

From: khpark@hct.co.kr
Sent: Thursday, January 29, 2004 5:42 AM
To: MIKE KUO (CCSEMC); Steve Cheng
Cc: KiSoo Kim (HCT); ??? \(\HCT\); SCOTT WANG(CCS)
Subject: Re: TCB Review Questions for AN04T3582 HCT Cellphone PP4TX-120C

Dear Sir,

How are you ?

According to your requests on the below questions, we'd like to send the answers on each questions under each question as follows;

FCC ID : PP4TX-120C (Class II Permissive Change)

- 1) Applicant Name : Hyundai Curitel Inc.
- 2) Application Product : Tri-Mode Phone (AMPS/ CDMA/ PCS CDMA)
- 3) Model Name : TX-120C (Class II Permissive Change (Antenna have been changed))
- 4) Applicant ID: T11390
- 5) Application Assessment Number : AN04T3582
- 6) Up-load date: January 29, 2004

If you have any questions or comments, please do not hesitate to contact us.

Best Regards,

Keun- Ho Park - HCT

----- Original Message -----

From: Steve Cheng
To: '???'
Cc: ??? \(\HCT\) ; KiSoo Kim (HCT) ; ??? \(\HCT\) ; Scott Wang ; Mike Kuo
Sent: Thursday, January 29, 2004 5:13 AM
Subject: RE: TCB Review Questions for AN04T3582 HCT Cellphone PP4TX-120C

Dear Mr. Park,

Question #4: test report page 13, both 835M_system_verification_record shown exceeding 5%. However, according to OET BULLETIN 65 supplement C, APPENDIX D: SAR MEASUREMENT PROTOCOL that "The relative permittivity and conductivity of the tissue material should be within 5% of the values given in Appendix C". Please explain what happen to the system and retest the related record if necessary.

====> We've revised the SAR Report. (page 13).

Please find the attached test report. (filename : ATT. N
(SAR REPORT))

<CCS> No correction has been made yet. Please indicate that this is a typo or liquid exceed the tolerance. If out of the spec liquid was used during the previous test, please re-perform all related test. The re-evaluation with new liquid parameter on previous plots is not acceptable, since actual ratio of incident and reflected power to the measurement probe is liquid dependent.

====> The relative permittivity and conductivity of the tissue material did not exceed the tolerance(page 12). and system verification tolerance is 10% (page 13)

Please find the attached test report. (filename : ATT. N
(SAR Report))

Question #5: At least one z plot required for each test configuration (like right head touch, right head tilt,...etc). Please supply missing data. Also, please increase Z-axis measurement range long enough to show trace settled on Z-axis or reach 15cm.

====> We've revised the SAR data. (page 9 ~ 23).

Please find the attached test report. (filename : ATT. O
(SAR TEST DATA) -4 of 4-))

<CCS> Plots 22 to 24 shown step jump on extrapolated and measured data, please explain why this happen?

====> I attached wrong data through a mistake.

We've revised the SAR data.(page: 21, 22, 23)

Please find the attached test report. (filename : ATT. O (SAR
TEST DATA) -4 of 4-)

Question #7: ATT. O (SAR TEST DATA) -3 of 4- for 1900M PCS, all the plots regarding to extended antenna position shown second peak outside the measurement contour. Please redo all the measurement with antenna in extended position (include body worn configuration in 4 of 4 file). Also, please make sure that new area scan shall cover whole EUT including the extended antenna.

====> We've retested. (ATT. O (SAR TEST DATA) -3 of 4- for 1900M PCS HEAD : page 14 / ATT. O (SAR TEST DATA) -4 of 4- for 1900M PCS BODY : page 8). Please find the attached Users manual. (filename :ATT. O (SAR TEST DATA) -3 of 4- / ATT. O (SAR TEST DATA) -4 of 4-))

<CCS> System validation plot for added measurement on January 26, 2004 is missing, please supply. And pages 3,5,7,9,11,13 was not proper taken, i.e. still shown second peak outside the scan, please redo the measurement.

====> We've retested and revised the System validation plot for added measurement .

Please find the attached test report.

(ATT. O (SAR TEST DATA) -3 of 4- for 1900M PCS HEAD : (page 18, 19, 20, 21, 22, 23) / (ATT. Q (DIPOLE VALIDATION PLOTS) : (page 5, 12)

Best regards,

Steve

-----Original Message-----

From: khpark@hct.co.kr [mailto:khpark@hct.co.kr]
Sent: Monday, January 26, 2004 12:03 AM
To: MIKE KUO (CCSEMC); Steve Cheng
Cc: ??? \ (HCT\); KiSoo Kim (HCT); ??? \ (HCT\); SCOTT WANG(CCS)
Subject: Re: TCB Review Questions for AN04T3582 HCT Cellphone PP4TX-120C

Dear Sir,

How are you ?

According to your requests on the below questions, we'd like to send the answers on each questions under each question as belows;

FCC ID : PP4TX-120C (Class II Permissive Change)

- 1) Applicant Name : Hyundai Curitel Inc.
- 2) Application Product : Tri-Mode Phone (AMPS/ CDMA/ PCS CDMA)
- 3) Model Name : TX-120C (Class II Permissive Change (Antenna have been changed))
- 4) Applicant ID: T11390

5) Application Assessment Number : AN04T3582

6) Up-load date: January 26, 2004

If you have any questions or comments, please do not hesitate to contact us.

Thanks and Best Regards,

Keun- Ho Park - HCT

----- Original Message -----

From: Steve Cheng

To: '???'

Cc: Mike Kuo ; Scott Wang ; ??? \ (HCT\) ; KiSoo Kim (HCT)

Sent: Thursday, January 22, 2004 10:18 AM

Subject: RE: TCB Review Questions for AN04T3582 HCT Cellphone PP4TX-120C

TCB Review Questions for AN04T3582 HCT Cellphone PP4TX-120C

-EMC-

Question #1: ATT. L (Operational description) page 1, please explain why level 0 output power is lower than level 1?

1.1.1. Cellular-FM mode : 7.6dBm +0.2/-4dB ~ 26.8dBm +0.2/-4dB

Level 0 : 26.8dBm +0.2/-4dB

Level 1 : 27.0dBm +0.2/-4dB

Level 2 : 27.0dBm +0.2/-4dB

Level 3 : 23.7dBm +0.2/-4dB

Level 4 : 19.7dBm +0.2/-4dB

Level 5 : 15.7dBm +0.2/-4dB

Level 6 : 11.7dBm +0.2/-4dB

Level 7 : 7.6dBm +0.2/-4dB

====> We've revised the Operational Description (page 1).
Please find the attached file. (filename : ATT. L
(Operational Description))

<CCS> OK

Question #2: Test-Report(Part 15) EMI page 5 mentioned that EUT is tested under standby mode. However, per C63.4 section 11.1 that "all parts of the system shall be exercised. For example, in a computer system, tape and disk drives shall be put through a read-write-erase sequence ...". Please clarify why standby mode was used during the test.

2.2 EUT exercise Software

The EUT was tested on the standby during the radiated and conducted emission testing

====> We've revised the EMI Report. (page 4, 6, 8, 9, 14, 15).
Please find the attached test report. (filename : Test-Report(Part 15) EMI)

<CCS> OK

Question #3: Operational description page 2. Section 2. Presented the DC voltage into final amplifier, but DC current is missing. Please supply this required information.

====> We've revised the Operational Description (page 2).
Please find the attached file. (filename : ATT. L (Operational Description))

<CCS> OK

-SAR-

Question #4: test report page 13, both 835M_system_verification_record shown exceeding 5%. However, according to OET BULLETIN 65 supplement C, APPENDIX D: SAR MEASUREMENT PROTOCOL that "The relative permittivity and conductivity of the tissue material should be within 5% of the values given in Appendix C". Please explain what happen to the system and retest the related record if necessary.

====> We've revised the SAR Report. (page 13).
Please find the attached test report. (filename : ATT. N (SAR REPORT))

<CCS> No correction has been made, yet.

Question #5: At least one z plot required for each test configuration (like right head touch, right head tilt,...etc). Please supply missing data. Also,

please increase Z-axis measurement range long enough to show trace settled on Z-axis or reach 15cm.

====> We've revised the SAR data. (page 9 ~ 23).

 Please find the attached test report. (filename :
ATT. O (SAR TEST DATA) -4 of 4-))

<CCS> Plots 22 to 24 shown step jump on extrapolated data and measured data, please explain why this happen?

Question #6: Users manual P121 included following language.

"A minimum separation distance of 7.9 inches (20cm) must be maintained between the user/bystander and the vehicle mounted external antenna to satisfy FCC RF exposure requirements.

VEHICLE MOUNTED EXTERNAL ANTENNA

(OPTIONAL, IF AVAILABLE)"

However there was no test data or MPE assessment found in the report to support it. Please supply either test data or MPE assessment to support this statement.

====> We've revised the Users manual . (page 123).

 Please find the attached Users manual. (filename :
ATT. M (User Manual))

<CCS> OK, Info has been deleted.

Question #7: ATT. O (SAR TEST DATA) -3 of 4- for 1900M PCS, all the plots regarding to extended antenna position shown second peak outside the measurement contour. Please redo all the measurement with antenna in extended position (include body worn configuration in 4 of 4 file). Also, please make sure that new area scan shall cover whole EUT including the extended antenna.

====> We've retested. (ATT. O (SAR TEST DATA) -3 of 4- for 1900M PCS HEAD : page 14 / ATT. O (SAR TEST DATA) -4 of 4- for 1900M PCS BODY : page 8).

 Please find the attached Users manual. (filename :
:ATT. O (SAR TEST DATA) -3 of 4- / ATT. O (SAR TEST DATA) -4 of 4-))

<CCS> Does system verification has been done for added test? Only partial of them been re-do, need justification. re-examine.

 one of the new data was taken on Jan. 26, page 15, but other are new plots from Dec. 24?

Question #8: ATT. P (SAR TEST SET-UP PHOTO) page 9, it seems from the photo that the separation distance is 2.5cm but label indicated 2.0cm. Please confirm which number is correct. And make necessary update on p121 of users manual if necessary.

====> We've revised the SAR Test set-up photo and Users manual . (SAR Test set-up photo: page 9 / Users manual: page: 121).

Please find the attached Users manual. (filename : ATT. P (SAR TEST SET-UP PHOTO) / ATT. M (User Manual))

<CCS> OK

For your info (no response required for this application): All Z plots does not have enough travel distance to demonstrate the compliance, please increase Z axis measurement range long enough to show trace settled on Z axis or reach the 15cm.

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information within 60 days of the original e-mail date may result in application dismissal and forfeiture of the filing fee. Also, please note that partial responses increase processing time and should not be submitted. Any questions about the content of this correspondence should be directed to the e-mail address listed below the name of the sender.

Best Regards

Steve Cheng / TCB Technical Reviewer

Compliance Certification Services

561F Monterey Road

Morgan Hill, CA 95037

Tel:(408) 463-0885 x: 119

Fax:(408) 463-0888

scheng@ccsemc.com

<http://www.ccsemc.com>

-----Original Message-----

From: khpark@hct.co.kr [mailto:khpark@hct.co.kr]

Sent: Monday, January 19, 2004 6:41 PM

To: Steve Cheng

Cc: MIKE KUO (CCSEMC); SCOTT WANG(CCS); ??? \ (HCT\); KiSoo Kim (HCT)

Subject: Re: TCB Review Questions for AN04T3579 (FCC ID: PP4TX-110C)

Dear Sir,

Thanks very much for your grant (TX-110C).

According to your requests on the below questions, we'd like to send the answers on each questions under each question as follows;

1. FCC ID: PP4TX-110C

1) Assessment no.: AN04T3579 (belows test report uploaded)

2) Upload date: January 20, 2004

2. How about as below another project?

FCC ID : PP4TX-120C (Class II Permissive Change)

1) Applicant Name : Hyundai Curitel Inc.

2) Application Product : Tri-Mode Phone (AMPS/ CDMA/ PCS CDMA)

3) Model Name : TX-120C (Class II Permissive Change (Antenna have been changed))

4) Applicant ID: T11390

5) Application Assessment Number : AN04T3582

6) Application date: January 9, 2004

If you have any questions or comments, please do not hesitate to contact us.

Best Regards,

KiSoo Kim - HCT

----- Original Message -----

From: Steve Cheng
To: '???'
Cc: ??? \ (HCT\) ; KiSoo Kim (HCT) ; Mike Kuo ; Scott Wang
Sent: Tuesday, January 20, 2004 9:26 AM
Subject: RE: TCB Review Questions for AN04T3579 (FCC ID: PP4TX-110C)

Dear Mr. Kim,

Attached please find the grant and payment request form for AN04T3579. Also, please notice that the SAR plots "ATT_O (SAR TEST DATA) -4 of 4-.doc" is for PP4TX-120C but not for PP4TX-110C. Please resubmit a correct version within 2 days. Thanks you again for choosing CCS as your TCB service.

====> We've revised the SAR plots "ATT_O (SAR TEST DATA) -4 of 4-.doc.

Please find the attached test report. (filename : ATT_O (SAR TEST DATA) -4 of 4-))

Best regards,
Steve

-----Original Message-----

From: khpark@hct.co.kr [mailto:khpark@hct.co.kr]
Sent: Monday, January 19, 2004 1:02 AM
To: Steve Cheng
Cc: ??? \ (HCT\); KiSoo Kim (HCT); MIKE KUO (CCSEMC); SCOTT WANG (CCS)
Subject: Re: TCB Review Questions for AN04T3579 (FCC ID: PP4TX-110C)

Dear Sir,

How are you ?

According to your requests on the below questions, we'd like to send the answers on each questions under each question as follows;

1. FCC ID: PP4TX-110C

- 1) Assessment no.: AN04T3579 (belows test report uploaded)
- 2) Upload date: January 19, 2004

This project should be completed within January 19, 2004 if as soon as possible.

2. How about as below project?

FCC ID : PP4TX-120C (Class II Permissive Change)

- 1) Applicant Name : Hyundai Curitel Inc.

2) Application Product : Tri-Mode Phone (AMPS/ CDMA/ PCS
CDMA)

3) Model Name : TX-120C (Class II Permissive Change
(Antenna have been changed))

4) Applicant ID: T11390

5) Application Assessment Number : AN04T3582

6) Application date: January 9, 2004

If you have any questions or comments, please do not hesitate to
contact us.

Best Regards,

KiSoo Kim - HCT

----- Original Message -----

From: Steve Cheng

To: '???' ; KiSoo Kim (HCT)

Cc: Mike Kuo ; Scott Wang ; ??? \ (HCT\)

Sent: Saturday, January 17, 2004 12:57 PM

Subject: RE: TCB Review Questions for AN04T3579 (FCC ID: PP4TX-
110C)

Dear Mr. Kim,

Thanks very much for your timely response. But there are still
some question remained, please resolve them ASAP. Thanks.

Question # 3 : Page 5 of part 15B report mentioned that EUT is
tested under standby mode. However, per C63.4 section 11.1 that "all parts of
the system shall be exercised. For example, in a computer system, tape and disk
drives shall be put through a read-write-erase sequence ...". Please clarify why
standby mode was used during the test.

====> We've revised the EMI Report. (page 5).

Please find the attached test report. (filename :
Test-Report(Part 15) EMI)

<CCS> Please confirm, if charging mode represent the
worst case among all possible operations? like up/down load the data between EUT
and PC in camera mode.

====> We've revised the EMI Report. (page 4, 6, 8, 9, 14, 15).
Please find the attached test report. (filename :
Test-Report(Part 15) EMI)

Question # 7 : SAR value quoted in the users manual, page 110, as
listed below, is not agree with SAR test report. Please revise the manual.

"The highest SAR value for this model phone when
tested for use at the ear is 1.31 W/Kg and when worn on the body, as described
in this user guide, is 0.79 W/Kg."

====> We've revised the Users manual . (page 110).
Please find the attached file. (filename : ATT. M
(User Manual))

<CCS> Please check again, no change was made.

====> We've revised the Users manual . (page 110 ※CH 8
124page).
Please find the attached file. (filename : ATT. M (User
Manual))

Question # 5 : The data supplied in "ATT_Q _DIPOLE VALIDATION
PLOTS" is not matching the date indicated on the report page 12. Please
clarify/correct or retest if necessary.

====> We've revised the SAR Report. (page 12).
Please find the attached test report. (filename : ATT.
N (SAR REPORT))

<CCS> The correction is Ok for SAR test plots 1 of 4
to 3 of 4, but please explain why 3 body worn tests in plots 4 of 4 take 3 days
to finish and in different days?

====> We've revised the SAR Report. (page 12).
Please find the attached test report. (filename : ATT.
N (SAR REPORT))

Best regards,
Steve

-----Original Message-----

From: khpark@hct.co.kr [mailto:khpark@hct.co.kr]

Sent: Friday, January 16, 2004 12:45 AM

To: MIKE KUO (CCSEMC); Steve Cheng

Cc: SCOTT WANG(CCS); ??? \ (HCT\); KiSoo Kim (HCT)

Subject: Re: TCB Review Questions for AN04T3579 (FCC ID: PP4TX-

110C)

Dear Sir,

How are you ?

According to your requests on the below questions, we'd like to send the answers on each questions under each question as belows;

1) FCC ID: PP4TX-110C

2) Assessment no.: AN04T3579 (belows test report uploaded)

3) Upload date: January 16, 2004

This project should be completed within January 19, 2004 if possible.

If you have any questions or comments, please do not hesitate to contact us.

Best Regards,

KiSoo Kim - HCT

----- Original Message -----

From: Steve Cheng

To: '???'

Cc: KiSoo Kim (HCT) ; Scott Wang ; Mike Kuo

Sent: Friday, January 16, 2004 12:56 PM

Subject: RE: TCB Review Questions for AN04T3579

TCB Review Questions for AN04T3579 HCT Cellphone PP4TX-110C

-EMC-

Question # 1 : Operational description page 2. Section 2. Presented the DC voltage into final amplifier, but DC current is missing. Please supply this required information.

====> We've revised the Operational Description (page 2).
Please find the attached file. (filename : ATT. L
(Operational Description))

Question # 2 : EMC and SAR test report used different power measurement scheme. Please explain the relation between RF conducted and ERP/EIRP power and confirm that both tests used the same maximum RF power?

====> We've same maximum power tested. (EMC and SAR test)

Maximum Conducted Power: 0.501W AMPS (27.0dBm) /
0.355W CDMA (25.5dBm) / 0.316W PCS CDMA (25.0dBm)

Please find the attached file. (filename : SAR test mode (TX-110C))

Question # 3 : Page 5 of part 15B report mentioned that EUT is tested under standby mode. However, per C63.4 section 11.1 that "all parts of the system shall be exercised. For example, in a computer system, tape and disk drives shall be put through a read-write-erase sequence ..." Please clarify why standby mode was used during the test.

====> We've revised the EMI Report. (page 5).
Please find the attached test report. (filename :
Test-Report(Part 15) EMI)

-SAR-

Question # 4 : test report page 13, both 835M_system_verification_record shown exceeding 5%. However, according to OET BULLETIN 65 supplement C, APPENDIX D: SAR MEASUREMENT PROTOCOL that "The relative permittivity and conductivity of the tissue material should be within 5% of the values given in Appendix C". Please explain what happen to the system and retest the related record if necessary.

====> We've revised the SAR Report. (page 13).
Please find the attached test report. (filename :
ATT. N (SAR REPORT))

Question # 5 : The data supplied in "ATT_Q _DIPOLE VALIDATION PLOTS" is not matching the date indicated on the report page 12. Please clarify/correct or retest if necessary.

====> We've revised the SAR Report. (page 12).
Please find the attached test report. (filename :
ATT. N (SAR REPORT))

Question # 6 : Users manual P123 included following language.

====> We've revised the Users manual . (page 123).
Please find the attached Users manual. (filename :
ATT. M (User Manual))

"A minimum separation distance of 7.9 inches (20cm) must be maintained between the user/bystander and the vehicle mounted external antenna to satisfy FCC RF exposure requirements.

VEHICLE MOUNTED EXTERNAL ANTENNA

(OPTIONAL, IF AVAILABLE)"

However there was no test data or MPE assessment found in the report to support it. Please supply either test data or MPE assessment to support this statement.

Question # 7 : SAR value quoted in the users manual, page 110, as listed below, is not agree with SAR test report. Please revise the manual.

====> We've revised the Users manual . (page 110).
Please find the attached file. (filename : ATT. M
(User Manual))

"The highest SAR value for this model phone when tested for use at the ear is 1.31 W/Kg and when worn on the body, as described in this user guide, is 0.79 W/Kg."

====> We've revised the Users manual . (page 110).
Please find the attached file. (filename : ATT. M
(User Manual))

Question # 8 : Test setup photo shown 25mm was used on Body worn configuration. However, Test report has other photos shown 20mm. Please clarify which separation distance was used during the test.

====> We've revised the SAR Report and SAR test set-up photo.
(SAR Report: page 8 / SAR test set-up photo: page 9).
Please find the attached test report. (filename :
ATT. N (SAR REPORT / ATT. P (SAR TEST SET-UP PHOTO))

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information within 60 days of the original e-mail date may result in application dismissal and forfeiture of the filing fee. Also, please note that partial responses increase processing time and should not be submitted. Any questions about the content of this correspondence should be directed to the e-mail address listed below the name of the sender.

Best Regards

Steve Cheng / TCB Technical Reviewer

Compliance Certification Services

561F Monterey Road

Morgan Hill, CA 95037

Tel:(408) 463-0885 x: 119

Fax:(408) 463-0888

scheng@ccsemc.com

http://www.ccsemc.com

-----Original Message-----

From: khpark@hct.co.kr [mailto:khpark@hct.co.kr]
Sent: Thursday, January 15, 2004 6:36 PM
To: MIKE KUO (CCSEMC); Steve Cheng (CCS)
Cc: KiSoo Kim (HCT); SCOTT WANG(CCS)
Subject: Question) FCC Part 24, 22 Tri-mode phone
Application (FCC ID : PP4TX-110C & PP4TX-120C)

Dear Sir

How are you ?

We always appreciate your kind cooperations on our FCC applications.,

How about as below two project?

1. FCC ID : PP4TX-110C (Basic)

CDMA/ PCS CDMA)

- 1) Applicant Name : HYUNDAI CURITEL INC.
- 2) Application Product : Tri-Mode Phone (AMPS/
- 3) Model Name : TX-110C
- 4) Applicant ID: T11390
- 5) Application Assessment Number : AN04T3579
- 6) Application date: January 9, 2004

2. FCC ID : PP4TX-120C (Class II Permissive Change)

CDMA/ PCS CDMA)

(Antenna have been changed))

- 1) Applicant Name : Hyundai Curitel Inc.
- 2) Application Product : Tri-Mode Phone (AMPS/
- 3) Model Name : TX-120C (Class II Permissive Change
- 4) Applicant ID: T11390
- 5) Application Assessment Number : AN04T3582
- 6) Application date: January 9, 2004

This project should be completed within January 19, 2004 if possible.

If you have questions or comments on this application, please do not hesitate to conatct us.

Thanks and Best Regards,

Ki- Soo Kim - HCT