For 8DPSK

Channel	Packet	Dwell Time (ms)		Conclusion
	00114	Fig.70	166.400	Р
	3DH1	Fig.71		
39	3DH3	Fig.72	- 282.080	Р
		Fig.73		
	ODUE	Fig.74	011 146	D
	3DH5	Fig.75	311.146	Р

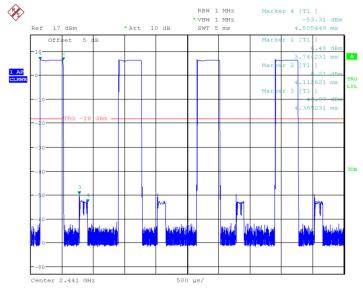
Report No.: I16D00012-RFB

Note: the dwell time is Calculated of the sum of test time about 31.5 seconds.

Equation: dwell time = pusletime *(1600/N)/79*T. N is the number of timeslot; T is the time about 31.5s.

The time of DH5=3.005*(1600/6)/79*31.6=319.519ms.

Conclusion: PASS
Test graphs as below:



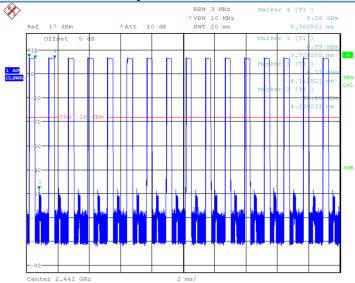
Date: 8.APR.2016 09:13:43

Fig.58 Time of occupancy (Dwell Time): Ch39, Packet DH1

Page Number

: 49 of 73





Date: 8.APR.2016 09:13:52

Fig.59 Number of Transmissions Measurement: Ch39, Packet DH1

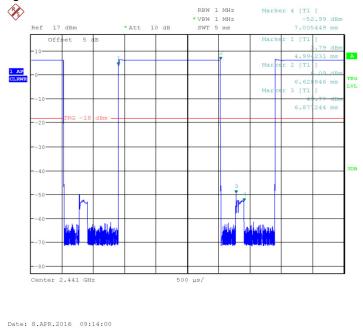
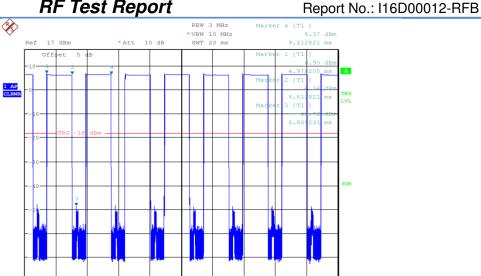


Fig.60 Time of occupancy (Dwell Time): Ch39, Packet DH3

Page Number

: 50 of 73



Date: 8.APR.2016 09:14:09

Fig.61 Number of Transmissions Measurement: Ch39, Packet DH3

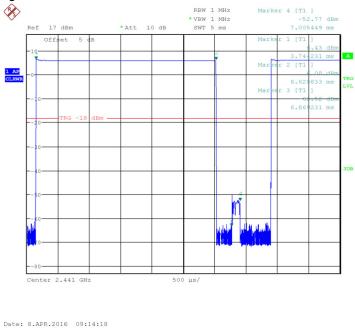
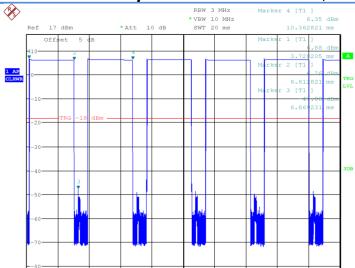


Fig.62 Time of occupancy (Dwell Time): Ch39,Packet DH5

Page Number

: 51 of 73



Report No.: I16D00012-RFB

Date: 8.APR.2016 09:14:26

Fig.63 Number of Transmissions Measurement: Ch39, Packet DH5

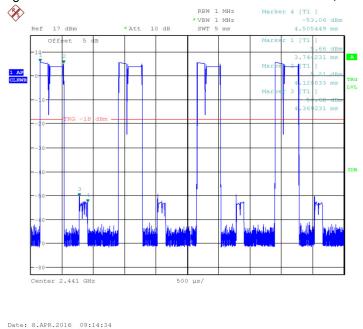
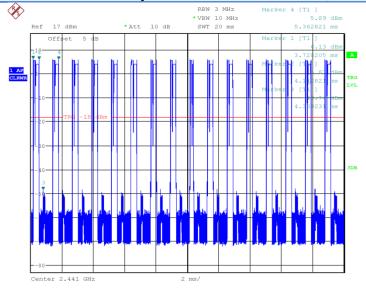


Fig.64 Time of occupancy (Dwell Time): Ch39, Packet 2-DH1

Page Number

: 52 of 73





Date: 8.APR.2016 09:14:42

Fig.65 Number of Transmissions Measurement: Ch39, Packet 2-DH1

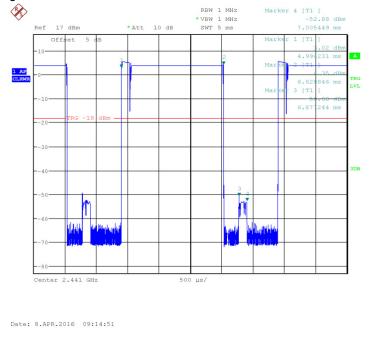
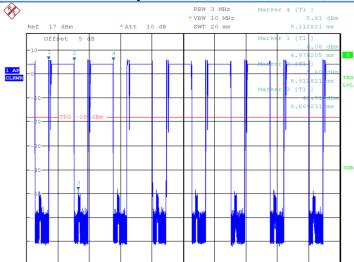


Fig.66 Time of occupancy (Dwell Time): Ch39, Packet 2-DH3

Page Number

: 53 of 73



Report No.: I16D00012-RFB

Date: 8.APR.2016 09:15:00

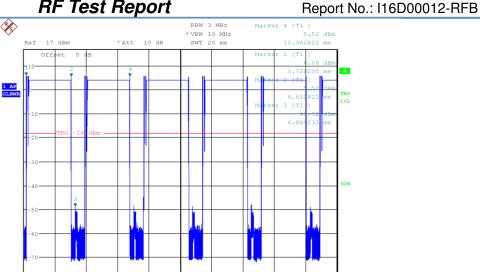
Fig.67 Number of Transmissions Measurement: Ch39, Packet 2-DH3



Fig.68 Time of occupancy (Dwell Time): Ch39,Packet 2-DH5

Page Number

: 54 of 73



Date: 8.APR.2016 09:15:16

Fig.69 Number of Transmissions Measurement: Ch39, Packet 2-DH5

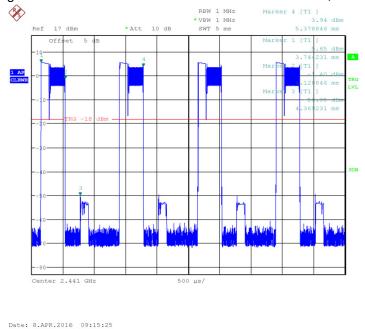
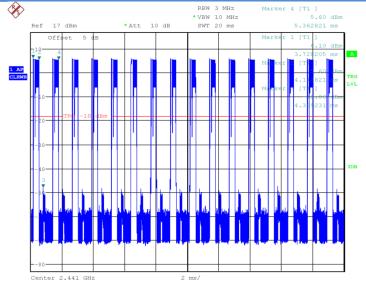


Fig.70 Time of occupancy (Dwell Time): Ch39, Packet 3-DH1

Page Number

: 55 of 73





Date: 8.APR.2016 09:15:34

Fig.71 Number of Transmissions Measurement: Ch39, Packet 3-DH1

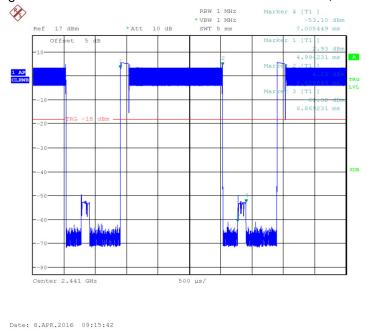
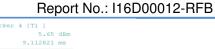
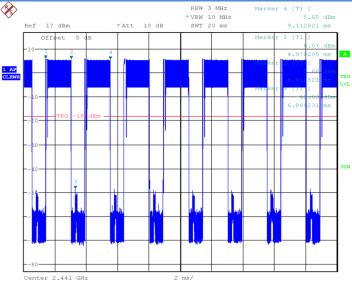


Fig.72 Time of occupancy (Dwell Time): Ch39,Packet 3-DH3

Page Number

: 56 of 73





Date: 8.APR.2016 09:15:51

Fig.73 Number of Transmissions Measurement: Ch39, Packet 3-DH3

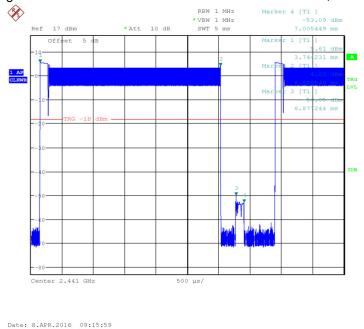
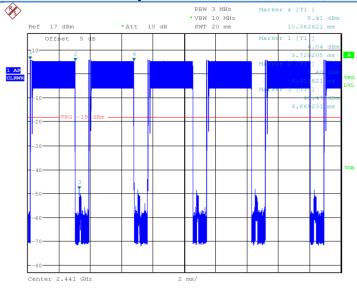


Fig.74 Time of occupancy (Dwell Time): Ch39,Packet 3-DH5

Page Number

: 57 of 73



Date: 8.APR.2016 09:16:08

Fig.75 Number of Transmissions Measurement: Ch39, Packet 3-DH5

6.6. 20dB Bandwidth

6.6.1 Measurement Limit:

Standard	Limit	
FCC 47 CFR Part 15.247 (a) (1)	N/A	

6.6.2 Test procedures

The measurement is according to ANSI C63.10 clause 7.8.7

- 1. Connect the EUT through cable and divide with CBT32 and spectrum analyzer.
- 2. Enable the EUT transmit maximum power.
- 3. Set the spectrum analyzer as
- 4. Span: two or five times of OBW
- 5. RBW= 1% to 5% of the OBW; VBW ≥ 3RBW; Max Hold.
- 6. Select the max peak, and N DB DOWN=20dB.
- 7. Record the results.

Measurement Result:

For GFSK

Channel	20dB Bandwidth (MHz)		Conclusion
0	Fig.76	1.029	Р
39	Fig.77	1.029	Р

East China Institute of Telecommunications TEL: +86 21 63843300 FAX: +86 21 63843301 Page Number : 58 of 73 Report Issued Date : Apr,25, 2016

Report No.: I16D00012-RFB



78 Fig.	78 1.029	Р
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Report No.: I16D00012-RFB

For $\pi/4$ DQPSK

Channel	20dB Bandwidth (MHz)		Conclusion
0	Fig.79	1.091	Р
39	Fig.80	1.091	Р
78	Fig.81	1.087	Р

For 8DPSK

Channel	20dB Bandwidth (MHz)		Conclusion
0	Fig.82	1.192	Р
39	Fig.83	1.192	Р
78	Fig.84	1.192	Р

Conclusion: PASS
Test graphs as below:

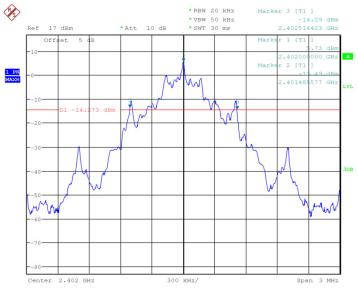


Fig.76 20dB Bandwidth: GFSK, Ch0

East China Institute of Telecommunications TEL: +86 21 63843300 FAX: +86 21 63843301

Date: 8.APR.2016 09:16:53

Page Number : 59 of 73 Report Issued Date : Apr,25, 2016





Date: 8.APR.2016 09:17:07

Fig.77 20dB Bandwidth: GFSK, Ch39

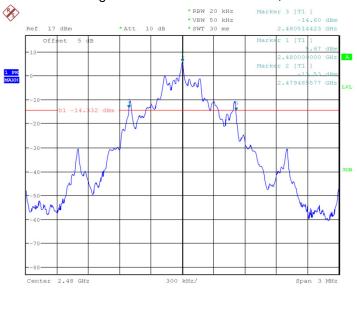


Fig.78 20dB Bandwidth: GFSK, Ch78

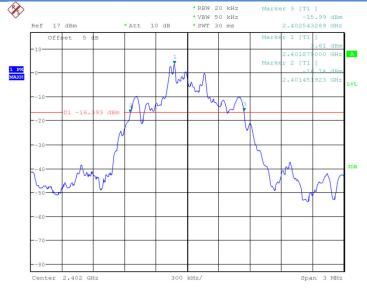
Page Number

: 60 of 73

Report Issued Date : Apr,25, 2016

Date: 8.APR.2016 09:17:21





Date: 8.APR.2016 09:17:35

Fig.79 20dB Bandwidth: π/4 DQPSK, Ch0

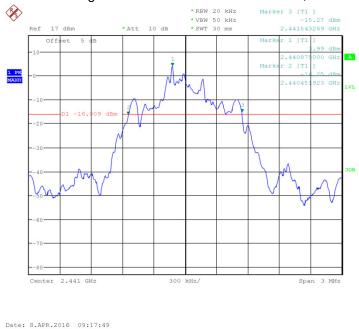
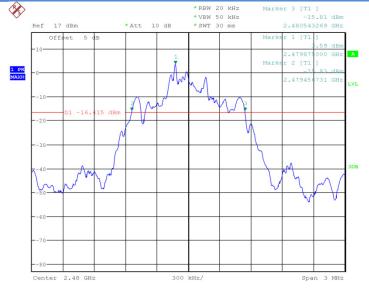


Fig.80 20dB Bandwidth: $\pi/4$ DQPSK, Ch39

Page Number

: 61 of 73





Date: 8.APR.2016 09:18:02

Fig.81 20dB Bandwidth: π/4 DQPSK, Ch78

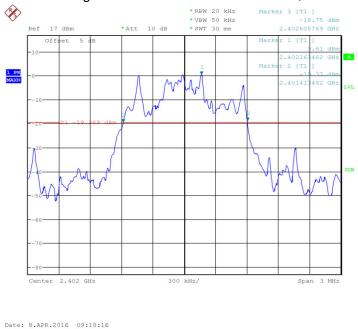


Fig.82 20dB Bandwidth: 8DPSK, Ch0

Page Number

: 62 of 73





Date: 8.APR.2016 09:18:30

Fig.83 20dB Bandwidth: 8DPSK, Ch39

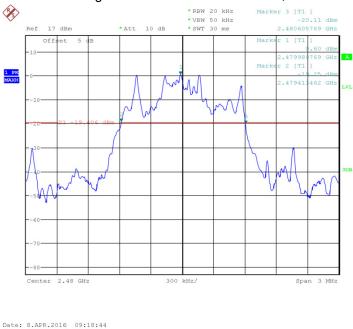


Fig.84 20dB Bandwidth: 8DPSK, Ch78

6.7. Carrier Frequency Separation

6.7.1 Measurement Limit:

Standard	Limit (KHz)	
FCC 47 CFR Part 15.247 (a) (1)	Over 25KHz or (2/3)*20dB bandwidth	

Page Number

: 63 of 73



6.7.2 Test procedures

The measurement is according to ANSI C63.10 clause 7.8.2.

- 1. Connect the EUT through cable and divide with CBT32 and spectrum analyzer.
- 2. Enable the EUT transmit in hopping mode.
- 3. Span: Wide enough to capture the peaks of two adjacent channels.
- 4. RBW: Start with the RBW set to approximately 30% of the channel spacing; adjust as necessary to best identify the center of each individual channel.

Report No.: I16D00012-RFB

- 5. Video (or average) bandwidth (VBW) ≥ RBW.
- 6. Sweep: Auto.
- 7. Detector function: Peak.
- 8. Trace: Max hold.
- 9. Allow the trace to stabilize.

6.7.3 Measurement Result:

For GFSK

Channel	Carrier separation (KHz)		Conclusion
39	Fig.85	1004.8077	Р

For π/4 DQPSK

Channel	Carrier separation (KHz)		Conclusion
39	Fig.86	980.7692	Р

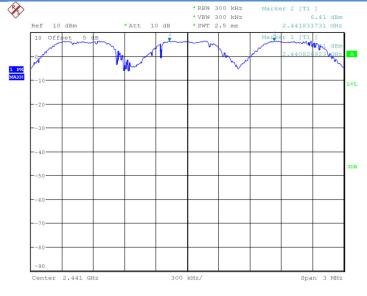
For 8DPSK

Channel	Carrier separation (KHz)		Conclusion
39	Fig.87	975.9615	Р

Conclusion: PASS
Test graphs as below:

East China Institute of Telecommunications Page Number : 64 of 73 TEL: +86 21 63843300 FAX: +86 21 63843301 Report Issued Date : Apr,25, 2016





Date: 8.APR.2016 09:24:21

Fig.85 Carrier separation measurement: GFSK, Ch39



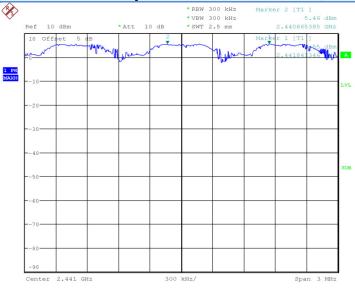
Page Number

: 65 of 73

Report Issued Date : Apr,25, 2016

Date: 8.APR.2016 09:25:32





Report No.: I16D00012-RFB

: 66 of 73

Report Issued Date : Apr,25, 2016

Page Number

Date: 8.APR.2016 09:26:43

Fig.87 Carrier separation measurement: 8DPSK, Ch39

6.8. Number Of Hopping Channels

6.8.1 Measurement Limit:

Standard	Limit	
FCC 47 CFR Part 15.247 (a)(1)(iii)	At least 15 non-overlapping channels	

6.8.2 Test procedure

The measurement is according to ANSI C63.10 clause 7.8.3.

- 1. Connect the EUT through cable and divide with CBT32 and spectrum analyzer.
- 2. Enable the EUT transmit in hopping mode.
- 3. Span: The frequency band of operation. Depending on the number of channels the device supports, it may be necessary to divide the frequency range of operation across multiple spans, to allow the individual channels to be clearly seen.
- 4. RBW: To identify clearly the individual channels, set the RBW to less than 30% of the channel spacing or the 20 dB bandwidth, whichever is smaller.
- 5. VBW \geq RBW.
- 6. Sweep: Auto.
- 7. Detector function: Peak.
- Trace: Max hold.
- 9. Allow the trace to stabilize.
- 10. Record the test rsults.

6.8.3 Measurement Result:

For GFSK

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Channel	Number of hopping channels		Conclusion
0~39	Fig.88	70	Р
40~78	Fig.89	79	Р

Report No.: I16D00012-RFB

For $\pi/4$ DQPSK

Channel	Number of hopping channels		Conclusion
0~39	Fig.90	70	Р
40~78	Fig.91	79	Р

For 8DPSK

Channel	Number of hopping channels		Conclusion
0~39	Fig.92	70	Р
40~78	Fig.93	Fig.93	

Conclusion: PASS
Test graphs as below:

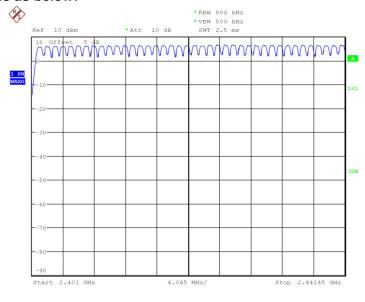


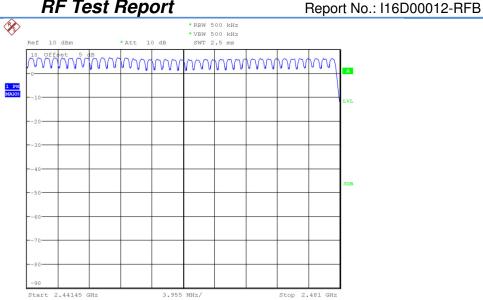
Fig.88 Number of hopping frequency: GFSK, Ch0~39

Page Number

: 67 of 73

Report Issued Date : Apr,25, 2016

Date: 8.APR.2016 09:29:20



Date: 8.APR.2016 09:31:25

Fig.89 Number of hopping frequency: GFSK, Ch40~78

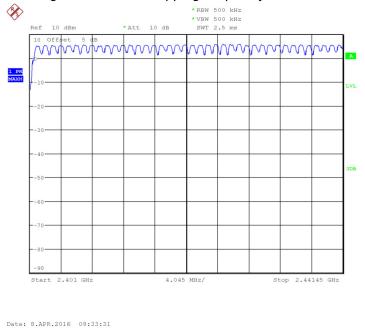
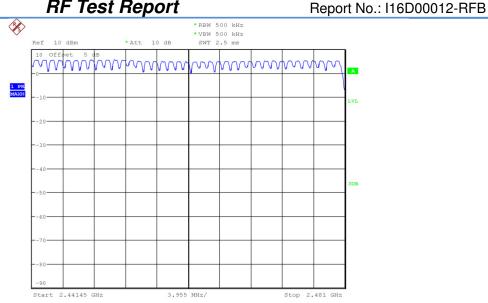


Fig.90 Number of hopping frequency: $\pi/4$ DQPSK, Ch0~39

Page Number

: 68 of 73



Date: 8.APR.2016 09:35:35

Fig.91 Number of hopping frequency: π/4 DQPSK, Ch40~78

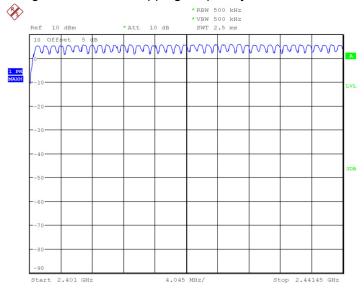


Fig.92 Number of hopping frequency: 8DPSK, Ch0~39

Page Number

: 69 of 73

Report Issued Date : Apr,25, 2016

Date: 8.APR.2016 09:37:40

Date: 8.APR.2016 09:39:45

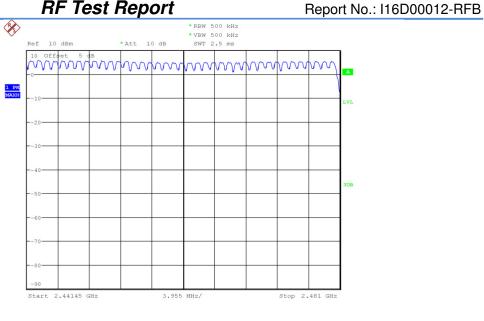


Fig.93 Number of hopping frequency: 8DPSK, Ch40~78

: 70 of 73

Report Issued Date : Apr,25, 2016

Page Number



7. Test Equipments and Ancillaries Used For Tests

The test equipments and ancillaries used are as follows.

Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Date	Cal.interva
1	Vector Signal Analyser	FSQ26	101096	Rohde&Schw arz	2015-05-13	1
2	Bluetooth Tester	CBT32	100785	Rohde&Schw arz	2015-05-13	1
3	DC Power Supply	ZUP60-14	LOC-220Z006 -0007	TDL-Lambda	2015-05-13	1

Report No.: I16D00012-RFB

Radiated emission test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibratio n Date	Cal.interv al
1	Universal Radio Communicati	CMU200	123126	R&S	2015-05-1 3	1
2	Test Receiver	ESU40	100307	R&S	2015-05-1 3	1
3	Trilog Antenna	VULB916 3	VULB9163-51 5	Schwarzbeck	2014-11-0 5	3
4	Double Ridged Guide Antenna	ETS-311 7	00135885	ETS	2014-05-0 6	3
5	2-Line V-Network	ENV216	101380	R&S	2015-05-1 3	1

Page Number

: 71 of 73

Report Issued Date : Apr,25, 2016

Anechoic chamber

Fully anechoic chamber by Frankonia German.

East China Institute of Telecommunications TEL: +86 21 63843300 FAX: +86 21 63843301

8. Test Environment

Shielding Room1 (6.0 meters × 3.0 meters × 2.7 meters) did not exceed following limits along the conducted RF performance testing:

Report No.: I16D00012-RFB

Temperature	Min. = 15 $^{\circ}$ C, Max. = 30 $^{\circ}$ C
Relative humidity	Min. = 30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Ground system resistance	< 0.5 Ω
Uniformity of field strength	Between 0 and 6 dB, from 80MHz to 3000 MHz

Control room did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. =30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω

Fully-anechoic chamber1 (6.8 meters × 3.08 meters × 3.53 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 $^{\circ}$ C, Max. = 30 $^{\circ}$ C
Relative humidity	Min. = 30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω
Uniformity of field strength	Between 0 and 6 dB, from 80MHz to 3000
-	MHz

Fully-anechoic chamber2 (Tapered Section: 8.75 meters × 3.66 meters × 3.66 meters, Rectangular Section: 7.32 meters × 3.97 meters × 3.66 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 $^{\circ}$ C, Max. = 30 $^{\circ}$ C
Relative humidity	Min. = 35 %, Max. = 60 %

Page Number

: 72 of 73

Report Issued Date : Apr,25, 2016

East China Institute of Telecommunications TEL: +86 21 63843300 FAX: +86 21 63843301



Shielding effectiveness	> 110 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω
Uniformity of field strength	Between 0 and 6 dB, from 30MHz to 40000MHz

Report No.: I16D00012-RFB

ANNEX A. Deviations from Prescribed Test Methods

*********End The Report*******

No deviation from Prescribed Test Methods.

East China Institute of Telecommunications Page Number : 73 of 73 TEL: +86 21 63843300 FAX: +86 21 63843301 Report Issued Date : Apr,25, 2016