



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

Report identification number: 1-5579/17-01-03 Exclusion FCC_IC

Product: AK01	
contains the module with the following certification numbers	
FCC ID	IYZ-AK01
IC number	2701A-AK01
HVIN (Hardware Version Identification Number)	AK01
PMN (Product Marketing Name)	AK01
FVIN (Firmware Version Identification Number)	-/-
HMN (Host Marketing Name)	-/-

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EUT technologies:

Technologies:	Max. rated power: (AVG)	Max. gain:	Min. pathloss:
Proprietary 260 to 470MHz	Declared max: -14.0 dBm	<0 dBi	0 dB (if applicable)

Note: Declared max taken from customer info: **AK01 technical Description 2014-05-23**
 (measured maximum EIRP: -17.1 dBm, less than declared value)

SAR test exclusion according to KDB447498 (General RF Exposure Guidance v06)

Equation from Chapter 4.3.1: Standalone SAR test exclusion considerations page 11 and ff.

(1) Standalone SAR test exclusion for 100 MHz to 6 GHz at test separation distances $\leq 50\text{mm}$

$$(\text{Threshold}_{1\text{-g};10\text{-g}}) \times d_{\text{separation}} / f^{0.5}$$

where

Threshold_{1-g;10-g} is 3 for 1-g; 7.5 for 10-g

d_{separation} is the min. test separation distance; 5mm is used if the distance is less

f is the RF channel transmit frequency

The table below gives the calculated maximal power that could be used for source based time averaged conducted or radiated power, adjusted for tune up tolerance. If this is at or below the calculated value the DUT is exempted from SAR evaluation.

frequency [MHz]	d _{separation} [mm]	Threshold _{1-g}	Powerlimit [mW]	P _{max-declared}		Exclusion
				[dBm]	[mW]	
260.00	5	3	29.42	-14.00	0.04	yes
433.00	5	3	22.80	-14.00	0.04	yes
460.00	5	3	22.12	-14.00	0.04	yes

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

The table below gives the calculated maximal power that could be used for source based time averaged conducted or radiated power, adjusted for tune up tolerance. If this is at or below the calculated value the DUT is exempted from SAR evaluation.

frequency [MHz]	d _{separation} [mm]	tissue volume	Powerlimit [mW]	P _{max-declared}		Exclusion
				[dBm]	[mW]	
260.00	5	1 g	4.00	-14.00	0.04	yes
433.00	5	1 g	4.00	-14.00	0.04	yes
460.00	5	1 g	4.00	-14.00	0.04	yes