
f=600 MHz, TEM



f=1800 MHz, R22

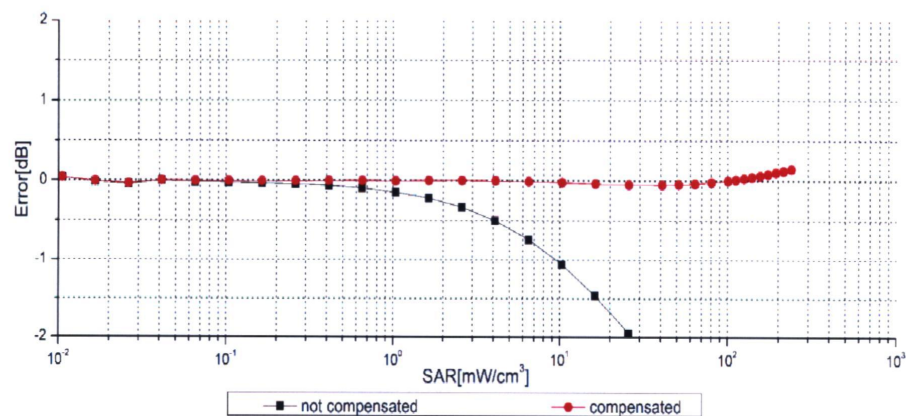
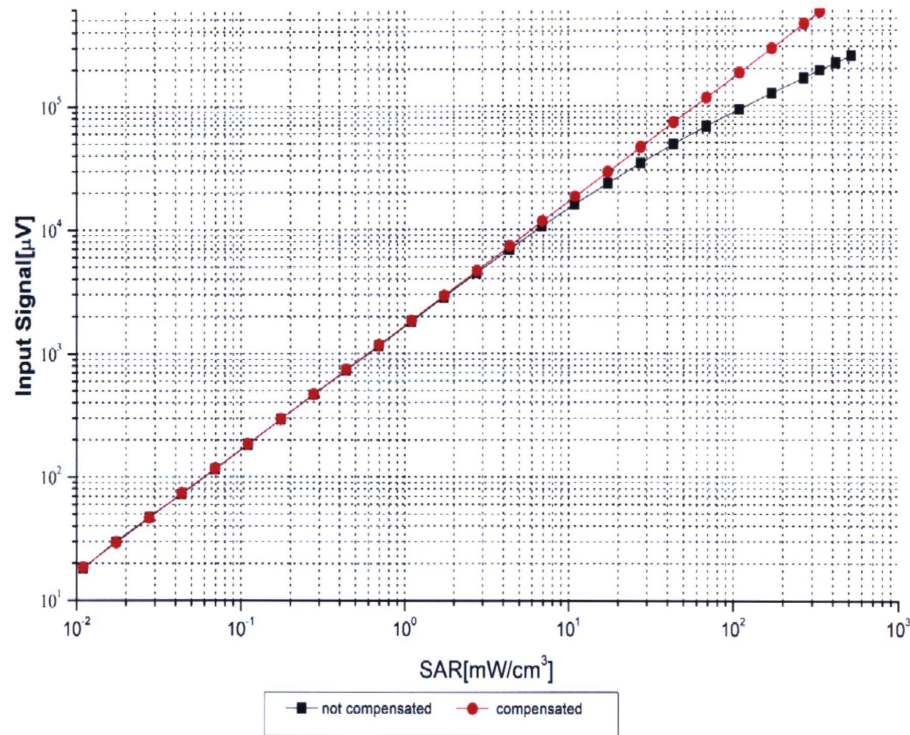


Uncertainty of Axial Isotropy Assessment: $\pm 1.2\%$ ($k=2$)

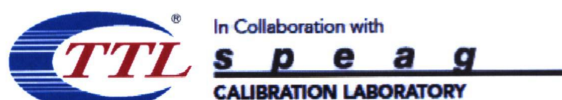


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E-mail: cttl@chinattl.com [Http://www.chinattl.cn](http://www.chinattl.cn)

Dynamic Range f(SAR_{head}) (TEM cell, f = 900 MHz)



Uncertainty of Linearity Assessment: $\pm 0.9\%$ ($k=2$)

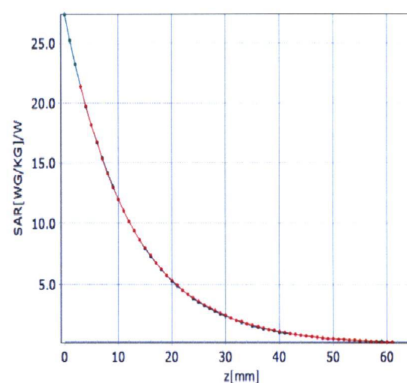
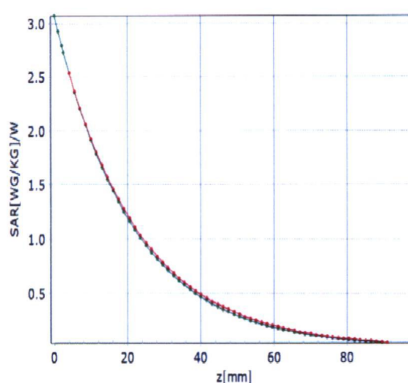


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E-mail: cttl@chinattl.com [Http://www.chinattl.cn](http://www.chinattl.cn)

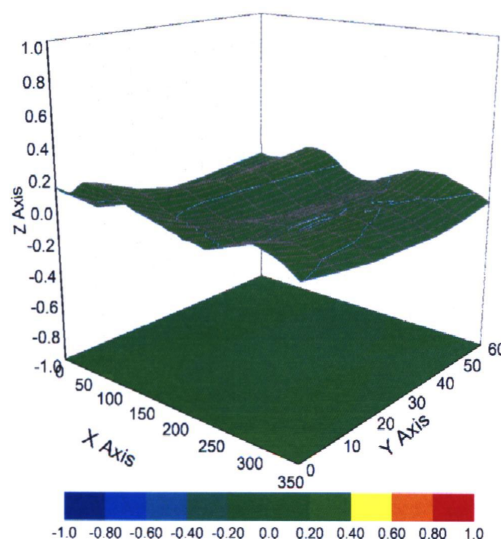
Conversion Factor Assessment

f=750 MHz,WGLS R9(H_convF)

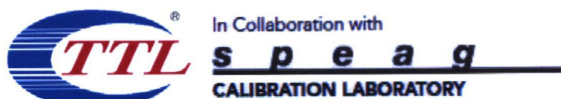
f=1750 MHz,WGLS R22(H_convF)



Deviation from Isotropy in Liquid



Uncertainty of Spherical Isotropy Assessment: $\pm 3.2\%$ ($k=2$)



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DASY/EASY – Parameters of Probe: EX3DV4 – SN:7464

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	30.7
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disable
Probe Overall Length	337mm
Probe Body Diameter	10mm
Tip Length	10mm
Tip Diameter	2.5mm
Probe Tip to Sensor X Calibration Point	1mm
Probe Tip to Sensor Y Calibration Point	1mm
Probe Tip to Sensor Z Calibration Point	1mm
Recommended Measurement Distance from Surface	1.4mm

ANNEX H Dipole Calibration Certificate

750 MHz Dipole Calibration Certificate

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland



S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

Client **CTTL (Auden)**

Certificate No: **D750V3-1017_Jul21**

CALIBRATION CERTIFICATE

Object **D750V3 - SN:1017**

Calibration procedure(s) **QA CAL-05.v11
Calibration Procedure for SAR Validation Sources between 0.7-3 GHz**

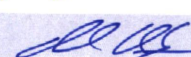
Calibration date: **July 12, 2021**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	09-Apr-21 (No. 217-03291/03292)	Apr-22
Power sensor NRP-Z91	SN: 103244	09-Apr-21 (No. 217-03291)	Apr-22
Power sensor NRP-Z91	SN: 103245	09-Apr-21 (No. 217-03292)	Apr-22
Reference 20 dB Attenuator	SN: BH9394 (20k)	09-Apr-21 (No. 217-03343)	Apr-22
Type-N mismatch combination	SN: 310982 / 06327	09-Apr-21 (No. 217-03344)	Apr-22
Reference Probe EX3DV4	SN: 7349	28-Dec-20 (No. EX3-7349_Dec20)	Dec-21
DAE4	SN: 601	02-Nov-20 (No. DAE4-601_Nov20)	Nov-21
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB39512475	30-Oct-14 (in house check Oct-20)	In house check: Oct-22
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-20)	In house check: Oct-22
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-20)	In house check: Oct-22
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-20)	In house check: Oct-22
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-20)	In house check: Oct-21

	Name	Function	Signature
Calibrated by:	Jeffrey Katzman	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: July 15, 2021

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.



No.I21Z62219-SEM01



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835 MHz Dipole Calibration Certificate



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1750 MHz Dipole Calibration Certificate



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No.I21Z62219-SEM01



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1900 MHz Dipole Calibration Certificate



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No.I21Z62219-SEM01



No.I21Z62219-SEM01



No.I21Z62219-SEM01



No.I21Z62219-SEM01



No.I21Z62219-SEM01

2450 MHz Dipole Calibration Certificate



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2600 MHz Dipole Calibration Certificate



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No.I21Z62219-SEM01



No.I21Z62219-SEM01



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No.I21Z62219-SEM01

3500 MHz Dipole Calibration Certificate



No.I21Z62219-SEM01



No.I21Z62219-SEM01



No.I21Z62219-SEM01



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No.I21Z62219-SEM01



No.I21Z62219-SEM01



No.I21Z62219-SEM01



No.I21Z62219-SEM01

3700M Dipole Calibration Certificate



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No.I21Z62219-SEM01



No.I21Z62219-SEM01



No.I21Z62219-SEM01



No.I21Z62219-SEM01



No.I21Z62219-SEM01



No.I21Z62219-SEM01



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5G Dipole Calibration Certificate



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No.I21Z62219-SEM01



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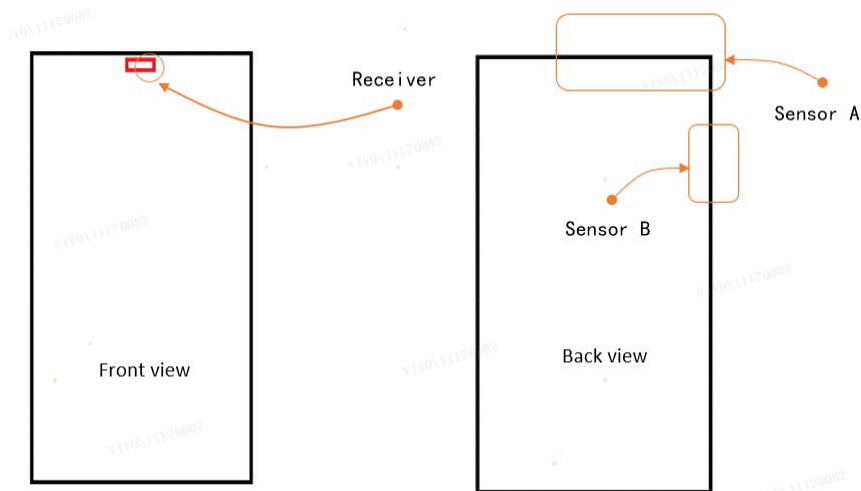
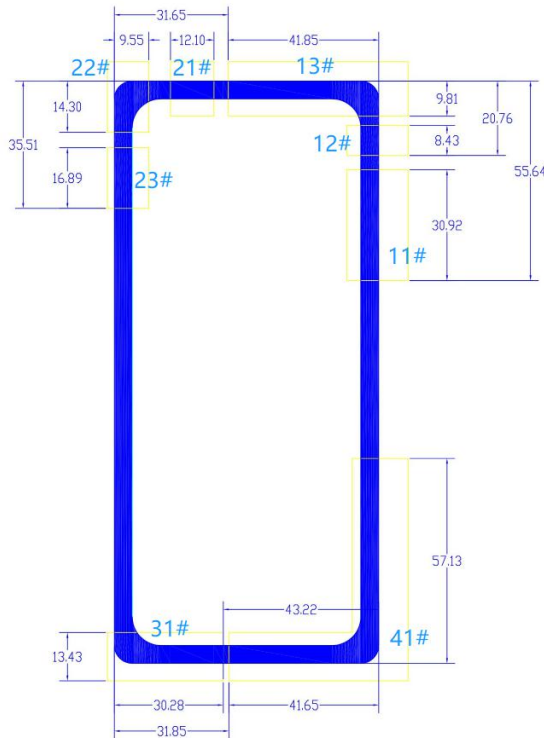
No.I21Z62219-SEM01



No.I21Z62219-SEM01

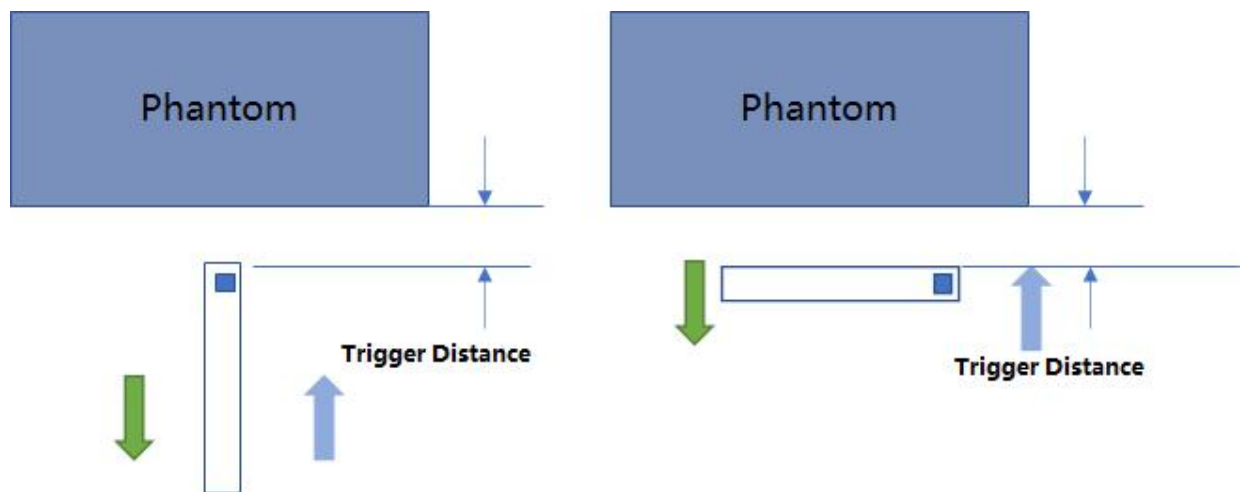
ANNEX I Sensor Triggering Data Summary

The DUT has the proximity sensors to reduce the output power. The position of the sensor and antenna are as shown in the graphic.



Rear, Front, Bottom and Top of the DUT was placed directly below the flat phantom. The DUT was moved toward the phantom in accordance with the steps outlined in KDB 616217 to determine the trigger distance for enabling power reduction. The DUT was moved away from the phantom to determine the trigger distance for resuming full power.

The DUT featured a visual indicator on its display that showed the status of the proximity sensor (Triggered or not triggered). This was used to determine the status of the sensor during the proximity sensor assessment as monitoring the output power directly was not practical without affecting the measurement. It was confirmed separately that the output power according to locking the proximity sensor status.



Blue arrow : Direction of DUT travel for determination of power reduction triggering point.

Green arrow: Direction of DUT travel for determination of normal power triggering point

When the visual indicator display is “CS0 turn green”, indicates that the status of the proximity sensor B is triggered, when the visual indicator display is “CS4 turn green”, indicates that the status of the proximity sensor A is triggered (see the figure below)

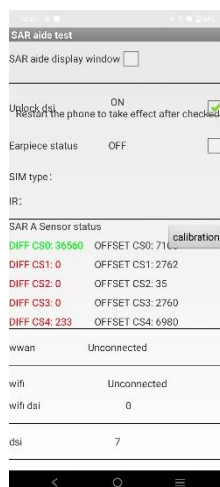


Fig1.sensor B is triggered

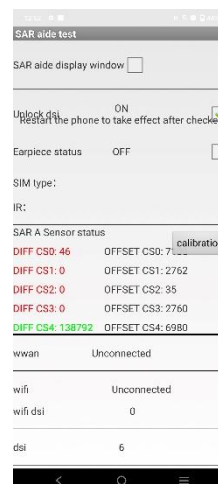


Fig2.Sensor A is triggered

When the visual indicator display is “CS0 and CS4 tune red”, indicates that the status of the proximity sensor B and sensor A is not triggered

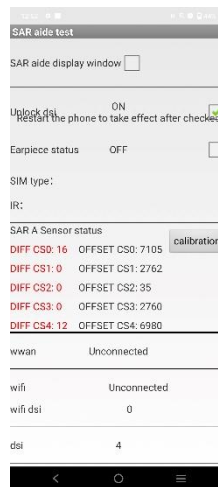


Fig3. sensor B and sensor A is not triggered

ANT 11

Rear Edge

Moving device toward the phantom:

sensor triggered (YES or NO)											
Distance [mm]	19	18	17	16	15	14	13	12	11	10	9
ANT11	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES

Moving device away from the phantom:

sensor triggered (YES or NO)											
Distance [mm]	9	10	11	12	13	14	15	16	17	18	19
ANT11	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO

Back right Edge

Moving device toward the phantom:

sensor triggered (YES or NO)											
Distance [mm]	22	21	20	19	18	17	16	15	14	13	12
ANT11	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES

Moving device away from the phantom:

sensor triggered (YES or NO)											
Distance [mm]	12	13	14	15	16	17	18	19	20	21	22
ANT11	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO

ANT 13

Front Edge

Moving device toward the phantom:

sensor triggered (YES or NO)											
Distance [mm]	15	14	13	12	11	10	9	8	7	6	5
ANT13	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES

Moving device away from the phantom:

sensor triggered (YES or NO)											
Distance [mm]	5	6	7	8	9	10	11	12	13	14	15
ANT13	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO

Rear Edge

Moving device toward the phantom:

sensor triggered (YES or NO)											
Distance [mm]	19	18	17	16	15	14	13	12	11	10	9
ANT13	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES

Moving device away from the phantom:

sensor triggered (YES or NO)											
Distance [mm]	9	10	11	12	13	14	15	16	17	18	19
ANT13	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO

Top Edge

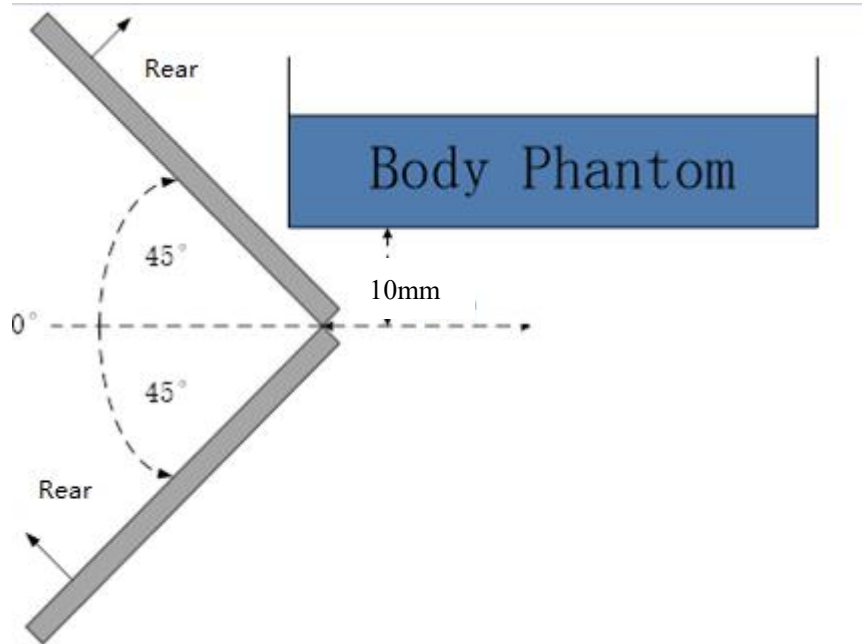
Moving device toward the phantom:

sensor triggered (YES or NO)											
Distance [mm]	25	24	23	22	21	20	19	18	17	16	15
ANT13	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES

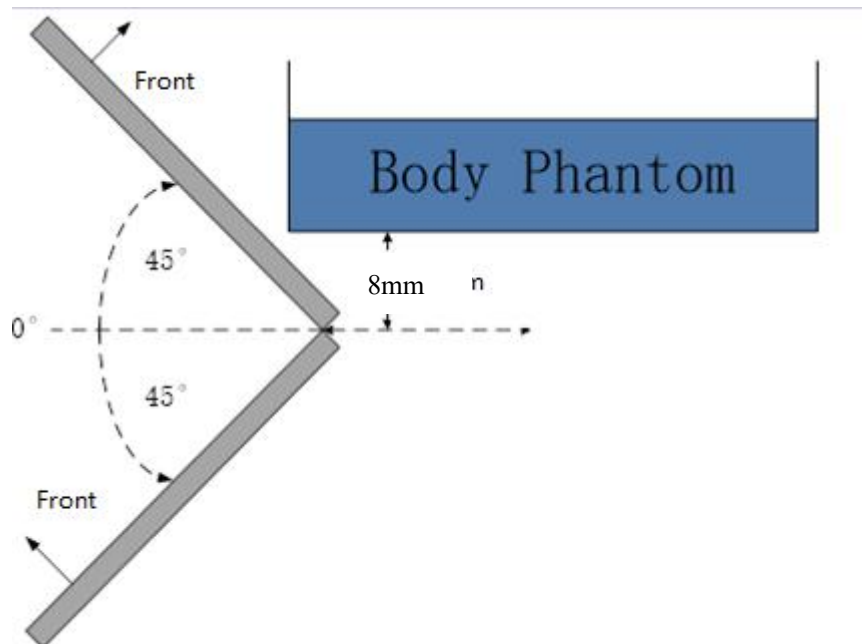
Moving device away from the phantom:

sensor triggered (YES or NO)											
Distance [mm]	15	16	17	18	19	20	21	22	23	24	25
2	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO

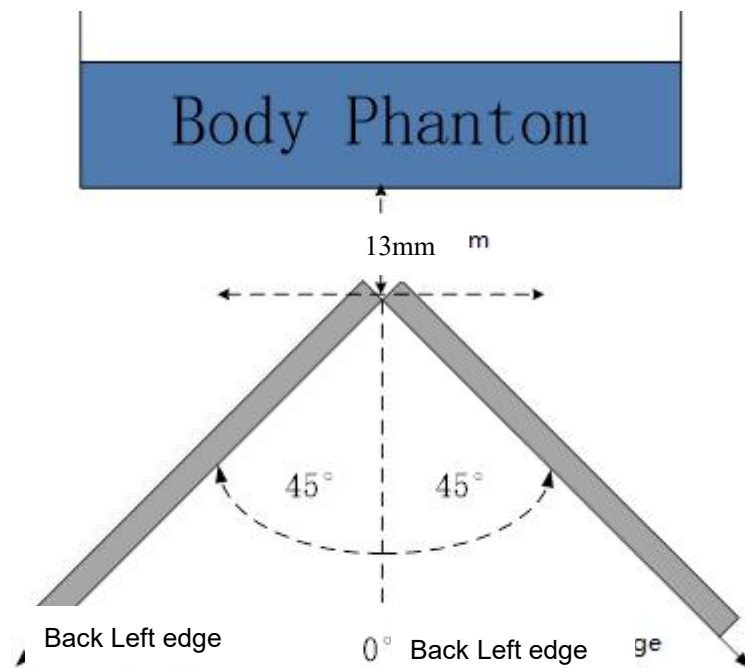
Per FCC KDB Publication 616217 D04v01r02, the influence of table tilt angles to proximity sensor triggering is determined by positioning each edge that contains a transmitting antenna, perpendicular to the flat phantom, at the smallest sensor triggering test distance by rotating the device around the edge next to the phantom in $\leq 10^\circ$ increments until the tablet is $\pm 45^\circ$ or more from the vertical position at 0° .



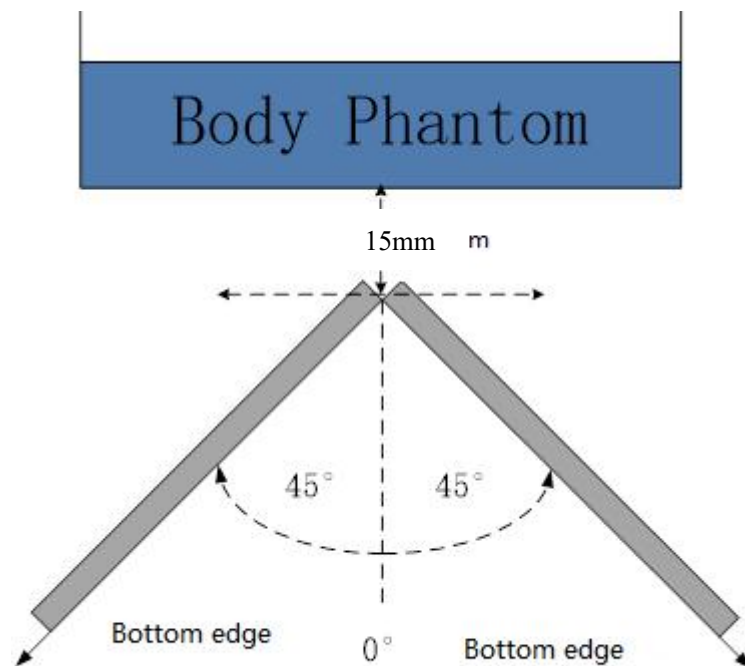
The Rear evaluation



The Front edge evaluation



The Back Right edge evaluation



The Top edge evaluation

Based on the above evaluation, we come to the conclusion that the sensor triggering is not released and normal maximum output power is not restored within the $\pm 45^\circ$ range at the smallest sensor triggering test distance declared by manufacturer.



No.I21Z62219-SEM01

ANNEX J Accreditation Certificate