SAR Test exclusion documentation according to FCC KDB 447498, RSS-102

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This SAR test exclusion document is referring to the Test report identification no. FCC ID: 23012925_Rev.01 and IC ID: 23012958_Rev.01.

module with the Certification numbers	
FCC ID	PJMLRM1002
IC ID	6633A-LRM1002
HVIN (Hardware Version Identification Number)	ID ISC.LRM1002-E
PMN (Product Marketing Name)	ID ISC.LRM1002
FVIN (Firmware Version Identification Number)	RF-Stack V1.00
HMN (Host Marketing Name)	---

Equipment under Test (EUT)					
EUT	**Technology**	**RFID Antenna**	**Operating Frequency**	**Max. output Power.**	**Antenna Gain**
ID ISC.LRM1002	RFID	ID ANT240/180-A	13.56 MHz	0.77 dBm**	0 dBi
ID ISC.LRM1002	RFID	ID ANTS240/180-A	13.56 MHz	0.07 dBm**	0 dBi

** measurement result is taken from TÜV Nord HF Test report no. FCC ID: 23012925_Rev.01/IC ID: 23012958_Rev.01

Calculation:

$E_{measured}$ = 94.06 dBµV/m @ 3 meter (ID ANT240/180-A)
$E_{measured}$ = 83.50 dBµV/m @ 3 meter (ID ANTS240/180-A)

According to ANSI 63.10-2013,
$Power_{EIRP} = E_{measured} + 20 \log (d_{meas}) - 104.7$ dBm = 0.77 dBm (ID ANT240/180-A)
$Power_{EIRP} = E_{measured} + 20 \log (d_{meas}) - 104.7$ dBm = 0.07 dBm (ID ANTS240/180-A)

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SAR test exclusion according to KDB 447498 (General RF Exposure Guidance v06)

SAR test exclusion for RFID

According to KDB 447498 subsection 4.3.1 c) and the table in Appendix C, the EUT is exempted from SAR evaluation.

RFID Freq. [MHz]	RFID Antenna	$d_{separation}$ [mm]	Power measured. [mW]	Power limit [mW]	Exclusion [Yes/No]
13.56	ID ANT240/180-A	190	<<1 mW	1059.0	Yes
13.56	ID ANTS240/180-A	190	<<1 mW	1059.0	Yes

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SAR test exclusion according to RSS-102 Issue 5 Section 2.5.1 Table 1

According to RSS-102 Issue 5, if the EUT operates at or below the applicable output power lever (adjusted for tune-up tolerance) for the specified separation distance defined in Table 1 of the section 2.5.1, then it is exempted from SAR evaluation.

SAR test exclusion for RFID

RFID Freq. [MHz]	RFID Antenna	$d_{separation}$ [mm]	Tissue volume	Power measured. [mW]	Power limit [mW]	Exclusion [Yes/No]
13.56	ID ANT240/180-A	200	1 g	<<1 mW	163.0	Yes
13.56	ID ANTS240/180-A	200	1 g	<<1 mW	163.0	Yes

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ATTESTATION: I attest that the EUT meets the exemption from the routine evaluation limits in section 4.3.1 “Standalone SAR test exclusion considerations” of KDB 447498 as well as meets the exemption from the routine evaluation limits in section 2.5 “Exemption Limits for Routine Evaluation” of RSS-105 issue 5; that the Technical Brief was prepared and the information contained therein is correct; that the device evaluation was performed or supervised by me; that applicable measurement methods and evaluation methodologies have been followed; and that the device meets the SAR and/or RF field strength limits of FCC KDB 447498 and RSS-102 issue 5.

Signature	TÜVNORD Digital unterschrieben von Trepper Ralf Datum: 2023.12.18 15:35:34 +01'00'
Name	**Mr. Ralf Trepper**
Designation	**Laboratory-Manager**
Date of issue	**2023-12-18**

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