

Proposal for Alternate DFS Test Procedure for Samsung,
Model GT-P6210, FCC ID: A3LGT-P6210
Model GT-P6200, FCC ID: A3LGT-P6200
Model SGH-T869, FCC ID: A3LSGHT869

Product Description:

The devices are a series of 7" Tablet PCs that support 802.11a operation in the DFS bands as client-only devices. They do not have radar detection capabilities and, as such, only support an infrastructure mode of operation and do not support ad-hoc networks in the DFS bands.

The Android operating system resident on the devices does not support the Windows based Media Player or the format of the streaming video file specified in FCC 06-96.

The WLAN (802.11a) interface and operating system\drivers are the same across all three models so the model GT-P6210 version will be tested and the results will be considered representative of the three devices. The plots included in this document were obtained from the test configuration on the model GT-P6210. Preliminary tests were performed on the other two models to confirm there were no significant differences between the three.

Proposed Alternate Method:

Since the operating system will not support the preferred method for data transfer from master to client device, we propose performing the DFS test while the system is performing a FTP file transfer. The file transfer from the master device to the client device under test will consist of a 4.2Gbyte compressed data folder containing multiple copies of a 418 Mbyte file.

General Test Setup Procedure:

- 1) *Connect FCC approved Master AP to a network, via wired Ethernet, that allows connection to an FTP server.*
- 2) *Associate the EUT with the Master AP*
- 3) *Launch the FTP application on the EUT*
- 4) *Connect to the FTP server application to the FTP server hosting the file*
- 5) *Initiate an FTP download of the file from the host*
- 6) *Monitor the channel loading during transfer*
- 7) *Reduce the maximum allowed data rate for the Master AP, using the AP's GUI interface.*
- 8) *Repeat steps 5 - 7 until the channel loading is as close to 20% as possible.*
- 9) *Record the data rate setting on the Master AP and the channel loading.*
- 10) *While the system is performing an FTP transfer using the settings from item 9 above, perform the Channel Closing Transmission Time and Channel Move Time measurements as required by FCC 06-96 using a radiated test.*

Results:

Testing showed that the minimum target of 20% channel loading was achieved by setting the Master AP to the lowest allowed data rate for 802.11a, 6Mb/s (MCS 0) in combination with setting the FTP transfer software to a speed limit of 150kbps for a channel bandwidth of 20MHz (see figure 1 below) and 450kbps for a channel bandwidth of 40MHz(see figure 2 below). At these settings approximate traffic loading levels were 25.2% for a channel bandwidth of 20MHz and 29.75% for a channel bandwidth of 40MHz. DFS testing will be performed using these conditions.

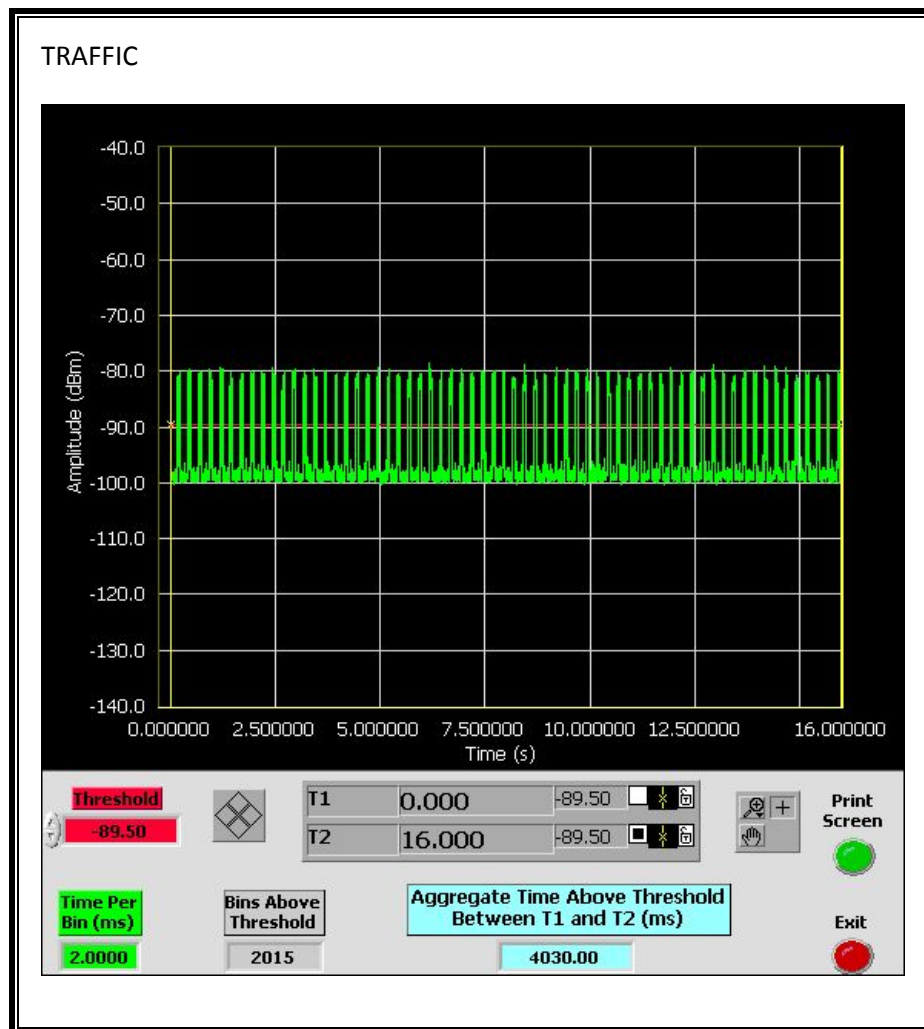


Figure 1 – 20MHz Channel Bandwidth Traffic Loading at 6 MB/s

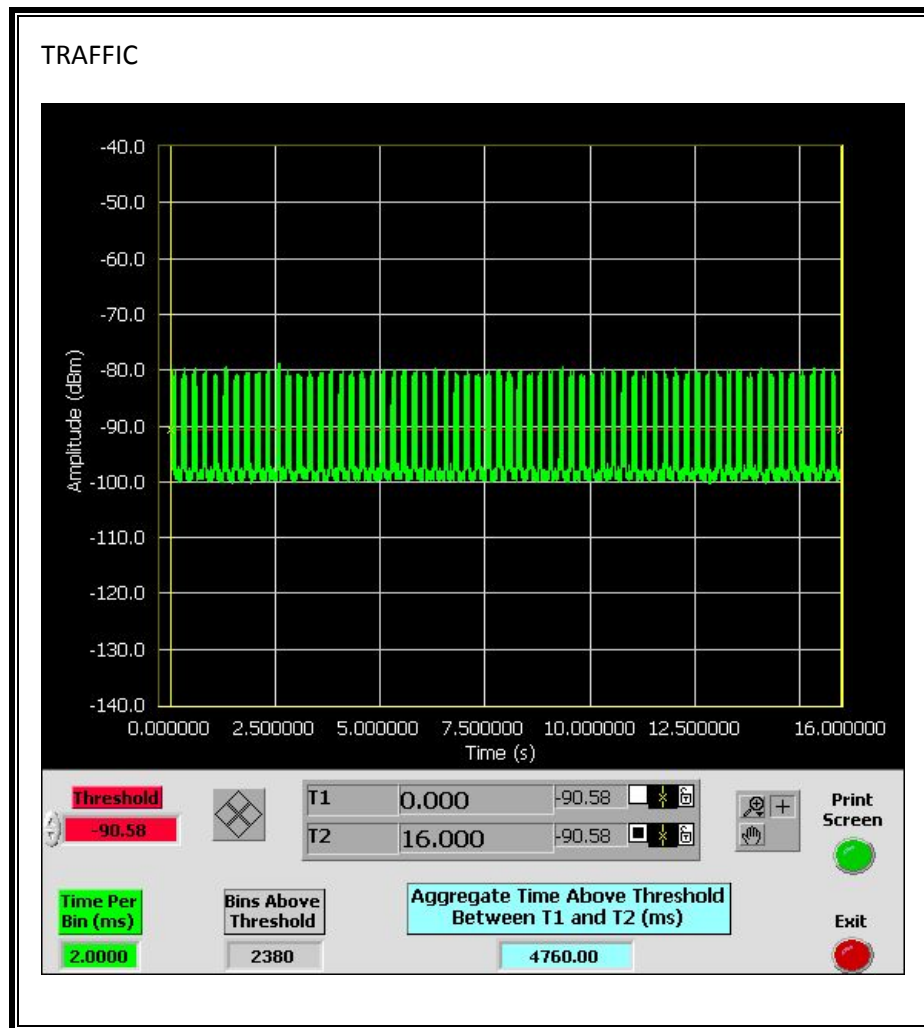


Figure 2 – 40MHz Channel Bandwidth Traffic Loading at 6 MB/s

Results from the DFS testing will be reported in the final DFS report submitted as part of the application.

Conclusion:

The proposed method loads the channel sufficiently to allow the channel closing and channel move times for the client device under test to be measured appropriately.