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FCC WPT REPORT

Certification

Date of Issue:

December 15, 2021

Test Site/Location:

74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-

si, Gyeonggi-do, 17383 KOREA

Report No.: HCT-RF-2110-FC024-R2

Address:

129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do,

16677, Rep. of Korea

SAMSUNG Electronics Co., Ltd.

Applicant Name:

FCC ID: A3LSMS901B

APPLICANT: SAMSUNG Electronics Co., Ltd.

Model: SM-S901B/DS EUT Type: Mobile Phone

Frequency of Operation

110 kHz ~ 148 kHz(Power sharing) : -12.40 dBμV/m @300 m

& Max. Transmit Power:

FCC Classification:

Part 15 Low Power Transmitter Below 1705 kHz (DCD)

FCC Rule Part(s): FCC Part 15, Subpart C (15.209)

Engineering Statement:

The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurements made, the equipment tested is capable of operation in accordance with the requirements of the FCC Rules under normal use and maintenance.

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FCC ID: A3LSMS901B

REVIEWED BY

Report prepared by: Jeong Ho Kim

Engineer of Telecommunication Testing Center

Report approved by: Jong Seok Lee Manager of Telecommunication Testing Center

This test results were applied only to the test methods required by the standard.

This laboratory is not accredited for the test results marked *. The above Test Report is the accredited test result by (KS Q) ISO/IEC 17025 and KOLAS(Korea Laboratory Accreditation Scheme), which signed the ILAC-MRA. (HCT Accreditation No.: KT197)

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Version

TEST REPORT NO. DATE		DESCRIPTION			
HCT-RF-2110-FC024 October 28, 2021		- First Approval Report			
HCT-RF-2110-FC024-R1 November 05, 2021		- Additional Model delete			
HCT-RF-2110-FC024-R2 Decemmber 15, 2021		- Add the test result (Renesas & S.LSI)			
1101-RF-2110-F0024-R2	Decemmen 15, 2021	- Test result table revised			

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1. EUT DESCRIPTION

Model	SM-S901B/DS
Additional Model	-
EUT Type	Mobile Phone
Power Supply	DC 3.88 V
Frequency of Operation	110 kHz ~ 148 kHz(Power sharing)
Max. Transmit Power	-15.45 dB _μ V/m @300 m (1. PCB Rev 0.7 – Renesas) -15.89 dB _μ V/m @300 m (2. PCB Rev 0.7A – Renesas) -12.40 dB _μ V/m @300 m (3. PCB Rev 0.7A – S.LSI)
Date(s) of Tests	September 24, 2021 ~ December 15, 2021
Serial number	Radiated: R3CR90EYFYM, R3CRB0926FP, R3CRB0923WY

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2. TEST METHODOLOGY

The measurement procedure described in the American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Device (ANSI C63.10-2013) is used in the measurement of the test device.

EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

EUT EXERCISE

The EUT was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements. According to its specifications, the EUT must comply with the requirements of the Section 15.207, 15.209 and 15.247 under the FCC Rules Part 15 Subpart C.

GENERAL TEST PROCEDURES

Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 6.2 of ANSI C63.10. (Version :2013) Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30 MHz using CISPR Quasi-peak and average detector modes.

Radiated Emissions

The EUT is placed on a turn table, which is 0.8 m above ground plane below 1 GHz. Above 1 GHz with 1.5 m using absorbers between the EUT and receive antenna. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3 m away from the receiving antenna, which varied from 1 m to 4 m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes according to the requirements in Section 6.6.5 of ANSI C63.10. (Version: 2013).

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3. INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment's, which is traceable to recognized national standards.

Especially, all antenna for measurement is calibrated in accordance with the requirements of C63.5 (Version : 2017).

4. FACILITIES AND ACCREDITATIONS

FACILITIES

The SAC(Semi-Anechoic Chamber) and conducted measurement facility used to collect the radiated data are located at the 74, Seoicheon-ro 578beon-gil,

Majang-myeon, Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA.

The site is constructed in conformance with the requirements of ANSI C63.4. (Version :2014) and CISPR Publication 22.

Detailed description of test facility was submitted to the Commission and accepted dated April 02, 2018 (Registration Number: KR0032).

EQUIPMENT

Radiated emissions are measured with one or more of the following types of Linearly polarized antennas: tuned dipole, bi-conical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with preselectors and quasi-peak detectors are used to perform radiated measurements.

Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers. Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

5. ANTENNA REQUIREMENTS

According to FCC 47 CFR §15.203:

"An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section."

- (1) The antennas of this E.U.T are permanently attached.
- (2) The E.U.T Complies with the requirement of §15.203

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6. MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.10-2013.

All measurement uncertainty values are shown with a coverage factor of k = 2 to indicate a 95 % level of confidence.

The measurement data shown herein meets or exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

Parameter	Expanded Uncertainty (dB)
Conducted Disturbance (150 kHz ~ 30 MHz)	1.82 (Confidence level about 95 %, <i>k</i> =2)
Radiated Disturbance (9 kHz ~ 30 MHz)	3.40 (Confidence level about 95 %, k=2)
Radiated Disturbance (30 MHz ~ 1 GHz)	4.80 (Confidence level about 95 %, k=2)
Radiated Disturbance (1 GHz ~ 18 GHz)	5.70 (Confidence level about 95 %, k=2)
Radiated Disturbance (18 GHz ~ 40 GHz)	5.05 (Confidence level about 95 %, <i>k</i> =2)

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7. Worst case configuration

Mode	EUT State	Position of Client device	Battery of Client device	Client device	
			1 % ~ 20 %		
		Aligned	20 % ~ 50 %		
	Charging from EUT to Client device		90 % ~ 100 %		
	(See Note 3)		1 % ~ 20 %		
	(000 11010 0)	Cross	20 % ~ 50 %		
			90 % ~ 100 %	Phone	
	Charging from EUT(Charging from TA) to Client device	Aligned	1 % ~ 20 %	(See Note 2)	
Power sharing			20 % ~ 50 %		
			90 % ~ 100 %		
			1 % ~ 20 %		
			20 % ~ 50 %		
			90 % ~ 100 %		
	Charging from		1 % ~ 20 %	\\/_4_L	
	EUT(Charging from TA)	Cross	20 % ~ 50 %	Watch (See Note 2)	
	to Client device		90 % ~ 100 %	(See Note 2)	

Note:

1. Client device:

Of Phone and Wearable device, we tested on Phone and Watch.

2. Client device information:

Phone	Watch
- Model : SM-G986B/DS	- Model : SM-R835F
- Manufacturer : SAMSUNG	- Manufacturer : SAMSUNG
- FCC ID : A3LSMG986B	- FCC ID : A3LSMR835

- 3. EUT can operate the power sharing mode when battery level is over 30%.
 Because test results are not different between fully charged status and battery level 30% status(EUT condition), test were performed fully charged condition.
- 4. All position of loop antenna were investigated and the worst position results are reported.
 - Position : Horizontal, Vertical, Parallel to the ground plane
 - Worst Position : Horizontal
- 5. The EUT was tested in three orthogonal axis(X, Y, Z) and the worst position results are reported.

Axis : X, Y, ZWorst Axis : X



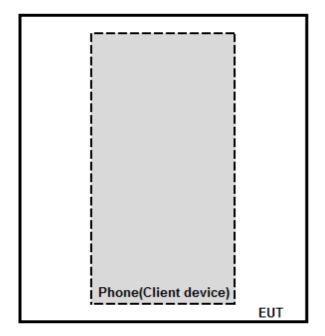
AC Power line Conducted Emissions

- 1. All modes of operation were investigated and the worst case configuration results are reported.
 - Mode : EUT + External accessories(Earphone, etc) + Travel Adapter + Phone(Client device)
 , EUT + Travel Adapter + Phone(Client device)
 - Worst case : EUT + Travel Adapter + Phone(Client device)

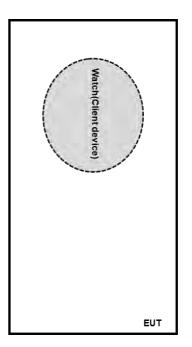
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Test Setup Diagram:

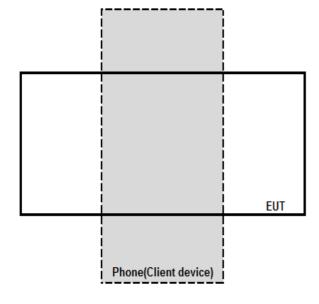
Aligned(Phone to Phone)



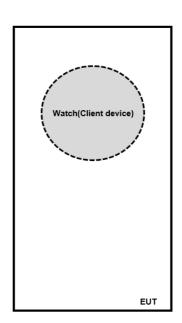
Aligned(Phone to Watch)



Cross (Phone to Phone)



Cross (Phone to Watch)





8. TEST SUMMARY

Test Description	FCC Rule	Limit	Condition	Result
Radiated emission	§15.209	cf. Section 9		Pass
AC Power Line Conducted Emission	§15.207	cf. Section 10	Radiated	Pass
Emission bandwidth.	§2.1049	See note1		See note1

Note:

1. For reporting purposes only.

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9. RADIATED EMISSION MEASUREMENT

Test Settings

1. Analyzer frequency set to the frequency of the radiated spurious emission of interest.

2. RBW:

9 kHz – 150 kHz : 300 Hz 150 kHz – 30 MHz : 10 kHz 30 MHz – 1G Hz : 100 kHz

3. VBW : ≥ 3 x RBW

4. Sweep time: Auto couple

5. Detector : Peak6. Trace : Maxhold

7. Trace was allowed to stabilize

Limit(FCC)

Except as provided elsewhere in this paragraph the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

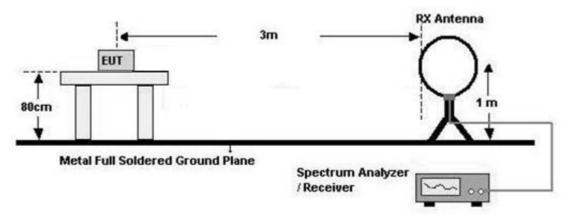
Rule Part	Frequency (MHz)	Limit	
	0.009 ~ 0.490	2400/F(kHz) μV/m@300 m	
	0.490 ~1.705	24000/F(kHz) μV/m@30 m	
	1.705 ~ 30	30 μV/m@30 m	
Part 15.209	30 ~ 88	100 ** μV/m@3 m	
	88 ~ 216	150 ** μV/m@3 m	
	216 ~ 960	200 ** μV/m@3 m	
	Above 960	500 μV/m@3 m	

^{**} Except as provided in 15.209(g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g. 15.231 and 15.241.

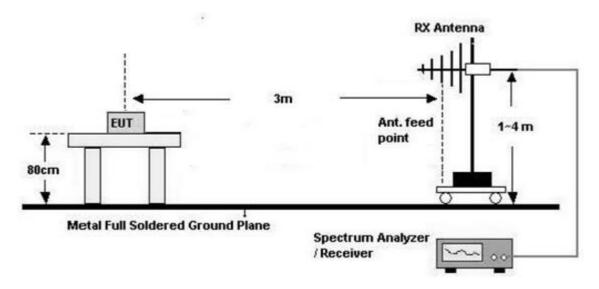
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Test Set-up

Below 30 MHz



30 MHz - 1 GHz



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Test Procedure of Radiated spurious emissions(Below 30 MHz)

- 1. The EUT was placed on a non-conductive table located on semi-anechoic chamber.
- 2. The loop antenna was placed at a location 3 m from the EUT.
- 3. The EUT is placed on a turntable, which is 0.8 m above ground plane.
- 4. We have done x, y, z planes in EUT and horizontal and vertical polarization and Parallel to the ground plane in detecting antenna.
- 5. The limit is converted from microvolts/meter to decibel microvolts/meter. Sample Calculation:
 - * Result level(dBµV/m@30 m)
 - = Measured level(dBµV/m@3 m) + Ant factor(dB/m) + Cable Loss(dB) Distance Correction Factor.
- 6. Distance Correction
 - * 0.009 MHz 0.490 MHz :

 $40\log(3 \text{ m}/300 \text{ m}) = -80 \text{ dB}$

* 0.490 MHz - 30 MHz:

 $40\log(3 \text{ m}/30 \text{ m}) = -40 \text{ dB}$

- 7. Plots were taken without using any correction factors.
- 8. The worst case plots are reported.

KDB 414788 OFS and Chamber Correlation Justification

Base on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

OFS and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

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Test Procedure of Radiated spurious emissions(Below 1 GHz)

- 1. The EUT was placed on a non-conductive table located on semi-anechoic chamber.
- 2. The EUT is placed on a turntable, which is 0.8m above ground plane.
- 3. The Hybrid antenna was placed at a location 3 m from the EUT, which is varied from 1m to 4m to find out the highest emissions.
- 4. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
- 5. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
- 6. Spectrum Setting
 - (1) Measurement Type(Peak):
 - Measured Frequency Range: 30 MHz 1 GHz
 - Detector = Peak
 - Trace = Maxhold
 - -RBW = 100 kHz
 - VBW ≥ 3 x RBW
- 7. Total = Measured Value + Antenna Factor(A.F) + Cable Loss(C.L)
- 8. Measurement value only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.

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■Test Result

(1. PCB Rev 0.7 - Renesas)

Frequency	Reading Level	Ant. Factor	Cable Loss	Distance Correction	Result Level	Limit	Margin
[kHz]	[dBµV/m] @3 m	[dB/m]	[dB]	[dB]	[dBµV/m] @300 m	[dBµV/m]	[dB]
9.2	10.46	18.90	0.69	-80.00	-49.95	48.33	98.28
#113.567	44.57	19.29	0.69	-80.00	-15.45	26.50	41.95
115.593	13.58	19.29	0.69	-80.00	-46.44	26.35	72.79
341.80	33.52	19.20	0.69	-80.00	-26.59	16.93	43.52
Fraguenes	Booding Lovel	Ant.	Cable	Distance	Result	Limit	Margin
Frequency	Reading Level	Factor	Loss	Correction	Level	Limit	Margin
FI-11-3	[dBµV/m]	[dD/m]	[4D]	(4D)	[dBµV/m]	[dD::\//mal	[4D]
[kHz]	@3 m	[dB/m]	[dB]	[dB]	@30 m	[dBµV/m]	[dB]
564.50	30.00	19.20	0.69	-40.00	9.89	32.57	22.68
7396.0	12.83	19.55	0.69	-40.00	-6.93	29.54	36.47

Note

1. "#" Fundamental Frequency

2. EUT Mode: Charging from EUT to Phone

3. Position: Aligned

4. 30 MHz - 1GHz: No Critical peaks found

5. The fundamental frequency(110kHz – 148kHz) varies depending on the position of client device.

All fundamental frequency were investigated and the worst results are reported.

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Frequency	Reading Level	Ant. Factor	Cable Loss	Distance Correction	Result Level	Limit	Margin
[kHz]	[dBµV/m] @3 m	[dB/m]	[dB]	[dB]	[dBµV/m] @300 m	[dBµV/m]	[dB]
9.07	11.40	18.90	0.69	-80.00	-49.01	48.45	97.46
#113.567	41.03	19.29	0.69	-80.00	-18.99	26.50	45.49
115.593	16.90	19.29	0.69	-80.00	-43.12	26.35	69.47
341.8	31.56	19.20	0.69	-80.00	-28.55	16.93	45.48
Frequency	Reading Level	Ant. Factor	Cable Loss	Distance Correction	Result Level	Limit	Margin
[kHz]	[dBµV/m] @3 m	[dB/m]	[dB]	[dB]	[dBµV/m] @30 m	[dBµV/m]	[dB]
564.5	28.6	19.20	0.69	-40.00	8.49	32.57	24.08
7513.0	12.55	19.55	0.69	-40.00	-7.21	29.54	36.75

<u>Note</u>

1. "#" Fundamental Frequency

2. EUT Mode: Charging from EUT to Phone

3. Position: Cross

4. 30 MHz - 1GHz: No Critical peaks found

5. The fundamental frequency(110kHz – 148kHz) varies depending on the position of client device.

All fundamental frequency were investigated and the worst results are reported.

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Frequency	Reading Level	Ant. Factor	Cable Loss	Distance Correction	Result Level	Limit	Margin
[kHz]	[dBµV/m] @3 m	[dB/m]	[dB]	[dB]	[dBµV/m] @300 m	[dBµV/m]	[dB]
9.07	11.22	18.90	0.69	-80.00	-49.19	48.45	97.64
#113.567	42.99	19.29	0.69	-80.00	-17.03	26.50	43.53
145.26	6.29	19.28	0.69	-80.00	-53.74	24.36	78.10
340.7	32.39	19.20	0.69	-80.00	-27.72	16.96	44.68
Frequency	Reading Level	Ant. Factor	Cable Loss	Distance Correction	Result Level	Limit	Margin
[kHz]	[dBµV/m] @3 m	[dB/m]	[dB]	[dB]	[dBµV/m] @30 m	[dBµV/m]	[dB]
566.9	27.83	19.20	0.69	-40.00	7.72	32.53	24.81
7396.0	13.69	19.55	0.69	-40.00	-6.07	29.54	35.61

<u>Note</u>

- 1. "#" Fundamental Frequency
- 2. EUT Mode: Charging from EUT(Charging from TA) to Phone
- 3. Position: Aligned
- 4. 30 MHz 1GHz: No Critical peaks found
- 5. The fundamental frequency(110kHz 148kHz) varies depending on the position of client device.

 All fundamental frequency were investigated and the worst results are reported.

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Frequency	Reading Level	Ant. Factor	Cable Loss	Distance Correction	Result Level	Limit	Margin
[kHz]	[dBµV/m] @3 m	[dB/m]	[dB]	[dB]	[dBµV/m] @300 m	[dBµV/m]	[dB]
9.07	10.84	18.90	0.69	-80.00	-49.57	48.45	98.02
#113.567	42.93	19.29	0.69	-80.00	-17.09	26.50	43.59
145.188	7.10	19.28	0.69	-80.00	-52.93	24.37	77.30
341.8	33.69	19.20	0.69	-80.00	-26.42	16.93	43.35
Frequency	Reading Level	Ant. Factor	Cable Loss	Distance Correction	Result Level	Limit	Margin
[kHz]	[dBµV/m] @3 m	[dB/m]	[dB]	[dB]	[dBµV/m] @30 m	[dBµV/m]	[dB]
564.5	31.35	19.20	0.69	-40.00	11.24	32.57	21.33
7318.0	13.95	19.54	0.69	-40.00	-5.82	29.54	35.36

<u>Note</u>

- 1. "#" Fundamental Frequency
- 2. EUT Mode: Charging from EUT(Charging from TA) to Phone
- 3. Position: Cross
- 4. 30 MHz 1GHz: No Critical peaks found
- 5. The fundamental frequency(110kHz 148kHz) varies depending on the position of client device.

 All fundamental frequency were investigated and the worst results are reported.

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Frequency	Reading Level	Ant. Factor	Cable Loss	Distance Correction	Result Level	Limit	Margin
[kHz]	[dBµV/m] @3 m	[dB/m]	[dB]	[dB]	[dBµV/m] @300 m	[dBµV/m]	[dB]
9.070	9.66	18.90	0.69	-80.00	-50.75	48.45	99.20
#113.64	39.03	19.29	0.69	-80.00	-20.99	26.49	47.48
145.26	6.99	19.27	0.69	-80.00	-53.05	24.36	77.41
341.8	29.01	19.20	0.69	-80.00	-31.10	16.93	48.03
Frequency	Reading Level	Ant. Factor	Cable Loss	Distance Correction	Result Level	Limit	Margin
[kHz]	[dBµV/m] @3 m	[dB/m]	[dB]	[dB]	[dBµV/m] @30 m	[dBµV/m]	[dB]
502.6	29.14	19.20	0.69	-40.00	9.03	33.58	24.55
3332.0	12.58	19.42	0.69	-40.00	-7.31	29.54	36.85

Note

- 1. "#" Fundamental Frequency
- 2. EUT Mode: Charging from EUT(Charging from TA) to Watch
- 3. Position: Cross
- 4. 30 MHz 1GHz: No Critical peaks found
- 5. The fundamental frequency(110kHz 148kHz) varies depending on the position of client device.

 All fundamental frequency were investigated and the worst results are reported.

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(2. PCB Rev 0.7A – Renesas)

Frequency	Reading Level	Ant. Factor	Cable Loss	Distance Correction	Result Level	Limit	Margin
[kHz]	[dBµV/m] @3 m	[dB/m]	[dB]	[dB]	[dBµV/m] @300 m	[dBµV/m]	[dB]
10.25	13.69	19.00	0.69	-80.00	-46.62	47.39	94.01
#112.844	38.42	19.29	0.69	-80.00	-21.60	26.55	48.15
145.954	2.40	19.28	0.69	-80.00	-57.63	24.32	81.95
337.70	27.97	19.20	0.69	-80.00	-32.14	17.03	49.17
Fraguenov	Baradia a Laurah	Ant.	Cable	Distance	Result	Limit	Morgin
Frequency	Reading Level	Factor	Loss	Correction	Level	Limit	Margin
FIz-U=1	[dBµV/m]	[dD/m]	[dD]	[dD]	[dBµV/m]	[dDu\//m]	[dD]
[kHz]	@3 m	[dB/m]	[dB]	[dB]	@30 m	[dBµV/m]	[dB]
564.50	26.98	19.20	0.69	-40.00	6.87	32.57	25.70
17868.0	12.39	19.94	0.69	-40.00	-6.98	29.54	36.52

Note

1. "#" Fundamental Frequency

2. EUT Mode: Charging from EUT to Phone

3. Position: Aligned

4. 30 MHz - 1GHz: No Critical peaks found

5. The fundamental frequency(110kHz – 148kHz) varies depending on the position of client device.

All fundamental frequency were investigated and the worst results are reported.

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Frequency	Reading Level	Ant. Factor	Cable Loss	Distance Correction	Result Level	Limit	Margin
[kHz]	[dBµV/m] @3 m	[dB/m]	[dB]	[dB]	[dBµV/m] @300 m	[dBµV/m]	[dB]
9.72	14.39	18.97	0.69	-80.00	-45.95	47.84	93.79
#112.771	42.49	19.29	0.69	-80.00	-17.53	26.56	44.09
114.725	11.17	19.29	0.69	-80.00	-48.85	26.41	75.26
337.7	31.4	19.20	0.69	-80.00	-28.71	17.30	46.01
Frequency	Reading Level	Ant. Factor	Cable Loss	Distance Correction	Result Level	Limit	Margin
[kHz]	[dBµV/m] @3 m	[dB/m]	[dB]	[dB]	[dBµV/m] @30 m	[dBµV/m]	[dB]
564.5	29.23	19.20	0.69	-40.00	9.12	32.57	23.45
3137.0	13.58	19.41	0.69	-40.00	-6.32	29.54	35.86

<u>Note</u>

1. "#" Fundamental Frequency

2. EUT Mode: Charging from EUT to Phone

3. Position: Cross

4. 30 MHz - 1GHz: No Critical peaks found

5. The fundamental frequency(110kHz – 148kHz) varies depending on the position of client device.

All fundamental frequency were investigated and the worst results are reported.

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Frequency	Reading Level	Ant. Factor	Cable Loss	Distance Correction	Result Level	Limit	Margin
[kHz]	[dBµV/m] @3 m	[dB/m]	[dB]	[dB]	[dBµV/m] @300 m	[dBµV/m]	[dB]
9.59	13.95	18.96	0.69	-80.00	-46.40	47.97	94.37
#112.771	39.32	19.29	0.69	-80.00	-20.70	26.56	47.26
113.4784	8.74	19.29	0.69	-80.00	-51.28	26.51	77.79
337.7	27.01	19.20	0.69	-80.00	-33.10	17.03	50.13
Frequency	Reading Level	Ant. Factor	Cable Loss	Distance Correction	Result Level	Limit	Margin
[kHz]	[dBµV/m] @3 m	[dB/m]	[dB]	[dB]	[dBµV/m] @30 m	[dBµV/m]	[dB]
560.4	24.51	19.20	0.69	-40.00	4.40	32.63	28.23
3137.0	12.33	19.41	0.69	-40.00	-7.57	29.54	37.11

Note

- 1. "#" Fundamental Frequency
- 2. EUT Mode: Charging from EUT(Charging from TA) to Phone
- 3. Position: Aligned
- 4. 30 MHz 1GHz: No Critical peaks found
- 5. The fundamental frequency(110kHz 148kHz) varies depending on the position of client device.

 All fundamental frequency were investigated and the worst results are reported.

F-TP22-03 (Rev.00) 24 / 94 **HCT CO.,LTD.**



Frequency	Reading Level	Ant. Factor	Cable Loss	Distance Correction	Result Level	Limit	Margin
[kHz]	[dBµV/m] @3 m	[dB/m]	[dB]	[dB]	[dBµV/m] @300 m	[dBµV/m]	[dB]
9.72	15.11	18.97	0.69	-80.00	-45.23	47.85	93.08
#112.771	44.13	19.29	0.69	-80.00	-15.89	26.56	42.45
114.725	12.95	19.29	0.69	-80.00	-47.07	26.41	73.48
337.7	33.20	19.20	0.69	-80.00	-26.91	17.03	43.94
Frequency	Reading Level	Ant. Factor	Cable Loss	Distance Correction	Result Level	Limit	Margin
[kHz]	[dBµV/m] @3 m	[dB/m]	[dB]	[dB]	[dBµV/m] @30 m	[dBµV/m]	[dB]
560.4	30.35	19.20	0.69	-40.00	10.24	32.63	22.39
17907.0	11.76	19.95	0.69	-40.00	-7.60	29.54	37.14

Note

- 1. "#" Fundamental Frequency
- 2. EUT Mode: Charging from EUT(Charging from TA) to Phone
- 3. Position: Cross
- 4. 30 MHz 1GHz: No Critical peaks found
- 5. The fundamental frequency(110kHz 148kHz) varies depending on the position of client device.

 All fundamental frequency were investigated and the worst results are reported.

F-TP22-03 (Rev.00) 25 / 94 **HCT CO.,LTD.**



Frequency	Reading Level	Ant. Factor	Cable Loss	Distance Correction	Result Level	Limit	Margin
[kHz]	[dBµV/m] @3 m	[dB/m]	[dB]	[dB]	[dBµV/m] @300 m	[dBµV/m]	[dB]
9.720	15.09	18.97	0.69	-80.00	-45.25	47.85	93.10
#112.699	41.00	19.29	0.69	-80.00	-19.02	26.57	45.59
114.725	3.43	19.29	0.69	-80.00	-56.59	26.41	83.00
337.7	27.96	19.20	0.69	-80.00	-32.15	17.03	49.18
Frequency	Reading Level	Ant. Factor	Cable Loss	Distance Correction	Result Level	Limit	Margin
[kHz]	[dBµV/m] @3 m	[dB/m]	[dB]	[dB]	[dBµV/m] @30 m	[dBµV/m]	[dB]
560.4	27.01	19.20	0.69	-40.00	6.90	32.63	25.73
7474.0	13.62	19.55	0.69	-40.00	-6.14	29.54	35.68

<u>Note</u>

- 1. "#" Fundamental Frequency
- 2. EUT Mode: Charging from EUT(Charging from TA) to Watch
- 3. Position: Cross
- 4. 30 MHz 1GHz: No Critical peaks found
- 5. The fundamental frequency(110kHz 148kHz) varies depending on the position of client device.

 All fundamental frequency were investigated and the worst results are reported.

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(3. PCB Rev 0.7A - S.LSI)

Frequency	Reading Level	Ant. Factor	Cable Loss	Distance Correction	Result Level	Limit	Margin
[kHz]	[dBµV/m] @3 m	[dB/m]	[dB]	[dB]	[dBµV/m] @300 m	[dBµV/m]	[dB]
9.59	15.20	18.96	0.69	-80.00	-45.15	47.97	93.12
#112.916	46.25	19.29	0.69	-80.00	-13.77	26.55	40.32
114.87	16.46	19.29	0.69	-80.00	-43.56	26.40	69.96
337.70	34.45	19.20	0.69	-80.00	-25.66	17.03	42.69
Frequency	Reading Level	Ant. Factor	Cable Loss	Distance Correction	Result Level	Limit	Margin
[kHz]	[dBµV/m] @3 m	[dB/m]	[dB]	[dB]	[dBµV/m] @30 m	[dBµV/m]	[dB]
564.50	31.15	19.20	0.69	-40.00	11.04	32.57	21.53
18024.0	16.64	19.96	0.69	-40.00	-2.71	29.54	32.25

<u>Note</u>

1. "#" Fundamental Frequency

2. EUT Mode: Charging from EUT to Phone

3. Position: Aligned

4. 30 MHz - 1GHz: No Critical peaks found

5. The fundamental frequency(110kHz – 148kHz) varies depending on the position of client device.

All fundamental frequency were investigated and the worst results are reported.

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Frequency	Reading Level	Ant. Factor	Cable Loss	Distance Correction	Result Level	Limit	Margin
[kHz]	[dBµV/m] @3 m	[dB/m]	[dB]	[dB]	[dBµV/m] @300 m	[dBµV/m]	[dB]
9.59	14.21	18.96	0.69	-80.00	-46.14	47.97	94.11
#112.844	40.76	19.29	0.69	-80.00	-19.26	26.55	45.81
114.725	8.44	19.29	0.69	-80.00	-51.58	26.41	77.99
337.7	30.4	19.20	0.69	-80.00	-29.71	17.03	46.74
Frequency	Reading Level	Ant. Factor	Cable Loss	Distance Correction	Result Level	Limit	Margin
[kHz]	[dBµV/m] @3 m	[dB/m]	[dB]	[dB]	[dBµV/m] @30 m	[dBµV/m]	[dB]
564.5	27.91	19.20	0.69	-40.00	7.80	32.57	24.77
18063.0	15.92	19.97	0.69	-40.00	-3.42	29.54	32.96

<u>Note</u>

1. "#" Fundamental Frequency

2. EUT Mode: Charging from EUT to Phone

3. Position: Cross

4. 30 MHz - 1GHz: No Critical peaks found

The fundamental frequency(110kHz – 148kHz) varies depending on the position of client device.
 All fundamental frequency were investigated and the worst results are reported.

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Frequency	Reading Level	Ant. Factor	Cable Loss	Distance Correction	Result Level	Limit	Margin
[kHz]	[dBµV/m] @3 m	[dB/m]	[dB]	[dB]	[dBµV/m] @300 m	[dBµV/m]	[dB]
9.72	14.86	18.97	0.69	-80.00	-45.48	47.85	93.33
#112.916	47.62	19.29	0.69	-80.00	-12.40	26.55	38.95
114.725	17.6	19.29	0.69	-80.00	-42.42	26.41	68.83
337.7	35.73	19.20	0.69	-80.00	-24.38	17.03	41.41
Frequency	Reading Level	Ant. Factor	Cable Loss	Distance Correction	Result Level	Limit	Margin
[kHz]	[dBµV/m] @3 m	[dB/m]	[dB]	[dB]	[dBµV/m] @30 m	[dBµV/m]	[dB]
564.5	32.36	19.20	0.69	-40.00	12.25	32.57	20.32
18102.0	17.19	19.97	0.69	-40.00	-2.15	29.54	31.69

<u>Note</u>

- 1. "#" Fundamental Frequency
- 2. EUT Mode: Charging from EUT(Charging from TA) to Phone
- 3. Position: Aligned
- 4. 30 MHz 1GHz: No Critical peaks found
- 5. The fundamental frequency(110kHz 148kHz) varies depending on the position of client device.

 All fundamental frequency were investigated and the worst results are reported.

F-TP22-03 (Rev.00) 29 / 94 **HCT CO.,LTD.**



Frequency	Reading Level	Ant. Factor	Cable Loss	Distance Correction	Result Level	Limit	Margin
[kHz]	[dBµV/m] @3 m	[dB/m]	[dB]	[dB]	[dBµV/m] @300 m	[dBµV/m]	[dB]
9.86	13.58	18.99	0.69	-80.00	-46.74	47.73	94.47
#112.844	41.62	19.29	0.69	-80.00	-18.40	26.55	44.95
114.797	14.04	19.29	0.69	-80.00	-45.98	26.41	72.39
337.7	31.15	19.20	0.69	-80.00	-28.96	17.03	45.99
Frequency	Reading Level	Ant. Factor	Cable Loss	Distance Correction	Result Level	Limit	Margin
[kHz]	[dBµV/m] @3 m	[dB/m]	[dB]	[dB]	[dBµV/m] @30 m	[dBµV/m]	[dB]
560.4	28.14	19.20	0.69	-40.00	8.03	32.63	24.60
18102.0	16.00	19.97	0.69	-40.00	-3.34	29.54	32.88

<u>Note</u>

- 1. "#" Fundamental Frequency
- 2. EUT Mode: Charging from EUT(Charging from TA) to Phone
- 3. Position: Cross
- 4. 30 MHz 1GHz: No Critical peaks found
- 5. The fundamental frequency(110kHz 148kHz) varies depending on the position of client device.

 All fundamental frequency were investigated and the worst results are reported.

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Frequency	Reading Level	Ant. Factor	Cable Loss	Distance Correction	Result Level	Limit	Margin
[kHz]	[dBµV/m] @3 m	[dB/m]	[dB]	[dB]	[dBµV/m] @300 m	[dBµV/m]	[dB]
9.460	14.70	18.95	0.69	-80.00	-45.66	48.09	93.75
#112.844	36.35	19.29	0.69	-80.00	-23.67	26.55	50.22
114.725	3.67	19.29	0.69	-80.00	-56.35	26.41	82.76
432.5	24.49	19.20	0.69	-80.00	-35.62	14.88	50.50
Frequency	Reading Level	Ant. Factor	Cable Loss	Distance Correction	Result Level	Limit	Margin
[kHz]	[dBµV/m] @3 m	[dB/m]	[dB]	[dB]	[dBµV/m] @30 m	[dBµV/m]	[dB]
564.5	24.39	19.20	0.69	-40.00	4.28	32.57	28.29
18063.0	14.25	19.97	0.69	-40.00	-5.09	29.54	34.63

Note

- 1. "#" Fundamental Frequency
- 2. EUT Mode: Charging from EUT(Charging from TA) to Watch
- 3. Position: Cross
- 4. 30 MHz 1GHz: No Critical peaks found
- 5. The fundamental frequency(110kHz 148kHz) varies depending on the position of client device.

 All fundamental frequency were investigated and the worst results are reported.

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■Test Plot

In order to simplify the report, the worst case results are reported.

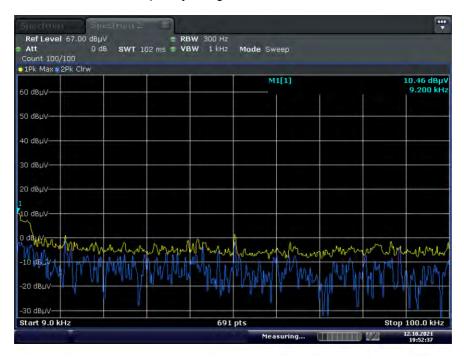
Worst case

(1. PCB Rev 0.7 - Renesas)

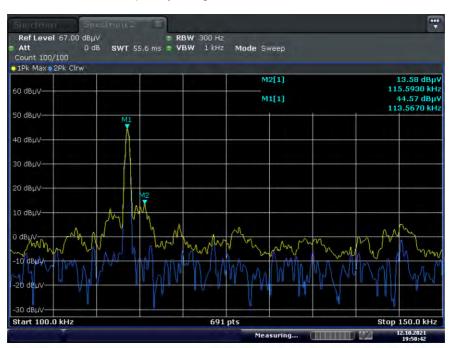
- EUT Mode: Charging from EUT to Phone

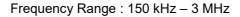
- Position: Aligned

Frequency Range: 9 kHz - 100 kHz



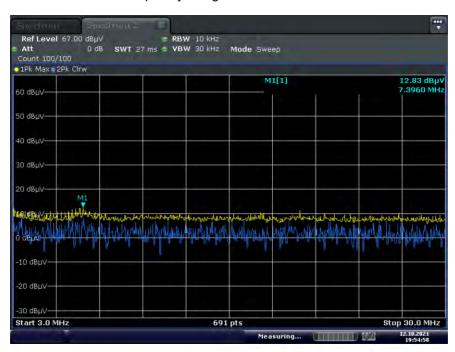
Frequency Range: 100 kHz - 150 kHz







Frequency Range: 3 MHz - 30 MHz



(30 MHz - 1 GHz: No Critical peaks found)

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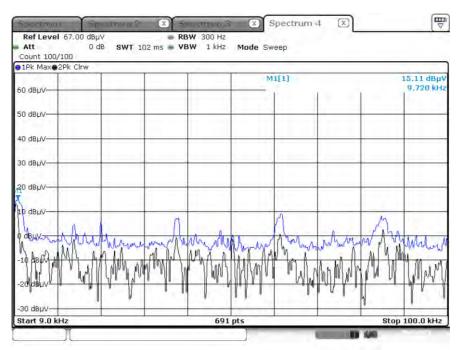


(2. PCB Rev 0.7A - Renesas)

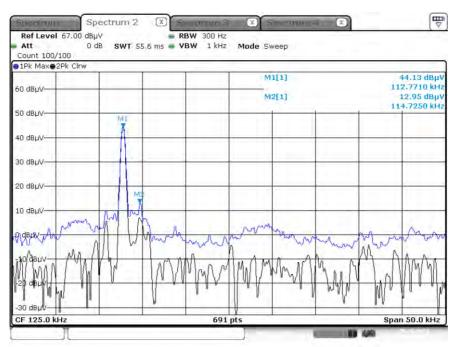
- EUT Mode: Charging from EUT(Charging from TA) to Phone

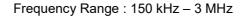
- Position: Cross

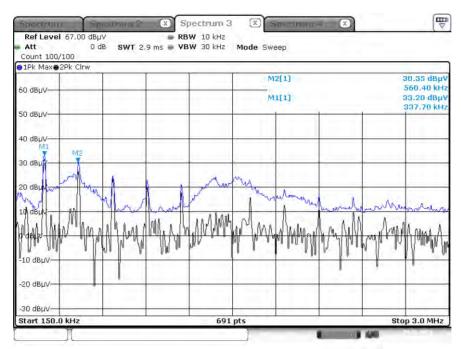
Frequency Range: 9 kHz - 100 kHz



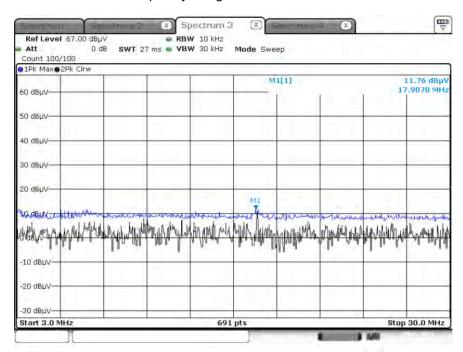
Frequency Range: 100 kHz - 150 kHz







Frequency Range: 3 MHz - 30 MHz



(30 MHz - 1 GHz: No Critical peaks found)

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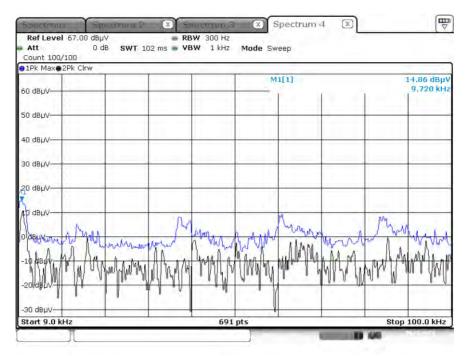


(3. PCB Rev 0.7A - S.LSI)

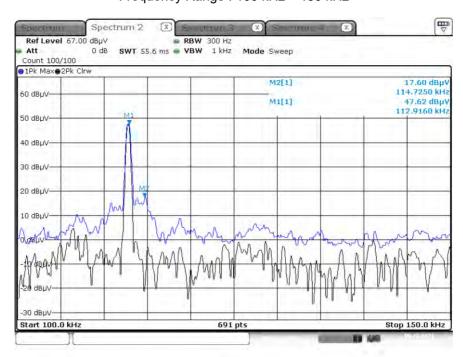
- EUT Mode: Charging from EUT(Charging from TA) to Phone

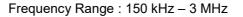
- Position: Aligned

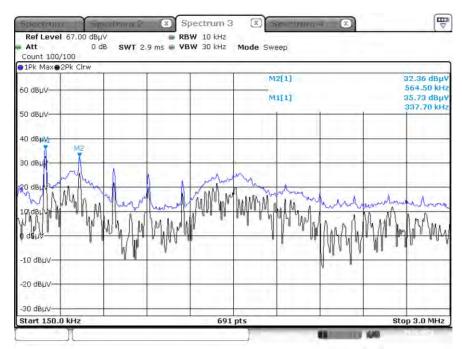
Frequency Range : 9 kHz - 100 kHz



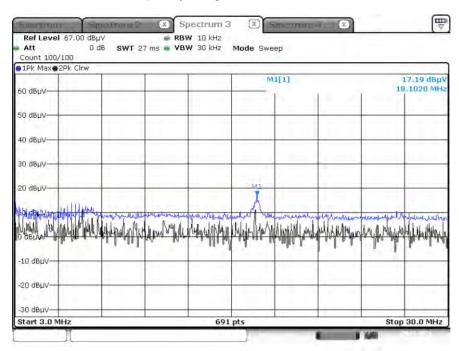
Frequency Range: 100 kHz - 150 kHz







Frequency Range: 3 MHz - 30 MHz



(30 MHz - 1 GHz: No Critical peaks found)

Note:

In order to simplify the report, attached plots were only the worst case



Report No.: HCT-RF-2110-FC024-R2 FCC ID: A3LSMS901B

10. POWERLINE CONDUCTED EMISSIONS

Limit

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 µH/50 ohms line impedance stabilization network (LISN).

Fraguency Benge (MUT)	Limits	(dBµV)
Frequency Range (MHz)	Quasi-peak	Average
0.15 to 0.50	66 to 56 ^(a)	56 to 46 ^(a)
0.50 to 5	56	46
5 to 30	60	50

⁽a) Decreases with the logarithm of the frequency.

Compliance with this provision shall be based on the measurement of the radio frequency voltage between each power line (LINE and NEUTRAL) and ground at the power terminals.

Test Configuration

See test photographs attached in Annex A for the actual connections between EUT and support equipment.

Test Procedure

- 1. The EUT is placed on a wooden table 80 cm above the reference ground plane.
- 2. The EUT is connected via LISN to a test power supply.
- 3. The measurement results are obtained as described below:
- 4. Detectors: Quasi Peak and Average Detector.
- 5. The EUT is the device operating below 30 MHz.
 - For unterminated the Antenna, the AC line conducted tests are performed with the antenna connected
 - For terminated the Antenna, the AC line conducted tests are performed with a dummy load connected to the EUT antenna output terminal.

Sample Calculation

Quasi-peak(Final Result) = Measured Value + Correction Factor

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(1. PCB Rev 0.7 - Renesas)

Test Result & Plot (Position: Aligned)

Conducted Emissions (Line 1)

WPT(PHONE TO WATCH)_ALIGNED_L1

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Test Report

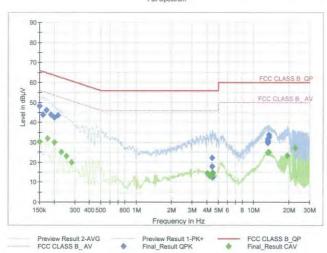
Common Information

EUT : Manufacturer : Test Site: Operating Conditions :

SM-S901B/DS SAMSUNG SHIELD ROOM

perating Conditions : WPT(PHONE TO WATCH)_ALIGNED_L1





Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1500	48.18	66.00	17.82	9.000	L1	OFF	9.6
0.1613	43.74	65.40	21.66	9.000	L1	OFF	9.6
0.1725	46.29	64.84	18.55	9.000	L1	OFF	9.6
0.1883	43.91	64.11	20.20	9.000	L1	OFF	9.6
0.2018	42.55	63.54	20.99	9.000	L1	OFF	9.6
0.2153	43.44	63.00	19.56	9.000	L1	OFF	9.6
4.4150	17.89	56.00	38.11	9.000	L1	OFF	9.8
4.4533	22.21	56.00	33.79	9.000	L1	OFF	9.8
4.4578	14.75	56.00	41.25	9.000	L1	OFF	9.8
4.4623	14.52	56.00	41.48	9.000	L1	OFF	9.8
4.4938	14.38	56.00	41.62	9.000	L1	OFF	9.8
4.5050	12.55	56.00	43.45	9.000	L1	OFF	9.9
13.1675	31.79	60.00	28.21	9.000	L1	OFF	10.2
13.1788	30.28	60.00	29.72	9.000	L1	OFF	10.2
13.1990	30.73	60.00	29.28	9.000	L1	OFF	10.2
13.2058	29.74	60.00	30.26	9.000	L1	OFF	10.2
13.4353	32.62	60.00	27.38	9.000	L1	OFF	10.2
13.4645	33.76	60.00	26.24	9.000	L1	OFF	10.2

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WPT(PHONE TO WATCH)_ALIGNED_L1

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Final_Result_CAV

Frequency (MHz)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1500	30.34	56.00	25.66	9.000	L1	OFF	9.6
0.1748	31.92	54.73	22.81	9.000	L1	OFF	9.6
0.2018	29.87	53.54	23.66	9.000	L1	OFF	9.6
0.2288	25.14	52.50	27.35	9.000	L1	OFF	9.6
0.2535	23.16	51.64	28.48	9.000	L1	OFF	9.6
0.2805	19.93	50.80	30.88	9.000	L1	OFF	9.6
4.0573	14.55	46.00	31.45	9.000	L1	OFF	9.8
4.2553	12.88	46.00	33.12	9.000	L1	OFF	9.8
4.2868	13.54	46.00	32.46	9.000	L1	OFF	9.8
4.4173	13.63	46.00	32.37	9.000	L1	OFF	9.8
4.4510	14.47	46.00	31,53	9.000	L1	OFF	9.8
13.1765	24.93	50.00	25.07	9.000	L1	OFF	10.2
13.2035	24.86	50.00	25.14	9.000	L1	OFF	10.2
13.2283	24.72	50.00	25.28	9.000	L1	OFF	10.2
13.4285	25.02	50.00	24.98	9.000	L1	OFF	10.2
13.4533	24.96	50.00	25.04	9.000	L1	OFF	10.2
19.3955	23.31	50.00	26.69	9.000	L1	OFF	10.4
22.7435	27.04	50.00	22.96	9.000	L1	OFF	10.5

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WPT(PHONE TO PHONE)_ALIGNED_L1

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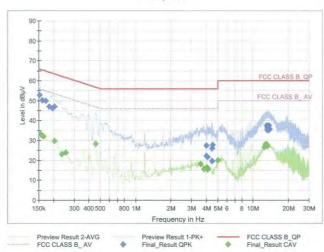
Test Report

Common Information

EUT : Manufacturer : Test Site: Operating Conditions :

SM-S901B/DS SAMSUNG SHIELD ROOM WPT(PHONE TO PHONE)_ALIGNED_L1





Final Result QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1523	52.86	65.88	13.01	9.000	L1	OFF	9.6
0.1613	50.23	65.40	15.17	9.000	L1	OFF	9.6
0.1725	49.96	64.84	14.87	9.000	L1	OFF	9.6
0.1838	46.90	64.31	17.42	9.000	L1	OFF	9.6
0.1973	46.08	63.73	17.65	9.000	L1	OFF	9.6
0.2040	46.91	63.45	16.53	9.000	L1	OFF	9.6
4.0168	22.26	56.00	33.74	9.000	L1	OFF	9.8
4.0213	27.52	56.00	28.48	9.000	L1	OFF	9.8
4.1000	21.70	56.00	34.30	9.000	L1	OFF	9.8
4.4578	26.03	56.00	29.97	9.000	L1	OFF	9.8
4.4668	19.71	56.00	36.29	9.000	L1	OFF	9.8
4.5320	27.71	56.00	28.29	9.000	L1	OFF	9.9
13.1225	37.49	60.00	22.51	9.000	L1	OFF	10.2
13.1315	36.32	60.00	23.68	9.000	L1	OFF	10.2
13.1878	35.19	60.00	24.81	9.000	L1	OFF	10.2
13.6400	35.28	60.00	24.72	9.000	L1	OFF	10.2
13.6783	37.60	60.00	22.40	9.000	L1	OFF	10.2
13.8335	35.66	60.00	24.34	9.000	L1	OFF	10.2

2021-10-18 오전 9:10:43



WPT(PHONE TO PHONE)_ALIGNED_L1

2/2

Final_Result_CAV

Frequency (MHz)	CAverage (dBμV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1545	33.11	55.75	22.64	9.000	L1	OFF	9.6
0.1590	32.50	55.52	23.01	9.000	L1	OFF	9.6
0.1635	32.05	55.28	23.24	9.000	L1	OFF	9.6
0.2040	29.79	53.45	23.65	9.000	L1	OFF	9.6
0.2355	23.14	52.25	29.11	9.000	L1	OFF	9.6
0.2535	23.88	51.64	27.76	9.000	L1	OFF	9.6
0.4583	28.31	46.72	18.41	9.000	L1	OFF	9.6
3.5780	18.26	46.00	27.74	9.000	L1	OFF	9.8
3.8143	15.65	46.00	30.35	9.000	L1	OFF	9.8
4.0348	16.44	46.00	29.56	9.000	L1	OFF	9.8
4.0865	15.36	46.00	30.64	9.000	L1	OFF	9.8
5.0338	19.82	50.00	30.18	9.000	L1	OFF	9.9
12.4610	26.43	50.00	23.57	9.000	L1	OFF	10.1
12.7243	27.94	50.00	22.06	9.000	L1	OFF	10.2
12,7378	27.12	50.00	22.88	9.000	L1	OFF	10.2
12.9920	27.93	50.00	22.07	9.000	L1	OFF	10.2
13.1225	28.04	50.00	21.96	9.000	L1	OFF	10.2
13.1878	27.25	50.00	22.75	9.000	L1	OFF	10.2

2021-10-18 오전 9:10:43

F-TP22-03 (Rev.00) 42 / 94 **HCT CO.,LTD.**



Conducted Emissions (Line 2)

WPT(PHONE TO WATCH)_ALIGNED_N

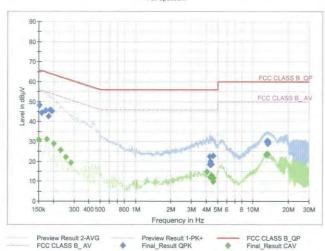
1/2

Test Report

Common Information

EUT : Manufacturer : Test Site: Operating Conditions : SM-S901B/DS SAMSUNG
SHIELD ROOM
WPT(PHONE TO WATCH)_ALIGNED_N





Final Result QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1523	48.23	65.88	17.64	9.000	N	OFF	9.6
0.1590	44.40	65.52	21.11	9.000	N	OFF	9.6
0.1725	45.58	64.84	19.26	9.000	N	OFF	9.6
0.1815	42.73	64.42	21.69	9.000	N	OFF	9.6
0.1883	46.01	64.11	18.11	9.000	N	OFF	9.6
0.1950	45.36	63.82	18.46	9.000	N	OFF	9.6
4.2913	22.58	56.00	33.42	9.000	N	OFF	9.8
4.3003	18.49	56.00	37.51	9.000	N	OFF	9.8
4,3340	20.01	56.00	35.99	9.000	N	OFF	9.8
4.3430	18.18	56.00	37.82	9.000	N	OFF	9.8
4.4510	18.54	56.00	37.46	9.000	N	OFF	9.8
4.5613	22.70	56.00	33.30	9.000	N	OFF	9.8
12.9853	30.11	60.00	29.89	9.000	N	OFF	10.2
13.1518	29.73	60.00	30.27	9.000	N	OFF	10.2
13.2733	28.71	60.00	31.29	9.000	N	OFF	10.2
13,3430	29.73	60.00	30.27	9.000	N	OFF	10.2
13.3790	30.43	60.00	29.57	9.000	N	OFF	10.2
13.5028	29.41	60.00	30.59	9.000	N	OFF	10.2

2021-10-18 오전 9:28:36



WPT(PHONE TO WATCH)_ALIGNED_N

2/2

Final_Result_CAV

Frequency (MHz)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1500	30.93	56.00	25.07	9.000	N	OFF	9.6
0.1748	31.14	54.73	23.60	9.000	N	OFF	9.6
0.2018	28.74	53.54	24.80	9.000	N	OFF	9.6
0.2288	25.58	52.50	26.92	9.000	N	OFF	9.6
0.2558	22.24	51.57	29.33	9.000	N	OFF	9.6
0.2805	19.21	50.80	31.59	9.000	N	OFF	9.6
4.0280	14.81	46.00	31.19	9.000	N	OFF	9.8
4.3340	11.99	46.00	34.01	9.000	N	OFF	9.8
4.4533	13.11	46.00	32.89	9.000	N	OFF	9.8
4.4848	11.12	46.00	34.88	9.000	N	OFF	9.8
4.5613	11.82	46.00	34.18	9.000	N	OFF	9.8
4.5658	9.87	46.00	36.13	9.000	N	OFF	9.8
12.9583	23.39	50.00	26.61	9.000	N	OFF	10.2
12.9853	23.58	50.00	26.42	9.000	N	OFF	10.2
13.0820	23.63	50.00	26.37	9.000	N	OFF	10.2
13.1833	23.50	50.00	26.50	9.000	N	OFF	10.2
13.2103	23.40	50.00	26.60	9.000	N	OFF	10.2
13.3633	23.76	50.00	26.24	9.000	N	OFF	10.2

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F-TP22-03 (Rev.00) 44 / 94 **HCT CO.,LTD.**



WPT(PHONE TO PHONE)_ALIGNED_N

1/2

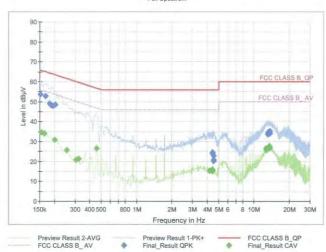
Test Report

Common Information

EUT : Manufacturer : Test Site: Operating Conditions : SM-S901B/DS SAMSUNG SHIELD ROOM

WPT(PHONE TO PHONE)_ALIGNED_N





Final Result QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1523	53.51	65.88	12.36	9.000	N	OFF	9.6
0.1680	52.91	65.06	12.15	9.000	N	OFF	9.6
0.1815	48.97	64.42	15.44	9.000	N	OFF	9.6
0.1883	48.22	64.11	15.89	9.000	N	OFF	9.6
0.1950	47.92	63.82	15.91	9.000	N	OFF	9.6
0.2040	48.49	63.45	14.96	9.000	N	OFF	9.6
4.4353	24.43	56.00	31.57	9.000	N	OFF	9.8
4.4398	24.08	56.00	31.92	9.000	N	OFF	9.8
4.4465	24.38	56.00	31.62	9.000	N	OFF	9.8
4.5253	20.73	56.00	35.27	9.000	N	OFF	9.8
4.5298	20.22	56.00	35.78	9.000	N	OFF	9.8
4.5365	22.84	56.00	33.16	9.000	N	OFF	9.8
13.0505	33.88	60.00	26.12	9.000	N	OFF	10.2
13.1833	34.59	60.00	25.41	9.000	N	OFF	10.2
13.1945	34.12	60.00	25.88	9.000	N	OFF	10.2
13.2395	33.65	60.00	26.35	9.000	N	OFF	10.2
13.7120	33.94	60.00	26.06	9.000	N	OFF	10.2
13.7165	35.18	60.00	24.82	9.000	N	OFF	10.2

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HCT CO.,LTD. F-TP22-03 (Rev.00) 45 / 94



WPT(PHONE TO PHONE)_ALIGNED_N

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Final_Result_CAV

Frequency (MHz)	CAverage (dBμV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1545	34.53	55.75	21.22	9.000	N	OFF	9.6
0.1635	34.09	55.28	21.19	9.000	N	OFF	9.6
0.2018	30.92	53.54	22.62	9.000	N	OFF	9.6
0.2535	25.65	51.64	25.99	9.000	N	OFF	9.6
0.3030	20.88	50.16	29.28	9.000	N	OFF	9.6
0.3210	21.42	49.68	28.26	9.000	N	OFF	9.6
0.4583	26.68	46.72	20.05	9.000	N	OFF	9.6
4.1698	15.27	46.00	30.73	9.000	N	OFF	9.8
4.3655	15.17	46.00	30.83	9.000	N	OFF	9.8
4.3768	15.52	46.00	30.48	9.000	N	OFF	9.8
4.4420	15.75	46.00	30.25	9.000	N	OFF	9.8
4.4533	15.26	46.00	30.74	9.000	N	OFF	9.8
12.6770	26.59	50.00	23.41	9.000	N	OFF	10.2
12.7828	25.69	50.00	24.31	9.000	N	OFF	10.2
13.1405	26.68	50.00	23.32	9.000	N	OFF	10.2
13.4510	26.94	50.00	23.06	9.000	N	OFF	10.2
13.5073	27.67	50.00	22.33	9.000	N	OFF	10.2
13.7165	26.83	50.00	23.17	9.000	N	OFF	10.2

2021-10-18 오전 9:05:20

F-TP22-03 (Rev.00) 46 / 94 **HCT CO.,LTD.**



Test Result & Plot (Position: Cross)

Conducted Emissions (Line 1)

WPT(PHONE TO WATCH)_CROSS_L1

1/2

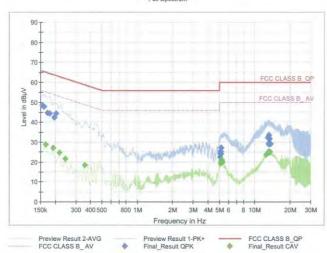
Test Report

Common Information

EUT : Manufacturer : Test Site: Operating Conditions : SM-S901B/DS SAMSUNG SHIELD ROOM

WPT(PHONE TO WATCH)_CROSS_L1





Final Result QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1545	48.60	65.75	17.16	9.000	L1	OFF	9.6
0.1613	47.84	65.40	17.56	9.000	L1	OFF	9.6
0.1725	44.62	64.84	20.21	9.000	L1	OFF	9.6
0.1793	44.43	64.52	20.09	9.000	L1	OFF	9.6
0.1973	42.42	63.73	21.30	9.000	L1	OFF	9.6
0.2040	44.33	63.45	19.12	9.000	L1	OFF	9.6
5.0990	22.50	60.00	37.50	9.000	L1	OFF	9.9
5.1350	23.91	60.00	36.09	9.000	L1	OFF	9.9
5.1508	25.31	60.00	34.69	9.000	L1	OFF	9.9
5.1575	24.57	60.00	35.43	9.000	L1	OFF	9.9
5.1620	27.15	60.00	32.85	9.000	L1	OFF	9.9
5.1778	27.18	60.00	32.82	9.000	L1	OFF	9.9
12.9335	32.43	60.00	27.57	9.000	L1	OFF	10.2
13.0978	29.06	60.00	30.94	9.000	L1	OFF	10.2
13.2283	33.57	60.00	26.43	9.000	L1	OFF	10.2
13.3115	29.27	60.00	30.73	9.000	L1	OFF	10.2
13.3520	31.64	60.00	28.36	9.000	L1	OFF	10.2
13.6153	29.15	60.00	30.85	9.000	L1	OFF	10.2

오전 9:22:51 2021-10-18



WPT(PHONE TO WATCH)_CROSS_L1

2/2

Final_Result_CAV

Frequency (MHz)	CAverage (dBμV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1658	28.88	55.17	26.29	9.000	L1	OFF	9.6
0.1928	26.99	53.92	26.92	9.000	L1	OFF	9.6
0.2175	24.77	52.91	28.15	9.000	L1	OFF	9,6
0.2445	21.61	51.94	30.33	9.000	L1	OFF	9.6
0.3548	18.44	48.85	30.41	9.000	L1	OFF	9.6
5.1463	19.19	50.00	30.81	9.000	L1	OFF	9.9
5.1733	20.40	50.00	29.60	9.000	L1	OFF	9.9
5.2003	21.17	50.00	28.83	9.000	L1	OFF	9.9
5.2273	21.07	50.00	28.93	9.000	L1	OFF	9.9
5,2520	20.54	50.00	29.46	9.000	L1	OFF	9.9
5.2790	19.77	50.00	30.23	9.000	L1	OFF	9.9
12.4993	23.65	50.00	26.35	9.000	L1	OFF	10.1
12.9830	24.99	50.00	25.01	9.000	L1	OFF	10.2
13.0595	24.70	50.00	25.30	9.000	L1	OFF	10.2
13.2035	25.38	50.00	24.62	9.000	L1	OFF	10.2
13.2283	25.37	50.00	24.63	9.000	L1	OFF	10.2
13.3543	24.70	50.00	25.30	9.000	L1	OFF	10.2
13,5365	25.13	50.00	24.87	9.000	L1	OFF	10.2

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F-TP22-03 (Rev.00) 48 / 94 **HCT CO.,LTD.**



WPT(PHONE TO PHONE)_CROSS_L1

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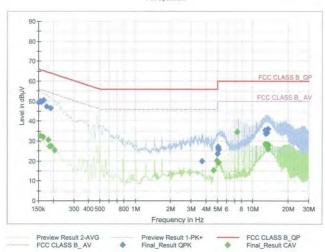
Test Report

Common Information

SM-S901B/DS SAMSUNG SHIELD ROOM WPT(PHONE TO PHONE)_CROSS_L1 EUT : Manufacturer : Test Site:

Operating Conditions :





Final Result QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1500	49.37	66.00	16.63	9.000	L1	OFF	9.6
0.1545	50.02	65.75	15.73	9.000	L1	OFF	9.6
0.1590	49.53	65.52	15.99	9.000	L1	OFF	9.6
0.1658	50.47	65.17	14.70	9.000	L1	OFF	9.6
0.1748	47.21	64.73	17.52	9.000	L1	OFF	9.6
0.1905	46.42	64.02	17.59	9.000	L1	OFF	9.6
3.7220	19.82	56.00	36.18	9.000	L1	OFF	9.8
5.0248	23.72	60.00	36.28	9.000	L1	OFF	9.9
5.0653	26.71	60.00	33.29	9.000	L1	OFF	9.9
5.0720	26.01	60.00	33.99	9.000	L1	OFF	9.9
5.0788	27.00	60.00	33.00	9.000	L1	OFF	9.9
5.1080	25.74	60.00	34.26	9.000	L1	OFF	9.9
12.7490	35.56	60.00	24.44	9.000	L1	OFF	10.2
12.8705	33.70	60.00	26.30	9.000	L1	OFF	10.2
13.0663	34.14	60.00	25.86	9.000	L1	OFF	10.2
13.1203	34.65	60.00	25.35	9.000	L1	OFF	10.2
13.1585	33.91	60.00	26.09	9.000	L1	OFF	10.2
13.4285	36.19	60.00	23.81	9.000	L1	OFF	10.2

2021-10-18 오전 8:59:11



WPT(PHONE TO PHONE)_CROSS_L1

2/2

Final Result CAV

Frequency (MHz)	CAverage (dBμV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1545	32.51	55.75	23.24	9.000	L1	OFF	9.6
0.1635	32.14	55.28	23.14	9.000	L1	OFF	9,6
0.1815	30.61	54.42	23.80	9.000	L1	OFF	9.6
0.1860	27.45	54.21	26.76	9.000	L1	OFF	9.6
0.1928	27.45	53.92	26.47	9.000	L1	OFF	9.6
0.2063	25.40	53.36	27.96	9.000	L1	OFF	9.6
4.6265	15.31	46.00	30.69	9.000	L1	OFF	9.9
4.9528	20.16	46.00	25.84	9.000	L1	OFF	9.9
5.0765	19.52	50.00	30.48	9.000	L1	OFF	9.9
5.0968	19.47	50.00	30.53	9.000	L1	OFF	9.9
5.1553	19.36	50.00	30.64	9.000	L1	OFF	9.9
7.3333	34.66	50.00	15.34	9.000	L1	OFF	9.9
12.7490	28.45	50.00	21.55	9.000	L1	OFF	10.2
12.9763	28.02	50.00	21.98	9.000	L1	OFF	10.2
13.2013	28.22	50.00	21.78	9.000	L1	OFF	10.2
13.4263	28.24	50.00	21.76	9.000	L1	OFF	10.2
13.5725	26.04	50.00	23.96	9.000	L1	OFF	10.2
13.6535	28.10	50.00	21.90	9.000	L1	OFF	10.2

2021-10-18 오전 8:59:11

F-TP22-03 (Rev.00) 50 / 94 **HCT CO.,LTD.**

Conducted Emissions (Line 2)

WPT(PHONE TO WATCH)_CROSS_N

1/2

Test Report

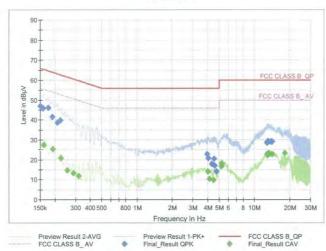
Common Information

EUT : Manufacturer :

SM-S901B/DS

Test Site: Operating Conditions:

SAMSUNG SHIELD ROOM WPT(PHONE TO WATCH)_CROSS_N



Final Result QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1500	47.10	66.00	18.90	9.000	N	OFF	9.6
0.1590	46.00	65.52	19.52	9.000	N	OFF	9.6
0.1748	46.04	64.73	18.69	9.000	N	OFF	9.6
0.1905	41.61	64.02	22.41	9.000	N	OFF	9.6
0.2108	38.71	63.18	24.47	9.000	N	OFF	9.6
0.2220	39.74	62.74	23.01	9.000	N	OFF	9.6
3.9718	22.66	56.00	33.34	9.000	N	OFF	9.8
4.0550	20.63	56.00	35.37	9.000	N	OFF	9.8
4.3318	17.86	56.00	38.14	9.000	N	OFF	9.8
4.5365	20.61	56.00	35.39	9.000	N	OFF	9.8
4.5770	16.88	56.00	39.12	9.000	N	OFF	9.8
4.7188	14.11	56.00	41.89	9.000	N	OFF	9.9
12.7153	28.80	60.00	31.20	9.000	N	OFF	10.2
12.7220	28.60	60.00	31.40	9.000	N	OFF	10.2
13.0213	29.44	60.00	30.56	9.000	N	OFF	10.2
13.2665	29.07	60.00	30.93	9.000	N	OFF	10.2
13.7593	29.25	60.00	30.75	9.000	N	OFF	10.2
14.1013	29.24	60.00	30.76	9.000	N	OFF	10.2

2021-10-18 오전 9:17:15



WPT(PHONE TO WATCH)_CROSS_N

2/2

Final Result CAV

Frequency (MHz)	CAverage (dBμV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1613	27.28	55.40	28.12	9.000	N	OFF	9.6
0.1928	25.45	53.92	28.47	9.000	N	OFF	9.6
0.2243	20.68	52.66	31.98	9.000	N	OFF	9.6
0.2558	14.63	51.57	36.94	9.000	N	OFF	9.6
0.2873	13.25	50.60	37.35	9.000	N	OFF	9.6
0.3188	11.89	49.74	37.85	9.000	N	OFF	9.6
3.9965	14.24	46.00	31.76	9.000	N	OFF	9.8
4.1360	10.40	46.00	35.60	9.000	N	OFF	9.8
4.4803	9.94	46.00	36.06	9.000	N	OFF	9.8
5.2183	16.74	50.00	33.26	9.000	N	OFF	9.9
5.2520	18.20	50.00	31.80	9.000	N	OFF	9.9
12.7153	22.88	50.00	27.12	9.000	N	OFF	10.2
12.9718	22.24	50.00	27.76	9.000	N	OFF	10.2
13.1518	23.13	50.00	26.87	9.000	N	OFF	10.2
13.2170	23.40	50.00	26.60	9.000	N	OFF	10.2
13.3138	22.93	50.00	27.07	9.000	N	OFF	10.2
14.0540	22.74	50.00	27.26	9.000	N	OFF	10.2
18.0500	23.49	50.00	26.51	9.000	N	OFF	10.4

2021-10-18 오전 9:17:15

F-TP22-03 (Rev.00) 52 / 94 **HCT CO.,LTD.**



WPT(PHONE TO PHONE)_CROSS_N

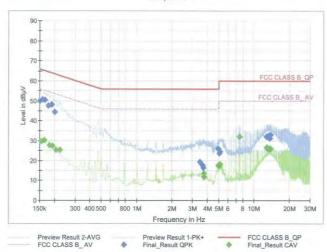
1/2

Test Report

Common Information

SM-S901B/DS SAMSUNG SHIELD ROOM WPT(PHONE TO PHONE)_CROSS_N EUT : Manufacturer : Test Site: Operating Conditions :





Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1500	50.02	66.00	15.98	9.000	N	OFF	9.6
0.1590	50.78	65.52	14.73	9.000	N	OFF	9.6
0.1658	50.38	65.17	14.79	9.000	N	OFF	9.6
0.1770	47.68	64.63	16.95	9.000	N	OFF	9.6
0.1905	48.06	64.02	15.96	9.000	N	OFF	9.6
0.2018	44.34	63.54	19.20	9.000	N	OFF	9.6
3.4633	19.20	56.00	36.80	9.000	N	OFF	9.8
3.6478	17.56	56.00	38.44	9.000	N	OFF	9.8
3.6950	16.46	56.00	39.54	9.000	N	OFF	9.8
4.9550	25.99	56.00	30.01	9.000	N	OFF	9.9
5.0765	23.54	60.00	36.46	9.000	N	OFF	9.9
5.1283	24.64	60.00	35.36	9.000	N	OFF	9.9
12.7513	32.09	60.00	27.91	9.000	N	OFF	10.2
12.9830	32.09	60.00	27.91	9.000	N	OFF	10.2
13.2013	32.29	60.00	27.71	9.000	N	OFF	10.2
13.4285	32.63	60.00	27.37	9.000	N	OFF	10.2
13.6513	31.20	60.00	28.80	9.000	N	OFF	10.2
13.8808	33.02	60.00	26.98	9.000	N	OFF	10.2

2021-10-18 오전 8:53:16

HCT CO.,LTD. F-TP22-03 (Rev.00) 53 / 94



WPT(PHONE TO PHONE)_CROSS_N

2/2

Final Result CAV

Frequency (MHz)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1545	29.65	55.75	26.11	9.000	N	OFF	9.6
0.1635	30.33	55.28	24.96	9.000	N	OFF	9.6
0.1815	27.65	54.42	26.77	9.000	N	OFF	9.6
0.1928	27.39	53.92	26.52	9.000	N	OFF	9.6
0.2063	25.36	53.36	27.99	9.000	N	OFF	9.6
0.2220	25.42	52.74	27.33	9.000	N	OFF	9.6
3.7243	13.66	46.00	32.34	9.000	N	OFF	9.8
3.7648	11.79	46.00	34.21	9.000	N	OFF	9.8
4.9550	17.50	46.00	28.50	9.000	N	OFF	9.9
5.0765	17.25	50.00	32.75	9.000	N	OFF	9.9
5.1283	18.29	50.00	31.71	9.000	N	OFF	9.9
7.5605	32.08	50.00	17.92	9.000	N	OFF	10.0
12.7513	26.47	50.00	23.53	9.000	N	OFF	10.2
12.9763	26.40	50.00	23.60	9.000	N	OFF	10.2
13.2013	25.96	50.00	24.04	9.000	N	OFF	10.2
13.4263	26.07	50.00	23.93	9.000	N	OFF	10.2
13.6535	26.05	50.00	23.95	9.000	N	OFF	10.2
13.8785	26.08	50.00	23.92	9.000	N	OFF	10.2

2021-10-18 오전 8:53:16

F-TP22-03 (Rev.00) 54 / 94 **HCT CO.,LTD.**



(2. PCB Rev 0.7A - Renesas)

Test Result & Plot (Position: Aligned)

Conducted Emissions (Line 1)

Test 1 / 2

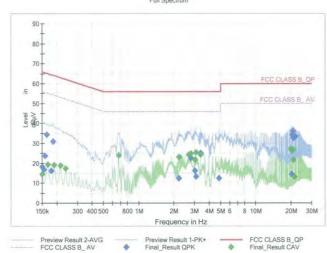
Test Report

Common Information

EUT: SM-S901B/DS
Manufacturer: SAMSUNG
Test Site: SHIELD ROOM
Operating Conditions: WPT(PHONE TO

WPT(PHONE TO WATCH)_ALIGNED_L1

Full Spectrum



Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1500	18.14	66.00	47.86	9.000	L1	OFF	9.6
0.1545	16.82	65.75	48.93	9.000	L1	OFF	9.6
0.1590	23.68	65.52	41.84	9.000	L1	OFF	9.6
0.1635	34.37	65.28	30.92	9.000	L1	OFF	9.6
0.1793	16.24	64.52	48.28	9.000	L1	OFF	9.6
0.1860	30.76	64.21	33.45	9.000	L1	OFF	9.6
2.2078	12.29	56.00	43.71	9.000	L1	OFF	9.7
2.7950	22.49	56.00	33.51	9.000	L1	OFF	9.8
3.0200	16.08	56.00	39.92	9.000	L1	OFF	9.8
3.0898	13.16	56.00	42.84	9.000	L1	OFF	9.8
3.3823	24.98	56.00	31.02	9.000	L1	OFF	9.8
4.8515	12.50	56.00	43.50	9.000	L1	OFF	9.9
20.1538	14.37	60.00	45.63	9.000	L1	OFF	10.4
20.4485	33.90	60.00	26.10	9.000	L1	OFF	10.4
20.7410	36.01	60.00	23.99	9.000	L1	OFF	10.4
21.0358	32.48	60.00	27.53	9.000	L1	OFF	10.4
21.3283	32.82	60.00	27.18	9.000	L1	OFF	10.4
21.6253	33.36	60.00	26.64	9.000	L1	OFF	10.4

2021-12-10 오후 7:32:25



Test 2 / 2

Final Result CAV

Frequency (MHz)	(dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1500	14.39	56.00	41.61	9.000	L1	OFF	9.6
0.1680	19.41	55.06	35.64	9.000	L1	OFF	9.6
0.1905	19.04	54.02	34.97	9.000	L1	OFF	9.6
0.2153	18.72	53.00	34.28	9.000	L1	OFF	9.6
0.2378	17.23	52.17	34.94	9.000	L1	OFF	9.6
0.6755	23.83	46.00	22.17	9.000	L1	OFF	9.7
2.2055	23.13	46.00	22.87	9.000	L1	OFF	9.7
2.6713	24.16	46.00	21.84	9.000	L1	OFF	9.8
2.7950	24.89	46.00	21.11	9.000	L1	OFF	9.8
3.0223	21.64	46.00	24.36	9.000	L1	OFF	9.8
3.0898	25.26	46.00	20.74	9.000	L1	OFF	9.8
3.3823	24.12	46.00	21.88	9.000	L1	OFF	9.8
19.8568	26.98	50.00	23.02	9.000	L1	OFF	10.4
20.1515	26.12	50.00	23.88	9.000	L1	OFF	10.4
20.4463	26.31	50.00	23.69	9.000	L1	OFF	10.4
20.7410	26.81	50.00	23.19	9.000	L1	OFF	10.4
21.0335	21.73	50.00	28.27	9.000	L1	OFF	10.4
21.3283	12.94	50.00	37.06	9.000	L1	OFF	10.4

2021-12-10 오후 7:32:25



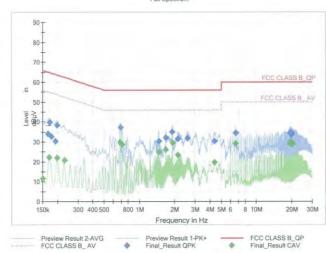
Test 1/2

Test Report

Common Information

EUT : Manufacturer : Test Site: Operating Conditions :

SM-S901B/DS SAMSUNG SHIELD ROOM WPT(PHONE TO PHONE)_ALIGNED_L1



Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1658	34.01	65.17	31.16	9.000	L1	OFF	9.6
0.1725	39.87	64.84	24.97	9.000	L1	OFF	9.6
0.1770	32.69	64.63	31.94	9.000	L1	OFF	9.6
0.1928	30.23	63.92	33.69	9.000	L1	OFF	9.6
0.1995	38.37	63.63	25.27	9.000	L1	OFF	9.6
0.6890	37.08	56.00	18.92	9.000	L1	OFF	9.7
1.4653	30.23	56.00	25.77	9.000	L1	OFF	9.7
1.6903	31.93	56.00	24.07	9.000	L1	OFF	9.7
1.9153	34.90	56.00	21.10	9.000	L1	OFF	9.7
2.1425	31.40	56.00	24.60	9.000	L1	OFF	9.7
2.5948	31.81	56.00	24.19	9.000	L1	OFF	9.8
4.3948	30.15	56.00	25.85	9.000	L1	OFF	9.8
6.6515	34.29	60.00	25.71	9.000	L1	OFF	9.9
19.2763	34.57	60.00	25.43	9.000	L1	OFF	10.4
19.5035	34.57	60.00	25.43	9.000	L1	OFF	10.4
19.7240	33.50	60.00	26.50	9.000	L1	OFF	10.4
19.7285	34.56	60.00	25.44	9.000	L1	OFF	10.4
19.9535	33.98	60.00	26.02	9.000	L1	OFF	10.4

오후 6:50:25 2021-12-10

HCT CO.,LTD. F-TP22-03 (Rev.00) 57 / 94



Test 2 / 2

Final Result CAV

Frequency (MHz)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1500	11.54	56.00	44.46	9.000	L1	OFF	9.6
0.1703	22.11	54.95	32.84	9.000	L1	OFF	9.6
0.1995	22.02	53.63	31.62	9.000	L1	OFF	9.6
0.2288	20.88	52.50	31.62	9.000	L1	OFF	9.6
0.6868	29.71	46.00	16.29	9.000	L1	OFF	9.7
0.7138	28.60	46.00	17.40	9.000	L1	OFF	9.7
1.4653	24.91	46.00	21.09	9.000	L1	OFF	9.7
1.6903	25.99	46.00	20.01	9.000	L1	OFF	9.7
1.9175	29.40	46.00	16.60	9.000	L1	OFF	9.7
2.1448	23.28	46.00	22.72	9.000	L1	OFF	9.7
4.3610	19.57	46.00	26.43	9.000	L1	OFF	9.8
4.3970	19.62	46.00	26.38	9.000	L1	OFF	9.8
6.6515	29.20	50.00	20.80	9.000	L1	OFF	9.9
19,2785	29.16	50.00	20.84	9.000	L1	OFF	10.4
19.5035	29.90	50.00	20.10	9.000	L1	OFF	10.4
19.7285	28.87	50.00	21.13	9.000	L1	OFF	10.4
19.9535	29.54	50.00	20.46	9.000	L1	OFF	10.4
20.1785	28.83	50.00	21.17	9.000	L1	OFF	10.4

2021-12-10 오후 6:50:25

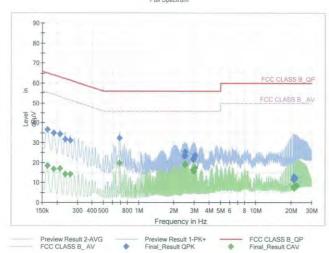
Conducted Emissions (Line 2)

1/2

Test Report

Common Information

EUT : Manufacturer : Test Site: Operating Conditions : SM-S901B/DS SAMSUNG SHIELD ROOM WPT(PHONE TO WATCH)_ALIGNED_N



Final Result QPK

Frequency (MHz)	QuasiPeak (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1658	36.73	65.17	28.44	9.000	N	OFF	9.6
0.1883	34.96	64.11	29.16	9.000	N	OFF	9.6
0.2130	34.35	63.09	28.74	9.000	N	OFF	9.6
0.2355	31.71	62,25	30.55	9.000	N	OFF	9.6
0.2603	31.03	61.42	30.39	9.000	N	OFF	9.6
0.6845	32.35	56.00	23.65	9.000	N	OFF	9.6
2.4575	23.77	56.00	32.23	9.000	N	OFF	9.7
2.4823	22.96	56.00	33.04	9.000	N	OFF	9.7
2.5048	25.35	56.00	30.65	9.000	N	OFF	9.8
2.9323	21.31	56.00	34.69	9.000	N	OFF	9.8
2.9548	22.33	56.00	33.67	9.000	N	OFF	9.8
3.0268	23.55	56.00	32.45	9.000	N	OFF	9.8
20.8940	11.42	60.00	48.58	9.000	N	OFF	10.5
21.1708	11.29	60.00	48.71	9.000	N	OFF	10.5
21.1775	12.89	60.00	47.11	9.000	N	OFF	10.5
21.4520	11.64	60.00	48.36	9.000	N	OFF	10.5
21.4565	11.61	60.00	48.39	9.000	N	OFF	10.5
21.7333	12.47	60.00	47.53	9.000	N	OFF	10.5

2021-12-10 오후 7:24:36



Test 2 / 2

Final Result CAV

Frequency (MHz)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1658	18.38	55.17	36.79	9.000	N	OFF	9.6
0.1883	16.70	54.11	37.41	9.000	N	OFF	9.6
0.2130	17.01	53.09	36.08	9.000	N	OFF	9.0
0.2355	14.14	52.25	38.12	9.000	N	OFF	9.6
0.2603	14.06	51.42	37.36	9.000	N	OFF	9.6
0.6845	19.56	46.00	26.44	9.000	N	OFF	9.6
2.4575	18.81	46.00	27.19	9.000	N	OFF	9.7
2.4823	18.69	46.00	27.31	9.000	N	OFF	9.7
2.5048	19.36	46.00	26.64	9.000	N	OFF	9.8
2.9300	16.39	46.00	29.61	9.000	N	OFF	9.1
2.9548	15.58	46.00	30.42	9.000	N	OFF	9.
3.0245	17.40	46.00	28.60	9.000	N	OFF	9.8
20.8940	7.49	50.00	42.51	9.000	N	OFF	10.5
21.1753	7.13	50.00	42.87	9.000	N	OFF	10.5
21.4543	7.34	50.00	42.66	9.000	N	OFF	10.5
21.7355	8.00	50.00	42.00	9.000	N	OFF	10.5
22.0168	8.35	50.00	41.65	9.000	N	OFF	10.4
22.2958	8.32	50.00	41.68	9.000	N	OFF	10.5

2021-12-10 오후 7:24:36

Test 1/2

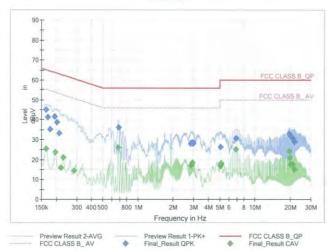
Test Report

Common Information

EUT : Manufacturer : Test Site: Operating Conditions :

SM-S901B/DS SAMSUNG SHIELD ROOM WPT(PHONE TO PHONE)_ALIGNED_N





Final Result QPK

Frequency (MHz)	QuasiPeak (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1635	44.99	65.28	20.30	9.000	N	OFF	9.6
0.1703	41.24	64.95	23.71	9.000	N	OFF	9.6
0.1770	35.33	64.63	29.29	9.000	N	OFF	9.6
0.1950	41.57	63.82	22.25	9.000	N	OFF	9.6
0.2040	38.60	63.45	24.84	9.000	N	OFF	9.6
0.2130	33.30	63.09	29.79	9.000	N	OFF	9.6
0.6823	36.18	56.00	19.82	9.000	N	OFF	9.6
2.8333	27.91	56.00	28.09	9.000	N	OFF	9.8
2.8513	28.21	56.00	27.79	9.000	N	OFF	9.8
2.9435	28.48	56.00	27.52	9.000	N	OFF	9.8
2.9548	27.98	56.00	28.02	9.000	N	OFF	9.8
5.0720	26.22	60.00	33.78	9.000	N	OFF	9.9
6.8788	30.60	60.00	29.40	9.000	N	OFF	9.9
19.5125	32.76	60.00	27.24	9.000	N	OFF	10.4
19.7375	32.63	60.00	27.37	9.000	N	OFF	10.5
19.9625	32.07	60.00	27.93	9.000	N	OFF	10.5
20.8648	30.50	60.00	29.50	9.000	N	OFF	10.5
21.7693	28.72	60.00	31.28	9.000	N	OFF	10.5

2021-12-10 오후 6:40:48



Test 2 / 2

Final Result CAV

Frequency (MHz)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1635	25.32	55.28	29.96	9.000	N	OFF	9.6
0.1973	23.62	53.73	30.10	9.000	N	OFF	9.6
0.2198	15.91	52.83	36.92	9.000	N	OFF	9.6
0.2310	21.01	52.41	31.41	9.000	N	OFF	9.6
0.2850	14.43	50.67	36.24	9.000	N	OFF	9.6
0.6800	25.90	46.00	20.10	9.000	N	OFF	9.6
2.8198	17.03	46.00	28.97	9.000	N	OFF	9.8
2.8490	17.39	46.00	28.61	9.000	N	OFF	9.8
2.9143	18.45	46.00	27.55	9.000	N	OFF	9.8
5.0698	16.80	50.00	33.20	9.000	N	OFF	9.9
5.1013	17.60	50.00	32.40	9.000	N	OFF	9.9
5.1328	18.24	50.00	31.76	9.000	N	OFF	9.9
6.8788	24.95	50.00	25.05	9.000	N	OFF	9.9
19.5103	24.18	50.00	25.82	9.000	N	OFF	10.4
19.7375	20.69	50.00	29.31	9.000	N	OFF	10.5
19.9625	17.67	50.00	32.33	9.000	N	OFF	10.5
20.8648	17.46	50.00	32.54	9.000	N	OFF	10.5
21.7670	15.11	50.00	34.89	9.000	N	OFF	10.5

2021-12-10 오후 6:40:48



Test Result & Plot (Position: Cross)

Conducted Emissions (Line 1)

Test 1 / 2

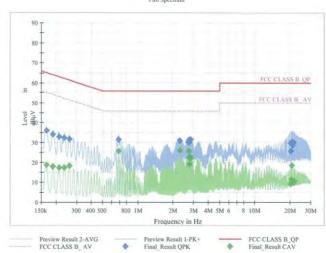
Test Report

Common Information

EUT : Manufacturer : Test Site: Operating Conditions : SM-S901B/DS SAMSUNG SHIELD ROOM

WPT(PHONE TO WATCH)_CROSS_L1

Full Spectrum



Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1658	36.17	65.17	29.00	9.000	L1	OFF	9.6
0.1883	34.06	64.11	30.05	9.000	L1	OFF	9.6
0.2130	33.02	63.09	30.06	9.000	L1	OFF	9.6
0.2355	32.29	62.25	29.96	9.000	L1	OFF	9.6
0.2603	31.64	61.42	29.79	9.000	L1	OFF	9.6
0.6845	31.54	56.00	24.46	9.000	L1	OFF	9.7
2.2933	30.76	56.00	25.24	9.000	L1	OFF	9.7
2.6960	30.16	56.00	25.84	9.000	L1	OFF	9.8
2.7185	31.12	56.00	24.88	9.000	L1	OFF	9.8
2.7410	29.91	56.00	26.09	9.000	L1	OFF	9.8
2.7905	31.11	56.00	24.89	9.000	L1	OFF	9.8
2.8130	31.54	56.00	24.46	9.000	L1	OFF	9.8
20.1560	25.61	60.00	34.39	9.000	L1	OFF	10.4
20.1628	29.73	60.00	30.27	9.000	L1	OFF	10.4
20.4553	29.88	60.00	30.12	9.000	L1	OFF	10.4
20.7500	30.28	60.00	29.72	9.000	L1	OFF	10.4
21.0403	28.68	60.00	31.32	9.000	L1	OFF	10.4
21.3395	30.12	60.00	29.88	9.000	L1	OFF	10.4

2021-12-10 오후 8:03:06



Test 2 / 2

Final Result CAV

Frequency (MHz)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1658	18.83	55.17	36.34	9.000	L1	OFF	9.6
0.1883	17.84	54.11	36.28	9.000	L1	OFF	9.6
0.2130	17.37	53.09	35.72	9.000	L1	OFF	9.6
0.2355	17.42	52.25	34.83	9.000	L1	OFF	9.6
0.2603	18.08	51.42	33.34	9.000	L1	OFF	9.6
0.6845	25.57	46.00	20.43	9.000	L1	OFF	9.7
2.2933	25.86	46.00	20.14	9.000	L1	OFF	9.7
2.7185	25.71	46.00	20.29	9.000	L1	OFF	9.8
2.7410	22.64	46.00	23.36	9.000	L1	OFF	9.8
2.7658	19.02	46.00	26.98	9.000	L1	OFF	9.8
2.7883	22.92	46.00	23.08	9.000	L1	OFF	9.8
2.8130	22.11	46.00	23.89	9.000	L1	OFF	9.8
20.1605	9.30	50.00	40.70	9.000	L1	OFF	10.4
20.4553	11.31	50.00	38.69	9.000	L1	OFF	10.4
20.7500	18.37	50.00	31.63	9.000	L1	OFF	10.4
21.0425	10.42	50.00	39.58	9.000	L1	OFF	10.4
21.3373	9.77	50.00	40.23	9.000	L1	OFF	10.4
21.6320	10.76	50.00	39.24	9.000	L1	OFF	10.4

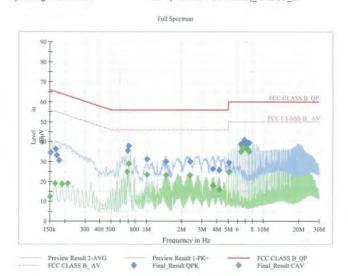
2021-12-10 오후 8:03:06

1 / 2

Test Report

Common Information

EUT : Manufacturer : Test Site: Operating Conditions : SM-S901B/DS SAMSUNG SHIELD ROOM WPT(PHONE TO PHONE)_CROSS_L1



Final Result QPK

Frequency (MHz)	QuasiPeak (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1523	34.50	65.88	31.38	9.000	L1	OFF	9.6
0.1680	36.46	65.06	28.60	9.000	L1	OFF	9.6
0.1725	33.10	64.84	31.74	9.000	L1	OFF	9.6
0.1793	30.67	64.52	33.86	9.000	L1	OFF	9.6
0.6935	35.60	56.00	20.40	9.000	L1	OFF	9.7
0.7093	37.81	56.00	18.19	9.000	L1	OFF	9.7
1.0153	31.02	56.00	24.98	9.000	L1	OFF	9.7
1.4653	30.14	56.00	25.86	9.000	L1	OFF	9.7
2.3653	29.97	56.00	26.03	9.000	L1	OFF	9.7
3.7198	26.20	56.00	29.80	9.000	L1	OFF	9.8
4.1743	25.71	56.00	30.29	9.000	L1	OFF	9.8
5.0743	29.43	60.00	30.57	9.000	L1	OFF	9.9
6.4265	38.75	60.00	21.25	9.000	L1	OFF	9.9
6.6515	38.64	60.00	21.36	9.000	L1	OFF	9.9
6.8788	40.70	60.00	19.30	9.000	L1	OFF	9.9
7.1038	39.64	60.00	20.36	9.000	L1	OFF	9.9
7.3288	39.02	60.00	20.98	9.000	L1	OFF	9.9
7.5560	39.34	60.00	20.66	9.000	L1	OFF	10.0

2021-12-10 오후 7:46:36



Test 2 / 2

Final Result CAV

Frequency (MHz)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1500	12,34	56.00	43.66	9.000	L1	OFF	9.6
0.1658	19.17	55.17	36.00	9.000	L1	OFF	9.6
0.1905	18.62	54.02	35.39	9.000	L1	OFF	9.6
0.2130	19.12	53.09	33.97	9.000	L1	OFF	9.6
0.6868	24.77	46.00	21.23	9.000	L1	OFF	9.7
0.7093	28.71	46.00	17.29	9.000	L1	OFF	9.7
1.0153	23.30	46.00	22.70	9.000	L1	OFF	9.7
1.4653	23.12	46.00	22.88	9.000	L1	OFF	9.7
2.3630	23.15	46.00	22.85	9.000	L1	OFF	9.7
3.7220	17.95	46.00	28.05	9.000	L1	OFF	9.8
4.1720	15.73	46.00	30.27	9.000	L1	OFF	9.8
5.0743	24.93	50.00	25.07	9.000	L1	OFF	9.9
6.4265	34.87	50.00	15.13	9.000	L1	OFF	9.9
6.6538	36.80	50.00	13.20	9.000	L1	OFF	9.9
6.8788	36.99	50.00	13.01	9.000	L1	OFF	9.9
7.1038	36.63	50.00	13.37	9.000	L1	OFF	9.9
7.3288	35.97	50.00	14.03	9.000	L1	OFF	9.9
7.5560	34.90	50.00	15.10	9.000	L1	OFF	10.0

2021-12-10 오후 7:46:36

Conducted Emissions (Line 2)

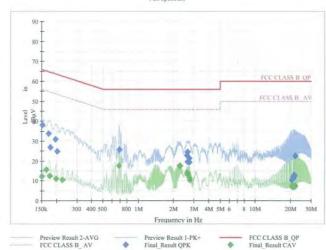
Test 1/2

Test Report

Common Information

EUT : Manufacturer : Test Site: Operating Conditions : SM-S901B/DS SAMSUNG SHIELD ROOM WPT(PHONE TO WATCH)_CROSS_N





Final Result QPK

Frequency (MHz)	QuasiPeak (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1523	38.09	65.88	27.78	9.000	N	OFF	9.6
0.1725	33.66	64.84	31.18	9.000	N	OFF	9.6
0.1770	26.69	64.63	37.94	9.000	N	OFF	9.6
0.1973	30.75	63.73	32.97	9.000	N	OFF	9.6
0.2040	24.92	63.45	38.52	9.000	N	OFF	9.6
0.6890	25.58	56.00	30.42	9.000	N	OFF	9.6
2.6263	22.90	56.00	33.10	9.000	N	OFF	9.8
2.6330	19.65	56.00	36.35	9.000	N	OFF	9.8
2.6420	24.49	56.00	31.51	9.000	N	OFF	9.8
2.6488	24.53	56.00	31.47	9.000	N	OFF	9.8
2.7275	19.27	56.00	36.73	9.000	N	OFF	9.8
2.7320	21.28	56.00	34.72	9.000	N	OFF	9.8
20.5678	10.35	60.00	49.65	9.000	N	OFF	10.5
20.8288	10.87	60.00	49.13	9.000	N	OFF	10.5
21.0943	11.83	60.00	48.17	9.000	N	OFF	10.5
21.3553	12.91	60.00	47.09	9.000	N	OFF	10.5
21.3598	12.40	60.00	47.60	9.000	N	OFF	10.5
21.8818	22.54	60.00	37.46	9.000	N	OFF	10.5

2021-12-10 오후 7:57:08



Test 2 / 2

Final Result CAV

Frequency (MHz)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1500	12.01	56.00	43.99	9.000	N	OFF	9.6
0.1635	15.70	55.28	39.58	9.000	N	OFF	9.6
0.1748	12.47	54.73	42.26	9.000	N	OFF	9.6
0.1995	11.06	53.63	42.57	9.000	N	OFF	9.6
0.2243	10.26	52.66	42.40	9.000	N	OFF	9.6
0.6868	17.48	46.00	28.52	9.000	N	OFF	9.6
2.2618	17.25	46.00	28.75	9.000	N	OFF	9.7
2.2865	17.73	46.00	28.27	9.000	N	OFF	9.7
2.6263	14.08	46.00	31.92	9.000	N	OFF	9.8
2.6510	13.32	46.00	32.68	9.000	N	OFF	9.8
2.7253	11.44	46.00	34.56	9.000	N	OFF	9.8
2.7500	10.51	46.00	35.49	9.000	N	OFF	9.8
20.5700	7.16	50.00	42.84	9.000	N	OFF	10.5
20.8310	7.18	50.00	42.82	9.000	N	OFF	10.5
21.0920	7.03	50.00	42.97	9.000	N	OFF	10.5
21.3553	7.17	50.00	42.83	9.000	N	OFF	10.5
21.6163	7.00	50.00	43.00	9.000	N	OFF	10.5
21.8795	7.51	50.00	42.49	9.000	N	OFF	10.5

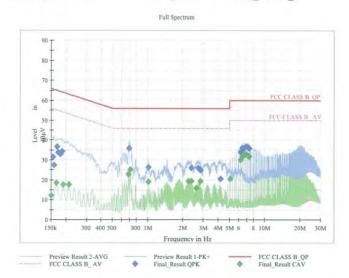
2021-12-10 오후 7:57:08

Test 1 / 2

Test Report

Common Information

EUT : Manufacturer : Test Site: Operating Conditions : SM-S901B/DS SAMSUNG SHIELD ROOM WPT(PHONE TO PHONE)_CROSS_N



Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1545	31.42	65.75	34.33	9.000	N	OFF	9.6
0.1590	27.46	65.52	38.06	9.000	N	OFF	9.6
0.1680	36.61	65.06	28.45	9.000	N	OFF	9.6
0.1725	33.80	64.84	31.04	9.000	N	OFF	9.6
0.1793	32.91	64.52	31.61	9.000	N	OFF	9.6
0.1860	34.32	64.21	29.89	9.000	N	OFF	9.6
0.6913	35.82	56.00	20.18	9.000	N	OFF	9.6
1.0153	26.24	56.00	29.76	9.000	N	OFF	9.7
2.3653	25.90	56.00	30.10	9.000	N	OFF	9.7
2.6960	25.96	56.00	30.04	9.000	N	OFF	9.8
2.8153	24.89	56.00	31.11	9.000	N	OFF	9.8
4.1698	20.51	56.00	35.49	9.000	N	OFF	9.8
6.2038	34.14	60.00	25.86	9.000	N	OFF	9.9
6.4288	35.92	60.00	24.08	9.000	N	OFF	9.9
6.6560	35.87	60.00	24.13	9.000	N	OFF	9.9
6.8810	36.55	60.00	23.45	9.000	N	OFF	9.9
7.1060	36.49	60.00	23.51	9.000	N	OFF	9.9
7.3310	35.74	60.00	24.26	9.000	N	OFF	9.9

2021-12-10 오후 7:39:25



Test 2 / 2

Final Result CAV

Frequency (MHz)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1500	12.14	56.00	43.86	9.000	N	OFF	9.6
0.1658	18.45	55.17	36.73	9.000	N	OFF	9.6
0.1905	17.50	54.02	36.51	9.000	N	OFF	9.6
0.2130	17.74	53.09	35.35	9.000	N	OFF	9.6
0.6868	22.74	46.00	23.26	9.000	N	OFF	9.6
0.7093	25.04	46.00	20.96	9.000	N	OFF	9.7
1.0153	19.07	46.00	26.93	9.000	N	OFF	9.7
2.2213	19.39	46.00	26.61	9.000	N	OFF	9.7
2.3653	19.46	46.00	26.54	9.000	N	OFF	9.7
2.6240	15.84	46.00	30.16	9.000	N	OFF	9.8
2.8130	19.40	46.00	26.60	9.000	N	OFF	9.8
5.0765	20.57	50.00	29.43	9.000	N	OFF	9.9
6.2038	29.94	50.00	20.06	9.000	N	OFF	9.9
6.4288	31.62	50.00	18.38	9.000	N	OFF	9.9
6.6560	32.19	50.00	17.81	9.000	N	OFF	9.9
6.8810	32.75	50.00	17.25	9.000	N	OFF	9.9
7.1060	32.36	50.00	17.64	9.000	N	OFF	9.9
7,3310	31.71	50.00	18.29	9.000	N	OFF	9.9

2021-12-10 오후 7:39:25



(3. PCB Rev 0.7A - S.LSI)

Test Result & Plot (Position: Aligned)

Conducted Emissions (Line 1)

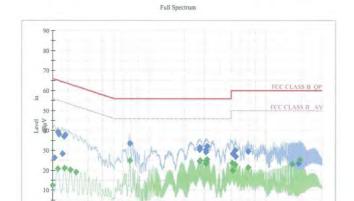
Test 1/2

Test Report

Common Information

EUT : Manufacturer : Test Site: Operating Conditions :

SM-S901B/DS SAMSUNG SHIELD ROOM WPT(PHONE TO WATCH)_ALIGNED_L1



Final Result QPK

300 400 500

800 IM

Frequency (MHz)	QuasiPeak (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1545	26.21	65.75	39.54	9.000	L1	OFF	9.6
0.1658	39.25	65.17	25.92	9.000	L1	OFF	9.6
0.1703	38.02	64.95	26.93	9.000	L1	OFF	9.6
0.1815	28.18	64.42	36.23	9.000	L1	OFF	9.6
0.1883	36.91	64.11	27.20	9.000	L1	OFF	9.6
0.1928	37.83	63.92	26.09	9.000	L1	OFF	9.6
0.6868	33.53	56.00	22.47	9.000	L1	OFF	9.7
2.7005	30.56	56.00	25.44	9.000	L1	OFF	9.8
2.7050	31.49	56.00	24.51	9.000	L1	OFF	9.8
2.7095	30.35	56.00	25.65	9.000	L1	OFF	9.8
3.0425	30.24	56.00	25.76	9.000	L1	OFF	9.8
3.0628	29.21	56.00	26.79	9.000	L1	OFF	9.8
3.1168	31.97	56.00	24.03	9.000	L1	OFF	9.8
5.1868	28.25	60.00	31.75	9.000	L1	OFF	9.9
5.4118	29.92	60.00	30.08	9.000	L1	OFF	9.9
5.4905	26.96	60.00	33.04	9.000	L1	OFF	9.9
6.9935	29.29	60.00	30.71	9.000	L1	OFF	9.9
18.8398	23.50	60.00	36.50	9.000	L1	OFF	10.3

3M 4M 5M 6

Frequency in Hz Preview Result 1-PK+ Final_Result QPK

20M 30M

FCC CLASS B QP Final Result CAV

2021-12-10 오후 8:42:22

HCT CO.,LTD. F-TP22-03 (Rev.00) 71 / 94



Test 2 / 2

Final Result CAV

Frequency (MHz)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1500	12.37	56.00	43.63	9.000	L1	OFF	9.6
0.1658	20.72	55.17	34.45	9.000	L1	OFF	9.6
0.1905	21.11	54.02	32.90	9.000	L1	OFF	9.6
0.2130	20.16	53.09	32.93	9.000	L1	OFF	9.6
0.2378	18.92	52.17	33.26	9.000	L1	OFF	9.0
0.6845	24.71	46.00	21.29	9.000	L1	OFF	9.
2.7163	24.56	46.00	21.44	9.000	L1	OFF	9.1
2.7410	24.94	46.00	21.06	9.000	L1	OFF	9.8
3.0493	23.28	46.00	22.72	9.000	L1	OFF	9.
3.0718	24.77	46.00	21.23	9.000	L1	OFF	9.
3.0965	23.83	46.00	22.17	9.000	L1	OFF	9.
3.1438	25.38	46.00	20.62	9.000	L1	OFF	9.
5.1508	23.54	50.00	26.46	9.000	L1	OFF	9.
5.1868	20.04	50.00	29.96	9.000	L1.	OFF	9.
5.4118	22.67	50.00	27.33	9.000	L1	OFF	9.
6.9935	21.44	50.00	28.56	9.000	L1	OFF	9.
16.8013	23.13	50.00	26.87	9.000	L1	OFF	10.
19.2808	25.13	50.00	24.87	9.000	L1	OFF	10.

2021-12-10 오후 8:42:22

Test 1/2

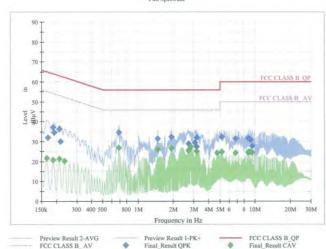
Test Report

Common Information

EUT : Manufacturer : Test Site: Operating Conditions :

SM-S901B/DS SAMSUNG SHIELD ROOM WPT(PHONE TO PHONE)_ALIGNED_L1





Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1703	32.11	64.95	32.84	9.000	L1	OFF	9.6
0.1883	37.20	64.11	26.91	9.000	L1	OFF	9.6
0.1928	34.73	63.92	29.19	9.000	L1	OFF	9.6
0.2130	36.37	63.09	26.72	9.000	L1	OFF	9.6
0.2175	29.92	62.91	33.00	9.000	L1	OFF	9.6
0.6868	34.69	56.00	21.31	9.000	L1	OFF	9.7
1.4698	31.40	56.00	24.60	9.000	L1	OFF	9.7
1.9198	32.44	56.00	23.56	9.000	L1	OFF	9.7
2.7140	28.88	56.00	27.12	9.000	L1	OFF	9.8
3.0515	29.49	56.00	26.51	9.000	L1	OFF	9.8
3.1618	27.48	56.00	28.52	9.000	L1	OFF	9.8
3.1663	32.15	56.00	23.85	9.000	L1	OFF	9.8
5.1980	32.30	60.00	27.70	9.000	L1	OFF	9.9
6.7798	31.36	60.00	28.64	9.000	L1	OFF	9.9
8.6990	31.86	60.00	28.14	9.000	L1	OFF	10.0
8.9285	31.55	60.00	28.45	9.000	L1	OFF	10.0
9.1513	30.85	60.00	29.15	9.000	L1	OFF	10.0
9.3830	27.60	60.00	32.40	9.000	L1	OFF	10.0

2021-12-10 오후 8:19:18

HCT CO.,LTD. F-TP22-03 (Rev.00) 73 / 94



Test 2 / 2

Final Result CAV

Frequency (MHz)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1658	21.60	55.17	33.58	9.000	L1	OFF	9.6
0.1883	20.71	54.11	33.40	9.000	L1	OFF	9.6
0.2130	21.24	53.09	31.84	9.000	L1	OFF	9.6
0.2355	20.17	52.25	32.08	9.000	L1	OFF	9.6
0.6845	26.93	46.00	19.07	9.000	L1	OFF	9.7
1.4675	25.94	46.00	20.06	9.000	L1	OFF	9.7
1.9198	26.53	46.00	19.47	9.000	L1	OFF	9.7
2.6938	25.29	46.00	20.71	9.000	L1	OFF	9.8
2.7185	25.96	46.00	20.04	9.000	L1	OFF	9.8
2.8130	27.40	46.00	18.60	9.000	L1	OFF	9.8
3.1663	25.13	46.00	20.87	9.000	L1	OFF	9.8
4.7503	24.14	46.00	21.86	9.000	L1	OFF	9.9
5.1980	24.71	50.00	25.29	9.000	L1	OFF	9.9
6.7798	24.22	50.00	25.78	9.000	L1	OFF	9.9
8.7013	24.66	50.00	25.34	9.000	L1	OFF	10.0
8.9263	24.77	50.00	25.23	9.000	L1	OFF	10.0
9.1535	24.88	50.00	25.12	9.000	L1	OFF	10.0
9.3785	24.56	50.00	25.44	9.000	L1	OFF	10.0

2021-12-10 오후 8:19:18

F-TP22-03 (Rev.00) 74 / 94 **HCT CO.,LTD.**

Conducted Emissions (Line 2)

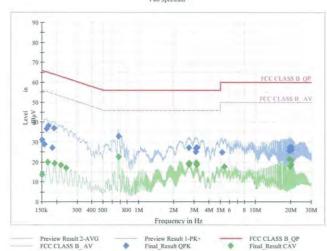
Test 1/2

Test Report

Common Information

EUT : Manufacturer : Test Site: Operating Conditions : SM-S901B/DS SAMSUNG SHIELD ROOM WPT(PHONE TO WATCH)_ALIGNED_N





Final Result QPK

Frequency (MHz)	QuasiPeak (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1500	31.03	66.00	34.97	9.000	N	OFF	9.6
0.1568	28.72	65.63	36.91	9.000	N	OFF	9.6
0.1635	36.67	65.28	28.62	9.000	N	OFF	9.6
0.1703	37.99	64.95	26.95	9.000	N	OFF	9.6
0.1838	27.09	64.31	37.22	9.000	N	OFF	9.6
0.1905	36.84	64.02	27.18	9.000	N	OFF	9.6
0.6778	32.76	56.00	23.24	9.000	N	OFF	9.6
2.7028	27.04	56.00	28.96	9.000	N	OFF	9.8
3.0965	26.75	56.00	29.25	9.000	N	OFF	9.8
3.1033	25.14	56.00	30.86	9.000	N	OFF	9.8
3.1213	27.11	56.00	28.89	9.000	N	OFF	9.8
3.1370	26.94	56.00	29.06	9.000	N	OFF	9.8
3.1663	27.20	56.00	28.80	9.000	N	OFF	9.8
5.1845	24.81	60.00	35.19	9.000	N	OFF	9.9
19.2605	25.72	60.00	34.28	9.000	N	OFF	10.4
19.4878	27.49	60.00	32.51	9.000	N	OFF	10.4
20.1673	25.84	60.00	34.16	9.000	N	OFF	10.5
20.1718	27.38	60.00	32.62	9.000	N	OFF	10.5

2021-12-10 오후 8:49:53



Test 2 / 2

Final Result CAV

Frequency (MHz)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1500	13.53	56.00	42.47	9.000	N	OFF	9.6
0.1680	19.87	55.06	35.19	9.000	N	OFF	9.6
0.1928	19.36	53.92	34.56	9.000	N	OFF	9.6
0.2175	18.59	52.91	34.32	9.000	N	OFF	9.6
0.2400	16.99	52.10	35.10	9.000	N	OFF	9.6
0.6778	22.48	46.00	23.52	9.000	N	OFF	9.6
2.6668	18.90	46.00	27.10	9.000	N	OFF	9.8
2.7005	18.64	46.00	27.36	9.000	N	OFF	9.8
2.7365	19.19	46.00	26.81	9.000	N	OFF	9.8
3.1190	18.81	46.00	27.19	9.000	N	OFF	9.8
3.1415	19.69	46.00	26.31		8	31.3	9.8
3.1663	18.76	46.00	27.24	9.000	N	OFF	9.8
5.4095	17.60	50.00	32.40	9.000	N	OFF	9.9
19.2673	21.47	50.00	28.53	9.000	N	OFF	10.4
19.4923	21.48	50.00	28.52	9.000	N	OFF	10.4
19.7173	17.74	50.00	32.26	9.000	N	OFF	10.4
19.9423	20.81	50.00	29.19	9.000	N	OFF	10.5
20.1673	18.64	50.00	31.36	9.000	N	OFF	10.5

2021-12-10 오후 8:49:53

Test 1/2

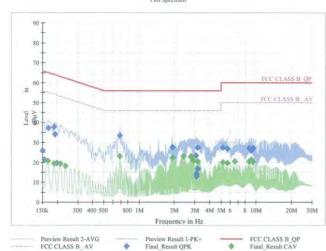
Test Report

Common Information

EUT : Manufacturer : Test Site: Operating Conditions :

SM-S901B/DS SAMSUNG SHIELD ROOM WPT(PHONE TO PHONE)_ALIGNED_N





Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1500	25.95	66.00	40.05	9.000	N	OFF	9.6
0.1545	21.44	65.75	44.32	9.000	N	OFF	9.6
0.1680	37.20	65.06	27.86	9.000	N	OFF	9.6
0.1883	37.66	64.11	26.45	9.000	N	OFF	9.6
0.1928	34.03	63.92	29.89	9.000	N	OFF	9.6
0.1995	19.50	63.63	44.13	9.000	N	OFF	9.6
0.6845	33.39	56.00	22.61	9.000	N	OFF	9.6
1.9175	27.71	56.00	28.29	9.000	N	OFF	9.7
3.0538	23.39	56.00	32.61	9.000	N	OFF	9.8
3.0830	14.02	56.00	41.98	9.000	N	OFF	9.8
3.1078	13.09	56.00	42.91	9.000	N	OFF	9.8
3.1595	16.85	56.00	39.15	9.000	N	OFF	9.8
3.1663	27.50	56.00	28.50	9.000	N	OFF	9.8
5.2003	27.33	60.00	32.67	9.000	N	OFF	9.9
5.6503	26.86	60.00	33.14	9.000	N	OFF	9.9
8.7013	27.21	60.00	32.79	9.000	N	OFF	10.0
9.1490	26.03	60.00	33.97	9.000	N	OFF	10.0
9.3808	26.99	60.00	33.01	9.000	N	OFF	10.0

2021-12-10 오후 8:12:52



Test 2 / 2

Final Result CAV

Frequency (MHz)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1658	20.65	55.17	34.52	9.000	N	OFF	9.6
0.1883	19.36	54.11	34.75	9.000	N	OFF	9.6
0.2130	19.47	53.09	33.62	9.000	N	OFF	9.6
0.2355	18.14	52.25	34.11	9.000	N	OFF	9.6
0.6845	23.04	46.00	22.96	9.000	N	OFF	9.6
1.9198	22.15	46.00	23.85	9.000	N	OFF	9.7
2.3878	23.14	46.00	22.86	9.000	N	OFF	9.7
2.7658	22.74	46.00	23.26	9.000	N	OFF	9.8
2.7883	22.69	46.00	23.31	9.000	N	OFF	9.8
2.8130	23.03	46.00	22.97	9.000	N	OFF	9.8
2.9323	20.85	46.00	25.15	9.000	N	OFF	9.8
3.1663	20.42	46.00	25.58	9.000	N	OFF	9.8
5.2003	19.91	50.00	30.09	9.000	N	OFF	9.9
5.6480	19.75	50.00	30.25	9.000	N	OFF	9.9
6.5503	20.51	50.00	29.49	9.000	N	OFF	9.9
8.6990	20.43	50.00	29.57	9.000	N	OFF	10.0
9.1490	21.20	50.00	28.80	9.000	N	OFF	10.0
9.3763	20.30	50.00	29.70	9.000	N	OFF	10.0

2021-12-10 오후 8:12:52



Test Result & Plot (Position: Cross)

Conducted Emissions (Line 1)

Test 1 / 2

Test Report

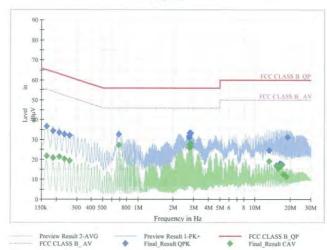
Common Information

EUT : Manufacturer : Test Site: Operating Conditions :

SM-S901B/DS SAMSUNG SHIELD ROOM

WPT(PHONE TO WATCH)_CROSS_L1





Final Result QPK

Frequency (MHz)	QuasiPeak (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1658	36.52	65.17	28.65	9.000	L1	OFF	9.6
0.1883	34.44	64.11	29.68	9.000	L1	OFF	9.6
0.2130	33.37	63.09	29.72	9.000	L1	OFF	9.6
0.2355	32.63	62.25	29.63	9.000	L1	OFF	9.6
0.2603	31.99	61.42	29.43	9.000	L1	OFF	9.6
0.6845	32.59	56.00	23.41	9.000	L1	OFF	9.7
2.7185	31.71	56.00	24.29	9.000	L1	OFF	9.8
2.7433	30.77	56.00	25.23	9.000	L1	OFF	9.8
2.7658	33.09	56.00	22.91	9.000	L1	OFF	9.8
2.7883	33.14	56.00	22.86	9.000	L1	OFF	9.8
2.8130	33.06	56.00	22.94	9.000	L1	OFF	9.8
2.8355	33.08	56.00	22.92	9.000	L1	OFF	9.8
13.2350	24.64	60.00	35.36	9.000	L1	OFF	10.2
15.2443	16.80	60.00	43.20	9.000	L1	OFF	10.2
16.3985	17.84	60.00	42.16	9.000	L1	OFF	10.3
16.9700	17.54	60.00	42.46	9.000	L1	OFF	10.3
16.9745	17.26	60.00	42.74	9.000	L1	OFF	10.3
18.9815	31.12	60.00	28.88	9.000	L1	OFF	10.3

2021-12-10 오후 8:56:20



Test 2 / 2

Final Result CAV

Frequency (MHz)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1658	21.59	55.17	33.58	9.000	L1	OFF	9.6
0.1883	20.84	54.11	33.28	9.000	L1	OFF	9.6
0.2130	21.43	53.09	31.66	9.000	L1	OFF	9.6
0.2355	20.27	52.25	31.98	9.000	L1	OFF	9.6
0.2603	19.42	51.42	32.00	9.000	L1	OFF	9.6
0.6845	27.20	46.00	18.80	9.000	L1	OFF	9.7
2.7185	26.10	46.00	19.90	9.000	L1	OFF	9.8
2.7433	26.98	46.00	19.02	9.000	L1	OFF	9.8
2.7658	27.55	46.00	18.45	9.000	L1	OFF	9.8
2.7905	27.68	46.00	18.32	9.000	L1	OFF	9.8
2.8130	27.87	46.00	18.13	9.000	L1	OFF	9.8
2.8378	26.31	46.00	19.69	9.000	L1	OFF	9.8
13.2350	19.12	50.00	30.88	9.000	L1	OFF	10.2
15.2443	17.05	50.00	32.95	9.000	L1	OFF	10.2
15.8158	15.33	50.00	34.67	9.000	L1	OFF	10.3
16.9700	16.99	50.00	33.01	9.000	L1	OFF	10.3
17.5438	12.26	50.00	37.74	9.000	L1	OFF	10.3
18.4100	11.31	50.00	38.69	9.000	L1	OFF	10.3

2021-12-10 오후 8:56:20

Test 1/2

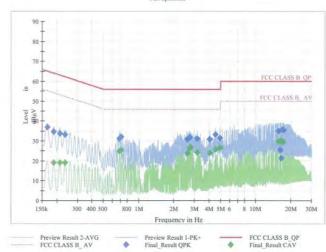
Test Report

Common Information

EUT : Manufacturer : Test Site: Operating Conditions :

SM-S901B/DS SAMSUNG SHIELD ROOM WPT(PHONE TO PHONE)_CROSS_L1





Final Result QPK

Frequency (MHz)	QuasiPeak (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1658	36.82	65.17	28.35	9.000	L1	OFF	9.6
0.1883	34.72	64.11	29.39	9.000	L1	OFF	9.6
0.2130	33.82	63.09	29.27	9.000	L1	OFF	9.6
0.2355	33.07	62.25	29.19	9.000	L1	OFF	9.6
0.6868	31.25	56.00	24.75	9.000	L1	OFF	9.7
0.7093	31.93	56.00	24.07	9.000	L1	OFF	9.7
2.5993	30.98	56.00	25.02	9.000	L1	OFF	9.8
2.7185	31.86	56.00	24.14	9.000	L1	OFF	9.8
3.1663	31.01	56.00	24.99	9.000	L1	OFF	9.8
4.0640	30.96	56.00	25.04	9.000	L1	OFF	9.8
4.5163	33.12	56.00	22.88	9.000	L1	OFF	9.9
4.9663	31.58	56.00	24.42	9.000	L1	OFF	9.9
15.6988	34.77	60.00	25.23	9.000	L1	OFF	10.3
16.1420	25.25	60.00	34.75	9.000	L1	OFF	10.3
16.5920	21.33	60.00	38.67	9.000	L1	OFF	10.3
16.8260	35.83	60.00	24.17	9.000	L1	OFF	10.3
16.8305	35.68	60.00	24.32	9.000	L1	OFF	10.3
17.2760	35.36	60.00	24.64	9.000	L1	OFF	10.3

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Test 2 / 2

Final Result CAV

Frequency (MHz)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1883	19.01	54.11	35.11	9.000	L1	OFF	9.6
0.2130	18.91	53.09	34.18	9.000	L1	OFF	9.6
0.2355	19.12	52.25	33.13	9.000	L1	OFF	9.6
0.6845	24.90	46.00	21.10	9.000	L1	OFF	9.7
0.7093	25.34	46.00	20.66	9.000	L1	OFF	9.7
2,5993	23.78	46.00	22.22	9.000	L1	OFF	9.8
2.7185	26.12	46.00	19.88	9.000	L1	OFF	9.8
2.7658	26.77	46.00	19.23	9.000	L1	OFF	9.8
3.1663	24.29	46.00	21.71	9.000	L1	OFF	9.8
4.0640	24.01	46.00	21.99	9.000	L1	OFF	9.8
4.5163	25.75	46.00	20.25	9.000	L1	OFF	9.9
4.9685	26.51	46.00	19.49	9.000	L1	OFF	9.9
15.6943	29.63	50.00	20.37	9.000	L1	OFF	10.3
16.1465	29.76	50.00	20.24	9.000	L1	OFF	10.3
16.3715	29.68	50.00	20.32	9.000	L1	OFF	10.3
16.5965	29.92	50.00	20.08	9.000	L1	OFF	10.3
16.8238	29.32	50.00	20.68	9.000	L1	OFF	10.3
17.0488	29.56	50.00	20.44	9.000	L1	OFF	10.3

2021-12-10 오후 8:27:22

1/2

Report No.: HCT-RF-2110-FC024-R2

Conducted Emissions (Line 2)

Test

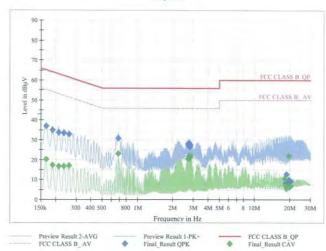
Test Report

Common Information
EUT:
Manufacturer:
Test Site:
Operating Conditions:

SM-S901B/DS SAMSUNG SHIELD ROOM

WPT(PHONE TO WATCH)_CROSS_N





Final Result OPK

Frequency (MHz)	QuasiPeak (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1658	36.99	65.17	28.18	9.000	N	OFF	9.6
0.1883	34.88	64.11	29.23	9.000	N	OFF	9.6
0.2130	33.86	63.09	29.23	9.000	N	OFF	9.6
0.2355	33.36	62.25	28.89	9.000	N	OFF	9.6
0.2603	32.83	61.42	28.59	9.000	N	OFF	9.6
0.6868	30.95	56.00	25.05	9.000	N	OFF	9.6
2.6960	27.90	56.00	28.10	9.000	N	OFF	9.8
2.7185	27.07	56.00	28.93	9.000	N	OFF	9.8
2.7410	27.75	56.00	28.25	9.000	N	OFF	9.8
2.7635	28.38	56.00	27.62	9.000	N	OFF	9.8
2.7905	26.64	56.00	29.36	9.000	N	OFF	9.8
2.8130	27.48	56.00	28.52	9.000	N	OFF	9.8
18.4123	7.85	60.00	52.15	9.000	N	OFF	10.4
18.4190	8.23	60.00	51.77	9.000	N	OFF	10.4
18.7048	12.62	60.00	47.38	9.000	N	OFF	10.4
19.5665	9.75	60.00	50.25	9.000	N	OFF	10.4
19.5710	9.44	60.00	50.56	9.000	N	OFF	10.4
20.1403	9.37	60.00	50.63	9.000	N	OFF	10.5

2021-12-10 오후 9:02:46



Test 2 / 2

Final Result CAV

Frequency (MHz)	(dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1658	20.27	55.17	34.90	9.000	N	OFF	9.6
0.1883	17.30	54.11	36.82	9.000	N	OFF	9.6
0.2130	16.59	53.09	36.50	9.000	N	OFF	9.6
0.2355	16.62	52.25	35.63	9.000	N	OFF	9.6
0.2603	17.06	51.42	34.36	9.000	N	OFF	9.6
0.6845	23.08	46.00	22.92	9.000	N	OFF	9.6
2.6960	20.58	46.00	25.42	9.000	N	OFF	9.8
2.7185	21.72	46.00	24.28	9.000	N	OFF	9.8
2.7433	20.43	46.00	25.57	9.000	N	OFF	9.8
2.7658	20.82	46.00	25.18	9.000	N	OFF	9.8
2.7905	21.25	46.00	24.75	9.000	N	OFF	9.8
2.8130	21.96	46.00	24.04	9.000	N	OFF	9.8
18.1288	10.75	50.00	39.25	9.000	N	OFF	10.4
18.4168	6.83	50.00	43.17	9.000	N	OFF	10.4
18.7048	5.36	50.00	44.64	9.000	N	OFF	10.4
19.5688	21.97	50.00	28.03	9.000	N	OFF	10.4
19.8568	6.30	50.00	43.70	9.000	N	OFF	10.5
20.1425	6.52	50.00	43.48	9.000	N	OFF	10.5

2021-12-10 오후 9:02:46

F-TP22-03 (Rev.00) 84 / 94 **HCT CO.,LTD.**

Test 1/2

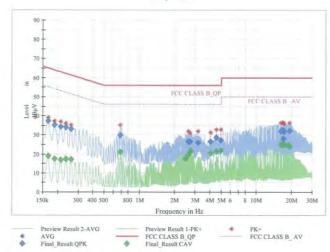
Test Report

Common Information

EUT : Manufacturer : Test Site: Operating Conditions :

SM-S901B/DS SAMSUNG SHIELD ROOM WPT(PHONE TO PHONE)_CROSS_N





Final Result QPK

Frequency (MHz)	QuasiPeak (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1658	37.45	65.17	27.72	9.000	N	OFF	9.6
0.1883	35.28	64.11	28.83	9.000	N	OFF	9.6
0.2130	34.46	63.09	28.63	9.000	N	OFF	9.6
0.2355	34.14	62.25	28.11	9.000	N	OFF	9.6
0.2603	33.09	61.42	28.34	9.000	N	OFF	9.6
0.6868	29.79	56.00	26.21	9.000	N	OFF	9.6
2.5993	26.51	56.00	29.49	9.000	N	OFF	9.8
2.7163	26.39	56.00	29.61	9.000	N	OFF	9.8
3.1663	25.92	56.00	30.08	9.000	N	OFF	9.8
4.0663	26.62	56.00	29.38	9.000	N	OFF	9.8
4.5163	28.74	56.00	27.26	9.000	N	OFF	9.8
4.9685	27.22	56.00	28.78	9.000	N	OFF	9.9
16.1465	32.00	60.00	28.00	9.000	N	OFF	10.3
16.5965	32.47	60.00	27.53	9.000	N	OFF	10.3
16.8283	32.56	60.00	27.44	9.000	N	OFF	10.3
16.8328	27.91	60.00	32.09	9.000	N	OFF	10.3
17.0443	31.75	60.00	28.25	9.000	N	OFF	10.4
19.0850	32.19	60.00	27.81	9.000	N	OFF	10.4

2021-12-10 오후 8:33:01



Test 2 / 2

Final Result CAV

Frequency (MHz)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1658	18.96	55.17	36.21	9.000	N	OFF	9.6
0.1883	17.59	54.11	36.53	9.000	N	OFF	9.6
0.2130	16.92	53.09	36.17	9.000	N	OFF	9.6
0.2355	17.33	52.25	34.92	9.000	N	OFF	9.6
0.2603	17.18	51.42	34.24	9.000	N	OFF	9.6
0.6845	21.17	46.00	24.83	9.000	N	OFF	9.6
2.4823	17.49	46.00	28.51	9.000	N	OFF	9.7
2.5993	19.67	46.00	26.33	9.000	N	OFF	9.8
2.7185	21.73	46.00	24.27	9.000	N	OFF	9.8
4.0663	20.44	46.00	25.56	9.000	N	OFF	9.8
4.5163	21.51	46.00	24.49	9.000	N	OFF	9.8
4.9685	21.67	46.00	24.33	9.000	N	OFF	9.9
16.1488	24.85	50.00	25.15	9.000	N	OFF	10.3
16.6010	25.41	50.00	24.59	9.000	N	OFF	10.3
16.8260	24.76	50.00	25.24	9.000	N	OFF	10.3
17.2783	24.97	50.00	25.03	9.000	N	OFF	10.4
18.6328	24.65	50.00	25.35	9.000	N	OFF	10.4
19.0850	24.11	50.00	25.89	9.000	N	OFF	10

2021-12-10 오후 8:33:01



Report No.: HCT-RF-2110-FC024-R2 FCC ID: A3LSMS901B

11. EMISSION BANDWIDTH PLOT

Test Settings

1. Analyzer frequency set to the frequency of the radiated spurious emission of interest

2. RBW: 300 Hz

(Because the measured signal is CW/CW-like, adjusting the RBW per C63.10 would not be practical since measured bandwidth will always follow the RBW and the result will be approximately twice the RBW.)

3. VBW : ≥ 3 x RBW

4. Sweep time: Auto couple

5. Detector : Peak6. Trace : Maxhold

7. Trace was allowed to stabilize

<u>Limit</u>

None

(for reporting purposes only.)

F-TP22-03 (Rev.00) 87 / 94 **HCT CO.,LTD.**



■Test Result

(1. PCB Rev 0.7 - Renesas)

EUT Mode	Position	Test Frequency (kHz)	20dB Bandwidth (kHz)	Occupied Bandwidth (Hz)
Charging from	Aligned	113.567	0.876	748.0
EUT to Phone	Cross	113.567	0.884	775.0
Charging from EUT(Charging from TA) to Phone	Aligned	113.567	0.841	718.0
	Cross	113.567	0.837	713.0
Charging from EUT to Watch(Charging from TA) to Watch	Cross	113.64	0.874	743.0

(2. PCB Rev 0.7A - Renesas)

EUT Mode	Position	Test Frequency	20dB Bandwidth	Occupied Bandwidth	
		(kHz)	(kHz)	(Hz)	
Charging from	Aligned	112.844	0.910	808.0	
EUT to Phone	Cross	112.771	0.920	781.0	
Charging from EUT(Charging from TA) to Phone	Aligned	112.771	0.925	789.0	
	Cross	112.771	0.918	782.0	
Charging from EUT to Watch(Charging from TA) to Watch	Cross	112.699	0.915	774.0	

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(3. PCB Rev 0.7A – S.LSI)

EUT Mode	Position	Test Frequency (kHz)	20dB Bandwidth (kHz)	Occupied Bandwidth (Hz)
Charging from	Aligned	112.916	0.955	812.0
EUT to Phone	Cross	112.844	0.974	822.0
Charging from EUT(Charging from TA) to Phone	Aligned	112.916	0.980	827.0
	Cross	112.844	0.965	825.0
Charging from EUT to Watch(Charging from TA) to Watch	Cross	112.844	0.973	828.0

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■Test Plot

(1. PCB Rev 0.7 - Renesas)

Charging from EUT to Phone - Position : Aligned



Charging from EUT to Phone - Position: Cross



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(2. PCB Rev 0.7A - Renesas)

Charging from EUT(Charging from TA) to Phone - Position: Aligned



Charging from EUT(Charging from TA) to Phone - Position: Cross



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(3. PCB Rev 0.7A - S.LSI)

Charging from EUT(Charging from TA) to Phone - Position: Aligned



Charging from EUT(Charging from TA) to Phone - Position: Cross



Note:

In order to simplify the report, attached plots were only the worst case

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12. LIST OF TEST EQUIPMENT

Equipment	Model	Manufacturer	Serial No.	Due to Calibration	Calibration Interval
LISN	ENV216	Rohde & Schwarz	102245	08/23/2022	Annual
EMI Test Receiver	ESR	Rohde & Schwarz	101910	06/17/2022	Annual
Controller(Antenna mast)	CO3000	Innco system	CO3000-4p	N/A	N/A
Antenna Position Tower	MA4640/800-XP- EP	Innco system	N/A	N/A	N/A
Controller	EM1000	Audix	060520	N/A	N/A
Turn Table	N/A	Audix	N/A	N/A	N/A
Loop Antenna	1513	Schwarzbeck	1513-333	03/19/2022	Biennial
Hybrid Antenna	VULB 9168	Schwarzbeck	9168-0895	09/04/2022	Biennial
Spectrum Analyzer	FSV(10 Hz ~ 40 GHz)	Rohde & Schwarz	101055	05/14/2022	Annual
Signal Analyzer	N9030A	Agilent	MY49432108	03/09/2022	Annual
ATT(10dB) + LNA1(1~18GHz)	FMSR -05B	TNM system	None	01/20/2022	Annual
ATT(3dB) + LNA1(1~18GHz)	FMSR -05B	TNM system	None	01/20/2022	Annual
LNA1(1~18GHz)	FMSR -05B	TNM system	25540	01/20/2022	Annual
Power Amplifier	CBL18265035	CERNEX	22966	12/02/2022	Annual

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13. Annex A_TEST SETUP PHOTO

Please refer to test setup photo file no. as follows;

No.	Description
1	HCT-RF-2110-FC024-P

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