

# OVER6G PRE-APPROVAL GUIDANCE CHECKLIST

## RF Exposure Evaluation Policy for sources with frequency between 6000 MHz and 8500

### MHz

1. For frequencies up to 8500 MHz provide spatial peak SAR evaluation based on IEC/IEEE 62209-1528:2020, along with applicable product-specific procedures among KDB Pubs. 648474, 616217, 941225. SAR test data shall account for device tune-up tolerance (that is referred to as "*Reported SAR*" in KDB 447498).

Section 2 of "FA461705\_R01\_FCC SAR\_Honeywell MRT\_CK67X0N\_Report" showed SAR test procedure.

### **2. Guidance Applied**

The Specific Absorption Rate (SAR) testing specification, method, and procedure for this device is in accordance with the following standards, the below KDB standard may not including in the TAF code without accreditation.

- FCC 47 CFR Part 2 (2.1093)
- ANSI/IEEE C95.1-1992
- IEEE 1528-2013
- FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
- FCC KDB 865664 D02 SAR Reporting v01r02
- FCC KDB 447498 D01 General RF Exposure Guidance v06
- FCC KDB 248227 D01 802.11 Wi-Fi SAR v02r02
- IEC/IEEE 62209-1528:2020
- SPEAG DASY6 System Handbook
- SPEAG DASY6 Application Note (Interim Procedure for Device Operation at 6GHz-10GHz)

Section 13 of "FA461705\_R01\_FCC SAR\_Honeywell MRT\_CK67X0N\_Report", test result showed SAR test data is account for device tune-up tolerance.

2. This policy considers a device compliant for Equipment Authorization purposes, so long as the SAR evaluation of step 1. is within the same SAR limits that have been established for frequencies below 6000 MHz (e.g., 1.6 W/kg for 1-g average SAR). In this case, the SAR evaluations are taken as a conservative compliance demonstration to the MPE power density limits of 47 CFR 1.1310(d)(3).

Section 4.2 of "FA461705\_R01\_FCC SAR\_Honeywell MRT\_CK67X0N\_Report" showed SAR and MPE limit.

## **4.2 Controlled Environment**

Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. The exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

**Limits for Occupational/Controlled Exposure (W/kg)**

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.4	8.0	20.0

**Limits for General Population/Uncontrolled Exposure (W/kg)**

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.08	1.6	4.0

1. Whole-Body SAR is averaged over the entire body, partial-body SAR is averaged over any 1gram of tissue defined as a tissue volume in the shape of a cube. SAR for hands, wrists, feet and ankles is averaged over any 10 grams of tissue defined as a tissue volume in the shape of a cube.
  
3. Documentation is required to support evaluation with MPE limits providing power density data in accordance with the following:
  - 3.1 For the test configurations of step 1 having the highest SAR, evaluate Incident Power Density (IPD), using a suitable near-field probe and a total-field/power-density reconstruction method.

Please refer report [“FA461705\\_R01\\_FCC SAR\\_Honeywell MRT\\_CK67X0N\\_Report”](#) section 13.3 for IPD test result.

- 3.2 Report estimated IPD measurement uncertainty

Please refer page 52 of report [“FA461705\\_R01\\_FCC SAR\\_Honeywell MRT\\_CK67X0N\\_Report”](#) section 15 for IPD uncertainty.

**Applicable for Power Density Measurements:**

Error Description	Uncertainty Value (±dB)	Probability	Divisor	(Ci)	Standard Uncertainty (±dB)
Probe Calibration	0.49	N	1	1	0.49
Probe correction	0.00	R	1.732	1	0.00
Frequency response (BW ≤ 1 GHz)	0.20	R	1.732	1	0.12
Sensor cross coupling	0.00	R	1.732	1	0.00
Isotropy	0.50	R	1.732	1	0.29
Linearity	0.20	R	1.732	1	0.12
Probe scattering	0.00	R	1.732	1	0.00
Probe positioning offset	0.30	R	1.732	1	0.17
Probe positioning repeatability	0.04	R	1.732	1	0.02
Sensor mechanical offset	0.00	R	1.732	1	0.00
Probe spatial resolution	0.00	R	1.732	1	0.00
Field impedance dependence	0.00	R	1.732	1	0.00
Amplitude and phase drift	0.00	R	1.732	1	0.00
Amplitude and phase noise	0.04	R	1.732	1	0.02
Measurement area truncation	0.00	R	1.732	1	0.00
Data acquisition	0.03	N	1	1	0.03
Sampling	0.00	R	1.732	1	0.00
Field reconstruction	2.00	R	1.732	1	1.15
Forward transformation	0.00	R	1.732	1	0.00
Power density scaling	0.00	R	1.732	1	0.00
Spatial averaging	0.10	R	1.732	1	0.06
System detection limit	0.04	R	1.732	1	0.02
<b>Uncertainty terms dependent on the DUT and environmental factors</b>					
Probe coupling with DUT	0.00	R	1.732	1	0.0
Modulation response	0.40	R	1.732	1	0.2
Integration time	0.00	R	1.732	1	0.0
Response time	0.00	R	1.732	1	0.0
Device holder influence	0.10	R	1.732	1	0.1
DUT alignment	0.00	R	1.732	1	0.0
RF ambient conditions	0.04	R	1.732	1	0.0
Ambient reflections	0.04	R	1.732	1	0.0
Immunity / secondary reception	0.00	R	1.732	1	0.0
Drift of the DUT		R	1.732	1	
<b>Combined Std. Uncertainty</b>					<b>1.34</b>
<b>Expanded STD Uncertainty (95%)</b>					<b>2.68</b>

3.3 Power density test data shall account for device tune-up tolerance.

Section 13.3 of “FA461705\_R01\_FCC SAR\_Honeywell MRT\_CK67X0N\_Report” showed PD test data is accounted for device tune-up tolerance.

3.4 If supported by the test system, also report estimated Absorbed (epithelial) Power Density (APD)

Please refer page 42 of report “FA461705\_R01\_FCC SAR\_Honeywell MRT\_CK67X0N\_Report” section 13.1 for APD test result.

4. The process of steps 1 to 4 shall be repeated for at least five channels, at the channel center frequency, selected to cover uniformly the largest frequency ranges used in the device, between 5925 MHz and 8500 MHz, and consistent with KDB Publication 248227 test configuration provisions.

Please refer report “FA461705\_R01\_FCC SAR\_Honeywell MRT\_CK67X0N\_Report” section 13.3 for IPD test result.

5. For the purpose of SAR test exemption, analyses of simultaneous transmission combinations of RF sources with frequencies from 4 MHz and 8500 MHz (where the lowest frequency is per KDB Publication 447498-D01 SAR evaluation requirements<sup>11</sup>), may be performed according to the SPLSR approach (*id.*). Accordingly, no further compliance evaluation is needed for all antenna pairs for which the SPLSR exemption is applicable.

Not applicable

**One or more RF source(s) operating above 8500 MHz, Including Simultaneous Transmissions**

6. For evaluations and test exemption analyses of simultaneous-transmission combinations of different RF sources, the procedure outlined above, for a single source between 6000 and 8500 MHz shall be included in the calculation of total exposure ratio (TER) as in KDB Pub. 447498-D01-Appendix C.

No RF source above 8500MHz.

7. Any source above 8500 MHz shall be evaluated via incident power density measurements.

No RF source above 8500MHz.