

# Quectel Wireless Solutions Company Limited

BG95-M5 original date of grant : 08/07/2020,

Certificate number :202180652AA00

FCC ID: XMR202005BG95M5

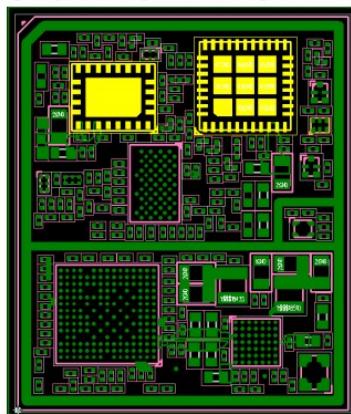
Name: LTE Cat M1 & Cat NB2 & EGPRS Module

Parent Model: BG95-M5

Hardware Version:R1.1

The description of the modification is as follows:

The HW design is not changed, just change the PA chip as follow:



Designator	BG95-M5 (Original) (Part Description)	BG95-M5 (New) (Part Description)
<b>U603</b>	IC RF SWITCH SPI2T + GSM Quadband 5.5x5.3mm H0.83mm RO (VC7912-62)	IC RF SWITCH SP14T 36dBm & PA GSM Quadband TDD34/39 5.3x5.5mm H0.94mm RO (RR88916-81H)
<b>U701</b>	IC RF PA LTE/NB-IOT LB/MB 5.0x4.0mm H0.65mm RO (QM55001)	IC RF PA LTE 4.0x5.0mm H0.9mm RO (SKY68018-11)

The change will not impact RF performance of CatM1/ NB-IoT/EGPRS.

Your assistance on this matter is highly appreciated.

#1 New FEM containing PA has slightly different electrical characteristics as the original

#2 The new PA is pin-to-pin compatible with the original PA

**All reports are updated as follows:**

**BG95-M5 (Report No.: R2108A0767-R1V1) is a variant model of BG95-M5 (Report No.: R2005A0283-R1V1). There is only changed the Power Amplifier and Software**

**Version of product.**

Tested cases refer to the following table. Please refer to Appendix C for Verify data

Test Case	Original	Variant
RF Power Output and Effective Radiated Power	PASS	Retest(GSM850 / LTE band5 / LTE band 26)
Occupied Bandwidth	PASS	Verify the worst combination of each frequency band(GSM850 / LTE band5 / LTE band 26)
Band Edge Compliance	PASS	Verify the worst combination of each frequency band(GSM850 / LTE band5 / LTE band 26)
Peak-to-Average Power Ratio	PASS	Retest(GSM850 / LTE band5 / LTE band 26)
Frequency Stability	PASS	Verify the worst combination of each frequency band(GSM850 / LTE band5 / LTE band 26)
Spurious Emissions at Antenna Terminals	PASS	Verify the worst combination of each frequency band(GSM850 / LTE band5 / LTE band 26)
Radiates Spurious Emission	PASS	Verify the worst combination of each frequency band(GSM850 / LTE band5 / LTE band 26)

**BG95-M5 (Report No.: R2108A0767-R2V1) is a variant model of BG95-M5 (Report No.: R2005A0283-R2V1). There is only changed the Power Amplifier and Software**

**Version of product.**

Tested cases refer to the following table. Please refer to Appendix C for Verify data

Test Case	Original	Variant
RF Power Output and Effective Radiated Power	PASS	Retest(GSM1900 / LTE Band 2 / LTE Band 25)
Occupied Bandwidth	PASS	Verify the worst combination of each frequency band(GSM1900 / LTE Band 2 / LTE Band 25)
Band Edge Compliance	PASS	Verify the worst combination of each frequency band(GSM1900 / LTE Band 2 / LTE Band 25)
Peak-to-Average Power Ratio	PASS	Retest(GSM1900 / LTE Band 2 / LTE Band 25)
Frequency Stability	PASS	Verify the worst combination of each frequency band(GSM1900 / LTE Band 2 / LTE Band 25)
Spurious Emissions at Antenna Terminals	PASS	Verify the worst combination of each frequency band(GSM1900 / LTE Band 2 / LTE Band 25)
Radiates Spurious Emission	PASS	Verify the worst combination of each frequency band(GSM1900 / LTE Band 2 / LTE Band 25)

**BG95-M5 (Report No.: R2108A0767-R3V1) is a variant model of BG95-M5 (Report No.: R2005A0283-R3V1). There is only changed the Power Amplifier and Software Version of product.**

**Tested cases refer to the following table. Please refer to Appendix C for Verify data**

Test Case	Original	Variant
RF Power Output and Effective Radiated Power	PASS	Retest(LTE Band 26)
Occupied Bandwidth	PASS	Verify the worst combination of each frequency band(LTE Band 26)
Band Edge Compliance	PASS	Verify the worst combination of each frequency band(LTE Band 26)
Peak-to-Average Power Ratio	PASS	Retest(LTE Band 26)
Frequency Stability	PASS	Verify the worst combination of each frequency band(LTE Band 26)
Spurious Emissions at Antenna Terminals	PASS	Verify the worst combination of each frequency band(LTE Band 26)
Radiates Spurious Emission	PASS	Verify the worst combination of each frequency band(LTE Band 26)

**BG95-M5 (Report No.: R2108A0767-R4V1) is a variant model of BG95-M5 (Report No.: R2005A0283-R4V1). There is only changed the Power Amplifier and Software Version of product.**

**Tested cases refer to the following table. Please refer to Appendix C for Verify data**

Test Case	Original	Variant
RF Power Output and Effective Radiated Power	PASS	Retest(LTE Band 4/66/12/13/85)
Occupied Bandwidth	PASS	Verify the worst combination of each frequency band(LTE Band 4/66/12/13/85)
Band Edge Compliance	PASS	Verify the worst combination of each frequency band(LTE Band 4/66/12/13/85)
Peak-to-Average Power Ratio	PASS	Retest(LTE Band 4/66/12/13/85)
Frequency Stability	PASS	Verify the worst combination of each frequency band(LTE Band 4/66/12/13/85)
Spurious Emissions at Antenna Terminals	PASS	Verify the worst combination of each frequency band(LTE Band 4/66/12/13/85)
Radiates Spurious Emission	PASS	Verify the worst combination of each frequency band(LTE Band 4/66/12/13/85)

**BG95-M5 (Report No.: R2108A0767-R5V1) is a variant model of BG95-M5 (Report No.: R2005A0283-R5). There is only changed the Power Amplifier and Software Version of product.**

**Tested cases refer to the following table. Please refer to Appendix C for Verify data**

Test Case	Original	Variant
RF Power Output and Effective Radiated Power	PASS	Retest(NB-IoT Band 5)
Occupied Bandwidth	PASS	Verify the worst combination of each frequency band(NB-IoT Band 5)
Band Edge Compliance	PASS	Verify the worst combination of each frequency band(NB-IoT Band 5)
Peak-to-Average Power Ratio	PASS	Retest(NB-IoT Band 5)
Frequency Stability	PASS	Verify the worst combination of each frequency band(NB-IoT Band 5)
Spurious Emissions at Antenna Terminals	PASS	Verify the worst combination of each frequency band(NB-IoT Band 5)
Radiates Spurious Emission	PASS	Verify the worst combination of each frequency band(NB-IoT Band 5)

**BG95-M5 (Report No.: R2108A0767-R6V1) is a variant model of BG95-M5 (Report No.: R2005A0283-R6). There is only changed the Power Amplifier and Software Version of product.**

**Tested cases refer to the following table. Please refer to Appendix C for Verify data**

Test Case	Original	Variant
RF Power Output and Effective Radiated Power	PASS	Retest(NB-IoT Band 2 / NB-IoT Band 25)
Occupied Bandwidth	PASS	Verify the worst combination of each frequency band(NB-IoT Band 2 / NB-IoT Band 25)
Band Edge Compliance	PASS	Verify the worst combination of each frequency band(NB-IoT Band 2 / NB-IoT Band 25)
Peak-to-Average Power Ratio	PASS	Retest(NB-IoT Band 2 / NB-IoT Band 25)
Frequency Stability	PASS	Verify the worst combination of each frequency band(NB-IoT Band 2 / NB-IoT Band 25)
Spurious Emissions at Antenna Terminals	PASS	Verify the worst combination of each frequency band(NB-IoT Band 2 / NB-IoT Band 25)
Radiates Spurious Emission	PASS	Verify the worst combination of each frequency band(NB-IoT Band 2 / NB-IoT Band 25)

**BG95-M5 (Report No.: R2108A0767-R7V1) is a variant model of BG95-M5 (Report No.: R2005A0283-R7). There is only changed the Power Amplifier and Software Version of product.**

**Tested cases refer to the following table. Please refer to Appendix C for Verify data**

Test Case	Original	Variant
RF Power Output and Effective Radiated Power	PASS	Retest(NB-IoT 4/66/12/13/71/85)
Occupied Bandwidth	PASS	Verify the worst combination of each frequency band(NB-IoT 4/66/12/13/71/85)
Band Edge Compliance	PASS	Verify the worst combination of each frequency band(NB-IoT 4/66/12/13/71/85)
Peak-to-Average Power Ratio	PASS	Retest(NB-IoT 4/66/12/13/71/85)
Frequency Stability	PASS	Verify the worst combination of each frequency band(NB-IoT 4/66/12/13/71/85)
Spurious Emissions at Antenna Terminals	PASS	Verify the worst combination of each frequency band(NB-IoT 4/66/12/13/71/85)
Radiates Spurious Emission	PASS	Verify the worst combination of each frequency band(NB-IoT 4/66/12/13/71/85)

Your assistance on this matter is highly appreciated.

**Signature:** 

**Print name:** Jean Hu

**Date:** 11/11/2021

**Company:** Quectel Wireless Solutions Co., Ltd.