APPLICATION FOR

TYPE ACCEPTANCE
Suplemental Information

Sierra Wireless Inc.

FCC ID: N7NACRD2
EA #: EA 95411

MODEL: AIRCARD 2

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FCC Questions:

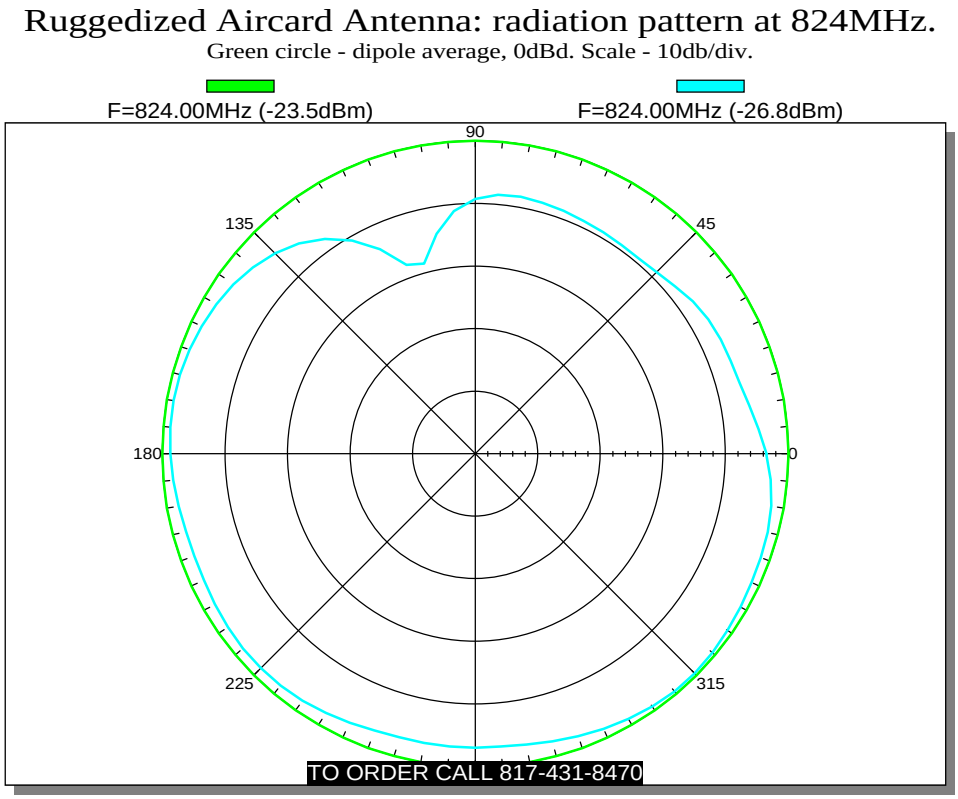
The following is a list of questions regarding a permissive change submitted for N7NACRD2 under EA95411.

This is a Class II Change from Sierra Wireless, EA 95411 -

1. The original grant was based on ERP, 400 mW. They are requesting 631 mW, which appears to be conducted. We need separate ERP measurements to confirm the output is less than 400 mW ERP.
2. Previous Class II change had a non-retractable antenna that did not pass SAR. Please clarify if the antenna in the current Class II Change is that same antenna, a variation or a different one. Upload a photo of the device with this latest antenna into the external photos exhibit.
3. In the previous Class II Change (at least in my record), it was indicated that the 9 cm and 3 cm separation distances are required for the antenna in the original grant (the one with non-standard connector). FCC did not stipulate the same distance requirements for the half-retractable antenna approved in the previous Class II Change, which has been indicated in the existing warning label. If Sierra Wireless chooses to require those distances for the other antennas, it should not be indicated as FCC requirements; please clarify.

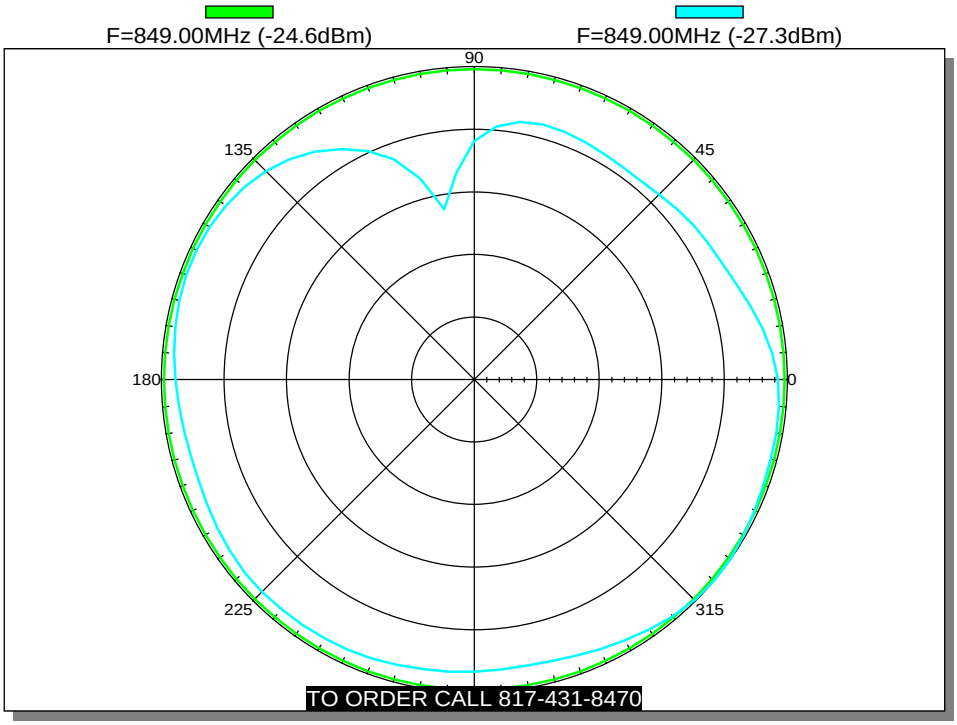
Answer to Question 1:

The following plots shows the measured gain of the ruggedized antenna at the two frequency extremes. The gain of an ideal ½ wave dipole is also shown as a reference.



Ruggedized Aircard Antenna: radiation pattern at 849MHz.

Outer circle - dipole average, 0dBd. Scale - 10dB/div.



At 824MHz, the antenna gain is (-26.8) – (-23.3) = -3.3dBd
At 849MHz, the antenna gain is (-27.3) – (-24.6) = -2.7dBd

Assuming the higher of the two (-2.7dBd), the maximum ERP of the antenna is:

631mW * 0.537 = 339mW

Answer to Question 2:

The antenna in this permissive change is different than previous submissions. The following two external photos show the antenna.

Answer to Question 3:

We understand that the 9cm restriction is not required by the FCC on this antenna. We keep the restriction on the label to comply with an earlier palmtop – antenna configuration.