

E2XSWL-2100P

1.) It appears the only real change between the "P" and "E" versions of this product are that the "P" version is mounted on a PC card internal to the computer. I am a little mystified as to why there appears to be so much of a discrepancy between the power output of the two versions. Please explain.

These devices are familiar but not exactly the same. The PCMCIA card and the PCI card are based on reference design from Harris. The manufacturer Samsung traditionally sets the output power through firm wave internal to both devices. From past experience testing both types of similar products there has always been differences between the two product types. Unfortunately, we have no control over the settings. The output power reported is exactly what it is for both products tested.

2.) RF exposure was calculated using 70 mW EIRP instead of 56mW + 2.15dB [91.8mW EIRP]. Please address.

There is a choice of two ways to get the results, the first is to calculate the EIRP based on the conducted power output and the second is to calculate the EIRP based on a radiated emissions measurement. The method used is to calculate the EIRP based on a radiated emissions measurement because it gives a more realistic result to confirm the antenna gain value. The maximum value from both the conducted power output and the radiated emission measurement was used in the calculation.

3.) External Photos missing. The FCC robot wants to see them anyways. Show end view of card and close up of connector and FCC ID.

External Photos section 25 has been added to the revised report.

4.) Antenna manual is for PCMCIA version and not this EUT.

This section has been removed from the report.

5.) Numerous incorrect references to PCMCIA version throughout application. See product description for example. Please address.

The PCMCIA report was used as the basic report for the PCI. The product description has been corrected and all references to the PCMCIA card has been removed

6.) Need connector attestation.

The connector is a reverse threaded SMA Connector.

7.) No RF Exposure warning statements in manual. No proper instructions.

Please see the revised manual.

8.) Antenna manual is for wrong equipment [PCMCIA]. Needs better warnings (not mixed with Class B stuff). Installation instructions anyone?

Same as 4 and has been removed.

9.) My comments yesterday about the "E" version test report appear to be just as valid. I question if any final check was made to either of these two Samsung filings.

To minimize confusion please separate your request for each FCC ID. Thank you

I do not have Rachid's email address so I cannot address him directly.

I did not have time to review both Applications for the Samsung spread spectrum transmitters, so I just picked one and looked for the most troublesome items. This is an informal review.

- 1.) The 731 form calls out a power output of .056 watts. RF exposure info calls out an EIRP of 70mW. My calculations shows 56mW with a 2.15dB gain antenna should make ~70mW. Please address.

[Rachid Sehb] The measurement that was provided was the output power at the port instead of the EIRP.

- 2.) Section 2.1 of test report appears to indicate in paragraph 3 that the emission envelope changes with changes in data rate. If so, data must be shown for all data rates throughout report.

Statement Removed

- 3.) Carrier power listed in Section 8 is just 3.8 dBm. This is very far from 25mW. claimed on 731.

Rachid Sehb] In Part 15.247 appendix C states the measurement should be performed with a RSW at 100 kHz and VBW>RBW. The reason for this is the low power carrier is due to this configuration.

4.) Section 10 and 14 of test report. It is difficult to understand what has been done with the test methodology as stated. If I assume that a true 1 second per 3 KHz was used, a 17 second sweep would correspond to only ~50 KHz worth of span. Since this is emission is over 11MHz wide, how can I be sure the spectrum analyzer was set to the highest in band emission?

Rachid Sehb] Per our phone conversation we agreed that the setup of the test was correct.

5.) Section 11 and 13: Are these Conducted emissions? Please use dBm and not dBuV. There seems to be a mixing of techniques and bandwidth settings when making band edge measurements. Please be sure of your technique. Make annotation bigger. Set center frequency to exact band edge (2400 or 2483.5), and use span with nice neat number. Span and frequency information are missing (except for marker delta). I suspect the 1MHZ/10Hz plots are swept too fast - there appears to be distortion in the trace. Slow down sweep.

Rachid Sehb] RTL agrees, that the sweep time was too fast and will be slowed to the appropriate sweep time for future tests. The reason that this measurement was not retaken is in using our engineering judgment we realized that the margin that was resulted made it impossible and improbable that the device would fail with a slower sweep time.

- 6.) Manual: There is no RF safety info in manual.

Correction made

- 7.) Antenna Manual: The RF safety warning is mixed up with the non-interference issues for Part 15 labeling. Separate and strengthen.

This is for the PCMCIA Card and not for this product of the PCI card.

8.) Antenna Manual: Must have better external antenna installation instructions. If RF exposure is dependent on the end user for keeping antenna away from people, then device is not applicable for TCB approval.

This comment is for the PCMCIA card and not for this product of the PCI Card.

9.) Internal photographs: Are their two antenna connectors? Can two antennas be hooked up at same time? Is this a diversity setup, or can both antennas be active at same time?

This comment is for the PCMCIA Card and not for this product of the PCI Card.