Claims

Claim 1. A wireless communication apparatus, comprising:

an amplifier circuit configured to amplify a signal output by a wireless communication unit that executes wireless communication, to output the signal having amplified to a transceiver unit;

a decision unit configured to decide, based on an operational mode of the wireless communication unit, whether to transmit the signal from the transceiver unit via the amplifier circuit, or transmit the signal from the transceiver unit without going via the amplifier circuit; and

a determination unit configured to determine the operational mode of the wireless communication unit, the determination unit determining the operational mode by integrating a detected envelope of the signal output by the wireless communication unit to obtain an integrated result and the integrated result is compared with a reference voltage to determine the operational mode.

Claim 2. The wireless communication apparatus as claimed in claim 1,
further comprising:

an amplification control unit configured to avoid activating the amplifier circuit in a case where the selector selects to transmit the signal from the transceiver unit without going via the amplifier circuit.

Claim 3. The wireless communication apparatus as claimed in claim 1 or 2, wherein the determination unit determines the operational mode by comparing the signal output by the wireless communication unit, with a predetermined first threshold.

Claim 4. The wireless communication apparatus as claimed in claim 1, wherein the decision unit is constituted with a passive element inserted on a path not via the amplifier circuit.

Claim 5. The wireless communication apparatus as claimed in claim 4, further comprising:

an amplification control unit configured to avoid activating the amplifier circuit in a case where the signal is transmitted from the transceiver unit without going via the amplifier circuit.

Claim 6. The wireless communication apparatus as claimed in claim 5, wherein the amplification control unit determines whether to activate the amplifier circuit, based on the signal output by the wireless communication unit, and the signal output by the transceiver unit.

Claim 7. The wireless communication apparatus as claimed in claim 6, wherein the amplification control unit determines whether to activate the amplifier circuit, by comparing the

signal output by the wireless communication unit with the predetermined first threshold, and comparing the signal output by the transceiver unit with a predetermined second threshold that is different from the first threshold.

Claim 8. The wireless communication apparatus as claimed in any one of claims 1 to 7, wherein at least the amplifier circuit and the decision unit are implemented and integrated in a single semiconductor integrated circuit.

Claim 9. The wireless communication apparatus as claimed in any one of claims 1 to 7, wherein at least the amplifier circuit is implemented in a semiconductor integrated circuit,
and the decision unit is not included in the semiconductor integrated circuit.

Claim 10. A mobile device, comprising:
the wireless communication apparatus as claimed in any one of claims 1 to 9.

Claim 11. A wireless communication apparatus, comprising:
a wireless communication unit configured to execute wireless communication;
a transceiver unit configured to transmit and receive a signal with the wireless communication unit;
an amplifier circuit configured to amplify a signal output by the wireless communication unit,

to output the signal having amplified to the transceiver unit; and

a decision unit configured to decide, based on an operational mode of the wireless communication unit, whether to transmit the signal from the transceiver unit via the amplifier circuit, or transmit the signal from the transceiver unit without going via the amplifier circuit; and

a determination unit configured to determine the operational mode of the wireless communication unit, the determination unit determining the operational mode by integrating a detected envelope of the signal output by the wireless communication unit to obtain an integrated result and the integrated result is compared with a reference voltage to determine the operational mode.

Claim 12. A wireless communication apparatus, comprising:

an amplifier circuit configured to amplify a signal output by a wireless communication unit that executes wireless communication, to output the signal having amplified to a transceiver unit, and to amplify a signal output by the transceiver unit, to output the signal having amplified to the wireless communication unit;

a decision unit configured to decide, based on an operational mode of the wireless communication unit, whether to transmit the signal from the transceiver unit via the amplifier circuit, or transmit the signal from the transceiver unit without going via the amplifier circuit; and

a determination unit configured to determine the operational mode of the wireless communication unit, the determination unit determining the operational mode by integrating a detected envelope of the signal output by the wireless communication unit to obtain an integrated result and the integrated result is compared with a reference voltage to determine the operational mode.

Claim 13. A wireless communication apparatus, comprising:

an amplifier circuit configured to amplify a signal output by a wireless communication unit that executes wireless communication, to output the signal having amplified to a transceiver unit;

a decision unit configured to decide, based on an operational mode of the wireless communication unit, whether to transmit the signal from the transceiver unit via the amplifier circuit, or transmit the signal from the transceiver unit without going via the amplifier circuit;

an amplification control unit configured to avoid activating the amplifier circuit in a case where the signal is transmitted from the transceiver unit without going via the amplifier circuit,

wherein the amplification control unit determines whether to have the amplifier circuit function, based on the signal output by the wireless communication unit, and the signal output by the transceiver unit; and

a determination unit configured to

determine the operational mode of the wireless communication unit, the determination unit determining the operational mode by integrating a detected envelope of the signal output by the wireless communication unit to obtain an integrated result and the integrated result is compared with a reference voltage to determine the operational mode.