

## 2830-015 - model 817A BLE remote control

The antenna is a meandered inverted F antenna designed according to Texas Instruments application note AN043 (<https://www.ti.com/lit/an/swra117d/swra117d.pdf>)

The antenna has a gain from minimum -1.8dBi to maximum 0 dBi (the exact gain values pro channel are detailed in the table below)

Calculation of the gain (at normal temperatures):

| Power setting: 0 dBm        | max. $P_{EIRP}$<br>(dBm) | $P_{conducted}$<br>(dBm) | Calculated<br>gain (dBi) |
|-----------------------------|--------------------------|--------------------------|--------------------------|
| data rate: 1 Mbit/s         |                          |                          |                          |
| CH37, $T_{nom}$ , $V_{nom}$ | -0.7                     | 0.1                      | -0.8                     |
| CH18, $T_{nom}$ , $V_{nom}$ | -0.7                     | -0.5                     | -0.2                     |
| CH39, $T_{nom}$ , $V_{nom}$ | -1.0                     | -1.0                     | 0.0                      |

| Power setting: 0 dBm        | max. $P_{EIRP}$<br>(dBm) | $P_{conducted}$<br>(dBm) | Calculated<br>gain (dBi) |
|-----------------------------|--------------------------|--------------------------|--------------------------|
| data rate: 2 Mbit/s         |                          |                          |                          |
| CH37, $T_{nom}$ , $V_{nom}$ | -1.7                     | 0.1                      | -1.8                     |
| CH18, $T_{nom}$ , $V_{nom}$ | -0.9                     | -0.5                     | -0.4                     |
| CH39, $T_{nom}$ , $V_{nom}$ | -1.1                     | -1.0                     | -0.1                     |