RF Exposure Evaluation

FCC ID: 2ABXLT5001

IC: 11858A-T5001

The device is used in portable RF exposure configuration – at a distance less than 20 cm from human's body. For this configuration SAR evaluation is required.

The RF Power is low, therefore the SAR test exclusion may be applied.

SAR test exclusion threshold formula according to FCC KDB 447898 D01 v06 is:

$$\frac{max.\ power\ of\ channel,\ mW}{min.\ test\ separation\ distance,\ mm} \times [\sqrt{f_{(GHz)}}] \leq 3.0 \text{ for 1-g SAR}$$

Where: maximum RF power of channel, including tune-up tolerance, $f_{(GHz)}$ is the RF channel transmit frequency in GHz, the minimum test separation distance is 5 mm.

Conducted power is -0.98 dBm or 0.8 mW; considering tune-up tolerance, maximum is 1.0 mW.

As antenna Gain is negative (-1.38 dBi), the e.i.r.p. is not taken in to consideration.

Per KDB 447498 Section 4.3 SAR test exclusion threshold at 5 mm distance is calculated as:

$1.0 \times \sqrt{2.480} \div 5 = 0.31 < 3.$

Therefore, SAR testing is not required as the SAR Test Exclusion Threshold condition is satisfied.

For IC: SAR Test Exemption limit according to IC RSS-102 Issue 5 at 5 mm separation distance is 4 mW.

SAR test is not required since the higher of the maximum conducted or equivalent isotopically radiated power (e.i.r.p.) source-based, time averaged output power is below the exemption limit.