



FCC Part15, Subpart B

TEST REPORT

For

LED TV

**MODEL NUMBER: 75S425, 75S421, 75S423, 75S427, 75S425-MX, 75S427-MX,
75S425-CA, 75S427-CA**

REPORT NUMBER: 4788713847.2-2

FCC ID: W8U75S425

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Prepared for

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Prepared by

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Revision History

Rev.	Issue Date	Revisions	Revised By
--	11/06/2018	Initial Issue	



Summary of Test Results				
Standard	Test Item	Limit	Result	Remark
FCC Part15, Subpart B ANSI C63.4-2014	Conducted Disturbance	Class B	PASS	
	Radiated Disturbance below 1 GHz	Class B	PASS	
	Radiated Disturbance above 1 GHz	Class B	PASS	NOTE (1)

Note:
(1) If the highest frequency of the internal sources of the EUT is less than 108 MHz, the measurement shall only be made up to 1 GHz. If the highest frequency of the internal sources of the EUT is between 108 MHz and 500 MHz, the measurement shall only be made up to 2 GHz. If the highest frequency of the internal sources of the EUT is between 500 MHz and 1 GHz, measurement shall only be made up to 5 GHz. If the highest frequency of the internal sources of the EUT is above 1 GHz, the measurement shall be made up to 5 times the highest frequency or 40 GHz, whichever is less.

CONTENTS

1. ATTESTATION OF TEST RESULTS.....	5
2. TEST METHODOLOGY.....	6
3. FACILITIES AND ACCREDITATION.....	6
4. CALIBRATION AND UNCERTAINTY	7
4.1. <i>Measuring Instrument Calibration</i>	<i>7</i>
4.2. <i>Measurement Uncertainty</i>	<i>7</i>
5. EQUIPMENT UNDER TEST	8
5.1. <i>Description of EUT.....</i>	<i>8</i>
5.2. <i>Test Mode.....</i>	<i>8</i>
5.3. <i>EUT Accessory</i>	<i>8</i>
5.4. <i>Block Diagram Showing the Configuration of System Tested.....</i>	<i>9</i>
6. MEASURING EQUIPMENT AND SOFTWARE USED.....	11
7. EMISSION TEST	12
7.1. <i>Conducted Disturbance Measurement.....</i>	<i>12</i>
7.1.1. <i>Limits of conducted disturbance voltage</i>	<i>12</i>
7.1.2. <i>Test Procedure</i>	<i>12</i>
7.1.3. <i>Test Setup</i>	<i>13</i>
7.1.4. <i>Test Environment.....</i>	<i>13</i>
7.1.5. <i>Test Mode.....</i>	<i>13</i>
7.1.6. <i>Test Results.....</i>	<i>14</i>
7.2. <i>Radiated Disturbance Measurement.....</i>	<i>18</i>
7.2.1. <i>Limits of radiated disturbance measurement.....</i>	<i>18</i>
7.2.2. <i>Test Procedure</i>	<i>19</i>
7.2.3. <i>Test Setup</i>	<i>19</i>
7.2.4. <i>Test Environment.....</i>	<i>20</i>
7.2.5. <i>Test Mode.....</i>	<i>20</i>
7.2.6. <i>Test Results – below 1GHz.....</i>	<i>21</i>
7.2.7. <i>Test Results – above 1GHz</i>	<i>25</i>



1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name: TTE Technology, Inc.
Address: 2455 Anselmo Drive, Suite 101 Corona, CA 92879

Manufacturer Information

Company Name: TCL King Electrical Appliances (Huizhou) Co., Ltd.
Address: NO.78 4TH HUIFENG RD ZHONGKAI NEW & HIGH-TECH INDUSTRIES DEVELOPMENT ZONE HUIZHOU GUANGDONG CHINA

EUT Information

EUT Name: LED TV
Model: 75S425
Series Model: 75S421, 75S423, 75S427, 75S425-MX, 75S427-MX, 75S425-CA, 75S427-CA

Model difference: All models are identical except the model name which is intended to differentiate sales channels, there is an alternative panel for all models.

Alternative panel information:
Original panel: T750QVR04.0 (AUO)
Alternative panel: V750DK1-QS3 (CMI)

Brand: TCL
Sample Received Date: October 15, 2018
Date of Tested: October 17, 2018 ~ October 29, 2018

APPLICABLE STANDARDS	
STANDARDS	TEST RESULTS
FCC Part15, Subpart B ANSI C63.4-2014	PASS

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2. TEST METHODOLOGY

All tests were performed in accordance with the standard FCC Part15 Subpart B, ANSI C63.4-2014.

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	<p>A2LA (Certificate No.: 4102.01) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA.</p> <p>FCC (FCC Recognized No.: CN1187) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules</p> <p>IC(Company No.: 21320) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with Industry Canada. The Company Number is 21320.</p> <p>VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793. Facility Name: Chamber D, the VCCI registration No. is G-20019 and R-20004 Shielding Room B , the VCCI registration No. is C-20012 and T-20011</p>
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Note: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, No. 1, Li Bin Road, Song Shan Lake Hi-Tech Development Zone Dongguan, 523808, People's Republic of China

4. CALIBRATION AND UNCERTAINTY

4.1. Measuring Instrument Calibration

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Test Item	Measurement Frequency Range	K	U(dB)
Conducted emissions from the AC mains power ports	0.009MHz ~ 0.15MHz	2	4.00
Conducted emissions from the AC mains power ports	0.15MHz ~ 30MHz	2	3.62
Radiated emissions	30MHz ~ 1GHz	2	4.00
Radiated emissions	1GHz ~ 18GHz	2	5.78
Radiated emissions	18GHz ~ 40GHz	2	5.64

Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

5. EQUIPMENT UNDER TEST

5.1. Description of EUT

EUT Name	LED TV
Model	75S425
Series Model	75S421, 75S423, 75S427, 75S425-MX, 75S427-MX, 75S425-CA, 75S427-CA
Model Difference	All models are identical except the model name which is intended to differentiate sales channels, there is an alternative panel for all models. Alternative panel information: Original panel: T750QVR04.0 (AUO) Alternative panel: V750DK1-QS3 (CMI)
Rated Input	120V~ 60Hz

5.2. Test Mode

Test Mode	Description
Mode 1	HDMI1 in (4K)
Mode 2	HDMI2 in (4K)
Mode 3	HDMI3 in (4K)
Mode 4	Ethernet Wired Play
Mode 5	WiFi 2.4GHz Play
Mode 6	WiFi 5GHz Play

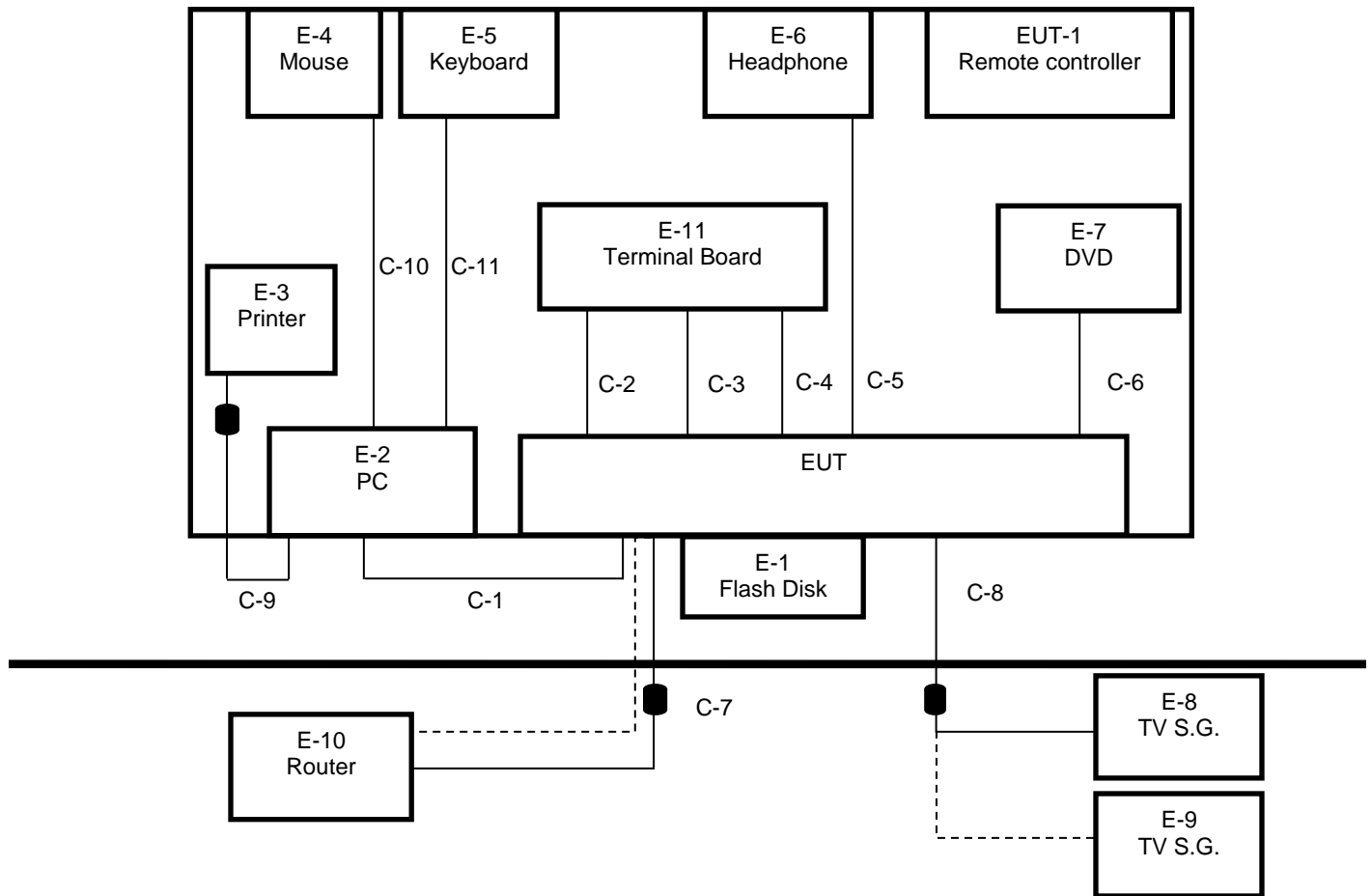
Note:

1. the EUT was set according to figure 16 as stated in Clause 11.4 of ANSI C63.4.
2. Both Original panel: T750QVR04.0 (AUO) and alternative panel V750DK1-QS3 (CMI) have been assessed on all test items.

5.3. EUT Accessory

Item	Accessory	Brand Name	Model Name	Description
1	Remote controller	TCL	/	/

5.4. Block Diagram Showing the Configuration of System Tested



The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Specification	Series No.
E-1	USB Disk	Kingstone	DTSE9H/8GB	8GB	/
E-2	PC	LENOVO	ThinkCentre E73	/	PC0K9QL4
E-3	Printer	Canon	LBP2900+	/	NDLA530620
E-4	Mouse	Lenovo	MO28UOB	USB port	8SSM50G45918FCCC1545
E-5	Keyboard	Lenovo	LXH-JME2209U	USB port	60804634
E-6	Headphone	Sony	/		/
E-7	DVD	PHILIPS	BDP7750/93	4K output	KX1A1623930542
E-8	TV Signal Generator	Shibasoku	TG39BX	/	3000035889
E-9	MXG vector	N5182B	Keysight	/	MY56200284



	signal generator				
E-10	Router	D-Link	DIR-809	2.4G wifi 5G wifi	RZMP2G4000780
E-11	Terminal load board	/	/	HDMI interface Audio & Video interface	/

The following cables were used to form a representative test configuration during the tests.

Item	Type of cable	Shielded Type	Ferrite Core	Specification
C-1	HDMI cable	YES	NO	1.5m
C-2	HDMI cable	YES	NO	1.5m
C-3	HDMI cable	YES	NO	1.5m
C-4	Optical Fiber cable	NO	NO	1.5m
C-5	Headphone cable	NO	NO	1.2m
C-6	AV cable	YES	NO	1.5m
C-7	Ethernet cable	YES	YES	10m
C-8	Coaxial cable	YES	YES	10m
C-9	USB Cable	YES	YES	1.5m

**6. MEASURING EQUIPMENT AND SOFTWARE USED**

Conducted Emissions					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
EMI Test Receiver	R&S	ESR3	101961	Dec. 12, 2017	Dec. 12, 2018
Two-Line V-Network	R&S	ENV216	101983	Dec. 12, 2017	Dec. 12, 2018
Artificial Mains Networks	Schwarzbeck	NSLK 8126	8126465	Dec. 12, 2017	Dec. 12, 2018
Software					
Description		Manufacturer		Name	Version
Test Software for Conducted Emissions		Farad		EZ-EMC	Ver. UL-3A1
Radiated Emissions					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
MXE EMI Receiver	KESIGHT	N9038A	MY56400036	Dec. 12, 2017	Dec. 12, 2018
Hybrid Log Periodic Antenna	TDK	HLP-3003C	130960	Jan. 09, 2016	Jan. 09, 2019
Preamplifier	HP	8447D	2944A09099	Dec. 12, 2017	Dec. 12, 2018
EMI Measurement Receiver	R&S	ESR26	101377	Dec. 12, 2017	Dec. 12, 2018
Horn Antenna	TDK	HRN-0118	130939	Jan. 09, 2016	Jan. 09, 2019
Horn Antenna	Schwarzbeck	BBHA9170	#691	Jan. 06, 2016	Jan. 06, 2019
Preamplifier	TDK	PA-02-0118	TRS-305-00067	Dec. 12, 2017	Dec. 12, 2018
Preamplifier	TDK	PA-02-2	TRS-307-00003	Dec. 12, 2017	Dec. 12, 2018
Preamplifier	TDK	PA-02-3	TRS-308-00002	Dec. 12, 2017	Dec. 12, 2018
Software					
Description		Manufacturer		Name	Version
Test Software for Radiated Emissions		Farad		EZ-EMC	Ver. UL-3A1

7. EMISSION TEST

7.1. Conducted Disturbance Measurement

7.1.1. Limits of conducted disturbance voltage

FREQUENCY (MHz)	Class A (dB μ V)		Class B (dB μ V)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46*
0.50 -5.0	73.00	60.00	56.00	46.00
5.0 -30.0	73.00	60.00	60.00	50.00

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

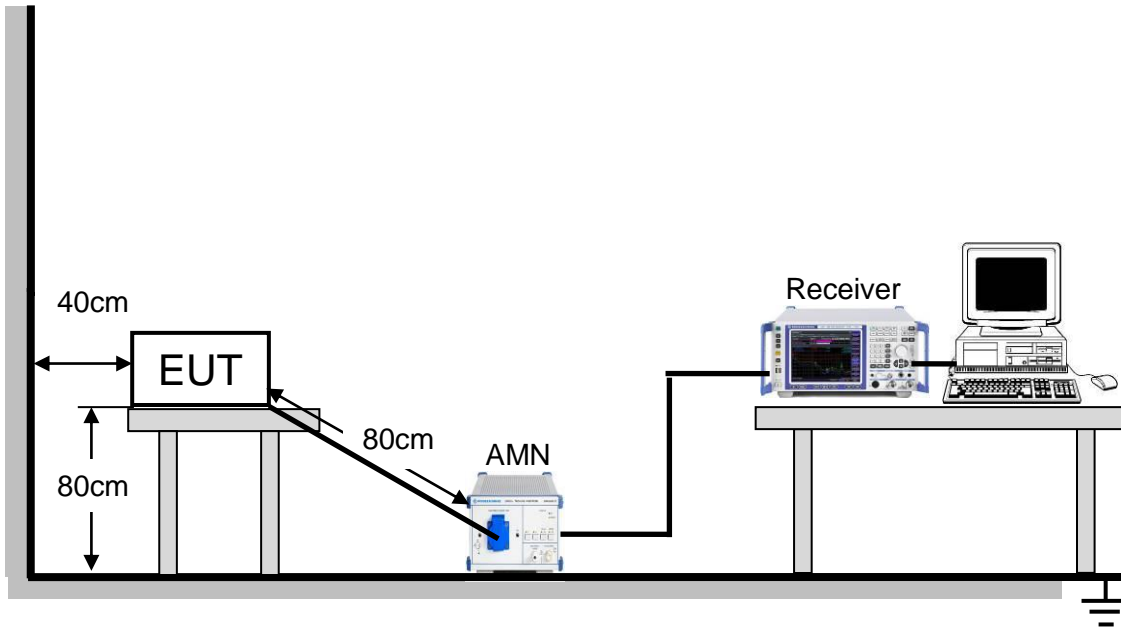
The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

7.1.2. Test Procedure

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item: Photographs of Test Configuration.

7.1.3. Test Setup



For the actual test configuration, please refer to Appendix I: Photographs of Test Configuration.

7.1.4. Test Environment

Temperature:	22°C
Humidity:	53%
ATM pressure:	101kPa

7.1.5. Test Mode

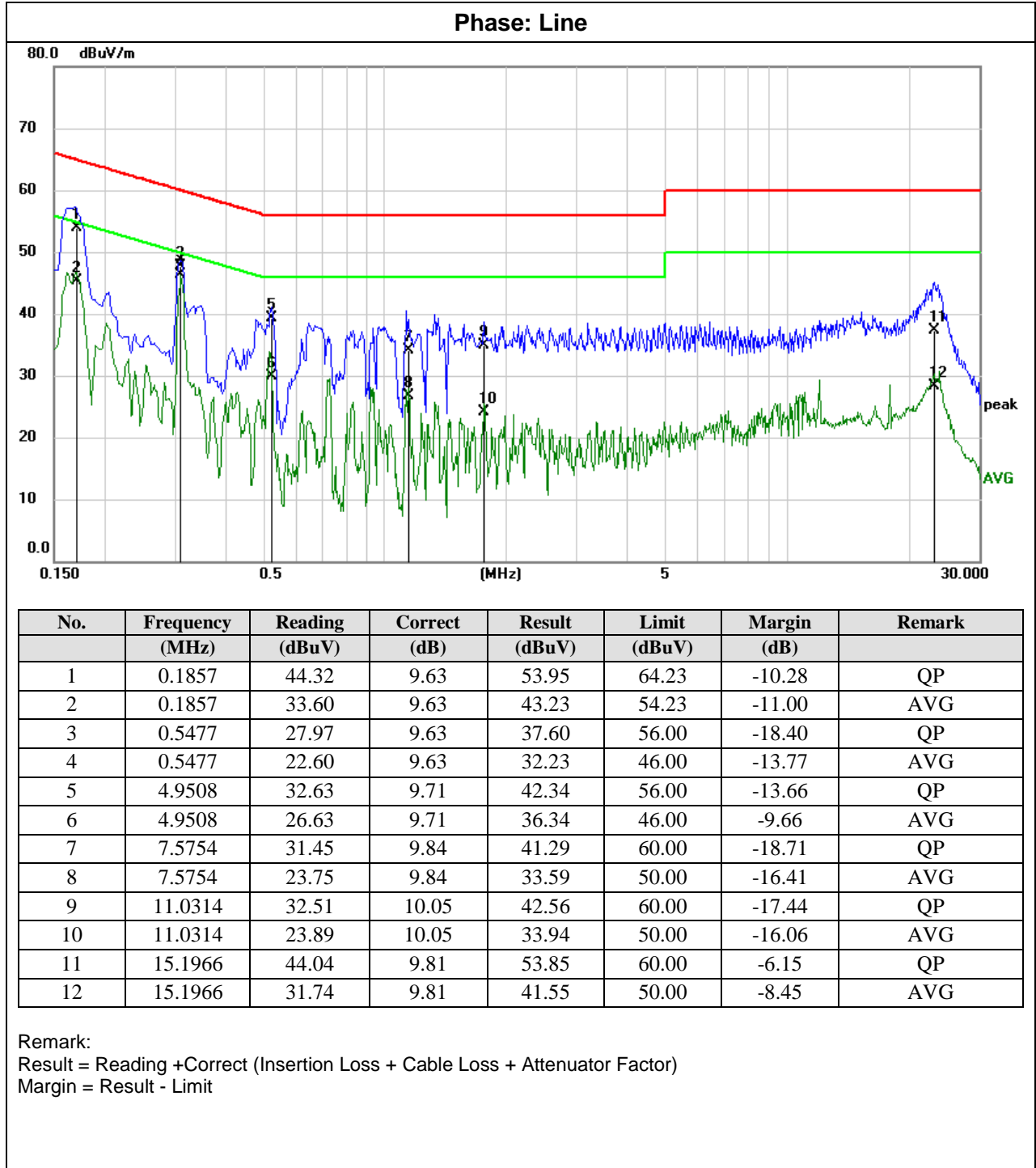
Pre-test Mode:	Mode 1 ~ Mode 6
Final Test Mode:	Mode 6

Note: According to pre-test results, the final test mode is each independent function's worst case and only shown in the report.



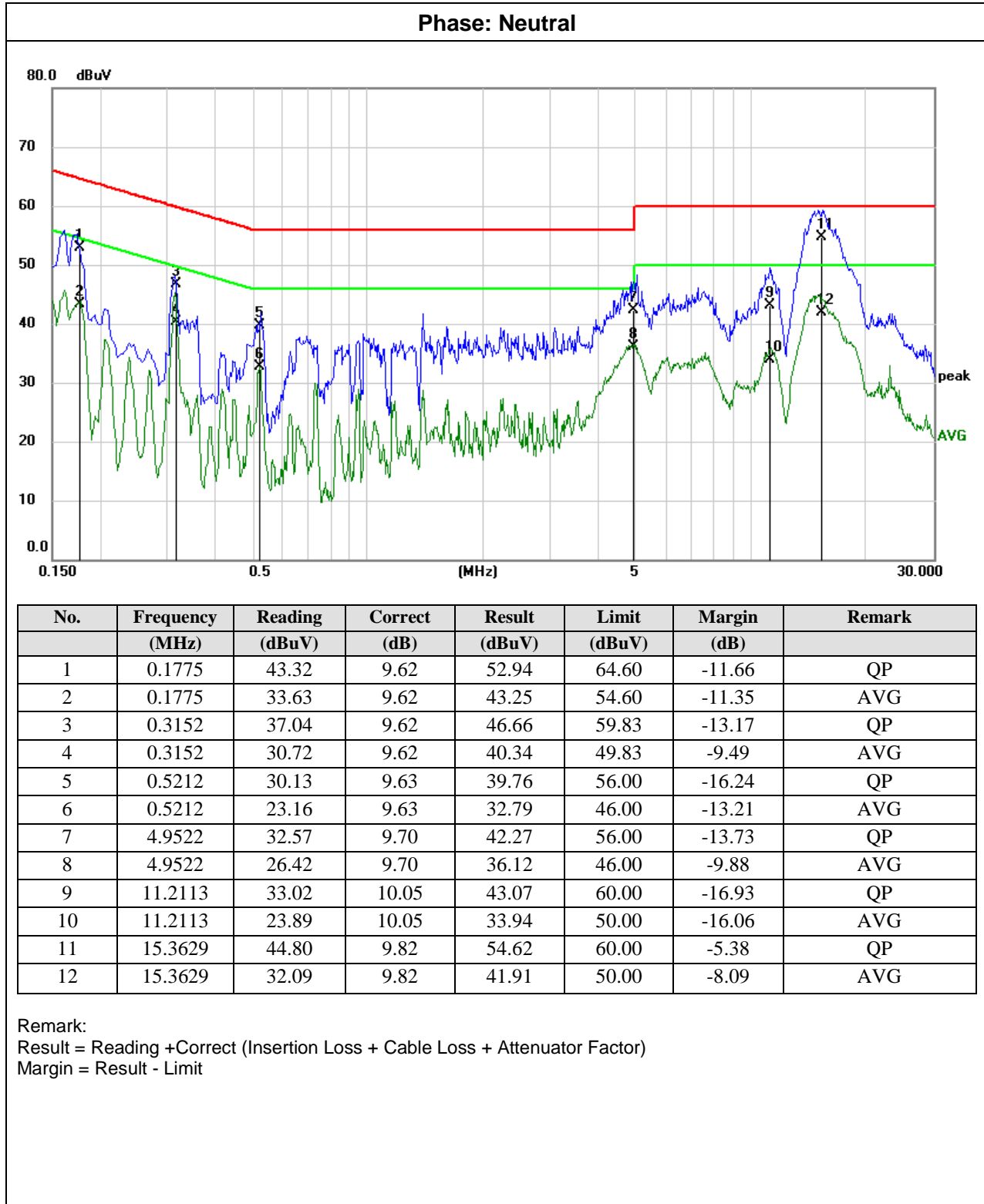
7.1.6. Test Results

Test Mode:	Mode 6
Test Voltage:	AC 120V/60Hz
Panel information:	T750QVR04.0 (AUO)



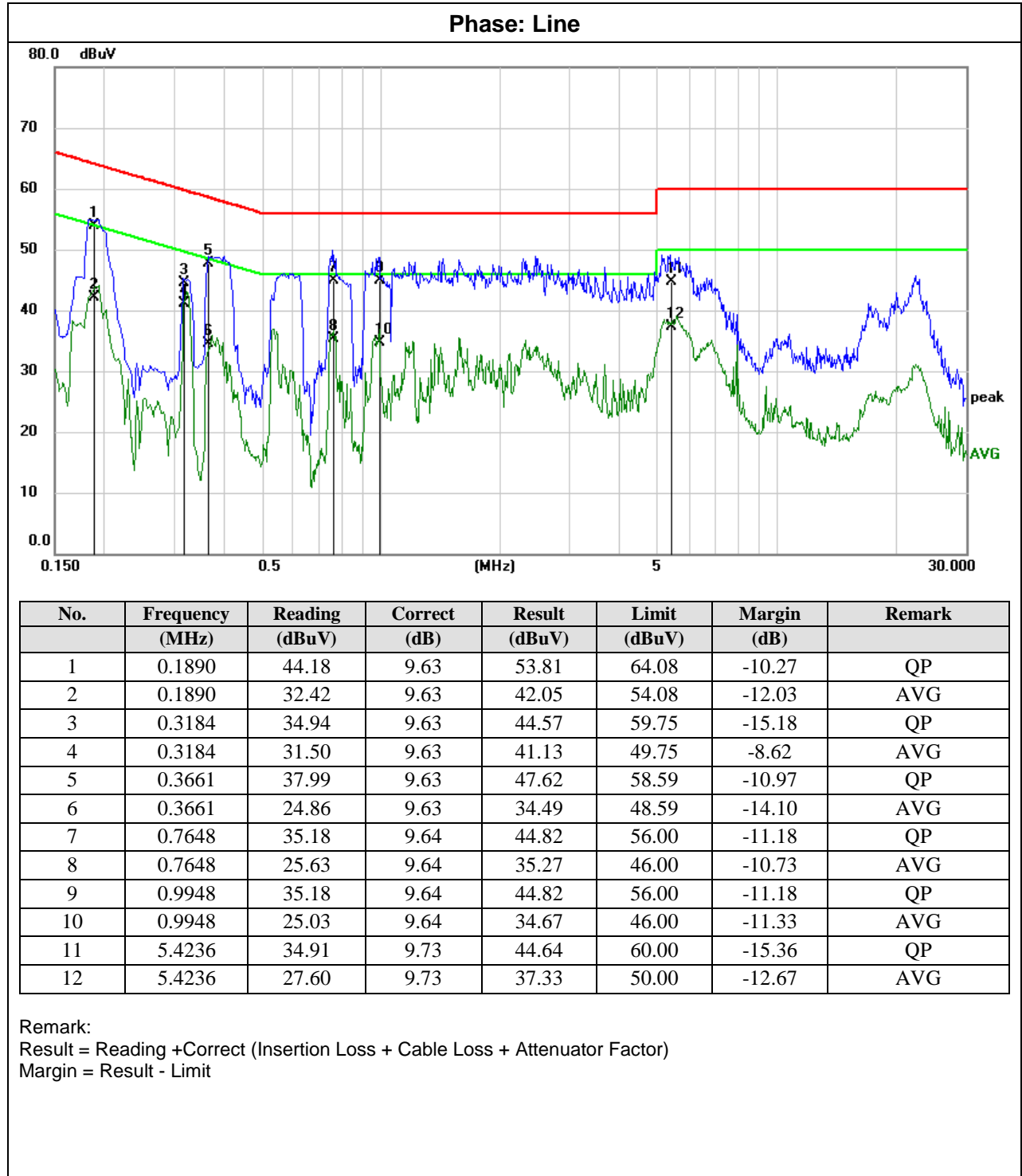


Test Mode:	Mode 6
Test Voltage:	AC 120V/60Hz
Panel information:	T750QVR04.0 (AUO)





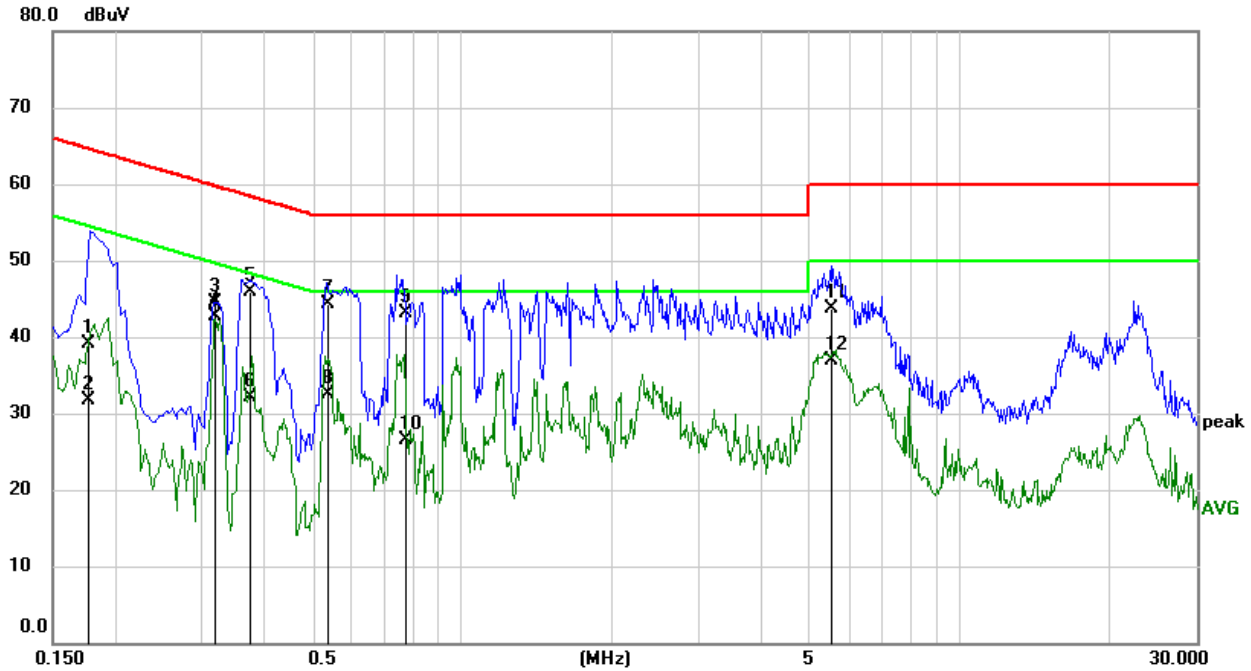
Test Mode:	Mode 6
Test Voltage:	AC 120V/60Hz
Panel information:	V750DK1-QS3 (CMI)





Test Mode:	Mode 6
Test Voltage:	AC 120V/60Hz
Panel information:	V750DK1-QS3 (CMI)

Phase: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1768	29.42	9.62	39.04	64.63	-25.59	QP
2	0.1768	22.10	9.62	31.72	54.63	-22.91	AVG
3	0.3181	34.80	9.62	44.42	59.76	-15.34	QP
4	0.3181	33.04	9.62	42.66	49.76	-7.10	AVG
5	0.3737	36.20	9.63	45.83	58.42	-12.59	QP
6	0.3737	22.49	9.63	32.12	48.42	-16.30	AVG
7	0.5353	34.67	9.63	44.30	56.00	-11.70	QP
8	0.5353	22.90	9.63	32.53	46.00	-13.47	AVG
9	0.7706	33.46	9.63	43.09	56.00	-12.91	QP
10	0.7706	16.94	9.63	26.57	46.00	-19.43	AVG
11	5.5048	33.92	9.72	43.64	60.00	-16.36	QP
12	5.5048	27.20	9.72	36.92	50.00	-13.08	AVG

Remark:
 Result = Reading + Correct (Insertion Loss + Cable Loss + Attenuator Factor)
 Margin = Result - Limit

7.2. Radiated Disturbance Measurement

7.2.1. Limits of radiated disturbance measurement

Below 1 GHz

Measurement Method and Applied Limits:

ANSI C63.4:

Frequency (MHz)	Class A		Class B
	Field strength (uV/m) (at 10m)	Field strength (dBuV/m) (at 3m)	Field strength (dBuV/m) (at 3m)
30 - 88	90	49.5	40
88 - 216	150	53.9	43.5
216 - 960	210	56.9	46
Above 960	300	60	54

Above 1 GHz

Measurement Method and Applied Limits:

ANSI C63.4:

Frequency (MHz)	Class A				Class B	
	(dBuV/m) (at 3m)		(dBuV/m) (at 10m)		(dBuV/m) (at 3m)	
	Peak	Average	Peak	Average	Peak	Average
Above 1000	80	60	69.5	49.5	74	54

Frequency Range of Radiated Disturbance Measurement

Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz)	Range (MHz)
Below 1.705	30
1.705 - 108	1000
108 - 500	2000
500 - 1000	5000
Above 1000	5 th harmonic of the highest frequency or 40 GHz, whichever is lower

NOTE:

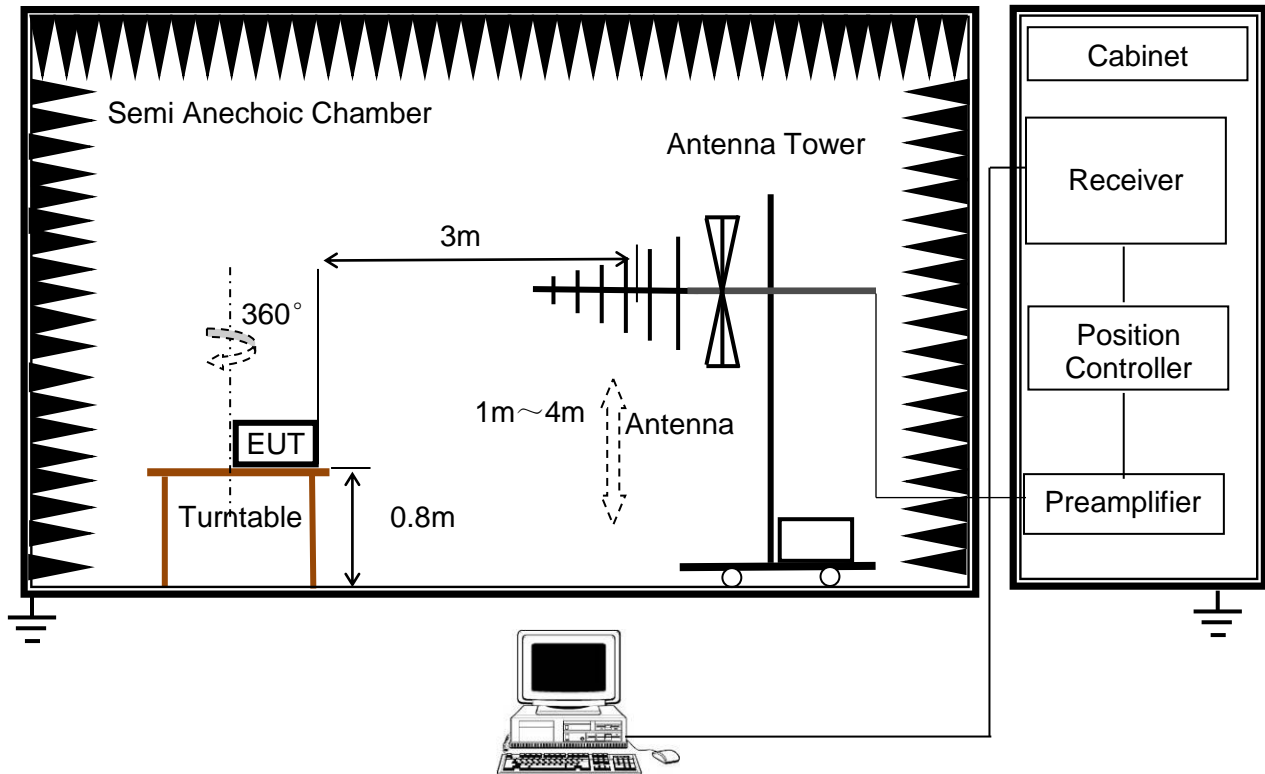
- (1) The limit for radiated test was performed according to FCC Part 15, Subpart B;
- (2) The tighter limit applies at the band edges;
- (3) Emission level (dBuV/m) = 20log Emission level (uV/m),
3m Emission level = 10m Emission level + 20log(10m/3m);

7.2.2. Test Procedure

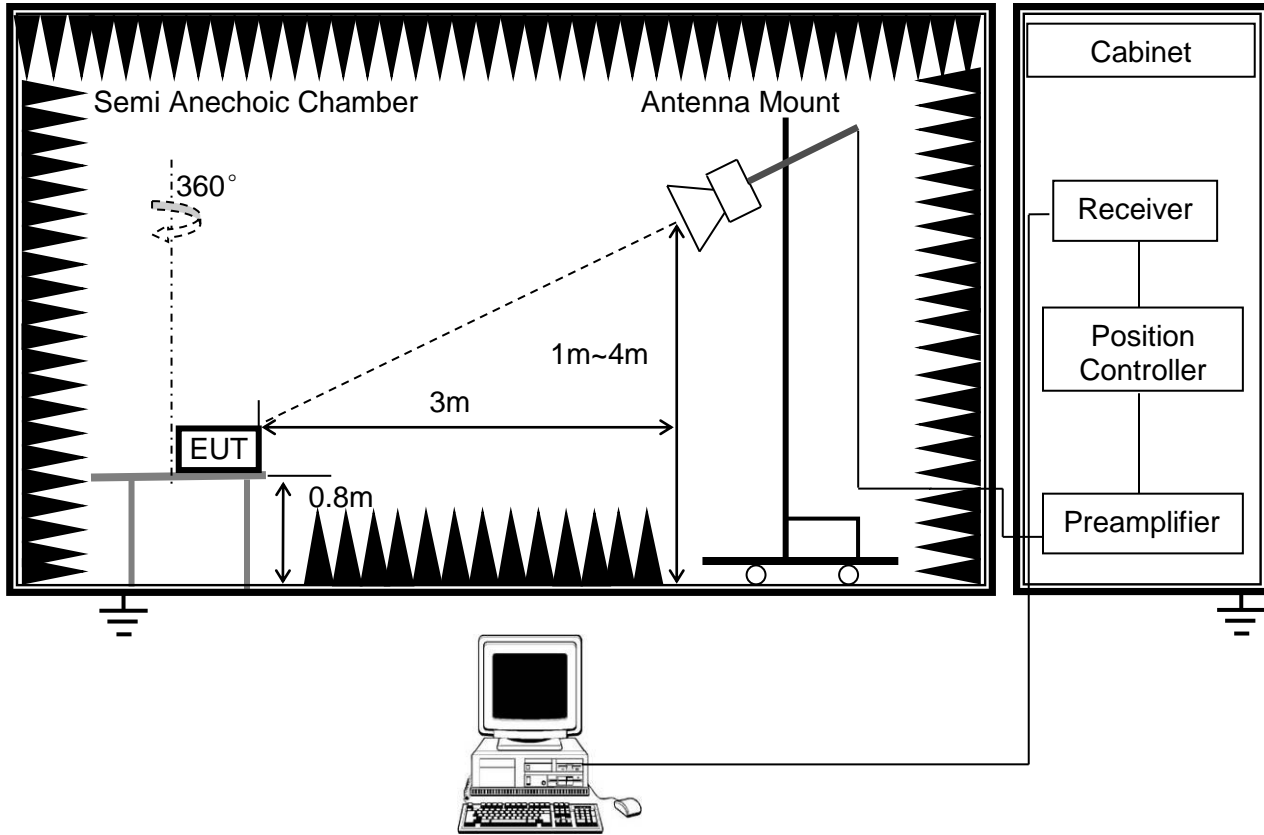
- a. The measuring distance of at 3m shall be used for measurements at frequency up to 1GHz.
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For the actual test configuration, please refer to the related Item:EUT Photographs of Test Configuration.

7.2.3. Test Setup

(a) Radiated Disturbance Test Set-Up Frequency 30MHz - 1GHz



(b) Radiated Disturbance Test Set-Up Frequency above 1GHz



For the actual test configuration, please refer to Appendix I: Photographs of Test Configuration.

7.2.4. Test Environment

Radiated Disturbance - below 1 GHz		Radiated Disturbance - above 1 GHz	
Temperature:	23.2°C	Temperature:	23.5°C
Humidity:	53%	Humidity:	54%
ATM pressure:	101kPa	ATM pressure:	101kPa

7.2.5. Test Mode

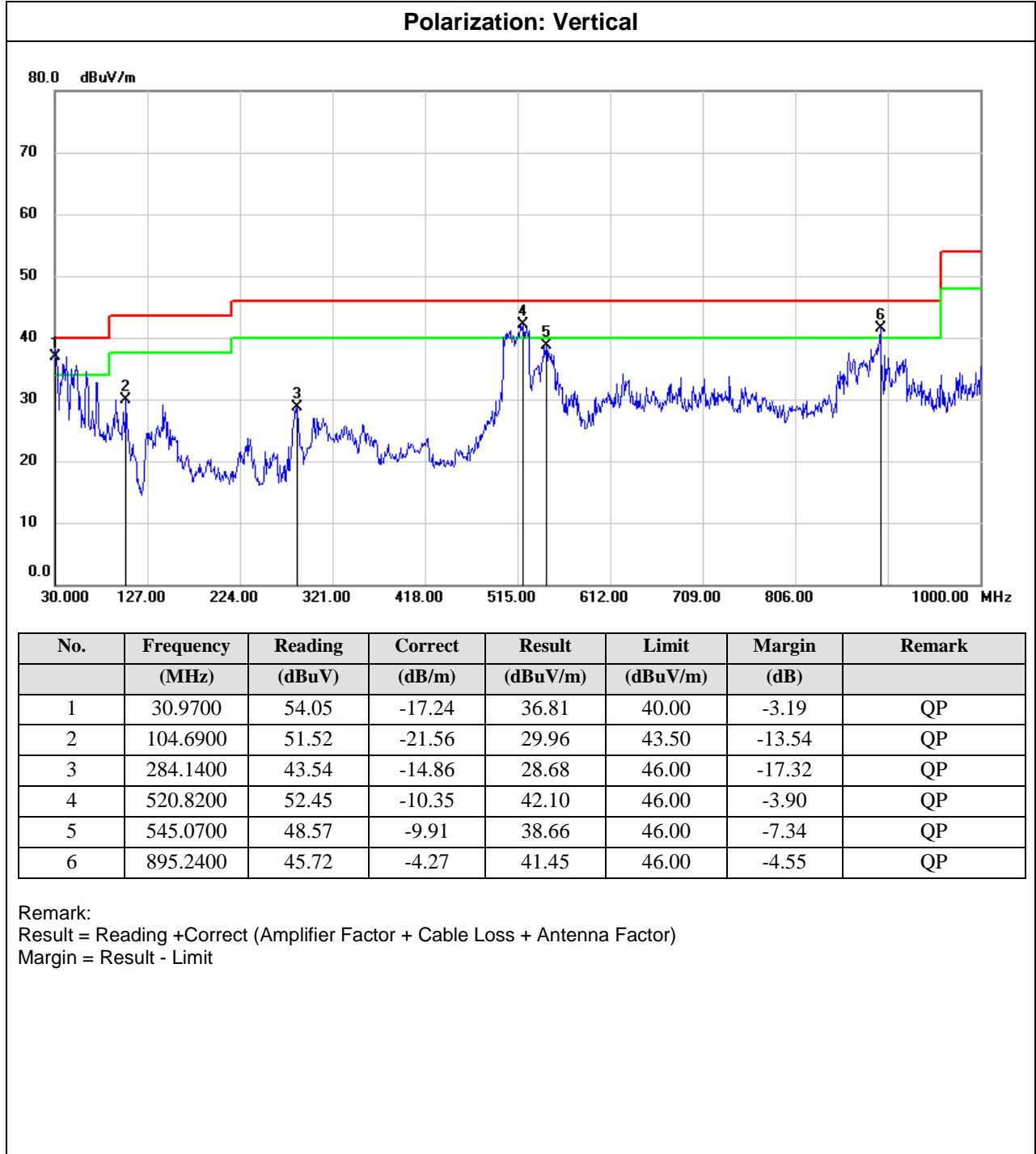
Radiated Disturbance - below 1 GHz		Radiated Disturbance - above 1 GHz	
Pre-test Mode:	Mode 1 ~ Mode 6	Pre-test Mode:	Mode 1 ~ Mode 6
Final Test Mode:	Mode 4	Final Test Mode:	Mode 1

Note: According to pre-test results, the final test mode is each independent function's worst case and only shown in the report.



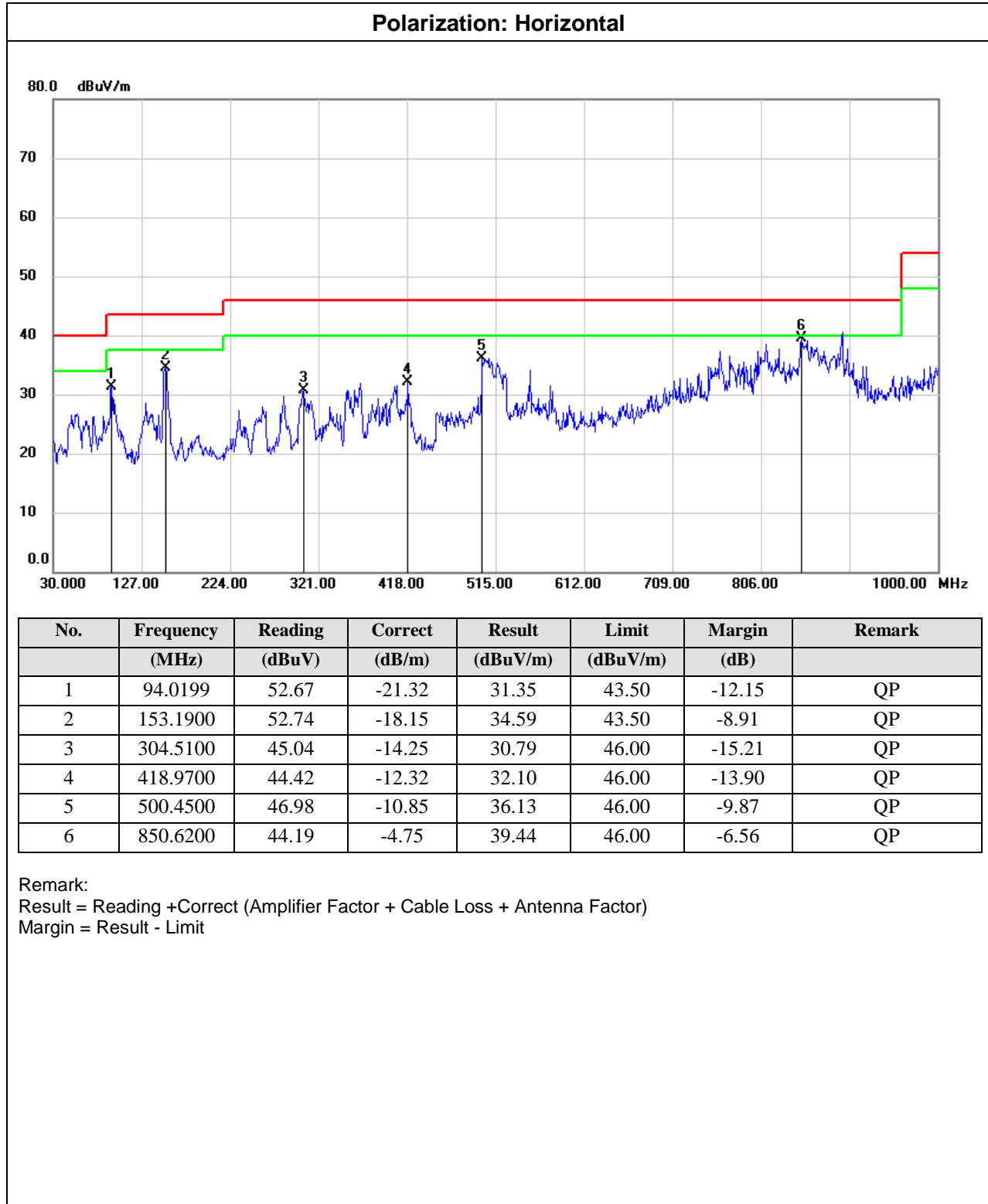
7.2.6. Test Results – below 1GHz

Test Mode:	Mode 4
Test Voltage:	AC 120V/60Hz
Panel information:	T750QVR04.0 (AUO)



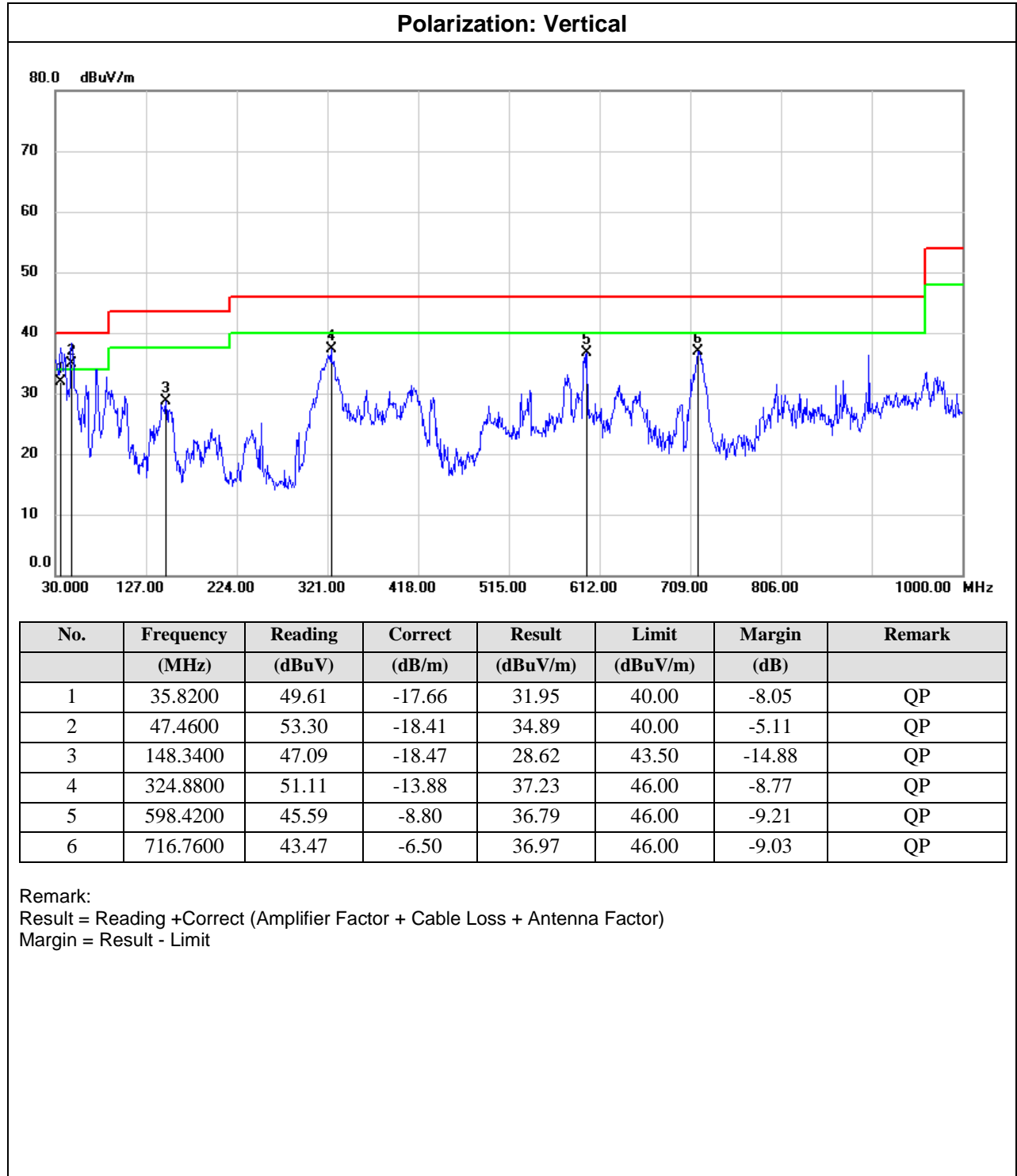


Test Mode:	Mode 4
Test Voltage:	AC 120V/60Hz
Panel information:	T750QVR04.0 (AUO)



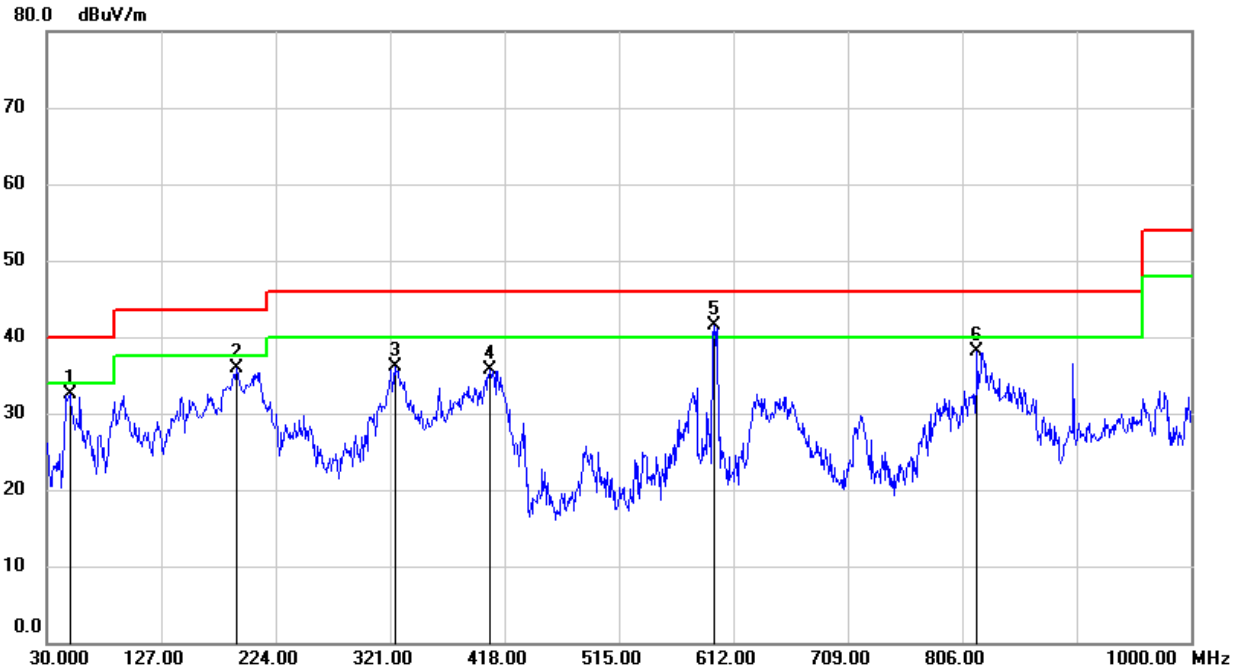


Test Mode:	Mode 4
Test Voltage:	AC 120V/60Hz
Panel information:	V750DK1-QS3 (CMI)





Test Mode:	Mode 4
Test Voltage:	AC 120V/60Hz
Panel information:	V750DK1-QS3 (CMI)

Polarization: Horizontal

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	49.4000	50.94	-18.45	32.49	40.00	-7.51	QP
2	191.0200	51.91	-16.09	35.82	43.50	-7.68	QP
3	324.8800	50.04	-13.88	36.16	46.00	-9.84	QP
4	405.3900	48.33	-12.60	35.73	46.00	-10.27	QP
5	595.5100	50.37	-8.89	41.48	46.00	-4.52	QP
6	818.6100	43.20	-5.13	38.07	46.00	-7.93	QP

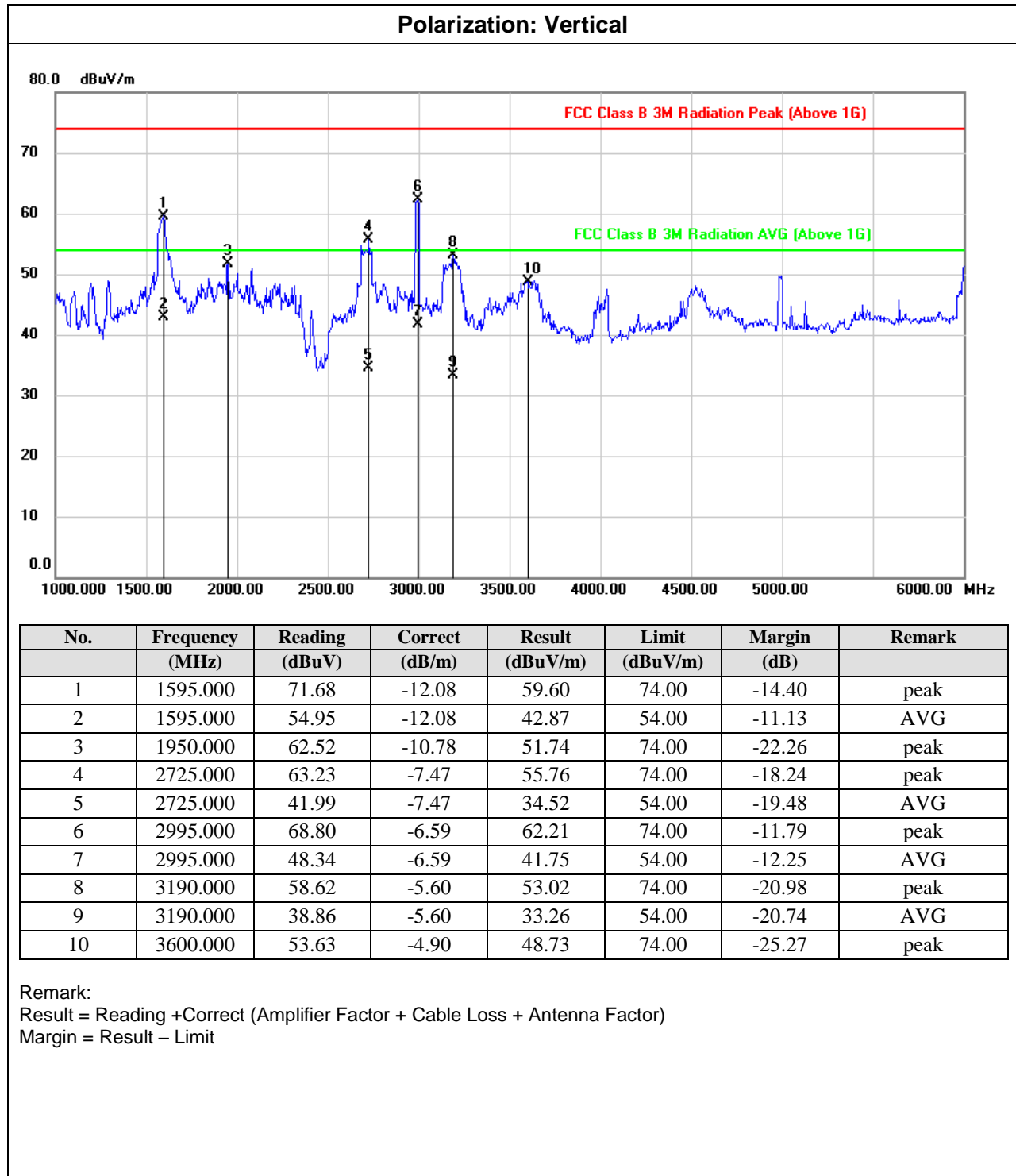
Remark:

Result = Reading + Correct (Amplifier Factor + Cable Loss + Antenna Factor)

Margin = Result - Limit

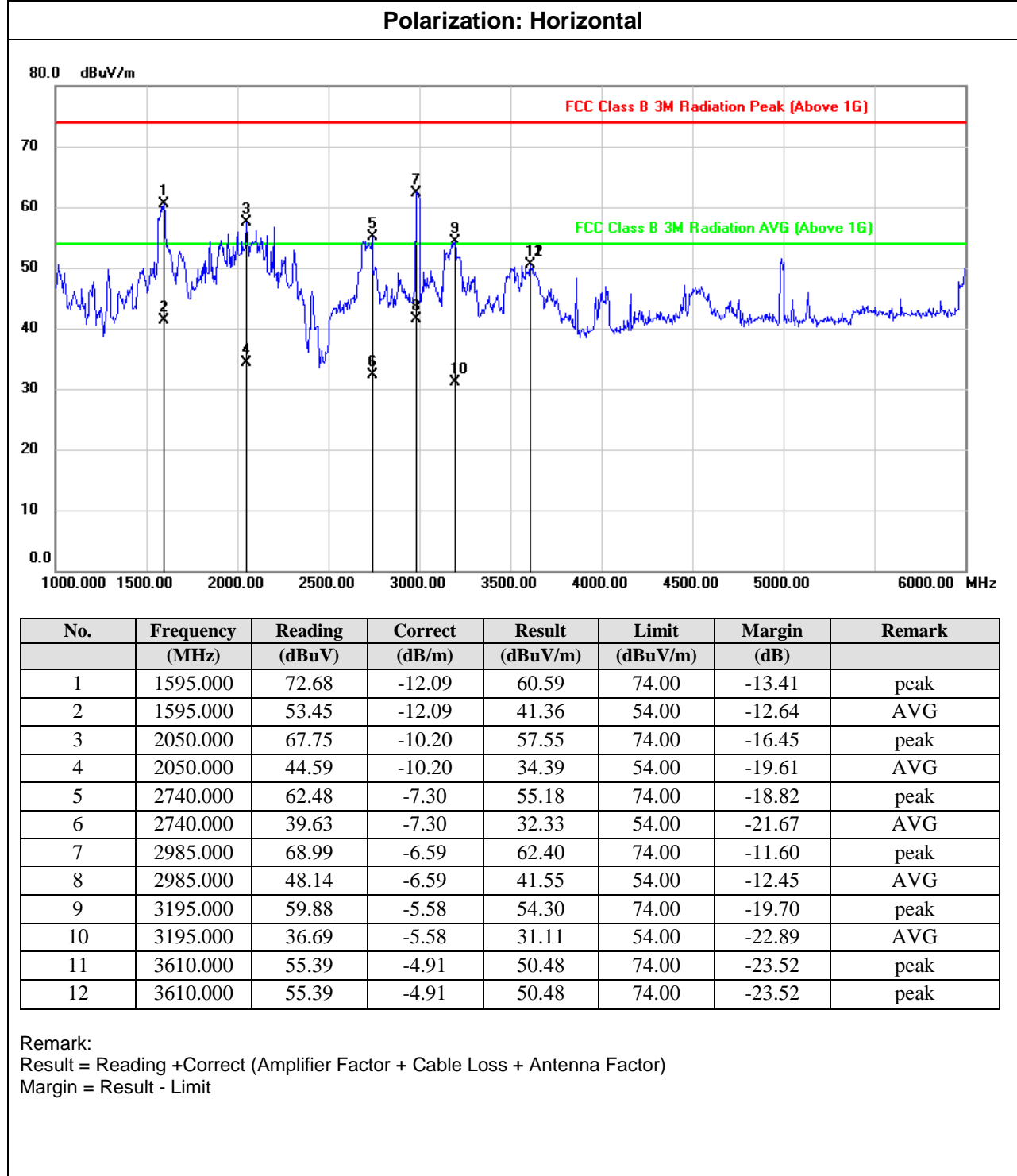
**7.2.7. Test Results – above 1GHz**

Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz
Panel information:	T750QVR04.0 (AUO)



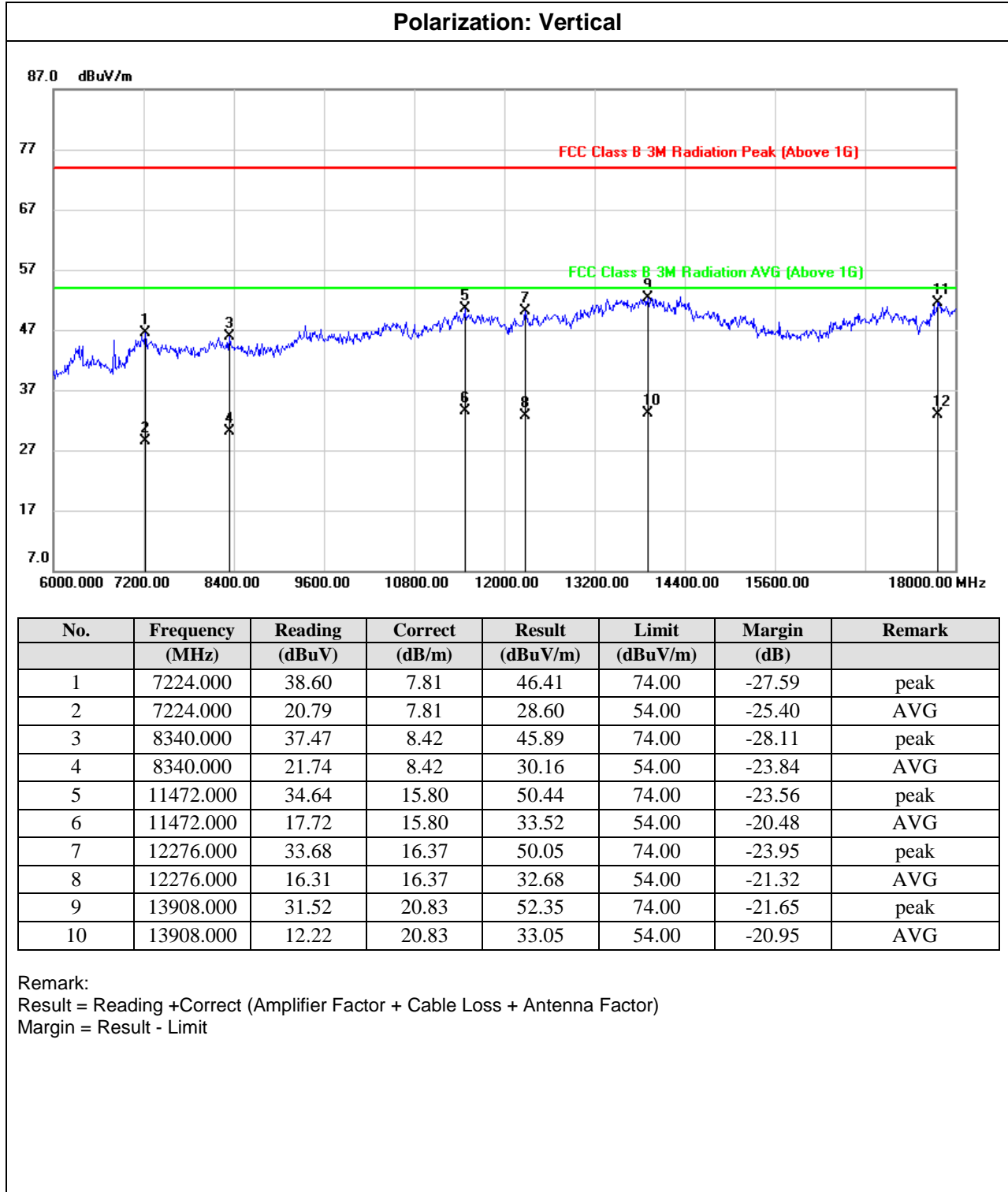


Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz
Panel information:	T750QVR04.0 (AUO)



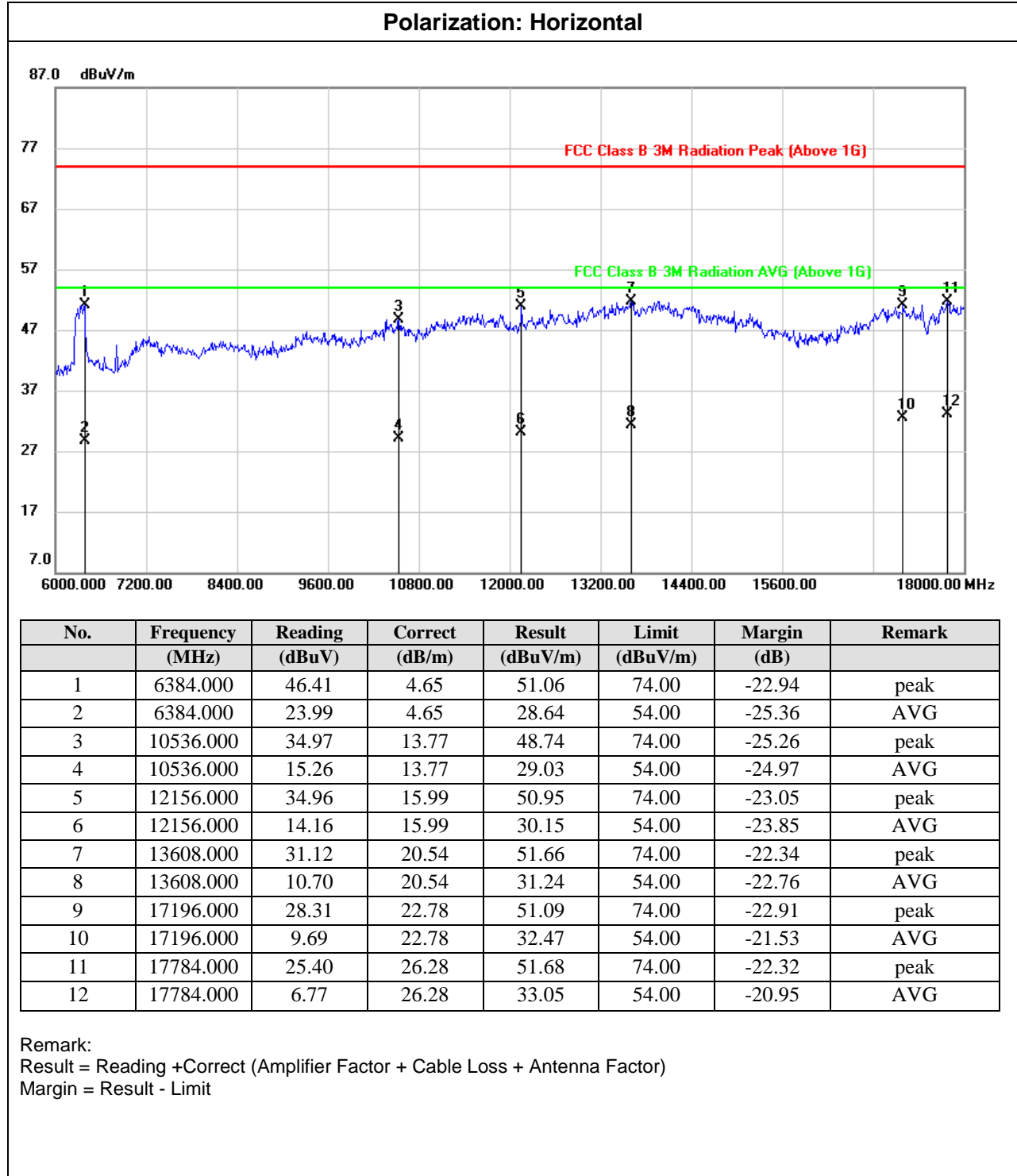


Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz
Panel information:	T750QVR04.0 (AUO)



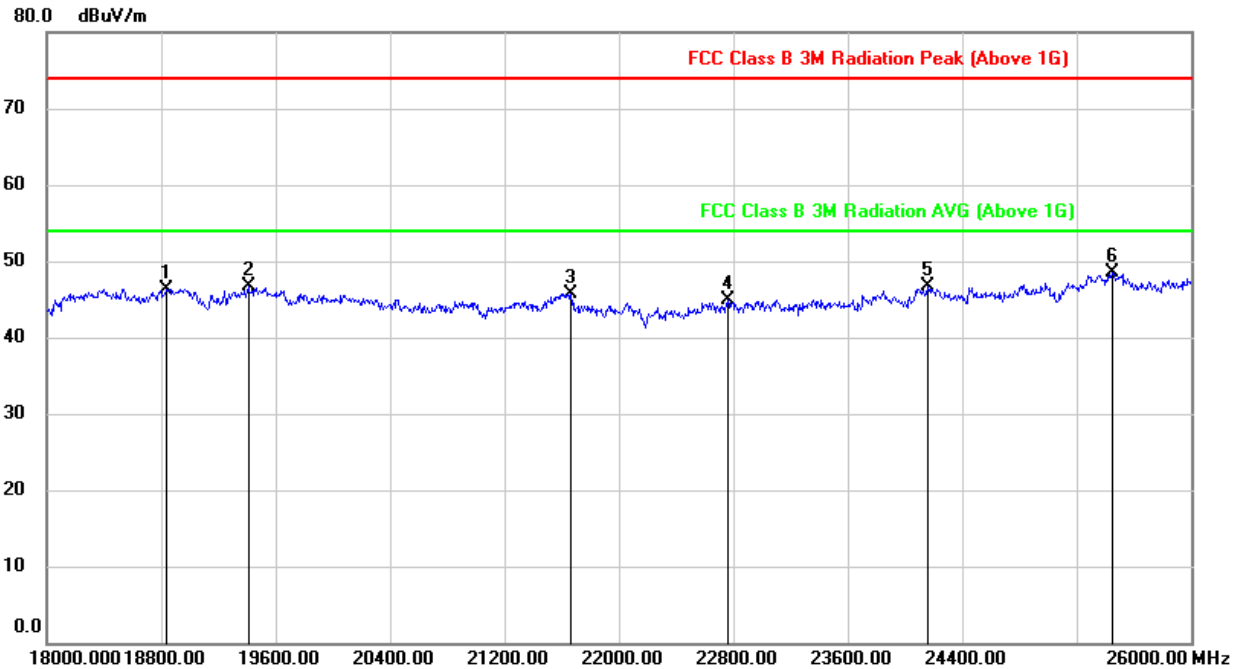


Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz
Panel information:	T750QVR04.0 (AUO)





Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz
Panel information:	T750QVR04.0 (AUO)

Polarization: Vertical

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18832.000	51.71	-5.35	46.36	74.00	-27.64	peak
2	19408.000	52.20	-5.56	46.64	74.00	-27.36	peak
3	21664.000	50.23	-4.45	45.78	74.00	-28.22	peak
4	22760.000	48.55	-3.68	44.87	74.00	-29.13	peak
5	24160.000	49.53	-2.80	46.73	74.00	-27.27	peak
6	25448.000	50.24	-1.76	48.48	74.00	-25.52	peak

Remark:

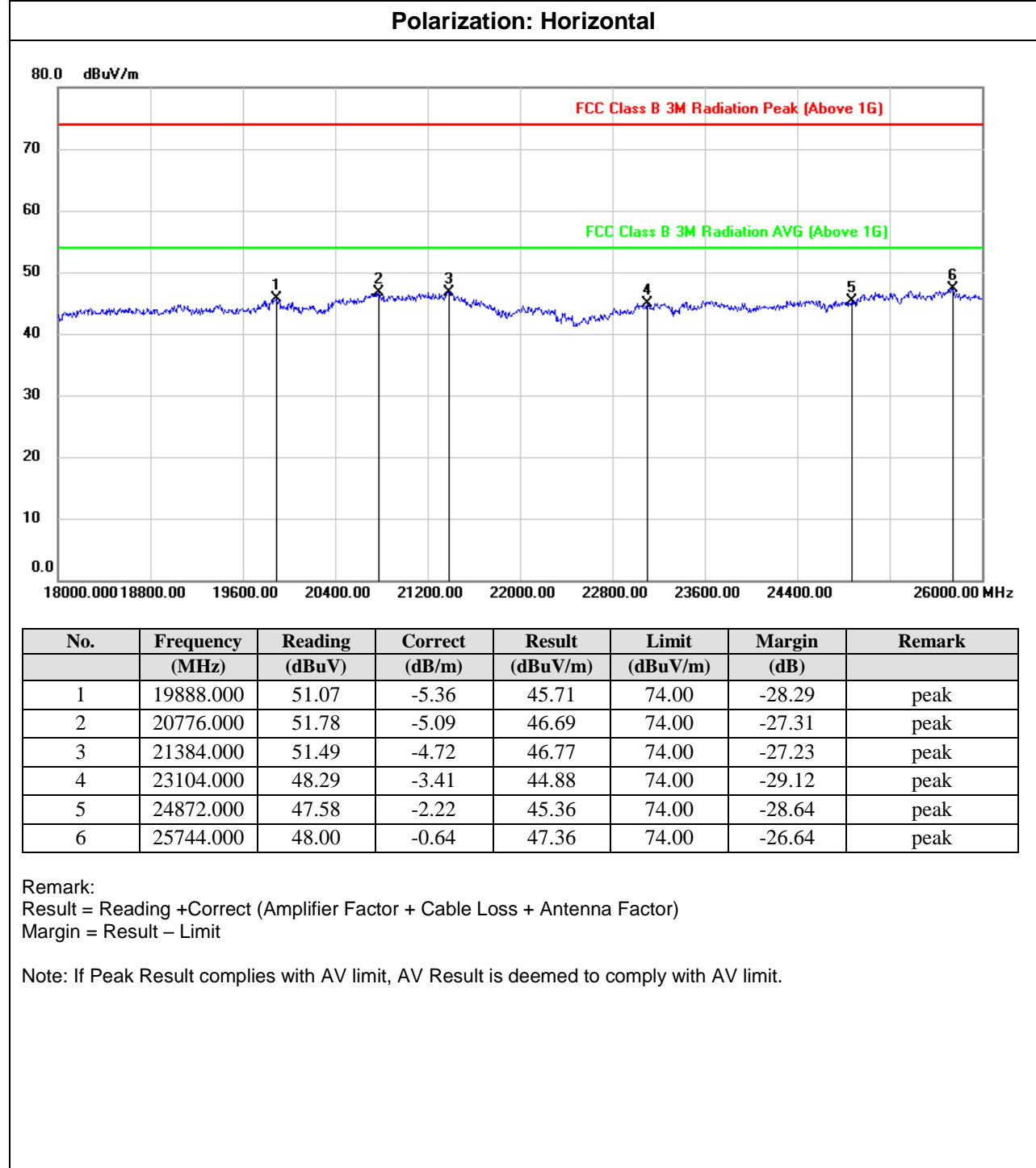
Result = Reading + Correct (Amplifier Factor + Cable Loss + Antenna Factor)

Margin = Result - Limit

Note: If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

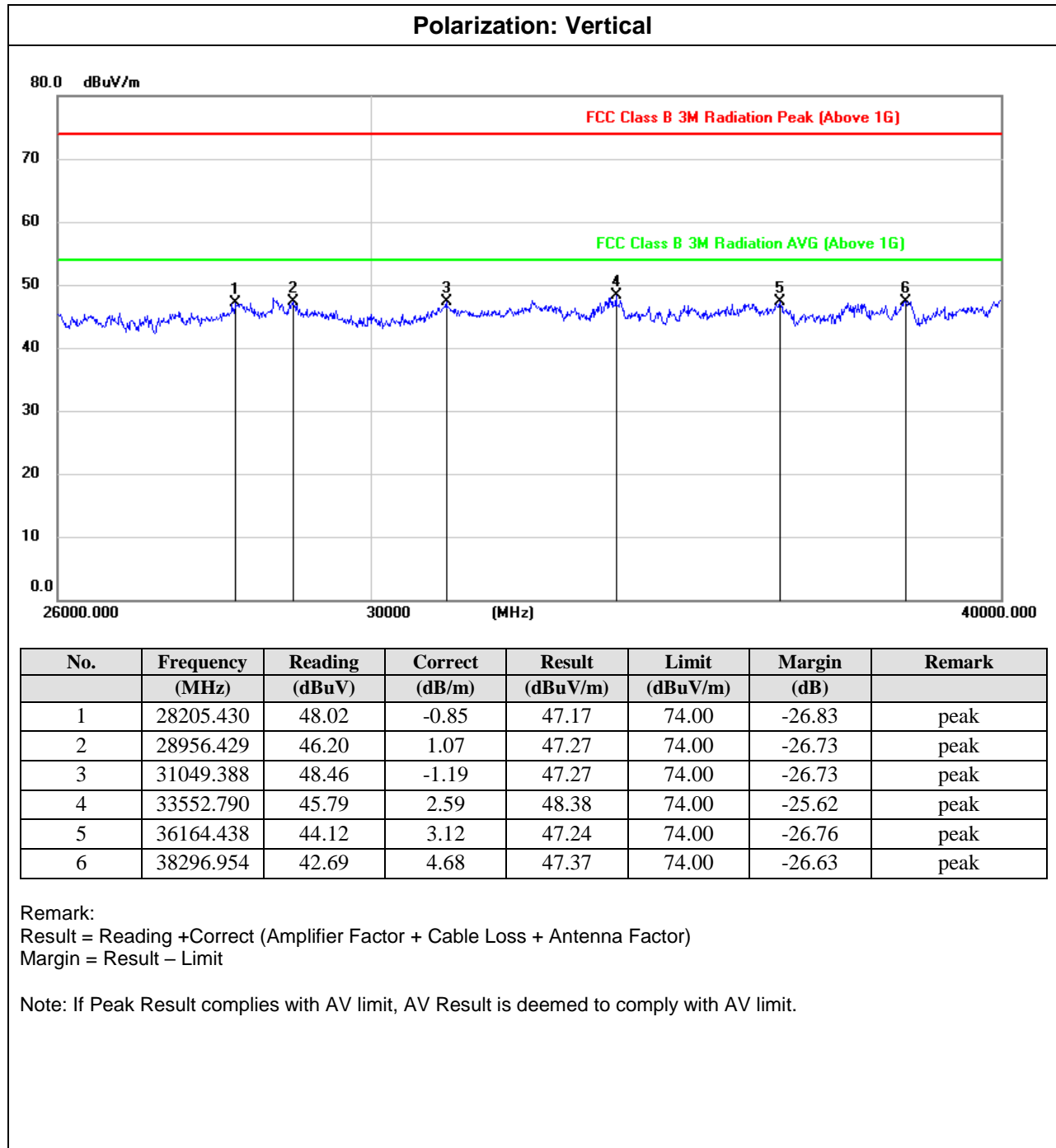


Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz
Panel information:	T750QVR04.0 (AUO)



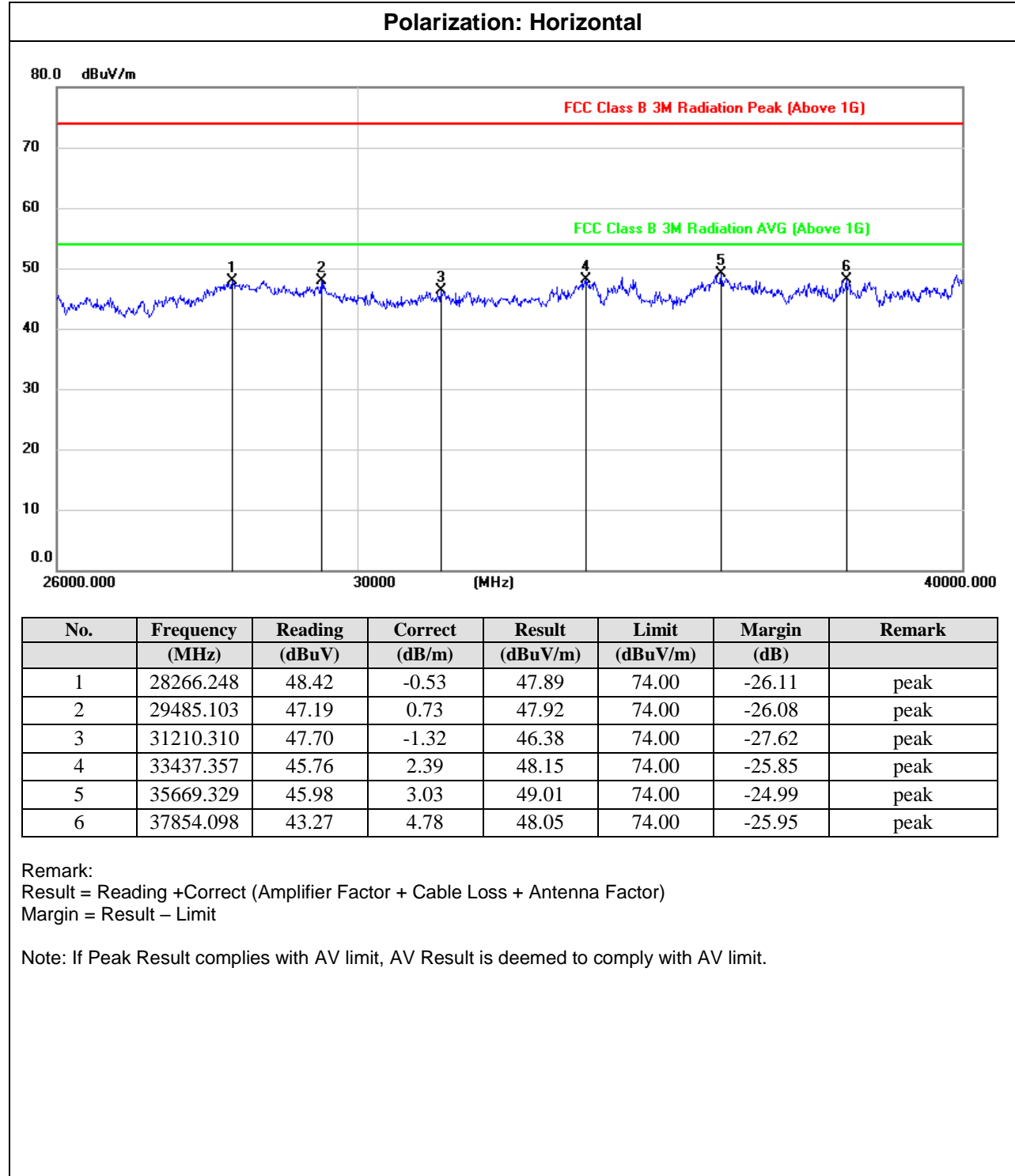


Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz
Panel information:	T750QVR04.0 (AUO)



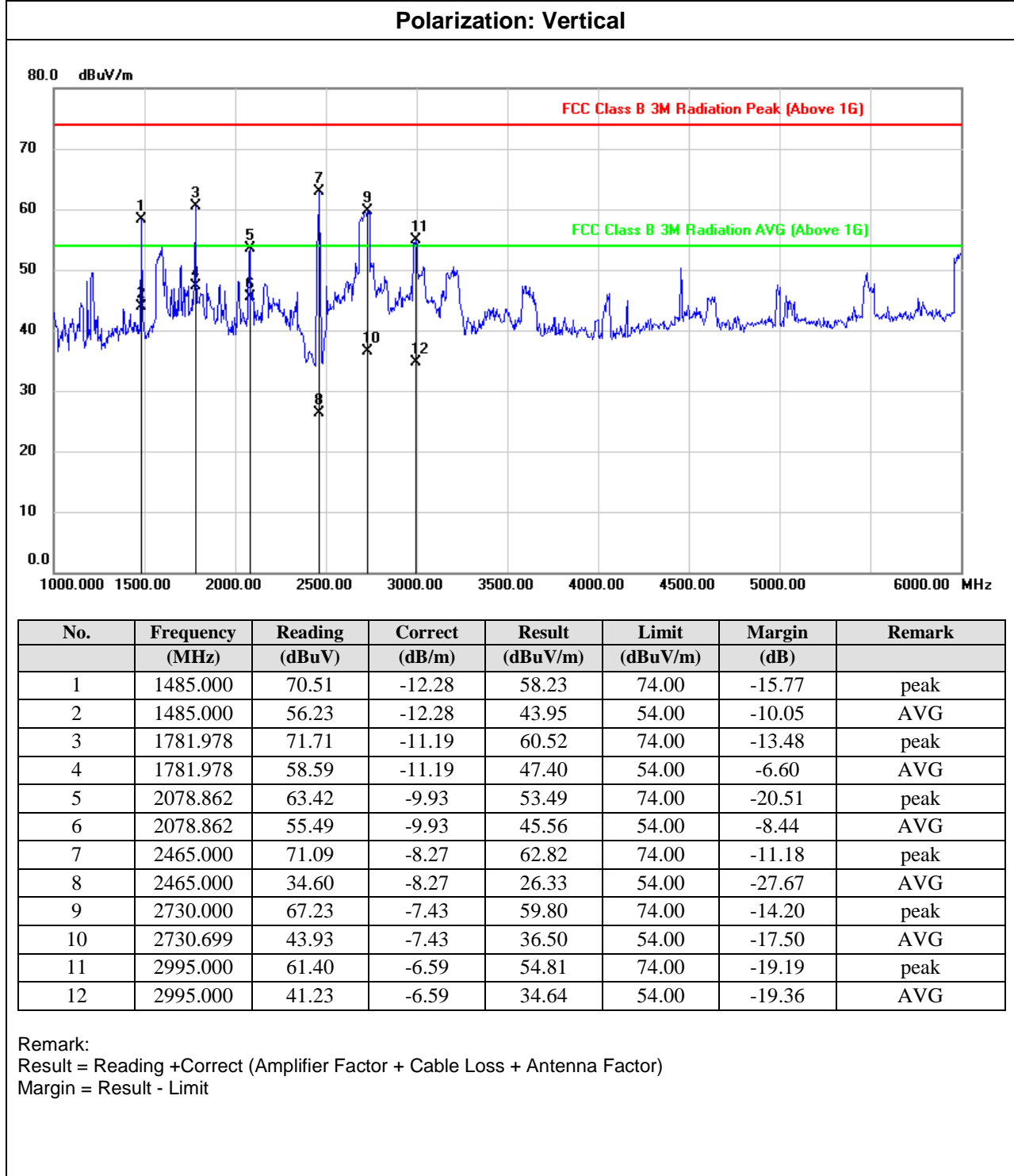


Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz
Panel information:	T750QVR04.0 (AUO)



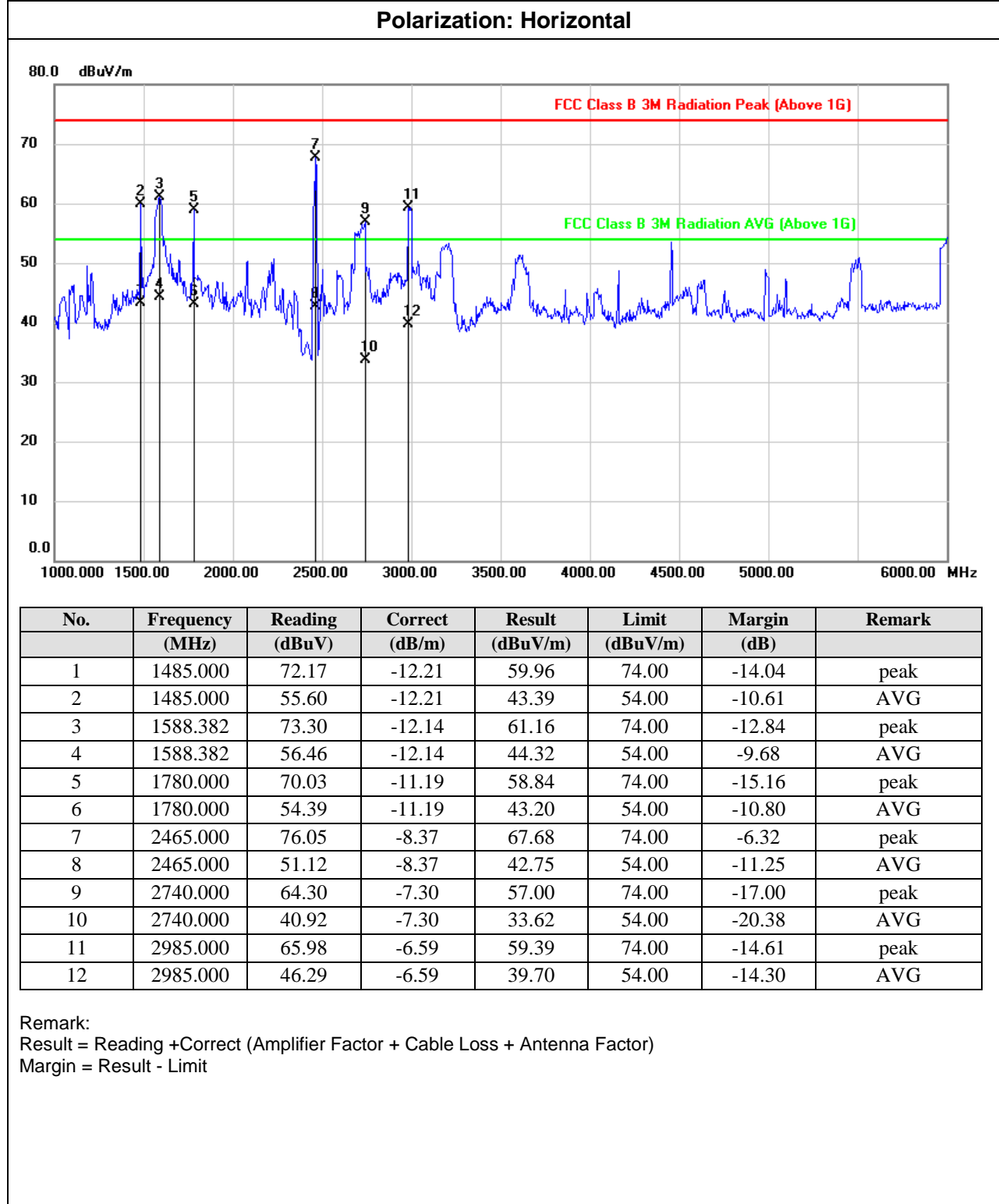


Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz
Panel information:	V750DK1-QS3 (CMI)



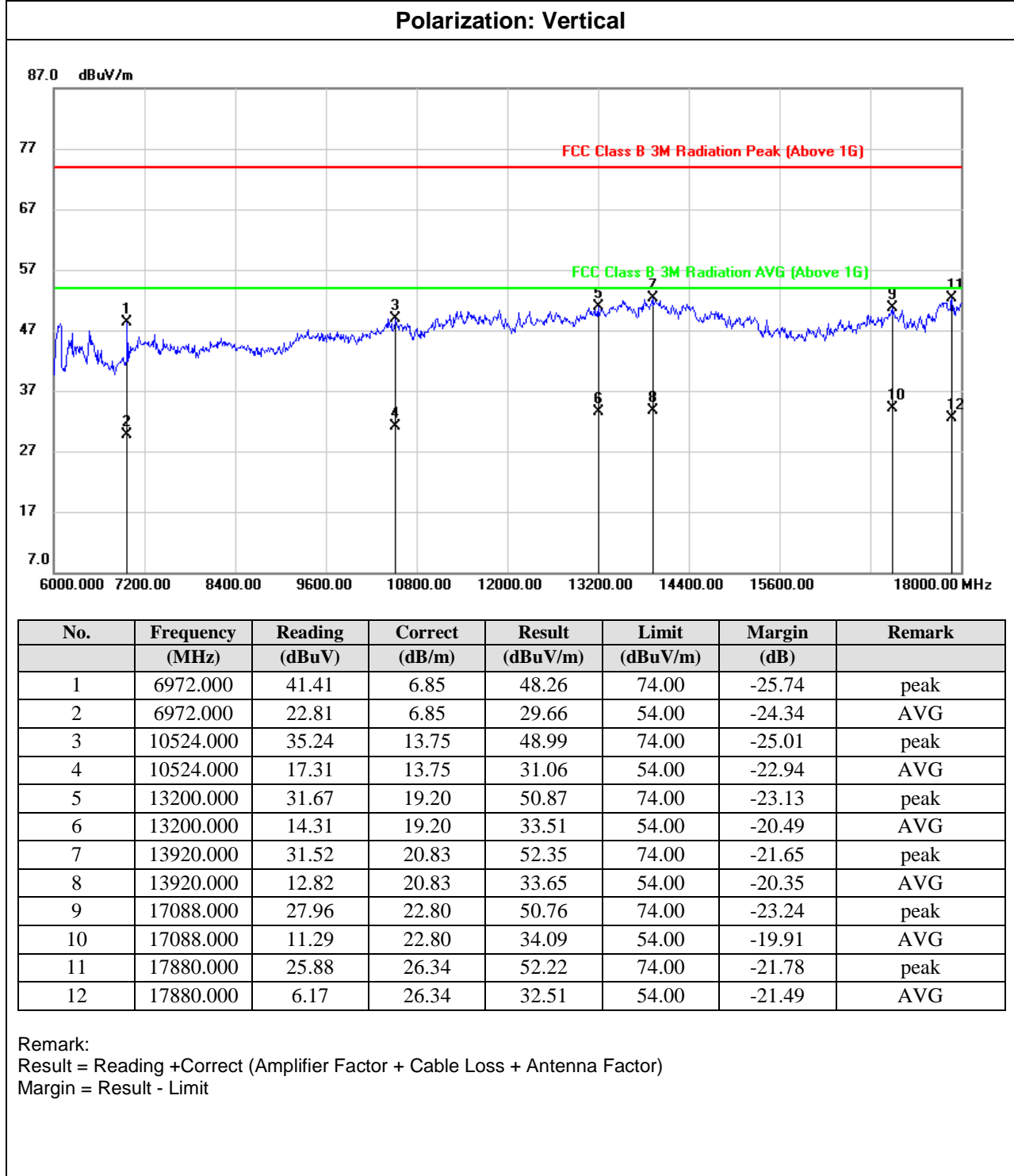


Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz
Panel information:	V750DK1-QS3 (CMI)



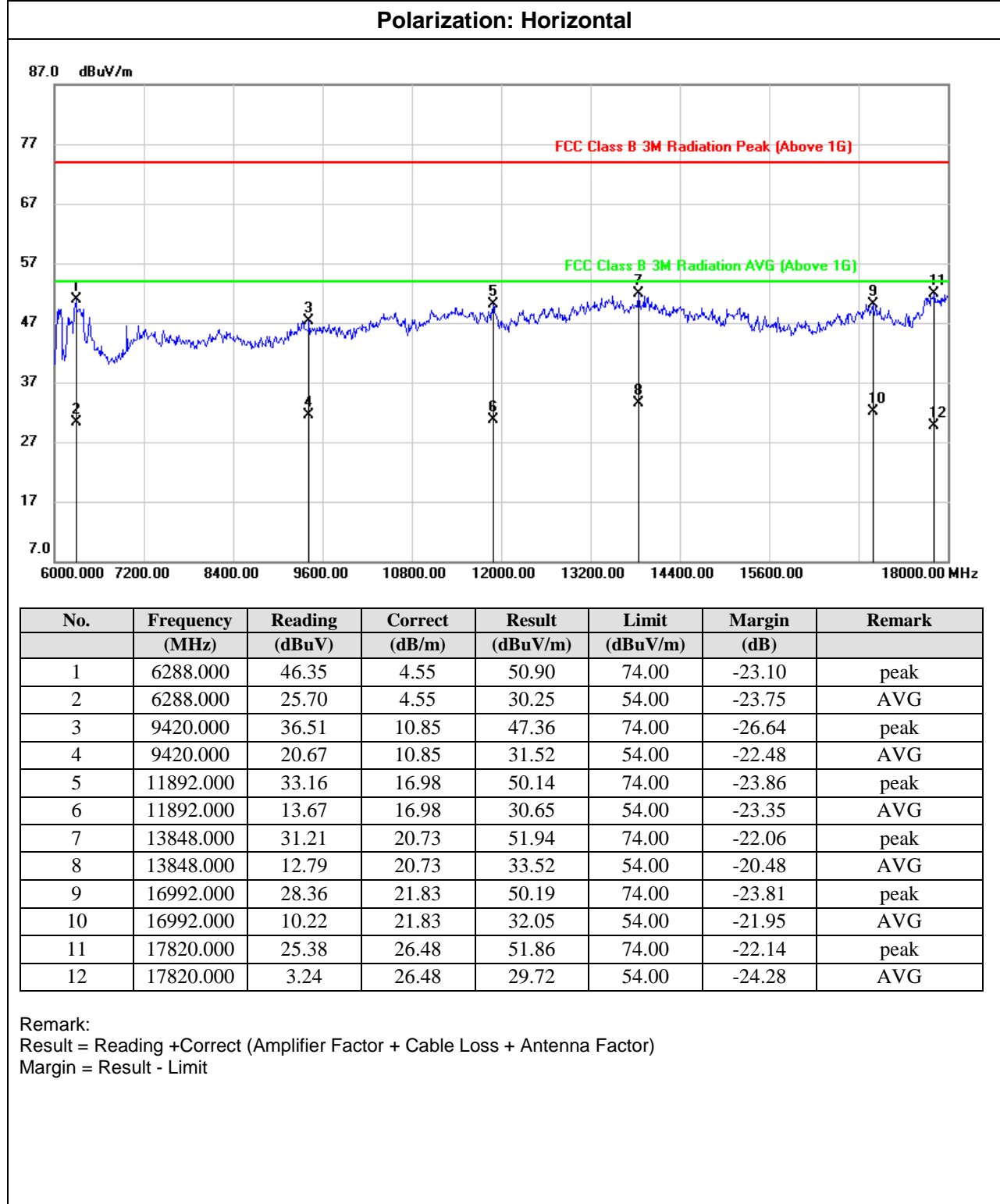


Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz
Panel information:	V750DK1-QS3 (CMI)



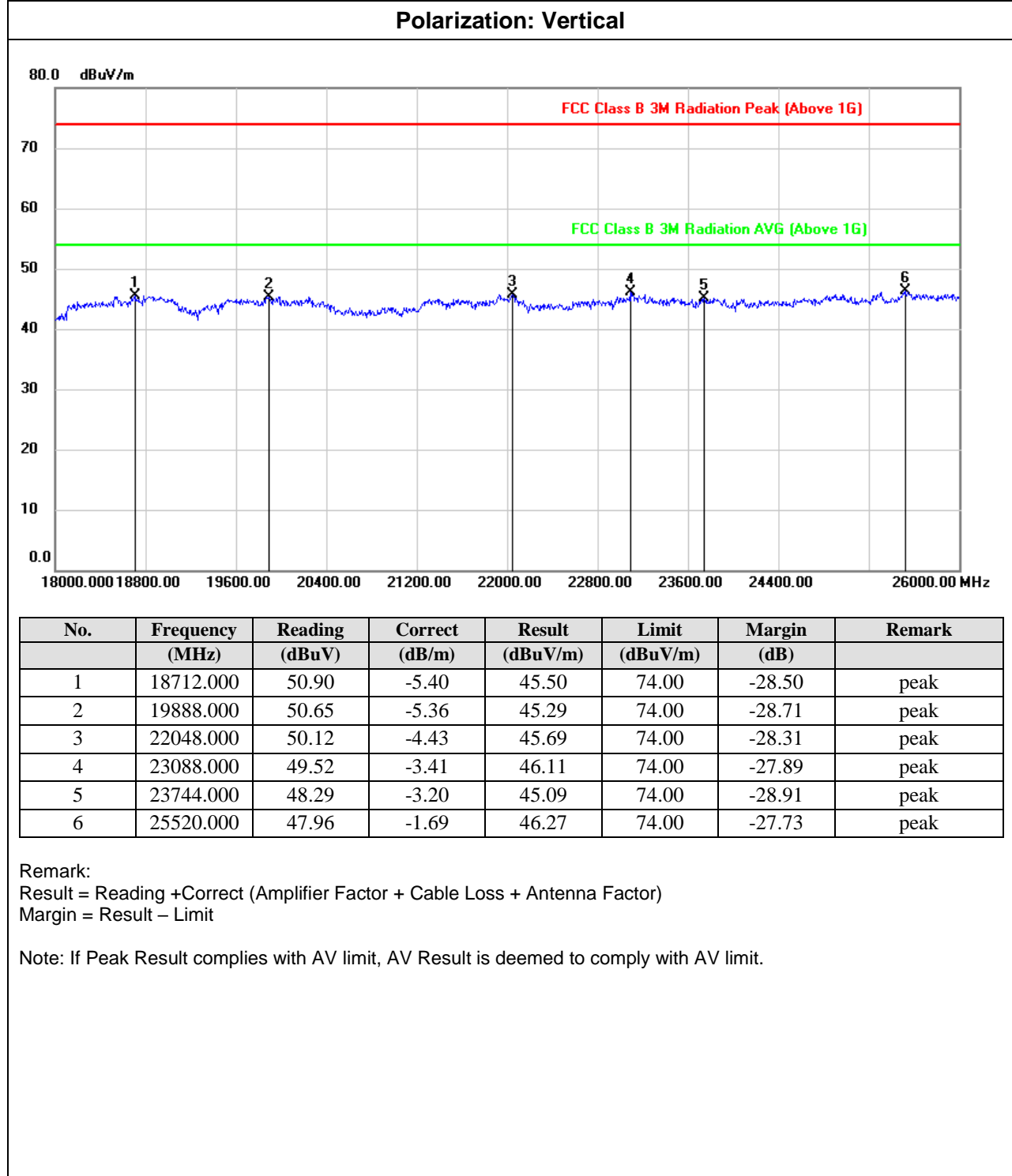


Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz
Panel information:	V750DK1-QS3 (CMI)



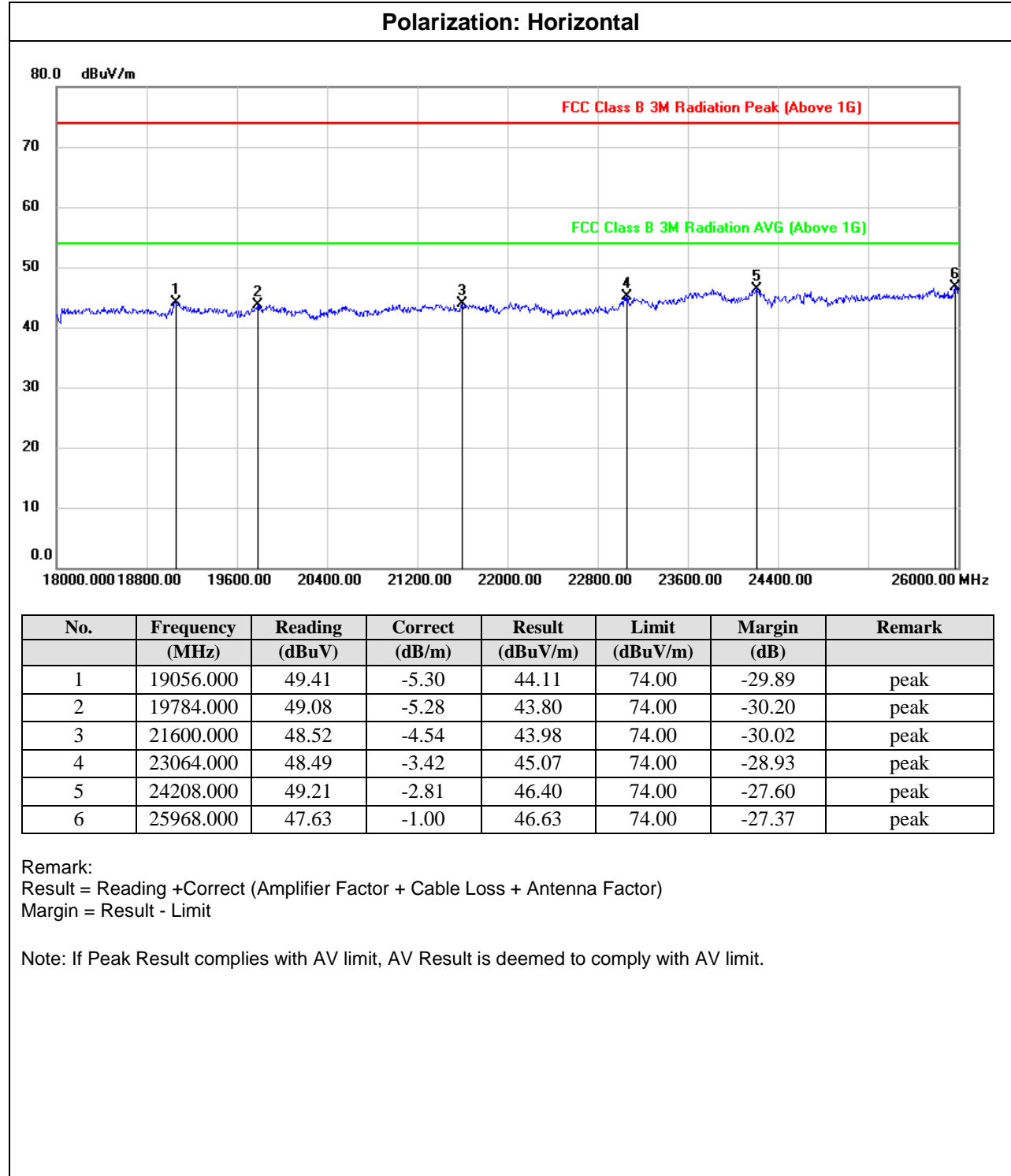


Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz
Panel information:	V750DK1-QS3 (CMI)



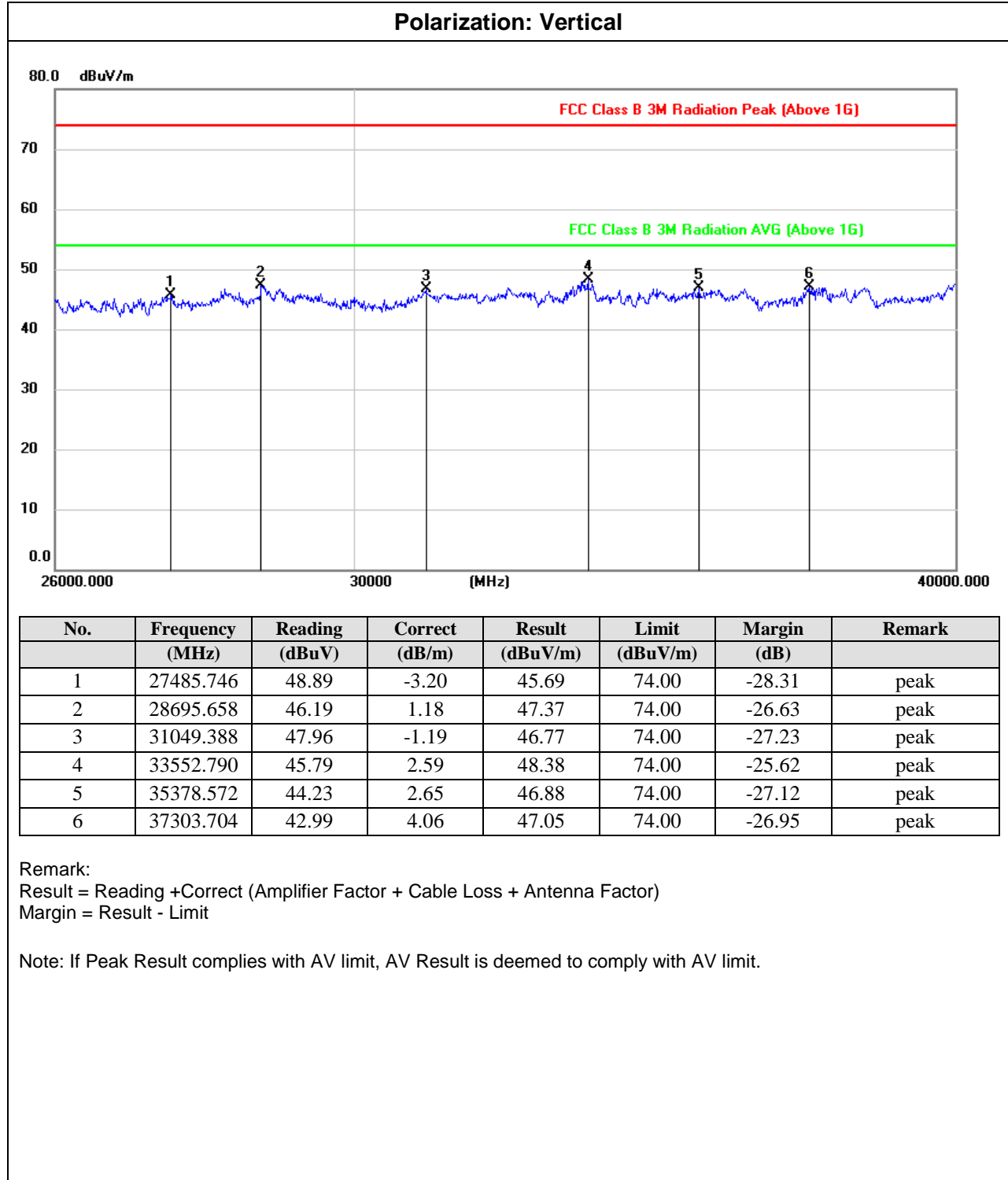


Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz
Panel information:	V750DK1-QS3 (CMI)





Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz
Panel information:	V750DK1-QS3 (CMI)





Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz
Panel information:	V750DK1-QS3 (CMI)



END OF REPORT