EMC TEST REPORT

Applicant	ZTE Corporation
FCC ID	SRQ-ZTEBLADEA530
Product	LTE/WCDMA/GSM(EDGE, GPRS) Multi-Mode Digital Mobile Phone
Model	BLADE A530
Marketing	BLADE A530, ZTE BLADE A530, A530, ZTE Blade A530, Blade A530
Report No.	R1803A0100-E1V1
Issue Date	April 20, 2018

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC Code CFR47 Part15B (2017)/ ANSI C63.4 (2014)**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Wei Liu Guangchang Fan

Performed by: Wei Liu/ Manager *Approved by: Guangchang Fan/ Director*

TA Technology (Shanghai) Co., Ltd.

No.145, Jintang Rd, Tangzhen Industry Park, Pudong Shanghai, China

TEL: +86-021-50791141/2/3

FAX: +86-021-50791141/2/3-8000

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Summary of measurement results

Number	Test Case	Clause in FCC Rules	Conclusion
1	Radiated Emission	15.109, ANSI C63.4-2014	PASS
2	Conducted Emission	15.107, ANSI C63.4-2014	PASS
Test Date: January 18, 2018 ~ January 23, 2018			

1 Test Laboratory

1.1 Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of **TA technology (shanghai) co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein .Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2 Test facility

CNAS (accreditation number: L2264)

TA Technology (Shanghai) Co., Ltd. has obtained the accreditation of China National Accreditation Service for Conformity Assessment (CNAS).

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

IC (recognition number is 8510A)

TA Technology (Shanghai) Co., Ltd. has been listed by industry Canada to perform electromagnetic emission measurement.

VCCI (recognition number is C-4595, T-2154, R-4113, G-10766)

TA Technology (Shanghai) Co., Ltd. has been listed by industry Japan to perform electromagnetic emission measurement.

A2LA (Certificate Number: 3857.01)

TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

1.3 Testing Location

Company:	TA Technology (Shanghai) Co., Ltd.
Address:	No.145, Jintang Rd, Tangzhen Industry Park, Pudong Shanghai, China
City:	Shanghai
Post code:	201201
Country:	P. R. China
Contact:	Xu Kai
Telephone:	+86-021-50791141/2/3
Fax:	+86-021-50791141/2/3-8000
Website:	http://www.ta-shanghai.com
E-mail:	xukai@ta-shanghai.com

2 General Description of Equipment under Test

2.1 Client Information

Applicant	ZTE Corporation
Applicant address	ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen.
Manufacturer	ZTE Corporation
Manufacturer address	ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen.

2.2 General information

EUT Description	
Device Type	Portable Device
Model Number	BLADE A530
IMEI	SIM 1: 867670030007217 SIM 2: 867670030007712
HW Version	uecB
SW Version	CLA_CL_BLADE_A530V1.0.0
Antenna Type	Internal Antenna
Test Mode	Transfer Data Mode
EUT Accessory	
Adapter 1	Manufacturer: SHENZHEN RUIJING INDUSTRIAL CO LTD Model: STC-A51A-Z
Adapter 2	Manufacturer: DONGGUAN AOHAI POWER TECHNOLOGY CO., LTD. Model: STC-A51A-Z
Adapter 3	Manufacturer: Jiangsu Chenyang Electron Co., Ltd. Model: STC-A51A-Z
Adapter 4	Manufacturer: SHENZHEN RUIJING INDUSTRIAL CO LTD Model: STC-A51A-A
Battery 1	Manufacturer: Zhongshan Tianmao Battery Co.,Ltd. Model: Li3826T43P4h705949
Battery 2	Manufacturer: Jiade Energy Technology (Zhuhai) Co., Ltd. Model: Li3826T43P4h705949
Earphone 1	Manufacturer: Shenzhen FDC Electronics Co. ,Ltd. Model:DEM-53

Earphone 2	Manufacturer: SANGFAI ELECTRICAL MANUFACTURE LIMITED Model: SF-880KM-53
USB Cable	Manufacturer: kingpower-tech 100cm Cable, Shielded
Auxiliary test equipment	
PC	PC Manufacturer: lenovo Model: Thinkpad T540p (SN : SL10E37685)
Note: The information of the EUT is declared by the manufacturer. 2. There are more than one Adapters, each one should be applied throughout the compliance test respectively, however, only the worst case (Adapter 1) will be recorded in this report.	

BLADE A530 (R1803A0100-E1V1) is a variant model of BLADE A530 (R1801A0031-E1V2). All test items tested for variant in this report. The detailed product change description please refers to the FCC Class II Permission Change Letter.

For variant BLADE A530 (R1803A0100-E1), the difference between Configure 1 and Configure 2 is show in the below table:

	Configure 1	Configure 2
SIM card slot	1* SIM card slot	2* SIM card slot
Other	Same	Same

2.3 Applied Standards

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

Test standards
FCC Code CFR47 Part15B (2017)
ANSI C63.4 (2014)

2.4 Test Mode

Test Mode	
Mode 1:	Adapter + USB cable+ earphone + Camera On +GPS Rx + MP3 +Idle
Mode 2:	Adapter + USB cable+ earphone + MP3 +Idle
Mode 3:	Adapter + USB cable+ earphone +Idle
Mode 4:	Adapter + USB cable +Idle
Mode 5:	USB Copy(EUT with PC) + USB cable +earphone + Camera On + MP3+GPS Rx +Idle
Mode 6:	Camera On +earphone + GPS Rx +Idle
Mode 7:	Earphone+MP3+Idle
Mode 8:	Earphone +Idle

During the test, the preliminary test was performed in all modes (Camera/MP3/GPS) with all frequency bands (GSM/ WCDMA/ LTE/ BT/ Wi-Fi), mode 5 (with Camera + MP3 + GPS Rx + GSM/ WCDMA/ LTE/ BT/ Wi-Fi idle) selected as the worst condition. The test data of the worst-case condition was recorded in this report.

3 Test Case Results

3.1 Radiated Emission

Ambient condition

Temperature	Relative humidity	Pressure
24°C~26°C	45%~50%	102.5kPa

Methods of Measurement

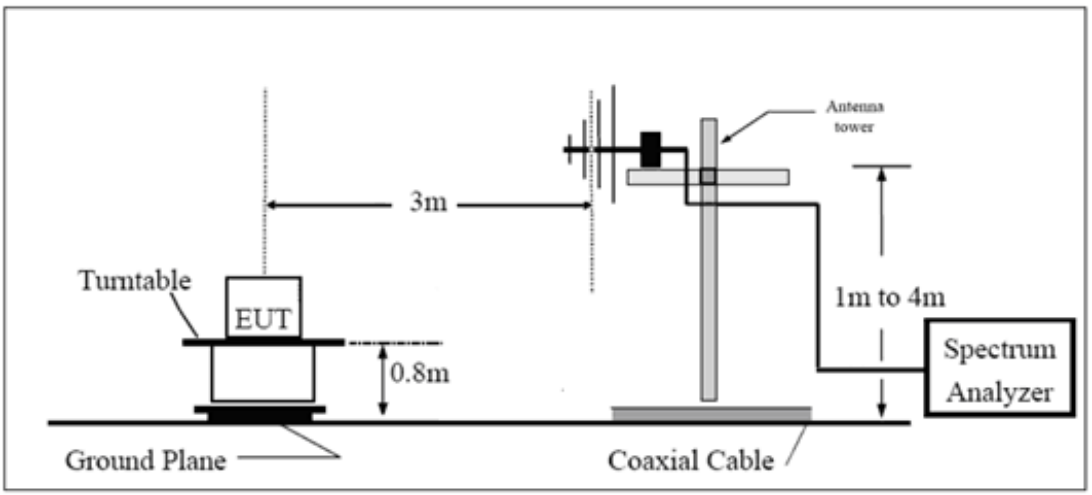
The EUT is placed on a non-metallic table 0.8m above the horizontal metal reference ground plane. The distance between EUT and receive antenna should be 3 meters. During the test, the EUT was operating in its typical mode. The test method is according to ANSI C63.4-2014. Sweep the whole frequency band through the range from 30MHz to the 5th harmonic of the carrier. During the test, the height of receive antenna shall be moved from 1 to 4 meters, and the antenna shall be performed under horizontal and vertical polarization. The turn table shall be rotated from 0 to 360 degrees for detecting the maximum of radiated signal level.
The data of cable loss and antenna factor has been calibrated in full testing frequency range before the testing. During the test, the EUT is worked at maximum output power.
Set the spectrum analyzer in the following:
Below 1GHz:
RBW=100 kHz / VBW=300 kHz / Sweep=AUTO
Above 1GHz:
(a) PEAK: RBW=1MHz / VBW=3MHz/ Sweep=AUTO
(b) AVERAGE: RBW=1MHz / VBW=1Hz / Sweep=AUTO

The radiated emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in lie-down position (X axis) and the worst case was recorded.

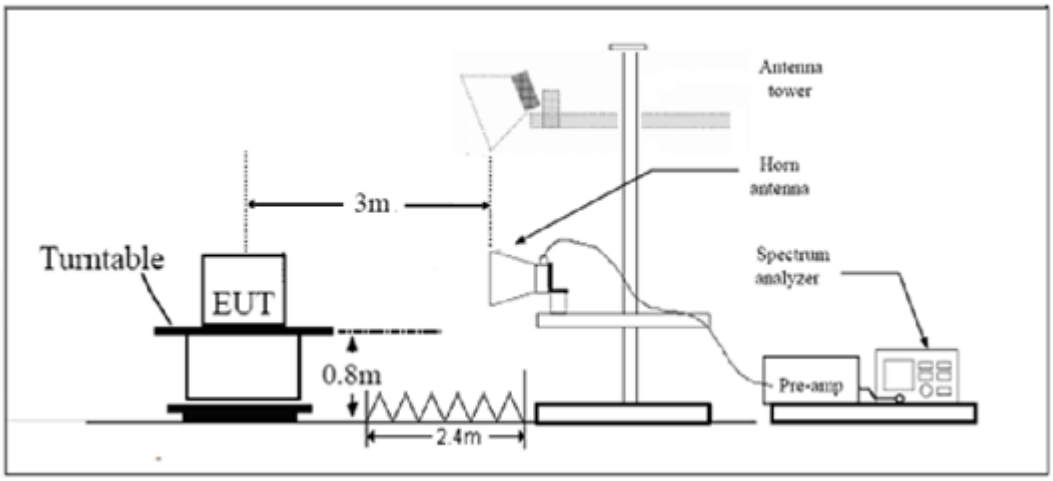
During the test, EUT is connected to a laptop via a USB cable in the case of Transfer Data mode. The EUT is used as the peripheral equipment of the PC. The data is transferred from EUT to PC; PC is connected to server via a long LAN cable.

Test Setup

Below 1GHz



Above 1GHz



Note: Area side:2.4mX3.6m

Antenna Tower meets ANSI C63.4 requirements for measurements above 1 GHz by keeping the antenna aimed at the EUT during the antenna's ascent/ descent along the antenna mast.

Limits

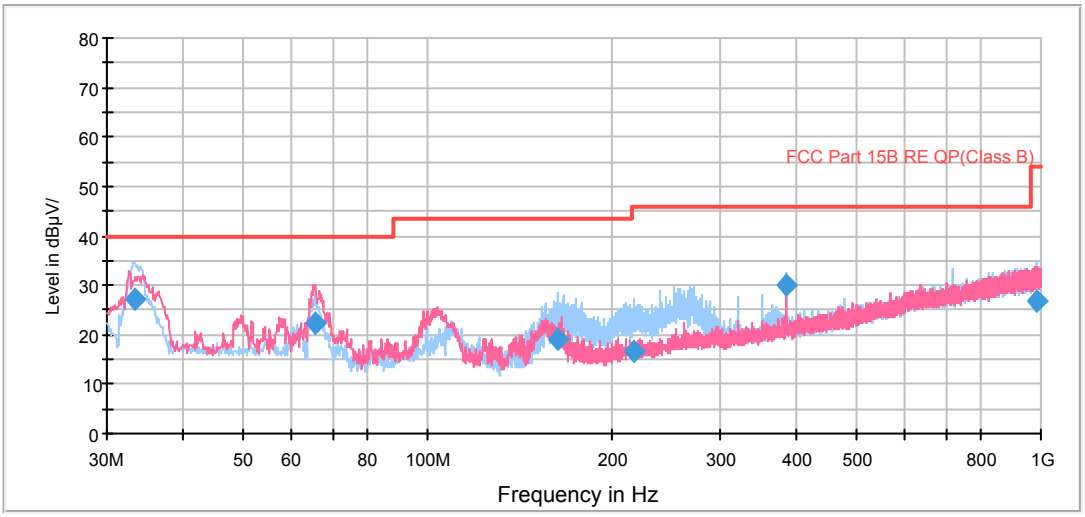
Frequency (MHz)	Field Strength (dBμV/m)	Detector
30 -88	40.0	Quasi-peak
88-216	43.5	Quasi-peak
216 – 960	46.0	Quasi-peak
960-1000	54.0	Quasi-peak
1000-5th harmonic of the highest frequency or 40GHz,which is lower	54 74	Average Peak

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor *k* = 1.96. U= 3.704 dB.

Test Results

The following graphs display the maximum values of horizontal and vertical by software.



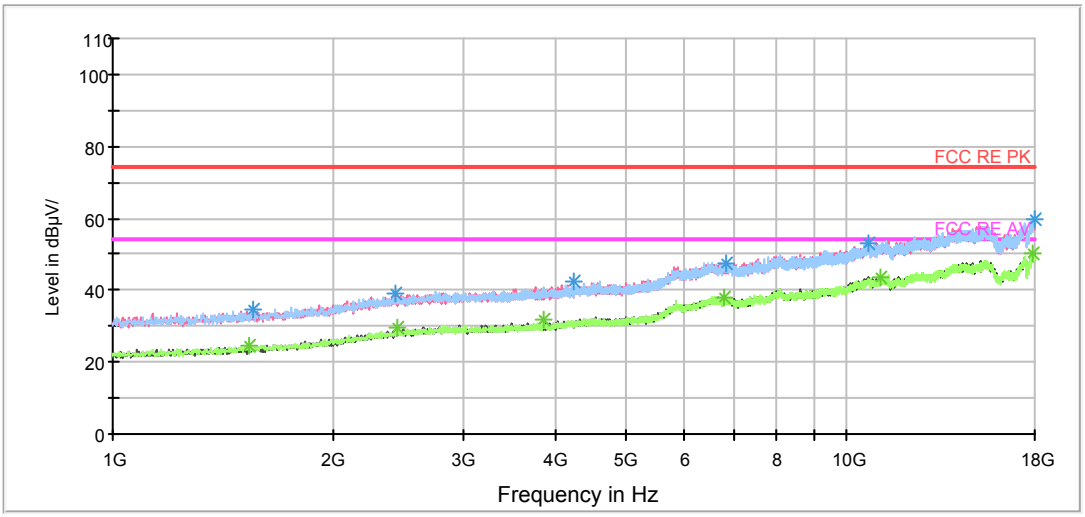
Radiated Emission from 30MHz to 1GHz

Frequency (MHz)	Quasi-Peak (dBuV/m)	Reading value (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
33.275000	27.4	15.3	225.0	H	0.0	12.1	12.6	40.0
65.843750	22.4	12.2	114.0	V	84.0	10.2	17.6	40.0
162.890000	19.1	9.1	225.0	H	227.0	10.0	20.9	40.0
217.372500	16.8	3.8	125.0	H	307.0	13.0	23.2	40.0
384.010000	29.9	11.8	100.0	H	33.0	18.1	17.1	47.0
984.965000	26.6	-1.0	100.0	H	22.0	27.6	20.4	47.0

Remark: 1. Quasi-Peak = Reading value + Correction factor

2. Correction Factor = Antenna factor+ Insertion loss(cable loss+amplifier gain)

3. Margin = Limit – Quasi-Peak



Radiated Emission from 1GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Reading value (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1531.250000	33.1	39.4	200.0	V	0.0	-6.3	40.9	74
2447.125000	37.3	38.4	200.0	H	352.0	-1.1	36.7	74
3868.750000	39.5	39.0	100.0	H	153.0	0.5	34.5	74
6788.500000	45.5	38.0	200.0	V	203.0	7.5	28.5	74
11089.500000	51.0	37.9	200.0	V	4.0	13.1	23.0	74
17934.125000	57.9	36.7	100.0	V	159.0	21.2	16.1	74

Frequency (MHz)	Average (dBuV/m)	Reading value (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1556.750000	23.1	29.2	100.0	H	261.0	-6.1	30.9	54
2428.000000	27.4	28.6	200.0	V	0.0	-1.2	26.6	54
4236.375000	30.3	29.2	100.0	H	16.0	1.1	23.7	54
6818.250000	36.9	29.6	100.0	V	358.0	7.3	17.1	54
10707.000000	42.5	29.6	100.0	V	159.0	12.9	11.5	54
17968.125000	48.7	27.0	100.0	V	358.0	21.7	5.3	54

3.2 Conducted Emission

Ambient condition

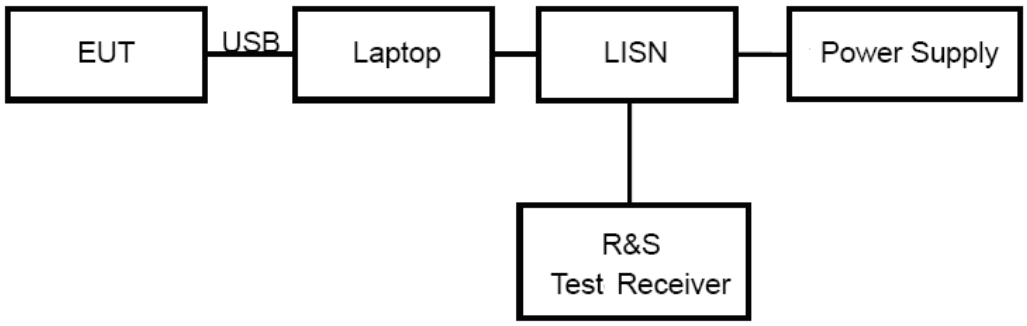
Temperature	Relative humidity	Pressure
24°C ~26°C	50%~55%	102.5kPa

Methods of Measurement

The EUT is placed on a non-metallic table of 80cm height above the horizontal metal reference ground plane. During the test, the EUT was operating in its typical mode. The test method is according to ANSI C63.4-2014. Connect the AC power line of the EUT to the L.I.S.N. Use EMI receiver to detect the average and Quasi-peak value. RBW is set to 9 kHz, VBW is set to 30kHz. The measurement result should include both L line and N line.

During the test, EUT is connected to a laptop via a USB cable in the case of Transfer Data mode. The EUT is used as the peripheral equipment of the PC. The data is transferred from EUT to PC; PC is connected to server via a long LAN cable.

Test Setup



Note: Power Supply is AC Power source and it is used to change the voltage 120V/60Hz.

Limits

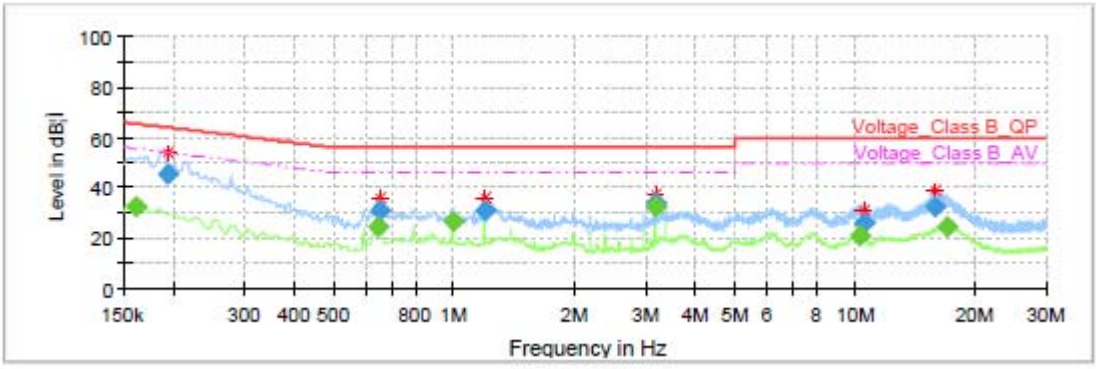
Frequency (MHz)	Conducted Limits(dBμV)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56 *	56 to 46 *
0.5 - 5	56	46
5 - 30	60	50
*: Decreases with the logarithm of the frequency.		

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor *k* = 1.96. U= 2.57 dB.

Test Results

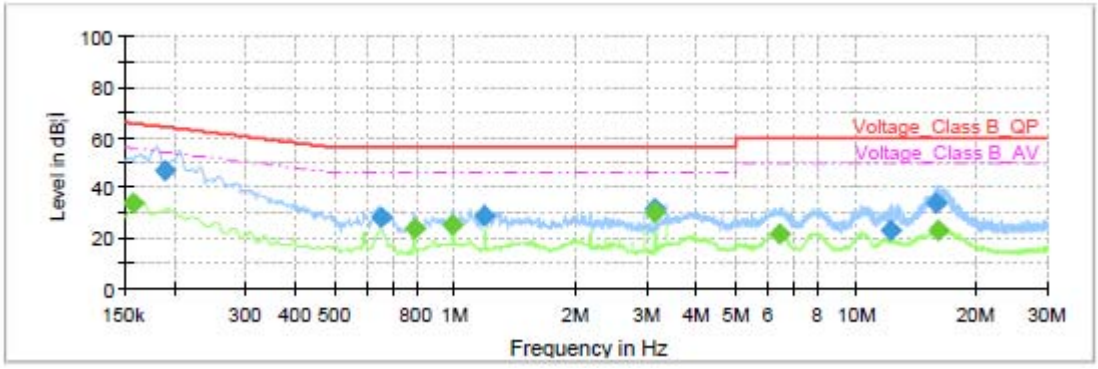
Following plots, Blue trace uses the peak detection; Green trace uses the average detection.



Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.161250	---	32.54	55.40	22.86	1000.0	9.000	L1	ON	19.6
0.192750	45.39	---	63.92	18.53	1000.0	9.000	L1	ON	19.7
0.642750	---	24.30	46.00	21.70	1000.0	9.000	L1	ON	19.6
0.649500	30.63	---	56.00	25.37	1000.0	9.000	L1	ON	19.6
0.991500	---	26.74	46.00	19.26	1000.0	9.000	L1	ON	19.6
1.189500	31.29	---	56.00	24.71	1000.0	9.000	L1	ON	19.6
3.169500	33.94	---	56.00	22.06	1000.0	9.000	L1	ON	19.6
3.169500	---	32.37	46.00	13.63	1000.0	9.000	L1	ON	19.6
10.236750	---	20.69	50.00	29.31	1000.0	9.000	L1	ON	19.9
10.479750	25.76	---	60.00	34.24	1000.0	9.000	L1	ON	19.9
15.933750	32.12	---	60.00	27.88	1000.0	9.000	L1	ON	20.0
16.912500	---	24.18	50.00	25.82	1000.0	9.000	L1	ON	20.0

L line

Conducted Emission from 150 KHz to 30 MHz



Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.156750	---	33.87	55.63	21.77	1000.0	9.000	N	ON	19.7
0.188250	46.86	---	64.11	17.26	1000.0	9.000	N	ON	19.7
0.649500	27.95	---	56.00	28.05	1000.0	9.000	N	ON	19.6
0.789000	---	23.87	46.00	22.13	1000.0	9.000	N	ON	19.6
0.987000	---	25.10	46.00	20.90	1000.0	9.000	N	ON	19.6
1.185000	28.90	---	56.00	27.10	1000.0	9.000	N	ON	19.6
3.160500	31.73	---	56.00	24.27	1000.0	9.000	N	ON	19.6
3.160500	---	30.54	46.00	15.46	1000.0	9.000	N	ON	19.6
6.445500	---	21.32	50.00	28.68	1000.0	9.000	N	ON	19.7
12.180750	22.98	---	60.00	37.02	1000.0	9.000	N	ON	19.9
15.911250	33.73	---	60.00	26.27	1000.0	9.000	N	ON	19.9
16.008000	---	22.80	50.00	27.20	1000.0	9.000	N	ON	19.9

N line

Conducted Emission from 150 KHz to 30 MHz

4 Main Test Instrument

Name	Manufacturer	Type	Serial Number	Last Cal.	Cal. Due Date
Signal Analyzer	R&S	FSV30	100815	2017-12-17	2018-12-16
EMI Test Receiver	R&S	ESCI	100948	2017-05-20	2018-05-19
Loop Antenna	SCHWARZBECK	FMZB1519	1519-047	2017-02-18	2019-02-17
Trilog Antenna	SCHWARZBECK	VULB 9163	9163-201	2017-11-18	2020-11-17
Horn Antenna	R&S	HF907	100126	2014-12-06	2019-12-05
Horn Antenna	ETS-Lindgren	3160-09	00102643	2015-01-30	2020-01-29
EMI Test Receiver	R&S	ESR	101667	2017-09-06	2018-09-05
LISN	R&S	ENV216	101171	2016-12-16	2019-12-15
Bore Sight Antenna mast	ETS	2171B	00058752	NA	NA
Test software	EMC32	R&S	V9.26.0	NA	NA

*******END OF REPORT *******