

Technical Description

The Equipment Under Test (EUT), is a BIT Bitzee Interactive Hamsterball with two 2.4GHz transceiver modules. The sample supplied operated on 4 channels, normally at 2420 MHz, 2435 MHz, 2450 MHz and 2465 MHz.

The EUT is powered by 3 x 1.5V AA batteries. After switching on EUT, the rotor will keep rotating and the LED on the rotor can show different image during rotation and emit different sound.

Rotor

Antenna Type: Internal, Integral antenna

Antenna Gain: 0dBi

Nominal rated field strength is 82.9dB μ V/m at 3m (Peak), 65.9dB μ V/m at 3m (Average)

Maximum allowed production tolerance: +/- 3dB

Stator

Antenna Type: Internal, Integral antenna

Antenna Gain: 0dBi

Nominal rated field strength is 87.8dB μ V/m at 3m (Peak), 74.5dB μ V/m at 3m (Average)

Maximum allowed production tolerance: +/- 3dB

The brief circuit description is listed as follows:

Stator and Rotor share the same MCU

Stator:

1. U3 (GPCE500A) acts as MCU
2. U1 (XM25QH128D) acts as flash memory
3. U5 (PAN1026) acts as RF module
4. Y2 acts as 16MHz Oscillator
5. C16, C14, L2 and C15 act as antenna matching circuit
6. U4(MC3419) acts as accelerometer
7. U8(ME2107) acts as voltage regulator
8. U6(ME6209) acts as voltage regulator

Rotor:

1. U1 (PY32F030K28U) acts as LED driving circuit
2. U4 (PAN1026) acts as RF module
3. Y1 acts as 16MHz Oscillator
4. C14, C12, L2 and C13 act as antenna matching circuit
5. U2 (BX8120D) acts as hall sensor
6. U3 (ME6209) acts as voltage regulator