

RF Test Report

Applicant : Getac Technology Corporation
Product Type : Wireless Module
Trade Name : Getac
Model Number : EM7455
FCC ID : QYLEM7455U
EUT Rated Voltage : DC 3.7 V
Test Voltage : 120 Vac / 60 Hz
Receive Date : Mar. 06, 2019
Test Period : Mar. 16 ~ Mar. 17, 2019
Issue Date : May 06, 2019
Applicable Standard : FCC 47 CFR PART 90S
ANSI C63.26
Test Result : Complied

Testing Laboratory

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Approved By



(Manager)

(Hai Wang)

Reviewed By



(Testing Engineer)

(Mick Zhang)



Revision History

Rev.	Issue Date	Revisions
00	Apr. 17, 2019	Initial Issue
01	May 07, 2019	Page 4 Revised Class II Permissive Change description



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1 General Information

1.1. EUT Description

Applicant	Getac Technology Corporation 5F., Building A, No.209, Sec.1, Nangang Rd., Nangang Dist., Taipei City, 11568, Taiwan		
Manufacturer	Sierra Wireless Inc. 13811 Wireless Way, Richmond, BC, V6V 3A4, Canada		
Product Type	Wireless Module		
Trade Name	Getac		
Model Number	EM7455		
FCC ID	QYLEM7455U		
Class II Permissive Change	This is to request a Class II permissive change for FCC ID:QYLEM7455U , originally granted on 2019/4/9 The major change filed under this application is: Change #1: Additional Chassis added, Getac, model number: UX10 #2: Addition one antenna, the antenna type is same, the antenna gain is low than the original application. #3: Disable LTE band 30 by software.		
Host Information	Product Type: Tablet Trade Name: Getac Model Name: UX10		
IMEI No.	353431080191380		
Operate Band	Frequency Range (MHz)	Modulation	Channel Bandwidth
LTE Band 26	UL: 814 ~ 824	QPSK, 16QAM	1.4 MHz, 3 MHz, 5 MHz, 10 MHz,
	DL: 859 ~ 869	QPSK, 16QAM	
Type of Antenna	FPC Antenna		
Antenna Gain	Main	LTE Band 26	0.49 dBi
	AUX	LTE Band 26	0.30 dBi
Operate Temp. Range	-40 ~ 85 ℃		

Band	Channel Bandwidth	Modulation	Max. RF Output Power
			(W)
LTE Band26	1.4 MHz	QPSK	0.212
LTE Band26	1.4 MHz	16QAM	0.179
LTE Band26	3 MHz	QPSK	0.214
LTE Band26	3 MHz	16QAM	0.179
LTE Band26	5 MHz	QPSK	0.215
LTE Band26	5 MHz	16QAM	0.178
LTE Band26	10 MHz	QPSK	0.212
LTE Band26	10 MHz	16QAM	0.175

1.2. Mode of Operation

Three channels had been tested for each channel bandwidth.

LTE Band 26				
Channel Bandwidth	1.4 MHz		3 MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Low CH	26697	814.7	26705	815.5
Middle CH	26740	819.0	26740	819.0
High CH	26783	823.3	26775	822.5
Channel Bandwidth	5 MHz		10 MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Low CH	26715	816.5	26740	819.0
Middle CH	26740	819.0		
High CH	26765	821.5		

During all testing, EUT is in link mode with base station emulator at maximum power level. The spurious emission measurements were carried out in semi-anechoic chamber with 3-meter test range, and EUT is rotated on three test planes to find out the worst emission.

Frequency range investigated for radiated emission: 30 MHz to 26.5 GHz.

Band	Channel Bandwidth	Test Modes	
LTE Band 26	1.4 MHz	☐ LTE(RB Size 1, RB Offset 0) Link ☒ LTE(RB Size 1, RB Offset 2) Link ☐ LTE(RB Size 1, RB Offset 5) Link ☐ LTE(RB Size 3, RB Offset 0) Link ☐ LTE(RB Size 3, RB Offset 1) Link ☐ LTE(RB Size 3, RB Offset 3) Link ☐ LTE(RB Size 6, RB Offset 0) Link	QPSK
	3 MHz	☐ LTE(RB Size 1, RB Offset 0) Link ☒ LTE(RB Size 1, RB Offset 7) Link ☐ LTE(RB Size 1, RB Offset 14) Link ☐ LTE(RB Size 8, RB Offset 0) Link ☐ LTE(RB Size 8, RB Offset 3) Link ☐ LTE(RB Size 8, RB Offset 7) Link ☐ LTE(RB Size 15, RB Offset 0) Link	QPSK
	5 MHz	☒ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 12) Link ☐ LTE(RB Size 1, RB Offset 24) Link ☐ LTE(RB Size 12, RB Offset 0) Link ☐ LTE(RB Size 12, RB Offset 6) Link ☐ LTE(RB Size 12, RB Offset 13) Link ☐ LTE(RB Size 25, RB Offset 0) Link	QPSK
	10 MHz	☒ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 24) Link ☐ LTE(RB Size 1, RB Offset 49) Link ☐ LTE(RB Size 25, RB Offset 0) Link ☐ LTE(RB Size 25, RB Offset 12) Link ☐ LTE(RB Size 25, RB Offset 25) Link ☐ LTE(RB Size 50, RB Offset 0) Link	QPSK

1.3. EUT Test Step

1	Setup the EUT shown on "Configuration of Test System Details".
2	Turn on the power of all equipment.
3	EUT run test program test.

1.4. Test Instruments

For Conducted

Test Period: Mar. 16 ~ Mar. 17, 2019

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Cycle
4 Way Divider	Woken	01204056002D	150504	11/16/2018	1 year
Cable	EMCI	N/A	1#	09/18/2018	1 year
Cable	EMCI	N/A	2#	09/18/2018	1 year
Cable	EMCI	N/A	3#	09/18/2018	1 year
Cable	EMCI	N/A	4#	09/18/2018	1 year
Cable	EMCI	N/A	5#	09/18/2018	1 year
Spectrum Analyzer (10Hz~26.5GHz)	Agilent	N9020A	MY53420615	09/18/2018	1 year
Programmable temp & humi chamber	ETAI	9712A	647	11/15/2018	1 year
Radio Communication Analyzer	Anritsu	MT8820C	6201144493	09/18/2018	1 year
Signal Generator	Agilent	E8257D	MY53400659	09/18/2018	1 year
Signal Generator	Agilent	N5182B	MY53050940	09/18/2018	1 year
Test Site	ATL	RF	RF	N.C.R.	-----

1.5. Test Site Environment

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	26
Humidity (%RH)	25-75	60
Barometric pressure (mbar)	860-1060	990

Test Setting Condition		
N.V.	Normal Voltage	AC 120 V
N.T.	Normal Temperature	+25 °C



1.6. Summary of Test Result

FCC Rule	Description	Result
§2.1046	Conducted Output Average Power	Pass
§90.635	Equivalent Isotropic Radiated Power / Equivalent Radiated Power	N/A (Note1)
§2.1055	Frequency Stability	N/A (Note1)
§2.1049	Emission Bandwidth & Occupied Bandwidth	N/A (Note1)
KDB 971168	Peak to average ratio	N/A (Note1)
§2.1051 §90.543	Band Edge	N/A (Note1)
§2.1051 §90.543	Conducted Spurious Emissions	N/A (Note1)
§2.1053 §90.543	Radiated Spurious Emissions	N/A (Note1)

Note1: Class II permissive change. No need for verification.

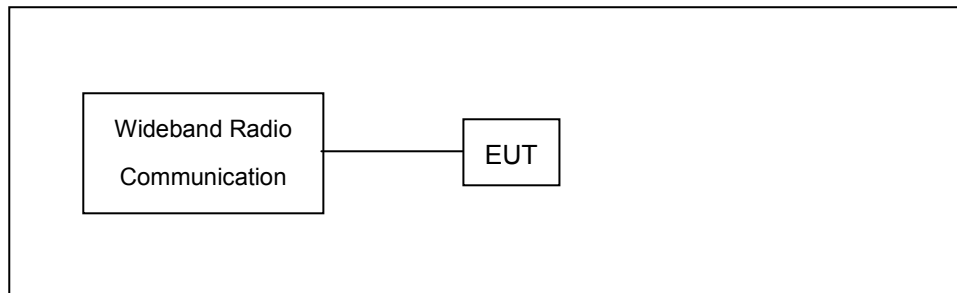
2 Measurement Procedure

2.1. Conducted Output Average Power Test

■ Limit

N/A

■ Test Setup



■ Test Procedure

- The EUT was set up for the maximum power with simulator.
- Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

■ Uncertainty

The measurement uncertainty is defined as for Conducted Power measurement is 1.2 dB.

3 Test Results

Conducted Output Average Power

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 26	1.4 MHz	QPSK	26697	814.7	1	0	23.26	0.212
					1	2	23.19	0.208
					1	5	23.12	0.205
					3	0	23.11	0.205
					3	1	23.15	0.207
					3	3	23.10	0.204
					6	0	22.08	0.161
			26740	819.0	1	0	23.14	0.206
					1	2	23.27	0.212
					1	5	23.02	0.200
					3	0	22.91	0.195
					3	1	23.07	0.203
					3	3	23.00	0.200
					6	0	21.95	0.157
			26783	823.3	1	0	23.20	0.209
					1	2	22.97	0.198
					1	5	22.90	0.195
					3	0	22.98	0.199
					3	1	22.96	0.198
					3	3	22.91	0.195
					6	0	21.87	0.154
		16QAM	26697	814.7	1	0	22.49	0.177
					1	2	22.52	0.179
					1	5	22.45	0.176
					3	0	22.35	0.172
					3	1	22.38	0.173
					3	3	22.28	0.169
					6	0	21.39	0.138
			26740	819.0	1	0	22.31	0.170
					1	2	22.31	0.170
					1	5	22.35	0.172
					3	0	22.01	0.159
					3	1	22.15	0.164
					3	3	21.96	0.157
					6	0	21.44	0.139
			26783	823.3	1	0	22.42	0.175
					1	2	22.23	0.167
					1	5	22.27	0.169
					3	0	22.03	0.160
					3	1	22.07	0.161
					3	3	21.93	0.156
					6	0	21.43	0.139

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 26	3 MHz	QPSK	26705	815.5	1	0	23.20	0.209
					1	7	23.31	0.214
					1	14	23.18	0.208
					8	0	22.27	0.169
					8	3	22.22	0.167
					8	7	22.29	0.169
					15	0	22.28	0.169
			26740	819.0	1	0	23.05	0.202
					1	7	23.16	0.207
					1	14	22.96	0.198
					8	0	22.08	0.161
					8	3	22.04	0.160
					8	7	21.91	0.155
					15	0	21.91	0.155
			26775	822.5	1	0	23.06	0.202
					1	7	23.23	0.210
					1	14	22.97	0.198
					8	0	22.02	0.159
					8	3	22.02	0.159
					8	7	21.93	0.156
					15	0	21.92	0.156
		16QAM	26705	815.5	1	0	22.44	0.175
					1	7	22.32	0.171
					1	14	22.51	0.178
					8	0	21.16	0.131
					8	3	21.23	0.133
					8	7	21.26	0.134
					15	0	21.15	0.130
			26740	819.0	1	0	22.33	0.171
					1	7	22.53	0.179
					1	14	22.18	0.165
					8	0	21.10	0.129
					8	3	21.04	0.127
					8	7	21.10	0.129
					15	0	20.90	0.123
			26775	822.5	1	0	22.43	0.175
					1	7	22.50	0.178
					1	14	22.20	0.166
					8	0	21.09	0.129
					8	3	20.93	0.124
					8	7	21.01	0.126
					15	0	20.96	0.125

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 26	5 MHz	QPSK	26715	816.5	1	0	23.32	0.215
					1	12	23.26	0.212
					1	24	23.11	0.205
					12	0	22.27	0.169
					12	6	22.41	0.174
					12	13	22.09	0.162
			26740	819.0	25	0	22.11	0.163
					1	0	23.20	0.209
					1	12	23.03	0.201
					1	24	23.00	0.200
					12	0	21.94	0.156
					12	6	22.09	0.162
					12	13	21.88	0.154
					25	0	21.95	0.157
			26765	821.5	1	0	23.19	0.208
					1	12	23.19	0.208
					1	24	23.26	0.212
					12	0	22.37	0.173
					12	6	22.43	0.175
					12	13	22.14	0.164
					25	0	22.17	0.165
		16QAM	26715	816.5	1	0	22.45	0.176
					1	12	22.32	0.171
					1	24	22.11	0.163
					12	0	21.24	0.133
					12	6	21.22	0.132
					12	13	21.18	0.131
			26740	819.0	25	0	21.11	0.129
					1	0	22.37	0.173
					1	12	22.39	0.173
					1	24	22.29	0.169
					12	0	20.98	0.125
					12	6	21.11	0.129
					12	13	21.04	0.127
					25	0	20.96	0.125
			26765	821.5	1	0	22.51	0.178
					1	12	22.31	0.170
					1	24	22.35	0.172
					12	0	21.40	0.138
					12	6	21.26	0.134
					12	11	21.13	0.130
					25	0	21.26	0.134



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 26	10 MHz	QPSK	26740	819	1	0	23.26	0.212
					1	24	23.03	0.201
					1	49	22.99	0.199
					25	0	22.15	0.164
					25	12	22.08	0.161
					25	25	21.98	0.158
					50	0	22.07	0.161
		16QAM	26740	819	1	0	22.44	0.175
					1	24	22.39	0.173
					1	49	22.28	0.169
					25	0	21.06	0.128
					25	12	21.06	0.128
					25	25	20.95	0.124
					50	0	20.98	0.125