May 1, 2024

FCC ID: WY7-0UR1

To whom it may concern,

We, UL Japan, Inc, hereby declare that Shift Switch, model: SW-EN605-R (FCC ID: WY7-0UR1) of SHIMANO INC. 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.

Pth (mW) *1)	4.35
f (GHz)	2.478
$ERP_{20\ \mathrm{cm}}$ (mW)	3060
d (cm)	0.64

Conducted Power	(dBm)	8.86
	(mW)	7.69
Antenna Gain (dBi)		1.14
EIRP (dBm)		10.00
ERP	(dBm)	7.86
	(mW)	6.11

*1) Since this device is used with only limbs, multipliying 4.35 mW by 2.5 yields 10.875 mW is applied as extremity SAR test exclusion.

The Maximum time-averaged power or ERP whichever greater is 7.7 mW.
(Rounded up to two decimals place)

Thank you for your attention to this matter.

Takayuki Shimada
Leader

UL Japan, Inc. Ise EMC Lab
4383-326 Asama-cho, Ise-shi, Mie 516-0021 Japan
T:: +81.596.24.8999 / F:: +81.596.24.8124 / W:: japan.ul.com