FCC ID: 2AFG6-TR3DQ

According to KDB 447498 D04 General RF Exposure Guidance v06, section 4.3.1

SAR Test Exclusion Threshold for < 100 MHz and < 200 mm as per Appendix C

SAR exclusion for 100 MHz at 50 mm is 237 mW.

For frequencies below 100 MHz, the following may be considered for SAR test exclusion (also illustrated in Appendix C):[33]

1) For *test separation distances* > 50 mm and < 200 mm, the power threshold at the corresponding test separation distance at 100 MHz in step b) is multiplied by $[1 + \log(100/f_{(MHz)})]$

$$237 * [1 + \log(100/f_{(13.56)})]=422 \text{ mW}$$

2) For *test separation distances* ≤ 50 mm, the power threshold determined by the equation in c) 1) for 50 mm and 100 MHz is multiplied by ½

$$422 *(1/2)= 221\text{mW}$$

1. SAR test exclusion threshold

Frequency: 13.56, test separation distances ≤ 50 mm.

Max. Tune-up Tolerance (mW)	SAR Test Exclusion Thresholds (mW)
0.0000006	221

Remark:
-Based on field strength 5.57 dBuV/m at 30m,
EIRP@3m = 5.57 + 40 = 45.57dBuV/m = 45.57 – 95.2 dBm = -49.63 dBm
Conducted power = -49.63 dBm – 0 = -49.63 dBm
so 45.57 dBuV/m at 3m transmit power(eirp) of the device was calculated as 0.000011 mW(3m) using free space formula.

<Collocated analysis>

Simultaneously Transmission Conditions:

Condition	Technology (NFC)	Technology (Module SKI.WB663U.1)	Technology (Module SKI.WB902.1)		Support (YES/NO)
1	NFC	WLAN (2.4G)	BT/BLE	WLAN (5G)	YES
2	NFC	WLAN (2.4G)	BT/BLE	WLAN (6G)	YES
3	NFC	WLAN (5G)	BT/BLE	WLAN (2.4G)	YES
4	NFC	WLAN (5G)	BT/BLE	WLAN (6G)	YES

General Note:

1. Σ(Power Density / Limit): This is a summation of [(power density for each transmitter/antenna included in the simultaneous transmission)/ (corresponding MPE limit)]

2. Considering the SI07E module collocation with the other transmitters of the EIRP performance listed in the table above, the aggregated (power density /limit) is smaller than 1, and MPE of 4 collocated transmitters is compliant.

For Single RF Source (worst case) -- Module SKI.WB902.1					
Operation Mode	Antenna Gain (dBi)	Maximum Conducted Power (dBm)	ERP at R = 20 cm (mW)	Limit Threshold (mW/)	Ratio (ERP / Limit Threshold)
2.4G WLAN	4.25	16.87	78.9	3060	0.00139
5G WLAN	4.68	15.14	58.5	3060	0.00153
6G WLAN	2.14	12.96	19.7	3060	0.00070
BT/BLE	2.98	8.05	7.7	3060	0.00097

For Single RF Source (worst case) -- Module SKI.WB902.1					
Operation Mode	Directional Gain (dBi)	Maximum Conducted Power (dBm)	ERP at R = 20 cm (mW)	Limit Threshold (mW/)	Ratio (ERP / Limit Threshold)
2.4G WLAN	6.16	18.35	282.49	3060	0.09232
5G WLAN	7.04	17.72	299.23	3060	0.09779

For Single RF Source (worst case) -- NFC					
Operation Mode	Antenna Gain (dBi)	Tune-up Limit (dBm)	Power Density at R = 20 cm (mW/m^2)	FCC Limit (mW/m^2)	Ratio (Power Density / Limit)
NFC	0	-49.63	0.00000	0.98	0

Worst Case Simultaneously Transmission Conditions:

Maximum 5G WLAN (SKI.WB663U.1) Ratio	Maximum BT (SKI.WB902.1) Ratio	Maximum 2.4G WLAN (SKI.WB902.1) Ratio	Maximum NFC Ratio	Sum of Ratios	Limit of Ratios
0.09779	0.00097	0.00139	0.00000	0.10015	1

Data Reference：

Model	FCC ID	Report number
SI07E	2AFG6-SI07E	2402TW0106-U10

2. Conclusion: No SAR is required.