RF Exposure Requirements

Product Description: Remote
Model No.: 10NAR-2010B1
FCC ID: 2AEBHAR2101B1
IC: 20239-AR2101B1

According to the KDB-4474498 D01, RSS-102 and FCC 1.1310, the following RF exposure evaluation shall to demonstrate RF exposure compliance.

2.5.2 Exemption Limits for Routine Evaluation – RF Exposure Evaluation

RF exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm, except when the device operates as follows:

- below 20 MHz[6] and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 1 W (adjusted for tune-up tolerance);
- at or above 20 MHz and below 48 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $4.49/f^{0.5}$ W (adjusted for tune-up tolerance), where f is in MHz;
- at or above 48 MHz and below 300 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 0.6 W (adjusted for tune-up tolerance);
- at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $1.31 \times 10^{-2} f^{0.6834}$ W (adjusted for tune-up tolerance), where f is in MHz;
- at or above 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 5 W (adjusted for tune-up tolerance).

In these cases, the information contained in the RF exposure technical brief may be limited to information that demonstrates how the e.i.r.p. was derived.

F= Frequency in MHz
Friis Formula
Friis transmission formula: $Pd=PG/4\pi R^2$

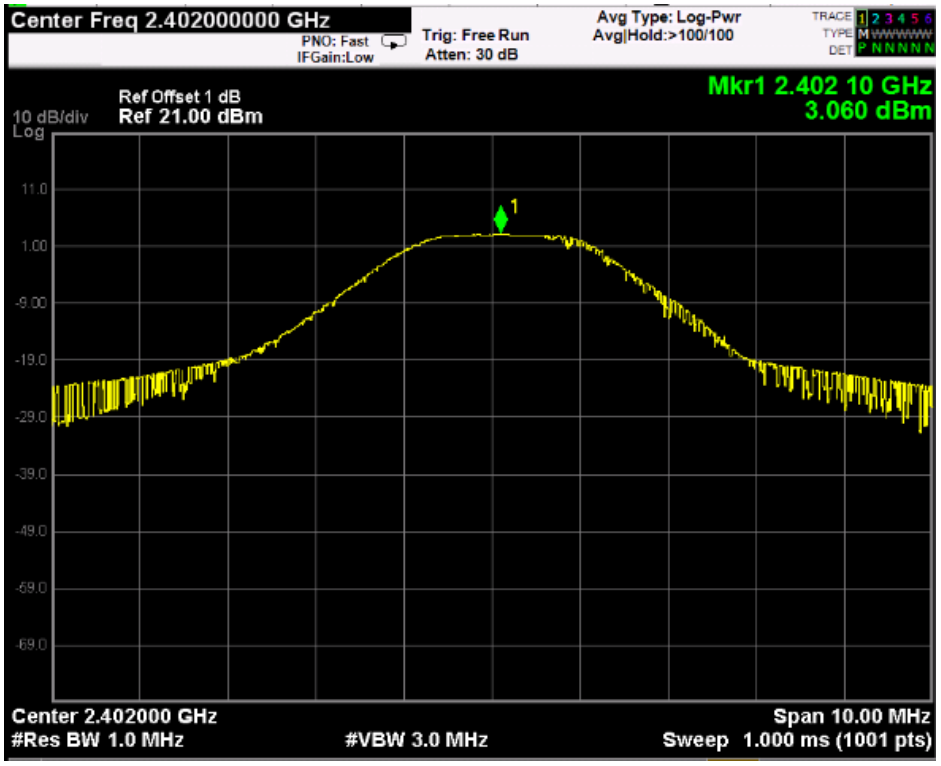
Where
Pd = power density in mW/cm2
Pout = output power to antenna in mW
G = gain of antenna in linear scale
Pi = 3.1416
R = distance between observation point and center of the radiator in cm

Pd id the limit of MPE, 1 mW/cm2. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

If we know the maximum Gain of the antenna and the total power input to the antenna, through the calculation, we will know the MPE value at distance 20cm.

The software provided by Manufacturer enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

Test Results



Max Conducted Peak Output Power: 3.06 dbm

Limit: 1.31 x 10^{-2} $f^{0.6834}$ W (where f is in MHz, f=2402MHz) ≈2.676W
Antenna Gain: 1dbi (Gain of antenna in linear scale: 1.26dbi)

Frequency (MHz)	Max Conducted Peak Output Power (dBm)	e.i.r.p （dBm）	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/ cm^2)	Limit (W)	Result
2402	3.06	4.06	2.55	0.0006	2.676	Pass