March 25, 2025

FCC ID: CWTWB1G0655

To whom it may concern,

We, UL Japan, Inc, hereby declare that Hand Unit, model: TWB1G0655 (FCC ID: CWTWB1G0655) of ALPS ALPINE CO., LTD. is exempt from RF exposure SAR evaluation because the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold P_{th} (mW) described in the following formula according to the Code of Federal Regulation title 47 section 1.1307(b)(3)(i)(B). This method is used at separation distances d (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive) for single RF sources. P_{th} is given by:

$$P_{th}\ (\mathrm{mW}) = \begin{cases} ERP_{20\ \mathrm{cm}}\ (d\ /\ 20\ \mathrm{cm})^{x} & d \le 20\ \mathrm{cm} \\ ERP_{20\ \mathrm{cm}} & 20\ \mathrm{cm}\ <\ d\ \le\ 40\ \mathrm{cm} \end{cases}$$

Where

$$x = -\log_{10}\left(\frac{60}{ERP_{20\ \mathrm{cm}}\sqrt{f}}\right) \text{and } f \text{ is in GHz}$$

$$ERP_{20\ \mathrm{cm}}\ (\mathrm{mW}) = \begin{cases} 2040f & 0.3\ \mathrm{GHz} \le f < 1.5\ \mathrm{GHz} \\ 3060 & 1.5\ \mathrm{GHz} \le f \le 6\ \mathrm{GHz} \end{cases}$$

When the minimum separation distance is shorter than 0.5 cm, 0.5 cm is applied.

The SAR evaluation exemption threshold is calculated as below.

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[UHF part]

Pth (mW)	23.16
f (GHz)	0.43392
$ERP_{20\ cm}$ (mW)	885.2
d (cm)	0.5

Conducted Power	(dBm)	1.00
	(mW)	1.26
Antenna Gain (dBi)		-
EIRP (dBm)		-17.90
ERP	(dBm)	-20.04
	(mW)	0.01

The Maximum time-averaged power or ERP whichever greater is 1.3 mW.
(Rounded up to two decimals place)
*The eirp was derived from a field strength specification value of the fundamental signal(77.3 dBuV/m at 3m) which was converted to an eirp using the free space equation E = √(30PG)/d.

UWB part:

Its output power meets the 1-mW test exemption threshold stated in the Code of Federal Regulation title 47 section 1.1307(b)(3)(i)(A).

This device available maximum time-averaged power is 0.05 mW, so no other assessment is required.

Reference of average Power [EIRP]
EIRP specification value: -41.3 dBm/MHz = 0.00007413 mW/MHz *Specification value
99 % occupied bandwidth = 608.272 MHz
0.00007413 mW/MHz [mW/MHz] x 608.272 [MHz] = **0.04509120 [mW]**

Thank you for your attention to this matter.

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