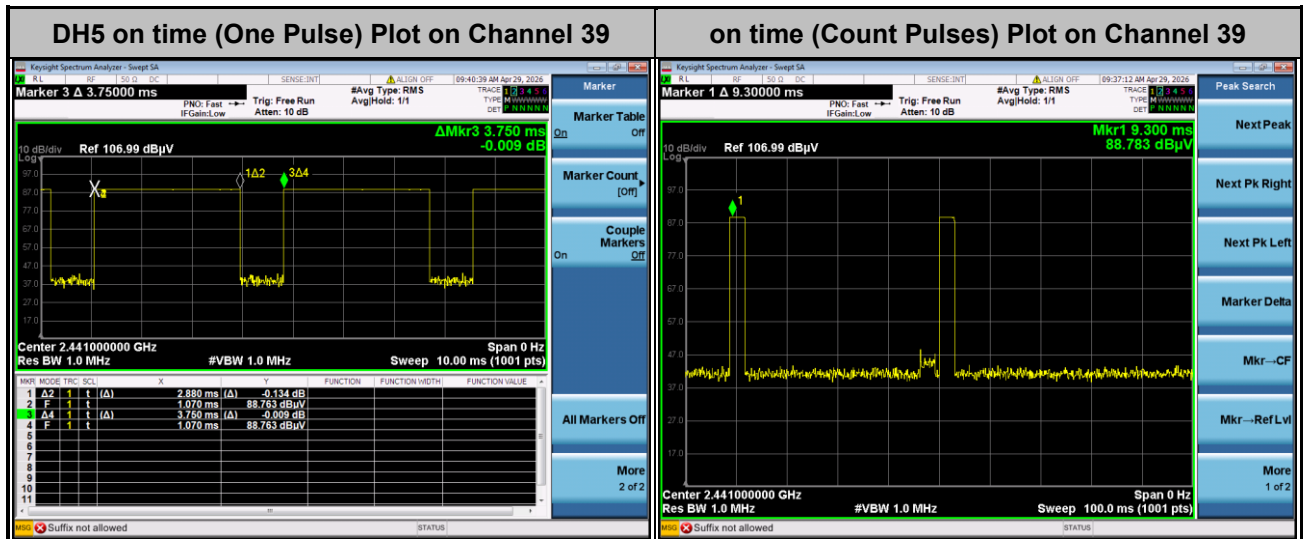


<ANT 7_1Mbps>

Note:

10. Worst case Duty cycle = on time/100 milliseconds = $2 \times 2.87 / 100 = 5.74 \%$
11. Worst case Duty cycle correction factor = $20 \times \log(\text{Duty cycle}) = -24.82 \text{ dB}$
12. **DH5** has the highest duty cycle worst case and is reported.

Duty Cycle Correction Factor Consideration for AFH mode:

Bluetooth normal hopping rate is 1600Hz and reduced to 800Hz in AFH mode; due to the reduced number of hopping frequencies, with the same packet configuration the dwell time in each channel frequency within 100msec period is longer in AFH mode than normal mode.

In AFH mode, the minimum hopping frequencies are 20, to get the longest dwell time DH5 packet is observed; the on time period to have DH5 packet completing one hopping sequence is

$$2.87 \text{ ms} \times 20 \text{ channels} = 57.4 \text{ ms}$$

There cannot be 2 complete hopping sequences within 100ms period, considering the random hopping behavior, maximum 2 hops can be possibly observed within the period. $[100 \text{ ms} / 57.4 \text{ ms}] = 2 \text{ hops}$

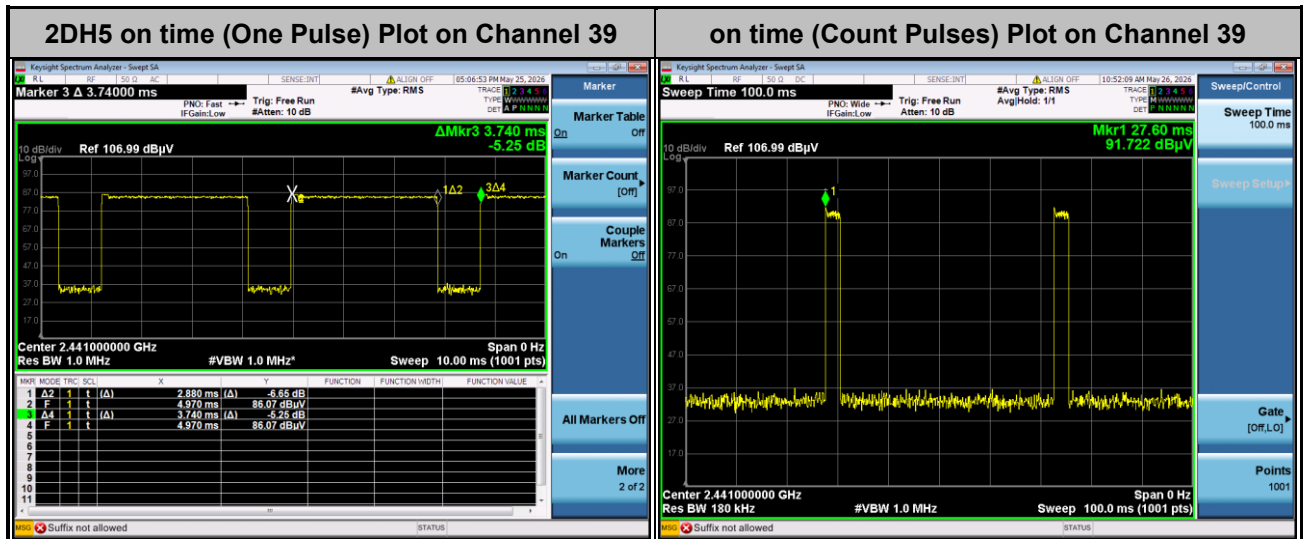
Thus, the maximum possible ON time:

$$2.87 \text{ ms} \times 2 = 5.74 \text{ ms}$$

Worst case Duty Cycle Correction factor, which is derived from the maximum possible ON time,

$$20 \times \log(5.74 \text{ ms}/100 \text{ ms}) = -24.82 \text{ dB}$$

<ANT 7_2Mbps>


Note:

13. Worst case Duty cycle = on time/100 milliseconds = $2 \times 2.87 / 100 = 5.74 \%$
14. Worst case Duty cycle correction factor = $20 \times \log(\text{Duty cycle}) = -24.82 \text{ dB}$
15. **2DH5** has the highest duty cycle worst case and is reported.

Duty Cycle Correction Factor Consideration for AFH mode:

Bluetooth normal hopping rate is 1600Hz and reduced to 800Hz in AFH mode; due to the reduced number of hopping frequencies, with the same packet configuration the dwell time in each channel frequency within 100msec period is longer in AFH mode than normal mode.

In AFH mode, the minimum hopping frequencies are 20, to get the longest dwell time 2DH5 packet is observed; the on time period to have DH5 packet completing one hopping sequence is

$$2.87 \text{ ms} \times 20 \text{ channels} = 57.4 \text{ ms}$$

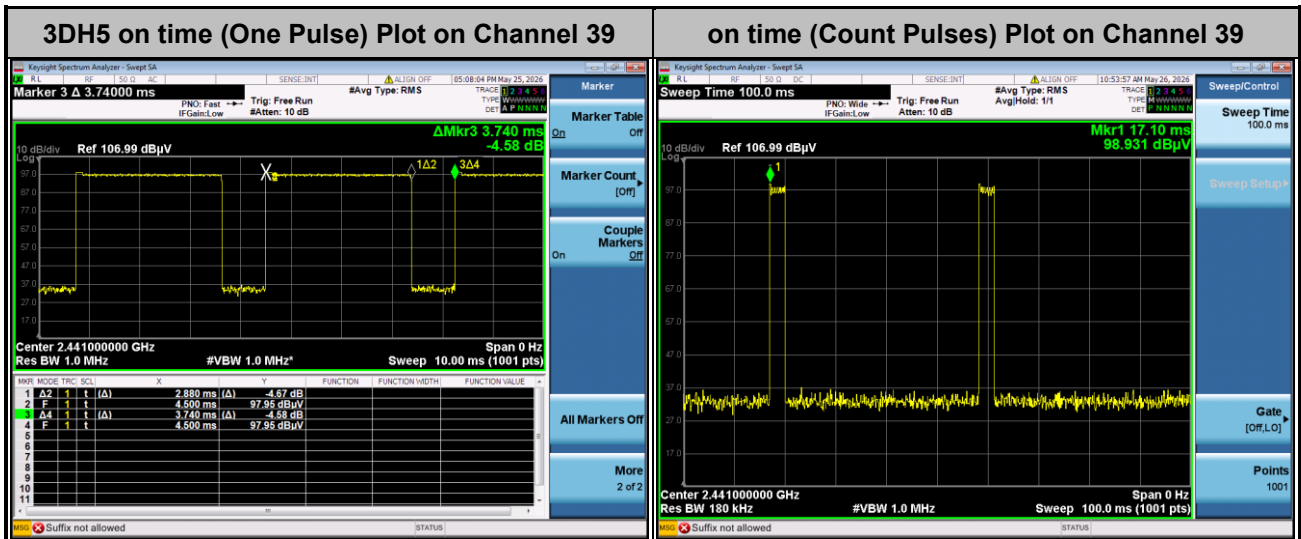
There cannot be 2 complete hopping sequences within 100ms period, considering the random hopping behavior, maximum 2 hops can be possibly observed within the period. $[100 \text{ ms} / 57.4 \text{ ms}] = 2 \text{ hops}$

Thus, the maximum possible ON time:

$$2.87 \text{ ms} \times 2 = 5.74 \text{ ms}$$

Worst case Duty Cycle Correction factor, which is derived from the maximum possible ON time,

$$20 \times \log(5.74 \text{ ms}/100 \text{ ms}) = -24.82 \text{ dB}$$

<ANT 7_3Mbps>

Note:

16. Worst case Duty cycle = on time/100 milliseconds = $2 \times 2.87 / 100 = 5.74 \%$
17. Worst case Duty cycle correction factor = $20 \times \log(\text{Duty cycle}) = -24.82 \text{ dB}$
18. **3DH5** has the highest duty cycle worst case and is reported.

Duty Cycle Correction Factor Consideration for AFH mode:

Bluetooth normal hopping rate is 1600Hz and reduced to 800Hz in AFH mode; due to the reduced number of hopping frequencies, with the same packet configuration the dwell time in each channel frequency within 100msec period is longer in AFH mode than normal mode.

In AFH mode, the minimum hopping frequencies are 20, to get the longest dwell time 3DH5 packet is observed; the on time period to have DH5 packet completing one hopping sequence is

$$2.87 \text{ ms} \times 20 \text{ channels} = 57.4 \text{ ms}$$

There cannot be 2 complete hopping sequences within 100ms period, considering the random hopping behavior, maximum 2 hops can be possibly observed within the period. $[100 \text{ ms} / 57.4 \text{ ms}] = 2 \text{ hops}$

Thus, the maximum possible ON time:

$$2.87 \text{ ms} \times 2 = 5.74 \text{ ms}$$

Worst case Duty Cycle Correction factor, which is derived from the maximum possible ON time,

$$20 \times \log(5.74 \text{ ms}/100 \text{ ms}) = -24.82 \text{ dB}$$



Appendix E. Spot Check Evaluation on PY7-52715J

Conducted power test configurations were selected from the worst cases identified in the reference model and tested to demonstrate the test data from reference model remains representative for the variant model.

The deviation between the spot check and the referenced values is within 1dB, therefore data referencing is justified according to the guidance in the TCB inquiry

Mode	Test Item	PY7-75158T Reference Worst mode Test Result	PY7-52715J Variant Check Test Result	Deviation	Limit (dB)
BT	Average Output Power	13.7 dBm	13.7dBm	0	Deviation (ddB) < 1 dB