

THEORY OF OPERATION

FCC ID: APYHRO00186

Confidential

FeliCa(RFID)

a) The DC V/I at the final RF amplifier device

DC voltage	4.0V max
DC current	12uA at sleep mode, 100mA peak at TX mode.

b) Specification

IC9102	RF & baseband IC	IC9102 is RF transceiver IC for 13.56MHz RFID system. FeliCa adopts amplitude shift keing. The encoding method is Manchester code without the subcarrier. IC9102 is HOST CPU LSI included non-volatile memory.
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Bluetooth/WLAN

a) The DC V/I at the final RF amplifier device

DC voltage	3.2V max
DC current	38.7uA at sleep mode, 287mA peak at TX mode.

b) Specification

X2000	19.2MHz Oscillator	This Oscillator is a reference signal source of frequency synthesizer.
IC5000	Bluetooth/WLAN module	IC5000 is Bluetooth module embedding the single-chip combo device Bluetooth Transceiver and Baseband Processor, IEEE802.11 b/g/n Tranceiver and Baseband Processor. The functions of IC5000 are following. 1. Radio Transceiver 2. Bluetooth and WLAN Baseband Core 3. Microprocessor and Memory Unit 4. High-Speed Peripheral Transport Unit 5. Band pass filter 6. RF matching and decoupling circuit 6. RF matching and decoupling circuit 7. Supports 802.11 b/g/n 8. Supports Bluetooth co-existence 9. Power Management Unit