

Technical Description

The Equipment Under Test (EUT), is a portable 2.4GHz BLE Transceiver (Robot Unit) for a Bluetooth Robot.

For BLE Mode, only 1 Mbps data rate is adopted. The sample supplied operated on 40 channels, normally at 2402 - 2480MHz. The channels are separated with 2MHz spacing.

The EUT is powered by 4 x 1.5V AA batteries. After switching on the EUT, the Robot will move and emit light based on the smartphone App.

Antenna Type: Internal, Integral antenna

Antenna Gain: 0dBi

Nominal rated field strength is 88.8dB μ V/m at 3m (Peak), 85.9dB μ V/m at 3m (Average)

Maximum allowed production tolerance: +/- 3dB

The brief circuit description is listed as follows:

1. U1 (FR8018HA) acts as MCU
2. Y1 acts as 24MHz Oscillator
3. L1, L2 and L3 act as antenna matching circuit
4. U2, U3 and U4 acts as motor driver
5. U6 acts as step-up converter DC/DC Boost
6. U5 acts as LDO regulator