RF Exposure Requirements

Product Description: Stereo Receiver
Model No.: AXR85, AXR100
FCC ID: YKBAXR-031

Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06 4.3.1, Standalone SAR test exclusion considerations.

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

Limits

1. The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ⩽ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√ f(GHz)] ⩽3.0 for 1-g SAR and ⩽7.5 for 10-g extremity SAR,

So,

Numeric Threshold= (max. power of channel) / (Min Test separation Distance) × [√ f(GHz)]

max. power of channel= (Numeric Threshold)×(Min Test separation Distance) / [√ f(GHz)]

Where,

f(GHz) is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation

The result is rounded to one decimal place for comparison

2. For 100 MHz to 6 GHz and test separation distances > 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

{[Power allowed at numeric threshold for 50 mm in step 1)] + [(test separation distance – 50 mm)·10]} mW, for > 1500 MHz and ≤ 6 GHz

RF Exposure

The Max Conducted peak Output Power is 1.308dBm in 802.11b lowest channel (2.402GHz);

The best case gain of the antenna is 0dBi

EIRP= 1.308+0=1.308dBm

1.308dBm logarithmic terms convert to numeric result is nearly 1.35mW

EIRP= 1.35 mW

According to the formula, calculate the EIRP test result:

{[Power allowed at numeric threshold for 50 mm)] + [(test separation distance – 50 mm)·10]}

SAR Exclusion Threshold = (3.0×50) / √ 2.402+[(200-50)×10] = 1596.78 mW

So the transmitter complies with the RF exposure requirements and the SAR is not required.