Justification of test data reuse (HL7810)

June 27th, 2022

Comparison

- Model Name: HL7800
- FCC ID: N7NHL78 IC: 2417C-HL78
- Supported Frequency bands
  - Cat-M1/NB1: B1, B2, B3, B4, B5, B8, B9, B10, B12, B13, B17, B18, B19, B20, B25, B26, B27, B28, B66

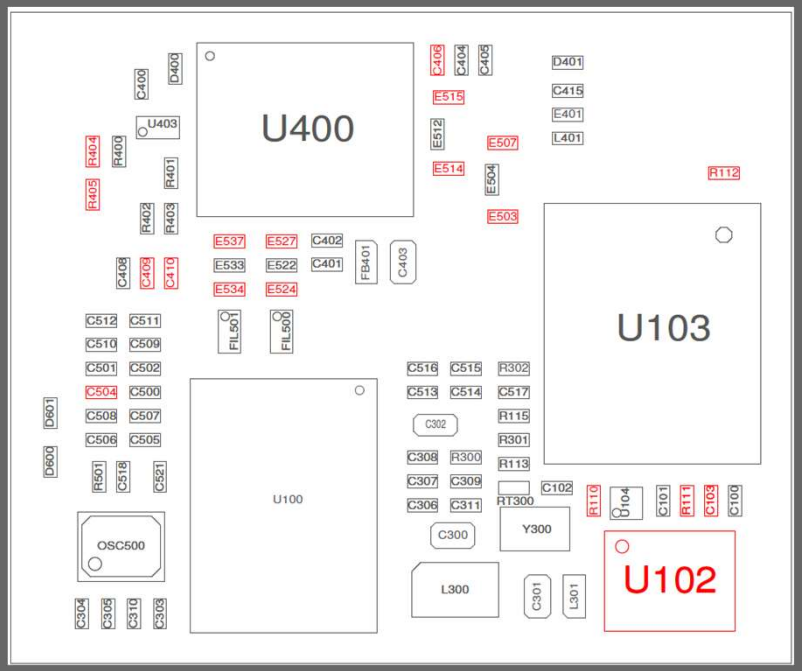
- Model Name: HL7810
- FCC ID: N7NHL78A IC: 2417C-HL78A
- Supported Frequency bands
  - Cat-M1/NB1/NB2: B1, B2, B3, B4, B5, B8, B12, B13, B18, B19, B20, B25, B26, B28, B66, B85
- B8 is covering the range as defined in Part 27 SubPart P
- NB2 is supported through a FW upgrade – no impact

Comparison (continued)

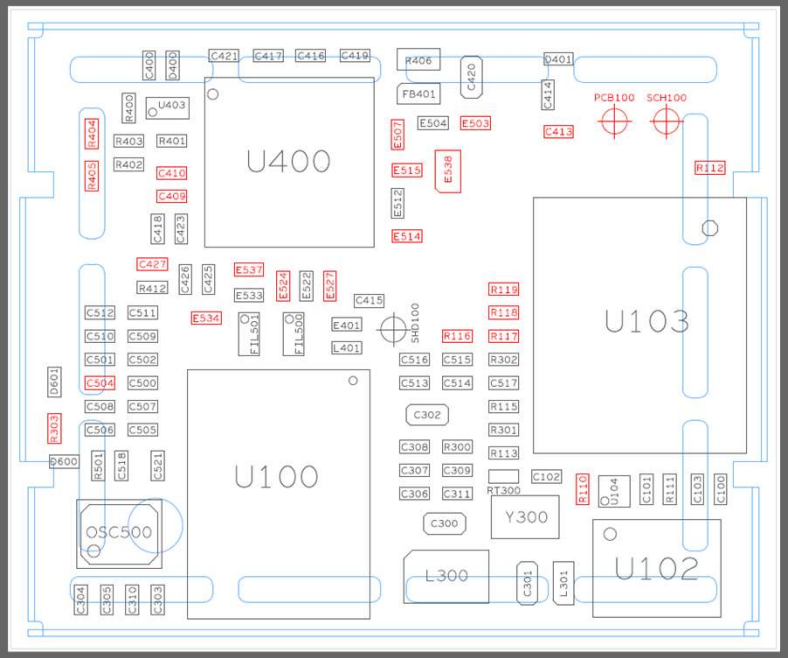
- Both modules have the same form factor, I/O interface, shielding and antenna connectors.
- Schematics:
  - Both modules share the same schematics
  - Band 8 was already supported in the original product
  - Band 85 is enabled by FW, no change in HW required
- PCB Layout:
  - Both modules use a closely similar PCB, with some passive (resistors/capacitors) updated to accommodate those components end-of-life.

Layout (HL7800/HL7810)

HL7800



HL7810



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RF Results

- The components in HL7810 design are identical to HL7800's in terms of characteristics.
- The RF performance of HL7800 and HL7810 are identical with the exception that the HL7810 modules includes additional support for Band 85 (Band 8 was already supported in HL7800 as per 3GPP, not as per FCC Part 27).
- All test data of HL7800 per FCC Part 22, 24, 27 and 90 as well as RSS-130, RSS-132, RSS-133 and RSS0139 are valid for the HL7810 module and spot check testing for worst case measurements was performed on HL7810 to confirm results were within tolerance.
- All reports are available in original certification under N7NHL78 (FCC) and 2417C-HL78 (ISED)
- Test data for Band 8 and Band 85 are provided as tested against HL7810.
- As such, LTE results from HL7800 can be reused for the FCC/IC certification of HL7810

Thank you

13811 Wireless Way :: Richmond, British Columbia, Canada, V6V 3A4

sierrawireless.com