

TECHNICAL JUSTIFICATION

HOST CONFIGURATION

10 August 2021

We, LG Electronics Inc., as a manufacturer of following product, hereby submit application of equipment authorization for a host equipment that contains certified modular.

A. Modular Information

FCC	FCC ID	BEJTM03LNNNAHD0
	Original Grant Date	29 July 2021
	Modular	Single Modular
ISED	IC Certification Number	2703H-TM03LNNNAHD0
	Approved Date	29 July 2021
	HVIN	TM03LNNNAHD0
	PMN	TM03LNNNAHD0

B. Difference between Host configuration and Modular configuration.

Modular	FCC ID	BEJTM03LNNNAHD0
	IC Certification Number	2703H-TM03LNNNAHD0
	Equipment Type	Single Modular
	HVIN/PMN	TM03LNNNAHD0
Host	FCC ID	BEJTLHOBDDNN0B
	IC Certification Number	2703H-TLHOBDDNN0B
	HVIN/PMN	TLHOBDDNN0B1, TLHOBDDNN0B2 / Car Telematics Device
Difference	Same hardware and software specification. Host equipment has identical PCB and components but has enclosures.	

C. Test Reports

Following test reports are referenced.

Mode	FCC ID, IC Certification Number	Test Report Reference	Date
WCDMA	BEJTM03LNNNAHD0, 2703H-TM03LNNNAHD0	F690501-RF-RTL002350	29 June 2021
LTE	BEJTM03LNNNAHD0, 2703H-TM03LNNNAHD0	F690501-RF-RTL002351	29 June 2021

D. Test in host configuration

The only difference of modular (BEJTM03LNNAHD0) and host equipment (BEJTLHOBDDNN0B) is the host equipment has enclosure. BEJTM03LNNAHD0 was tested in standalone configuration without enclosure. BEJTLHOBDDNN0B has enclosure added around the modular without having any modification or differences. All the software and hardware are identical in both configurations.

Spot check of conducted power was performed to make sure conducted power is not changed. Conducted power in host configuration has been verified and all the conducted measurement can be referenced.

We also performed radiated spurious emission of WCDMA II, V, LTE B2, B4, B5 and B12 in worst modes based on original test result of BEJTM03LNNAHD0. Radiated spurious emission test results were equivalent as original test result of the modular.

Mode	Radiated Spurious Emission				Deviation
	Mode	Worst Channel	BEJTM03LNNAHD0 Margin	BEJTLHOBDDNN0B Margin	
WCDMA	WCDMA 2	1852.4MHz	33.77 dB	36.33 dB	+ 2.56 dB
	WCDMA 5	846.6 MHz	34.06 dB	32.82 dB	- 1.24 dB
LTE	LTE 2	1880MHz 5MHz, QPSK	27.95 dB	27.73 dB	+ 0.22 dB
	LTE 4	1754.3 MHz 1.4 MHz, QPSK	26.12 dB	33.53 dB	+ 7.41 dB
	LTE 5	824.7 MHz 1.4 MHz, QPSK	32.87 dB	38.92 dB	+ 6.05 dB
	LTE 12	707.5 MHz 1.4 MHz, QPSK	30.39 dB	33.26 dB	+ 2.87 dB

E. Conclusion

Based on the analysis and additional test, it has been proven that the enclosure does not affects radiated spurious emission or other requirements. we hereby request a new equipment authorization application with referencing modular test reports.

Sincerely,



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Director, NA Regulatory & Environmental Affairs
LG Electronics USA