

원리통신특강 I, Problem Set 2, Solutions

1.

- 1) NFC (Near Field Communication)
- 2) RFID (Radio Frequency Identification)
- 3) BLE (Bluetooth Low Energy)
- 4) CDMA (Code Division Multiple Access)
- 5) TDD (Time Division Duplex)

2.

Class 1 : 100 mW

Class 2 : 25 mW

Class 3 : 1 mW

3.

$$C = B \log_2 [1 + S/(N_0 B)]$$

C : channel capacity (bps)

B : channel bandwidth (Hz)

S : Signal power (W)

N_0 : Noise spectral density (W/Hz)

4.

- 1) Long battery life
- 2) Low device cost
- 3) Low cost and easy deployment
- 4) Extended coverage
- 5) Support for a massive number of devices