FCC RF Test Report

APPLICANT	:	Motorola Solutions Inc.
EQUIPMENT 1	:	1)EVOLVE SMART HANDHELD W STD BATTERY 2)EVOLVE SMART HANDHELD W HICAP BATT
EQUIPMENT 2	:	EVOLVE-I IS SMART HANDHELD W IS HICAP BATT
BRAND NAME	:	Motorola Solutions
MODEL NAME 1	:	EVOLVE
MODEL NAME 2	:	EVOLVE-I
MODEL NUMBER 1	:	1)HK2136A 2)HK2156A
MODEL NUMBER 2	:	HK2137A
FCC ID	:	AZ489FT7134
STANDARD	:	47 CFR Part 2, 96
CLASSIFICATION	:	Citizens Band End User Devices (CBE)
EQUIPMENT TYPE	:	End User Equipment
TEST DATE(S)	:	Jul. 30, 2021

We, Sporton International (Kunshan) Inc., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.26-2015 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International (Kunshan) Inc., the test report shall not be reproduced except in full.

Jason Jia

Reviewed by: Jason Jia / Supervisor

Alex Wang

Approved by: Alex Wang / Manager

ACCREDITED Cert #5145.02

Sporton International (Kunshan) Inc.

No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China

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Appendix A. Test Results of Conducted Test

Appendix B. Test Results of EIRP and Radiated Test

Appendix C. Test Setup Photographs

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History of this test report

Report No.	Version	Description	Issued Date
FG052616-22A	01	Initial issue of report	Sep. 28, 2021
FG052616-22A	02	Add the information for EVOLVE sample	Nov. 18, 2021
FG052616-22A	03	Update the Equipment 1's name	Jun. 14, 2022

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	§2.1046	Conducted Output Power	Reporting only	-
3.2	§96.41	Maximum E.I.R.P	Pass	-
4.4	§2.1051 §96.41	Radiated Spurious Emission	Pass	Under limit 18.00 dB at 10848.000 MHz

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1 General Description

1.1 Applicant

Motorola Solutions Inc.
8000 West Sunrise Boulevard, Fort Lauderdale, Florida

1.2 Manufacturer

Motorola Solutions Malaysia Sdn. Bhd.
Plot 2A, Medan Bayan Lepas, Mukim 12, S.W.D. 11900 Bayan Lepas, Penang, Malaysia.

1.3 Feature of Equipment Under Test

Product Feature	
Equipment 1	1)EVOLVE SMART HANDHELD W STD BATTERY 2)EVOLVE SMART HANDHELD W HICAP BATT
Equipment 2	EVOLVE-i IS SMART HANDHELD W IS HICAP BATT
Brand Name	Motorola Solutions
Model Name 1	EVOLVE
Model Name 2	EVOLVE-i
Model Number 1	1)HK2136A 2)HK2156A
Model Number 2	HK2137A
FCC ID	AZ489FT7134
Tx Frequency	LTE Band 42: 3552.5 MHz ~ 3597.5 MHz LTE Band 43: 3602.5 MHz ~ 3697.5MHz LTE Band 48: 3552.5 MHz ~ 3697.5 MHz
Rx Frequency	LTE Band 42: 3552.5 MHz ~ 3597.5 MHz LTE Band 43: 3602.5 MHz ~ 3697.5MHz LTE Band 48: 3552.5 MHz ~ 3697.5 MHz
Bandwidth	5MHz / 10MHz / 15MHz / 20MHz
Maximum Output Power to Antenna	20.10 dBm
Type of Modulation	QPSK / 16QAM
Antenna Type & Gain	Fixed Stub Antenna with gain 1dBi
IMEI Code	Radiation: 353624640008330
HW Version	PVT
SW Version	EVOLVE-userdebug 10 QKQ1.200623.002 D01.01.43 release-keys
EUT Stage	Identical Prototype

Remark:

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. This is a variant report. The purpose is to change Component of RF PA, PL sensor and EMCP, for sample change note from HW P2.0 to HW PVT Stage, please refer the Product Equality Declaration as Appendix D. Based on the similarity between current and previous project, only the related test cases were verified from Original test report which can be found on FCC website under original application.

3. According to the Product Equality Declaration as Appendix D about the difference between EVOLVE and EVOLVE-i, the test result is not affected by two samples, we only performed testing with EVOLVE-i sample.

1.4 Specification of Accessory

Accessories Information				
MUC Charger base	**Brand Name**	Motorola	**Model Name**	PMPN4563A
	Description	CHGR DESKTOP MULTI UNIT EXT PS BASE		
AC Adapter MUC (US)	**Brand Name**	Motorola	**Model Name**	PMPN4564A
	Power Rating	I/P: 100 - 240Vac, 1.3A, O/P: 15Vdc, 6A		
Power Supply	**Brand Name**	Motorola	**P/N**	PS000242A01
AC Adapter1 (US) Micro-USB rapid-rate plug-in charger	**Brand Name**	Motorola	**P/N**	PS000150A11
	Power Rating	I/P: 100 - 240Vac, 0.25A, O/P: 5Vdc, 1.5A		
DC Adapter 2 Vehicular Power Adapter (VPA)	**Brand Name**	Motorola	**P/N**	PMPN4169A
	Power Rating	I/P: 10.8 – 33.0Vac, 1.1A, O/P: 5Vdc, 1.5A		
Battery 1	**Brand Name**	Motorola Solutions	**P/N**	BT000593A01
	Rated	5800mAh		
Battery 2	**Brand Name**	Motorola Solutions	**P/N**	BT000592A01
	Rated	2900mAh		
Battery 3	**Brand Name**	Motorola Solutions	**P/N**	BT000594A01
	Rated	5800mAh		
Earpiece	**Brand Name**	Motorola Solutions	**P/N**	PMLN8191A
	Signal Line	1.128meter, non-shielded cable, without ferrite core		
Remote Speaker Microphone 1	**Brand Name**	Motorola Solutions	**P/N**	PMMN4125B
	Signal Line	0.54 meter(normal), 2.5 meter (stretch) shielded cable, without ferrite core		
BT Wired Speaker Mic (WM500)	**Brand Name**	Motorola Solutions	**P/N**	PMMN4127A
Bluetooth Earpiece	**Brand Name**	Motorola Solutions	**P/N**	PMLN7851A(EP900)
Belt Clip Holster	**Brand Name**	Motorola Solutions	**Model Name**	PMLN6970A
Belt Clip Holster (Short)	**Brand Name**	Motorola Solutions	**Model Name**	NTN8266B
Belt Clip Holster (Long)	**Brand Name**	Motorola Solutions	**Model Name**	PMLN7965A

Remark: Battery 1 and Battery 2 are for EVOLVE sample, Battery 3 is for EVOLVE-i Sample.

1.5 Maximum EIRP Power and Emission Designator

LTE Band 48		QPSK		16QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
20	**3560~3690**	0.1230	-	0.1040	-

1. LTE Band 48 overlaps the entire frequency range of LTE Band 42 and Band 43 under Part 96 rule. Therefore, the test results of LTE Band 48 provided in this report covers Band 42 and Band 43
2. Based on engineering evaluation, only the maximum bandwidth and the worst modulation test results are shown in the report.

1.6 Testing Site

Sporton International (Kunshan) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International (Kunshan) Inc.		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158 FAX : +86-512-57900958		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	03CH04-KS TH01-KS	CN1257	314309

1.7 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH04-KS	AUDIX	E3	6.2009-8-24a

1.8 Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ANSI C63.26-2015
- ANSI / TIA-603-E
- 47 CFR Part 2, 96
- FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- FCC KDB 940660 D01 Part 96 CBRS v03
- FCC KDB 412172 D01 Determining ERP and EIRP v01r01

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

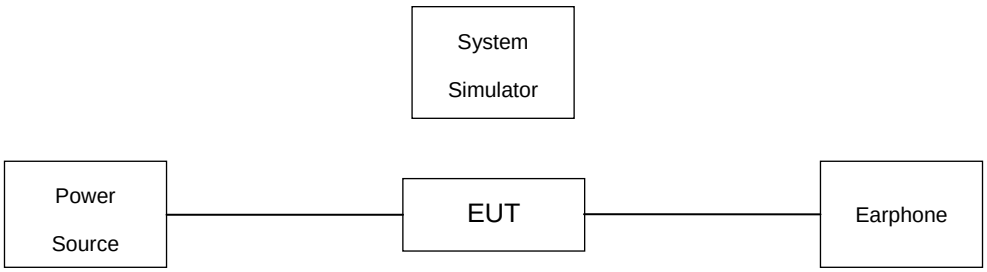
2.1 Test Mode

Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v03r01 with maximum output power.

For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Y plane) were recorded in this report.

Test Items	Band	Bandwidth (MHz)						Modulation			RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	–	1	Half	Full	L	M	H
Max. Output Power	48	-	-	v	v	v	v	v	v	–	v	v	v	v	v	v
E.R.P / E.I.R.P	48	-	-	v	v	v	v	v	v	–	v			v	v	v
Radiated Spurious Emission	48	Worst Case													v	
Remark	1. The mark "**v** " means that this configuration is chosen for testing 2. The mark "-" means that this bandwidth is not supported. 3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported. 4. LTE Band 48 overlaps the entire frequency range of LTE Band 42 and Band 43 under Part 96 rule. Therefore, the test results of LTE Band 48 provided in this report covers Band 42 and Band 43															

2.2 Connection Diagram of Test System



This example is connection diagram of EUT test configurations.

. For detail, please refer to test mode configuration and setup photographs for each test item.

2.3 Support Unit used in test configuration

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	LTE Base Station	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8 m

2.4 Frequency List of Low/Middle/High Channels

LTE Band 48 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	55340	55990	56640
	Frequency	3560.0	3625.0	3690.0
15	Channel	55315	55990	56665
	Frequency	3557.5	3625.0	3692.5
10	Channel	55290	55990	56690
	Frequency	3555.0	3625.0	3695.0
5	Channel	55265	55990	56715
	Frequency	3552.5	3625.0	3697.5

3 Conducted Test Items

3.1 Conducted Output Power

3.1.1 Description of the Conducted Output Power Measurement

A system simulator was used to establish communication with the EUT. Its parameters were set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

3.1.2 Test Procedures

1. The transmitter output port was connected to the system simulator.
2. Set EUT at maximum power through the system simulator.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure and record the power level from the system simulator.

3.2 EIRP

3.2.1 Description of the EIRP Measurement

EIRP and PSD limits for CBRS equipment as below table:

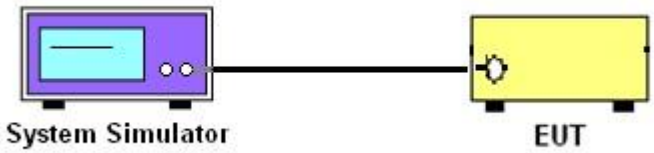
Device		Maximum EIRP (dBm/10 MHz)	Maximum PSD (dBm/MHz)
☒	**End User Device**	23	n/a
☐	**Category A CBSD**	30	20
☐	**Category B CBSD**	47	37

Remark:

The worst case EIRP shown in this section is found with LTE operating only using 1RB. As such, the EIRP/10MHz and full channel EIRP values will be identical since 1RB is fully contained within all available channel bandwidths for LTE Band 48 (i.e. 5, 10, 15, 20MHz)

3.2.2 EIRP Power Test Procedures

1. Establishing a communications link with the call box (Base station), the parameters were set to force the EUT transmitting at maximum output power level. Use the average power measurement function to measure total channel power of each channel bandwidth (per ANSI C63.26-2015 Section 5.2.1)



2. Determining ERP and/or EIRP from conducted RF output power measurements (Per ANSI C63.26-2015 Section 5.2.5.5)

   EIRP = $P_T + G_T – L_C$, ERP = EIRP -2.15, where

   P_T = transmitter output power in dBm

   G_T = gain of the transmitting antenna in dBi

   L_C = signal attenuation in the connecting cable between the transmitter and antenna in dB

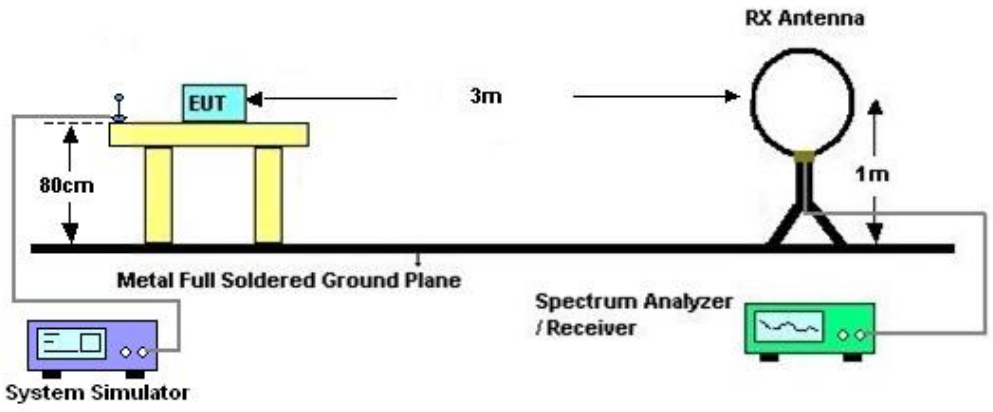
4 Radiated Test Items

4.1 Measuring Instruments

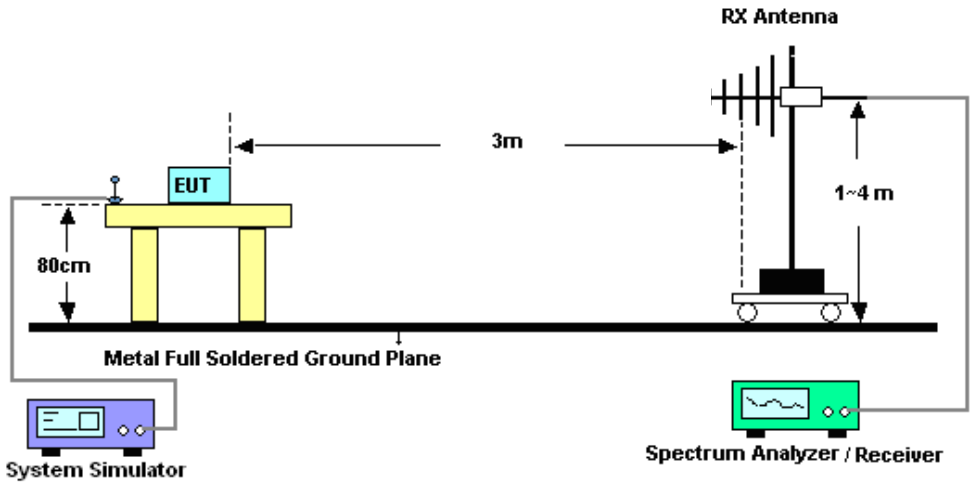
See list of measuring instruments of this test report.

4.2 Test Setup

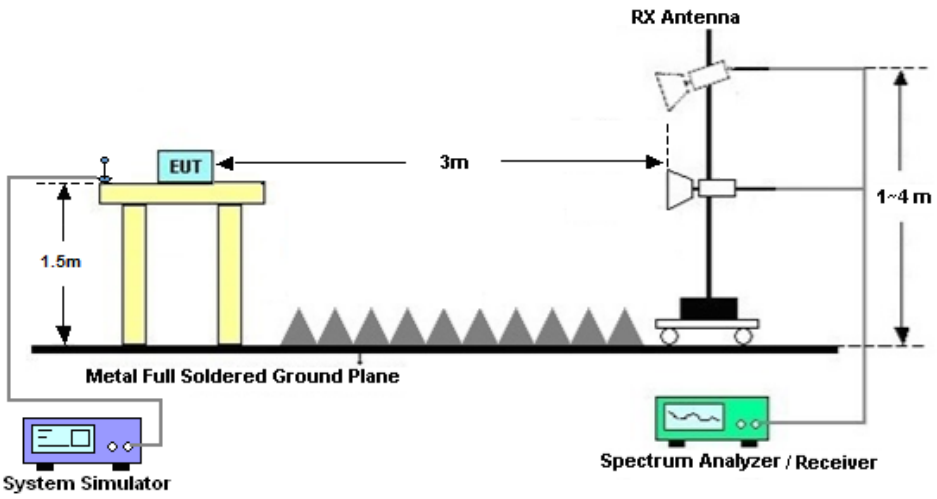
4.2.1 For radiated test below 30MHz



4.2.2 For radiated test from 30MHz to 1GHz



4.2.3 For radiated test above 1GHz



4.3 Test Result of Radiated Test

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

Please refer to Appendix B.

4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission Measurement

The radiated spurious emission was measured by substitution method according to ANSI / TIA-603-E. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least -40dBm / MHz.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

4.4.2 Test Procedures

1. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
5. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
   Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
   EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
   ERP (dBm) = EIRP - 2.15
8. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
   The limit line is −40dBm/MHz

5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Nov. 01, 2020	Jul. 30, 2021	Oct. 31, 2021	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz-44G,MAX 30dB	Apr. 13, 2021	Jul. 30, 2021	Apr. 12, 2022	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Nov. 01, 2020	Jul. 30, 2021	Oct. 31, 2021	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz-1GHz	May 30, 2021	Jul. 30, 2021	May 29, 2022	Radiation (03CH04-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75957	1GHz~18GHz	Nov. 01, 2020	Jul. 30, 2021	Oct. 31, 2021	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101115	18GHz~40GHz	Jan. 06, 2021	Jul. 30, 2021	Jan. 05, 2022	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	187289	9KHz-1GHz	Jan. 06, 2021	Jul. 30, 2021	Jan. 05, 2022	Radiation (03CH04-KS)
Amplifier	MITEQ	EM18G40GGA	060728	18~40GHz	Jan. 07, 2021	Jul. 30, 2021	Jan. 06, 2022	Radiation (03CH04-KS)
high gain Amplifier	MITEQ	AMF-7D-00101800-30-10P	2025788	1Ghz-18Ghz	Jan. 06, 2021	Jul. 30, 2021	Jan. 05, 2022	Radiation (03CH04-KS)
Amplifier	Keysight	83017A	MY57280106	500MHz~26.5GHz	Oct. 14, 2020	Jul. 30, 2021	Oct. 13, 2021	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Jul. 30, 2021	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Jul. 30, 2021	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Jul. 30, 2021	NCR	Radiation (03CH04-KS)

NCR: No Calibration Required

6 Uncertainty of Evaluation

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.3dB

Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.8dB

Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.8dB

---------- THE END ----------

Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power) and EIRP

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP(W)		
Channel				55340	55990	56640			
Frequency (MHz)				3560	3625	3690	L	M	H
20	QPSK	1	0	19.90	19.51	19.24	0.1230	0.1125	0.1057
20	QPSK	1	99	19.85	19.44	19.22	0.1216	0.1107	0.1052
20	QPSK	100	0	18.89	18.45	18.44	0.0975	0.0881	0.0879
20	16QAM	1	0	19.17	18.56	18.39	0.1040	0.0904	0.0869
Channel				55315	55990	56665	EIRP(W)		
Frequency (MHz)				3557.5	3625	3692.5	L	M	H
15	QPSK	1	0	19.89	19.37	19.21	0.1227	0.1089	0.1050
15	16QAM	1	0	19.12	18.56	18.39	0.1028	0.0904	0.0869
Channel				55290	55990	56690	EIRP(W)		
Frequency (MHz)				3555	3625	3695	L	M	H
10	QPSK	1	0	19.88	19.37	19.18	0.1225	0.1089	0.1042
10	16QAM	1	0	19.16	18.56	18.40	0.1038	0.0904	0.0871
Channel				55265	55990	56715	EIRP(W)		
Frequency (MHz)				3552.5	3625	3697.5	L	M	H
5	QPSK	1	0	19.82	19.38	19.20	0.1208	0.1091	0.1047
5	16QAM	1	0	19.10	18.57	18.39	0.1023	0.0906	0.0869

Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

LTE Band 48 / 20MHz / QPSK								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	7230	-62.82	-40	-22.82	-74.28	2.84	14.30	H
	10848	-58.29	-40	-18.29	-68.23	3.49	13.43	H
	14466	-59.68	-40	-19.68	-69.92	3.85	14.09	H
	7230	-62.86	-40	-22.86	-74.32	2.84	14.30	V
	10848	-58.00	-40	-18.00	-67.94	3.49	13.43	V
	14466	-59.07	-40	-19.07	-69.31	3.85	14.09	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Appendix D. Product Equality Declaration

MOTOROLA SOLUTIONS

Date: March 25, 2021

Product Equality Declaration

We, Motorola Solutions Malaysia Sdn Bhd, declare on our sole responsibility for the product of EVOLVE as below:
From hardware vintage P2 EVOLVE SKU to hardware vintage P2.2 EVOLVE SKU,

	Main Changes
1	increase bypassing capacitors to Charger Contactor Pin, Qet Circuitry, VPH_PWR, Battery Connector, Speaker Springs，Vibrator Springs and Side Key/Receiver/Main Key/Toggle Key/Universal Serial Bus/Headset/Volume Knob flexible printed circuit , to lower de-sense to antenna.
2	increase Single Retriggerable Monostable Multivibrator to power on circuitry to improve user experiences of power on
3	increase springs to enhance grounding between printed circuit board assembly and front housing.
4	diversity antenna, change feed point position, to improve diversity reception performance
5	move part of VPH_PWR line from surface layer to inner layer
6	Optimize clearance of antenna tuner and antenna spring of both main antenna and diversity antenna
7	Remove the screw and nut under WiFi/Bluetooth/global navigation satellite system antenna
8	Optimize WIFI 5G layout to solve Radiated Spurious Emission issue
9	Increase capacitors on headset microphone signals and around audio codec to get 3dB margin in Radio Frequency, Common mode(CS) test wall charger and accessory mode

Except listings above, the others are all the same.

Should you have any questions or comments regarding this matter, please have my best attention.

Sincerely yours,

Contact Person: Mahen Kirubakaran
COMPANY: Motorola Solutions Malaysia Sdn Bhd
Tel: +60 (4) 2241218
Fax: N/A
E-Mail: mahen@motorolasolutions.com

MOTOROLA SOLUTIONS

Date: March 25, 2021

Product Equality Declaration

We, Motorola Solutions Malaysia Sdn Bhd, declare on our sole responsibility for the product of EVOLVE-i as below:
From hardware vintage P2.2 EVOLVE-i SKU to hardware vintage P3 EVOLVE-i SKU,

	Main Changes
1	Increase LDO as MIC_BIAS power supplier, to solve EU RED Cert-Radio Frequency, Common mode(CS) test issue.
2	Optimize GPS routing, from inner layer to bottom layer.
3	Due to above changes, the PCB will update the part number.
4	Add a new Battery

Except listings above, the others are all the same.

Should you have any questions or comments regarding this matter, please have my best attention.

Sincerely yours,

Contact Person: Mahen Kirubakaran
COMPANY: Motorola Solutions Malaysia Sdn Bhd
Tel: +60 (4) 2241218
Fax: N/A
E-Mail: mahen@motorolasolutions.com

Date: October 22, 2021

Product Equality Declaration

We, Motorola Solutions Inc. CORPORATION, declare on our sole responsibility for the product of EVOLVE and EVOLVE-i as below:

There is no difference between P3 and PVT HW version, and, the difference of EVOLVE-i and EVOLVE is RF section is same only with extra protection components in EVOLVE-i.

i) Both SKUs share the same PCB with all traces.

ii) EVOLVE-i SKU will have protection circuits with fuse and Zener diode (BOM different).

iii) EVOLVE SKU the fuse will become 0 ohm and Zener diodes will be not populated.

iv) The RF sections are the same for both EVOLVE-i and EVOLVE SKUs.

Except listings above, the others are all the same.

Should you have any questions or comments regarding this matter, please have my best attention.

Sincerely yours,

Contact Person: Hasrolnizam Bin Mohd Mokhtar

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MOTOROLA SOLUTIONS

Date: October 26, 2021

Product Equality Declaration

We, Motorola Solutions Inc. CORPORATION, declare on our sole responsibility for the product of EVOLVE and EVOLVE-i as below:

There are three components，CBRS bands RF PA, PL sensor，and EMCP，are replaced due to the previous filled type of the three component are end of life（EOL），detailed information are listed in below table：

NO.	Component	Type	Part Number	Brand	Remark
1	CBRS bands RF PA	Original	QM75042	Qorvo	Compared original part, the alternate part is pin to pin, the layout and schematic is the same No affects the characteristics of the radio
2		Alternate	SKY78215-11	Skyworks	
3	PL Sensor	Original	STK3311-X	SensorTek	Compared original part, the layout of the FPC required to be slight update No affects the characteristics of the radio
4		Alternate	STK3337-X	SensorTek	
5	EMCP	Original	KMDH6001DA-B422T02	Samsung	Compared original part, the alternate part is pin to pin, the layout and schematic is the same No affects the characteristics of the radio
6		Alternate	KMDP6001DA-B425	Samsung	

And, the difference of EVOLVE-i and EVOLVE is RF section is same only with extra protection components in EVOLVE-i

Except listings above, the others are all the same.

Should you have any questions or comments regarding this matter, please have my best attention.

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