1. Filing for Class II Permissive Changes

We are submitting two different antenna types that we'd like to file under the original FCC grant 2AXVQ-WILIOT2SB and IC grant 22623-WILIOT2SB.

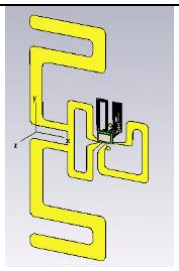
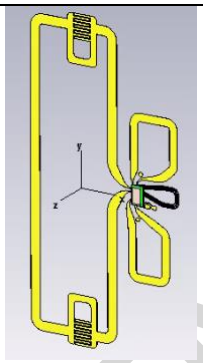
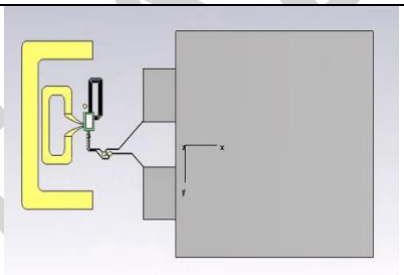
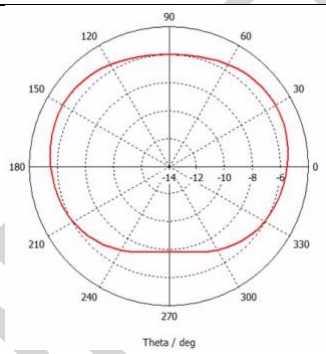
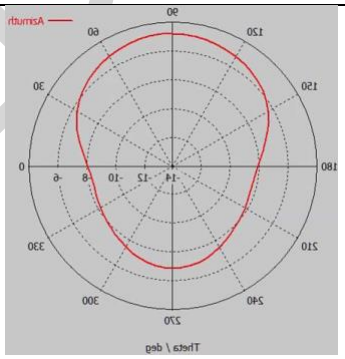
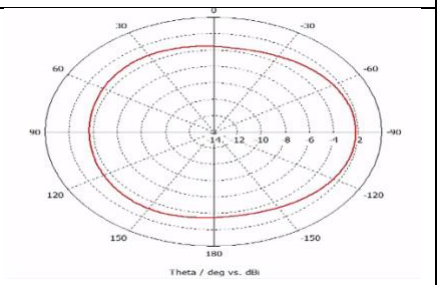
The original grant was assigned to an RF energy-harvesting device implemented as a qualified Bluetooth LE Broadcaster Transmission-only device.

The two additional devices embed the same Integrated Circuit (IC) and firmware, with two additional different antenna types. The antenna structure is the same as the original granted device – radiation pattern and gain differ from the original one.

This document summarizes the changes between the original device and the new ones.

2. Antenna Comparison

The following table summarizes the changes between the existing certified antenna, granted under FCC: 2AXVQ-WILIOT2SB (leftmost column) and the ones we are submitting the request for Permissive Change Class II (3rd and 4th columns).

	Existing Granted Antenna	**New Antenna #1**	**New Antenna #2**
Layout			
Antenna Type	Loop coupled to meander dipole	Loop coupled to dipole (segmented big loop)	Dipole
Pattern Type	Dipole – omni	Dipole – omni	Dipole – omni
Polarization	Vertical (Y-direction)	Vertical (Y-direction)	Vertical (Y-direction)
Radiation pattern (XZ plane)			
Peak to Peak on omni plane (XZ) [dB]	2.7	3.8	1.5
Mean gain on omni plane (XZ) [dBi]	-6.2	-6.7	-3.2
Max gain on omni plane (XZ) [dBi]	-5.4	-4.8	-2.1