

1) The duty factor is very low. While a duty factor can be used, we need clarification to ensure it is worse case. Please confirm that this is the worse case duty under all conditions (i.e. while all these modes may not apply, modes that could occur and be of concern could be something such as initial searching for something to communicate with, joining, synchronizing, actual data transmission, ending transmissions, etc.). Note that BTLE has 2 primary modes of communication – advertising and connection modes, but there can be other modes like beacon, etc.. It may be that during joining/ synchronization there is different duty factors. Please confirm or add an explanation that they are all the same or different as appropriate. Maybe you already tried to capture this, but note that the first plots on the first page are not labeled, so it is not clear of if this is the phone, EUT or both off hand until the calculations are looked at. We would assume from the calculations that maybe the first 2 plots are intended to show the worst case mode, but again it is not clear if this is the case and which mode this is. It is also not clear if all modes were investigated. Maybe a quick explanation added would be helpful.

GNTX: This EUT does not have beacon capability. We were able to capture passive and active scanning during advertising. Active scanning plots on the Duty Cycle tab show a second message from the DUT comprised of the HL Service UUID and is worst case for advertising. By measurement this equates to 1.68ms per 100ms time period or -63 dB correction. Plots for the Connected Data Exchange only show overhead messages (no payload). By calculation, the worst case characteristic is $20 \text{ bytes} + 14 \text{ bytes overhead} \times \text{bits} \times 1 \mu\text{s/bit} = 272 \mu\text{s}$. Assuming worst case connection interval of 7.5ms and all other channels blocked except the current in use (no hopping with connection event), there would be 13.33 events in a 100ms time period or $272 \mu\text{s} \times 13.33 = 3.6176 \text{ms}$ which equates to -49 dB correction factor. We added advertising plots to the Duty Cycle Correction tab and used the lower correction factor in the reported results.

3) The duty factor seems to define a duty factor based on hopping. Note that BTLE generally advertises/hops – but also can have a beacon mode and data connection mode. GNTX: This EUT does not have beacon mode capability. My understanding (which may not necessarily apply to all cases) is that once connected it's data connection is on a single channel. GNTX: Agreed. Also some theories on BTLE show advertising hop on a specific channel once every 20 msec which would be 5 TX in a 100 msec period as well. GNTX: The EUT advDelay is set for 100ms so only 1 TX in a 100 msec period. Please explain if the data connection mode has a TX interval and what the minimum is to ensure compliance. GNTX: Used worst case of 7.5ms in calculations. Note you may need to provide duty factor calculations separately for clarity for hopping and connection mode depending on how the device behaves. GNTX: Used worst case -49 dB from Connected Data Exchange for all reported values.