RF exposure (Mobile Device)

FCC ID: CGO-SQB003

EUT Description: SQ Home Controller

Company: Square Connect, Inc.
Model: SQB003-C-US

Typical use distance: d ≥ 20 cm
Frequency: 2412-2462MHz (11 channels)
Modulation: 11b/g (DSSS, OFDM)
Power density limit for mobile devices at 2.4GHz: S ≤ 1 mW/cm^2
Maximum measured conducted power (Peak): $P_{conducted}$ = 0.3048 mW =-5.16 dBm
Antenna Gain: G = 2 dBi
Remark: Average ≤ Peak, which means that calculating the power density applying Peak power is worst case.

$P_{radiated} = P_{conducted} + G_{linear}$ = -5.16 dBm + 2 dBi = -3.16 dBm = 0.48 mW

$$S = \frac{(P_{radiated})}{(4\pi \times d^2)} \text{ (mW/cm}^2\text{)} \ll 1\text{mW}$$

Conclusions:

At 20 cm distance, the power density EUT appears to be (far) below the required limit, so PASS.

Given the radiated output power, the device is generally exempted, since it operates far under 24mW (60/f(GHz) mW)