



	EMC TEST REPORT		
TEST REPORT NUMBER	DBN 1614TEL688-E		
TEST REPORT DATE	14-Jun-2016		
TEST REPORT VERSION	1.0		
MANUFACTURER	Cambium Networks		
PRODUCT NAME	ePMP2000		
PRODUCT MODEL	C050900P031A		
CONDITION OF EUT WHEN RECEIVED	Good and in proper working condition		
ISSUED TO	Cambium Networks, 3800 Golf Road, Suite 360,		
	Rolling Meadows, IL, USA 60008		
ISSUED BY	TARANG Lab		
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# **AMENDMENT HISTORY**

Amendment Number	Amendment Date	<b>Author of Amendment</b>	Previous Report Version	Previous Report Date
Amendment Details				





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## 1 TEST REPORT SUMMARY

Applicant	Cambium Networks	
Manufacturer	Cambium Networks	
Product Name	ePMP2000	
Product Model	C050900P031A	
<b>Product Serial Number</b>	000456D1846A	
Date of Test	29 <sup>th</sup> Mar 2016 to 06 <sup>th</sup> May 2016	
Venue of Test	Tarang Lab	

Applicable Standard	Description	Performance Criteria/Class	Results
RSS GEN, Issue 4, Nov	RSS GEN 8.9 & 8.10		
2014,	RSS 247 6.2.3 (2) - Transmitter Unwanted	Class 'B'	PASS
RSS 247 Issue 1 May	Emission (Radiated)		
2015	RSS GEN 8.8 - Conducted emission	Class 'B'	PASS

**ePMP2000** was tested by Tarang Lab as per the standards that are listed in the table above. Based on the observations during the test and interpretations by Tarang lab, results have been indicated. The test results produced in this report shall apply only to the above sample that has been tested under the specific conditions and modes of testing as described in the report. Other similar equipment may not necessarily reproduce same result due to production tolerances and measurement uncertainties. Any measurement uncertainties listed in this report are for information purpose only.

The results shall stand invalid, in case there are any modifications / additions / removals to the hardware or software or end use atmosphere to the product tested. This report shall not be modified or in any way revised unless it is expressly permitted and endorsed by Tarang lab, through a duly authorized representative. Particulars on Manufacturer / Supplier / Product configuration / performance criteria, given in this report, are based on the information given by the customer, along with test request. Tarang does not assume any responsibility for the correctness of such information for the above mentioned equipment under test.

Customer acknowledges that this is a test report and not a certificate to gain market access for the product. To gain market access, Customer needs appropriate clearance from the Government or authorized agency for the target market. For markets that allow self-declaration, customer needs to follow the procedure defined by the target market.

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# 2 GENERAL INFORMATION

## 2.1 ACCREDITATION DETAILS

Following are the accreditation and listing details for Tarang.

Accreditation / Listing body	Registration / Company / Certificate Number
NABL, India	Certificate No: T-1533, T-1534
	http://www.nabl-india.org/
FCC (Federal Communications	Registration Number: 799247
Commission)	http://www.fcc.gov/
IC (Industry Canada)	Company Number: 9023A-1
	http://www.ic.gc.ca

## 2.2 MEASUREMENT UNCERTAINTY

The following measurement uncertainties are applicable to the relevant tests that are mentioned below:

Name of the test	<b>Measurement Uncertainty</b>
Radiated Emission from 30 MHz to 1 GHz at 3 meter	± 4.6687 dB
Radiated Emission from 1 GHz to 18 GHz at 3 meter	± 3.2297 dB
Radiated Emission from 18 GHz to 26.5 GHz at 3 meter	± 3.7832 dB
Radiated Emission from 26.5 GHz to 40 GHz at 3 meter	± 3.7962 dB
Conducted Emission from 150 kHz to 30 MHz	± 1.6160 dB





## 3 INSTRUMENTATION AND CALIBRATION

# 3.1 TEST AND MEASURING EQUIPMENT

The list of following measuring equipment used for this testing conforms to the applicable standards. Performance of all test and measuring equipment including any accessories are checked periodically to ensure accuracy.

# 3.2 EQUIPMENTS USED

Name of Equipment	Manufacturer	Model No	Serial No	Calibration Due
EMI Test Receiver	R&S	ESU8	100324	11 <sup>th</sup> Jul 2016 & 09 <sup>th</sup> Mar 2017
EMI Test Receiver	R&S	ESIB40	100306	04 <sup>th</sup> Jul 2016 & 21 <sup>st</sup> Jan 2017
Active Loop Antenna	ETS-Lindgren	6507	00104711	05 <sup>th</sup> Aug 2016
Hybrid Log periodic Antenna	TDK	HLP-3003C	130334	20 <sup>th</sup> Jan 2017
Preamplifier	R&S	SCU-01	100626	30 <sup>th</sup> Oct 2016
Double Ridge Horn Antenna	SME	BBHA 9120D	9120D-687	27 <sup>th</sup> Jul 2017
Preamplifier	TDK	PA-02	100008	23 <sup>rd</sup> Mar 2017
Broad Band Horn Antenna	Schwarz beck	BBHA9170	9170-337	29th Oct 2016
Broad Band Horn Antenna	Schwarz beck	BBHA9170	9170-344	29th Oct 2016
Pre-Amplifier	TDK	PA-02-3	2007332	28th Oct 2016
Pre-Amplifier	TDK	PA-02-2	2007331	28 <sup>th</sup> Oct 2016

Table 1: List of equipment used for Radiated Emissions test

Name of Equipment	Manufacturer	Model No	Serial No	Calibration Due
EMI Test Receiver	R&S	ESIB40	100306	04 <sup>th</sup> Jul 2016 &
EMI Test Receiver	Kas	ESID40	100300	21st Jan 2017
Pulse Limiter	R&S	ESH3-Z2	101260	3 <sup>rd</sup> Mar 2017
LISN	Schwarzbeck	NSLK 8128	243	11 <sup>th</sup> Sep 2016

Table 2: List of equipment used for Conducted Emissions test





# 4 PRODUCT INFORMATION

### 4.1 DESCRIPTION OF THE PRODUCT

EUT is a point to point & point to multipoint fixed outdoor Transceiver with the following defined channels.

40 MHz channel for 17 dBi	10 MHz channel for 17 dBi
Low – 5495 MHz	Low – 5485 MHz
Mid - 5575 MHz	Mid – 5585 MHz
High - 5700 MHz	High – 5710 MHz

Product	ePMP2000
Model Number	C050900P031A
Serial Number	000456D1846A
Product Category / Type of Equipment	Telecom
<b>EUT Operating Voltage</b>	120 V AC / 230 V AC
<b>EUT Operating frequency range</b>	60 Hz / 50 Hz
Max EUT Operating Current	< 1 A

**Table 3: EUT details** 

Cable No.	Cable Name	Cable Length	Power / Interconnection cable	Shielded / Unshielded
Cable - 1	Power cable	0.8 meter	Power	Unshielded
Cable - 2	Ethernet Cable	1.5 meter	Interconnection	Unshielded
Cable - 3	Ethernet Cable	3.05 meter	Interconnection	Unshielded

Table 4: List of cables connected to the EUT

### 4.2 SOFTWARE AND FIRMWARE DETAILS

Atheros Radio Test 2 (ART2-GUI) Version 2.3





### 5 TEST DETAILS

### 5.1 PRODUCT AND TEST SETUP

### 5.1.1 PRODUCT CONFIGURATION

The EUT was powered through AC power supply (120 V AC / 60 Hz). The EUT was connected to Ethernet switch by using RJ45 cable. Figure 1 shows the product configuration during the tests. POE module was used during the test to power ON the EUT.

The 5.4 GHz ePMP Integrated Radio was configured with test software and configured to have the following settings during the course of testing:

- 40MHz modulation bandwidth for low, mid & high channels
  - o Rate HT40,
  - o 54 Mbps OFDM, MCS15 / 270 Mbps
  - o Tx Power is 10.5 dBm Tx99 for 17 dBi antenna configuration-Low channel
  - o Tx Power is 11.5 dBm Tx99 for 17 dBi antenna configuration-Mid channel
  - o Tx Power is 12 dBm Tx99 for 17 dBi antenna configuration-High channel
- 10 MHz modulation bandwidth for low, mid & high channels
  - o Rate Legacy,
  - o 54 Mbps OFDM, MCS15 / 130 Mbps
  - o Tx Power is 9 dBm Tx99 for 17 dBi antenna configuration-Low channel
  - o Tx Power is 9 dBm Tx99 for 17 dBi antenna configuration-Mid channel
  - o Tx Power is 9 dBm Tx99 for 17 dBi antenna configuration-High channel

The unit was continuously monitored for transmission using an auxiliary antenna during the radiated tests.

### 5.1.2 TEST SETUP DETAILS

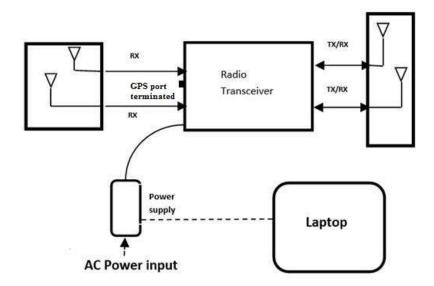


Figure 1: Block diagram of the EUT test setup





# **5.1.3 ACCESSORIES**

Name of the Equipment	Manufacturer	Model Number	Serial Number
17dBi Antenna Beam steer- Rx	Cambium Networks	C050900D020A	NA
17dBi Antenna sector- Tx	Cambium Networks	C050900D021A	NA
Power Supply	Cambium Networks	NET P30 56	031-326-6719
Switching Power Supply Gigabit Compatible	Cambium Networks	NET-P30-56	N000000L034A

## **5.2 APPLICABLE TEST**

Applicable Standard	Description	Test level / Test Voltage	Applicability
RSS 247 Issue 1 May 2015,	Transmitter Unwanted Emission (Radiated)	9 kHz - 40 GHz	Enclosure
RSS Gen-Issue 4 Nov 2014	Conducted Emission	150 kHz - 30 MHz	Power Port





## 5.3 TEST RESULT

# **5.3.1 TRANSMITTER UNWANTED EMISSION (RADIATED)**

### 5.3.1.1 TEST SPECIFICATION

Test Standard	RSS GEN, Issue 4, Nov 2014			
Test Procedure	ANSI C63.10-2013			
Class	Class B			
Frequency Range	9 kHz - 150 kHz	150 kHz - 30 MHz	30 MHz - 1 GHz	1 GHz - 40 GHz
Resolution Bandwidth	200 Hz	9 kHz	120 kHz	1 MHz
Video Bandwidth	3 kHz	30 kHz	300 kHz	3 MHz
Step size	400 Hz	4 kHz	40 kHz	400 kHz
<b>Pre Scan Measurement Time</b>	50 ms 50 ms 20 ms 5 ms			
<b>Final Measurement Time</b>	1 second 1 second 1 second 1 second			
Attenuation	5 dB 5 dB 10 dB 5 dB			
<b>Test Distance</b>	3 meter 3 meter 3 meter 3 meter			
Polarization	Parallel and Perpendicular	Parallel and Perpendicular	H & V	H & V
Detector	Quasi Peak, Peak			
Input Voltage	120 V AC			
Input Frequency	60 Hz			
Temperature	22.1 °C			
Humidity	50.0 %			
Tested By	Dikshit Raviteja			
Test Date	29th Mar 2016	-		_

### **5.3.1.2** LIMITS

Standard	Reference section	Frequency range (MHz)	Limit (dBµV/m)
RSS-247 Issue 1 May 2015	6.2.3(2)	Outside 5470 – 5725	79.99

**Table 5: Unwanted emission Limit** 

Standard	Reference section	Frequency range	Limit (dBµV/m)
		9 kHz to 490 kHz	128.5194 to 93.8003*
RSS GEN-Issue 4 Nov 2014	8.9 and 8.10	490 kHz to 1.705 MHz	73.8003 to 62.9697*
		1.705 MHz to 30 MHz	69.5429

Table 6: General Field strength limit below 30 MHz

*Note:* \* Decreases with the logarithm of the frequency





Standard	Reference section	Frequency range	Limit (dBµV/m)
		30 MHz to 88 MHz	40
DCC CENT James 4 Nov. 2014	0.0 and 0.10	88 MHz to 216 MHz	43.52
RSS GEN- Issue 4 Nov 2014	8.9 and 8.10	216 MHz to 960 MHz	46.02
		960 MHz to 40 GHz	53.98

Table 7: General Field strength limit above 30MHz

#### **5.3.1.3 TEST SETUP**

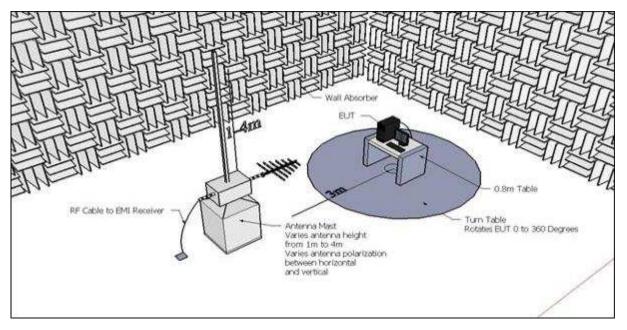


Figure 2: Sample Radiated Emission test setup

#### 5.3.1.4 TEST PROCEDURE

The test procedure is in accordance with ANSI C63.10: 2013.

The Radiated Emission test was performed inside a Shielded Semi-Anechoic chamber. The EUT was placed on 0.8 m height table for the measurements below 1 GHz and on 1.5 meter height table for the measurements above 1 GHz as per ANSI C63.10. The test setup was placed on a rotating turn table to enable 0 to 360 degree rotation.

The EUT was placed 3 meter away from the receiving antenna for the radiated emission measurement in the frequency range 30 MHz to 1 GHz. The receiving antenna was mounted on an antenna mast to enable height variation from 1meter to 4 meter above the ground plane.





The radiated emission measurement test system was configured through software as per standard. Pre-scan (Peak) was taken at different angles of EUT at 22.5 degree step, by rotating the turn table from 0 to 360 degree and by varying the antenna height from 1 to 4 meter in both vertical and horizontal polarization. The measurement was carried out in max hold mode and maximum amplitude of radiated emissions from the EUT was plotted in Graph. The predominant peaks at various frequencies, closer to limit line were identified using peak search option and listed. The Quasi-peak & Average measurement were carried out for the listed frequencies and compared with the limit specified in standard.

For Radiated Emission measurement from 1 GHz to 40 GHz the EUT was placed 3 meter away from the receiving antenna. The receiving antenna's height was fixed to 1 meter for the prescan measurement. Pre-scan (Peak) was taken at different angles of EUT at 22.5 degree step, by rotating the turn table from 0 to 360 degree in both vertical and horizontal polarization. The measurement was carried out in max hold mode and maximum amplitude of radiated emissions from the EUT was plotted in Graph. The predominant peaks at various frequencies, closer to limit line were identified using peak search option and listed. Average measurement were carried out for the listed frequencies and compared with the limit specified in standard.

#### 5.3.1.5 MEASUREMENT GRAPHS / DATA

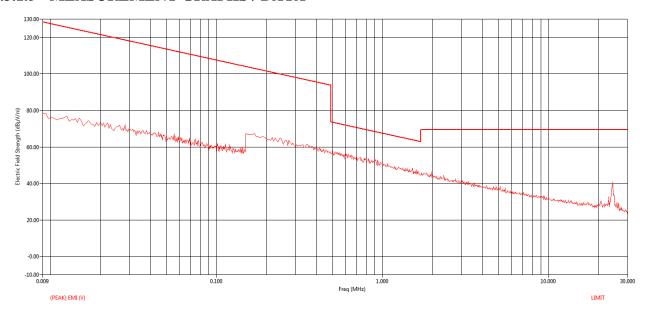


Figure 3: 40 MHz, 17 dBi, Low Channel: Peak RE Graph - 9 kHz to 30 MHz - Parallel





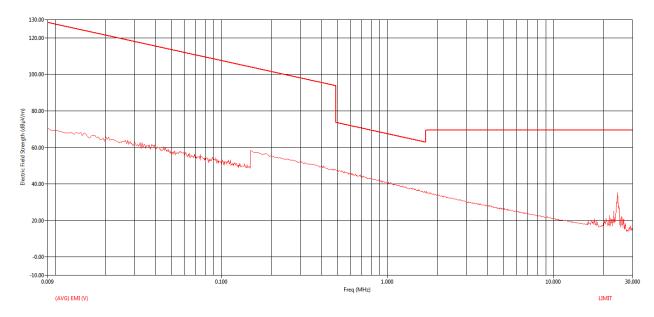


Figure 4: 40 MHz, 17 dBi, Low Channel: Average RE Graph - 9 kHz to 30 MHz - Parallel

Freq	Freq (Max)	EUT Ttbl Agl	(QP) Trace	Cable	Transducer	(QP) EMI	Limit	(QP) Margin
(MHz)	(MHz)	(deg)	(dBµV)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
0.050	0.050	42.10	33.57	0.03	19.73	53.33	113.68	-60.35
0.170	0.164	65.60	44.45	0.04	18.28	62.77	103.30	-40.53
24.350	24.350	93.40	20.56	1.07	16.15	37.77	69.54	-31.77

Table 8: 40 MHz, 17 dBi, Low Channel: Quasi Peak Table from 9 kHz to 30 MHz – Parallel

Freq (MHz)	Freq (Max) (MHz)	EUT Ttbl Agl (deg)	(AVG) Trace (dBµV)	Cable (dB)	Transducer (dB)	(AVG) EMI (dBµV/m)	Limit (dBµV/m)	(AVG) Margin (dB)
0.050	0.050	42.10	37.70	0.03	19.73	57.46	113.68	-56.21
0.170	0.164	65.60	38.62	0.04	18.28	56.94	103.30	-46.36
24.350	24.350	93.40	17.23	1.07	16.15	34.45	69.54	-35.09

Table 9: 40 MHz, 17 dBi, Low Channel: Average Table from 9 kHz to 30 MHz - Parallel





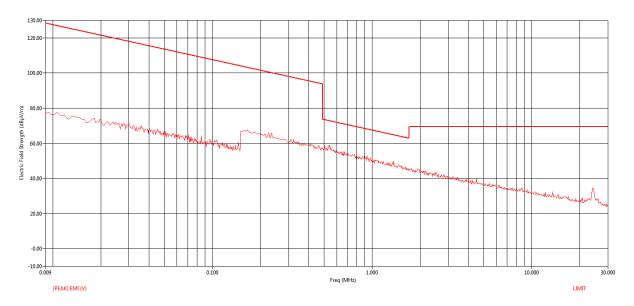


Figure 5: 40 MHz, 17 dBi, Low Channel: Peak RE Graph – 9 kHz to 30 MHz – Perpendicular

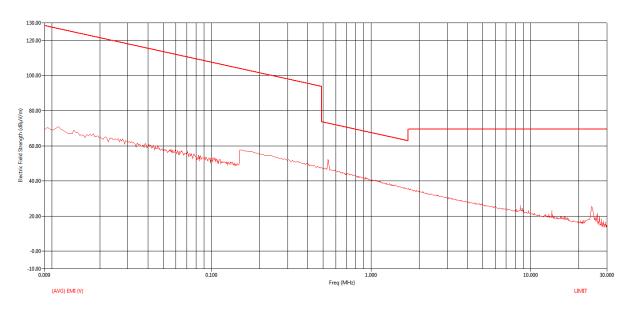


Figure 6: 40 MHz, 17 dBi, Low Channel: Average RE Graph – 9 kHz to 30 MHz – Perpendicular

1	Freq	Freq (Max)	EUT Ttbl Agl	(QP) Trace	Cable	Transducer	(QP) EMI	Limit	(QP) Margin
1	(MHz)	(MHz)	(deg)	(dBµV)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
	0.009	0.010	103.40	34.76	0.03	29.87	64.66	127.57	-62.92
	0.166	0.160	114.30	44.65	0.04	18.29	62.97	103.50	-40.53
	24.154	24.155	86.50	12.34	1.07	16.16	29.56	69.54	-39.98

Table 10: 40 MHz, 17 dBi, Low Channel: Quasi Peak Table from 9 kHz to 30 MHz – Perpendicular





Freq	Freq (Max)	EUT Ttbl Agl	(AVG) Trace	Cable	Transducer	(AVG) EMI	Limit	(AVG) Margin
(MHz)	(MHz)	(deg)	(dBµV)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
0.009	0.010	103.40	38.97	0.03	29.87	68.87	127.57	-58.71
0.166	0.160	114.30	38.87	0.04	18.29	57.20	103.50	-46.30
24.154	24.155	86.50	6.83	1.07	16.16	24.06	69.54	-45.48

Table 11: 40 MHz, 17 dBi, Low Channel: Average Table from 9 kHz to 30 MHz - Perpendicular

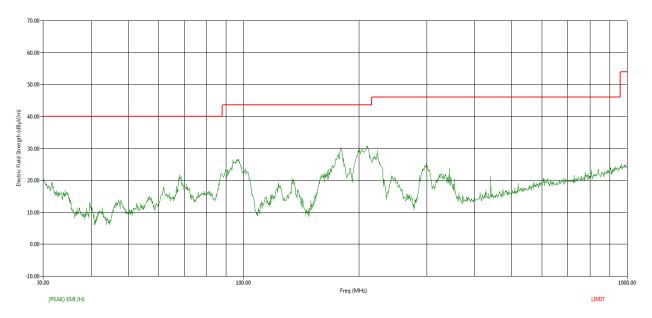


Figure 7: 40 MHz, 17 dBi, Low Channel: Peak RE Graph - 30 MHz to 1 GHz - Horizontal

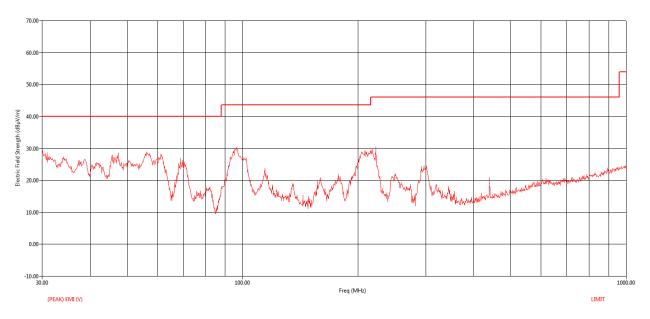


Figure 8: 40 MHz, 17 dBi, Low Channel: Peak RE Graph – 30 MHz to 1 GHz – Vertical





Freq	Freq (Max)	Pol	Twr Ht	EUT Ttbl Agl	(QP) Trace	Cable	Transducer	Preamp	(QP) EMI	Limit	(QP) Margin
(MHz)	(MHz)		(cm)	(deg)	(dBµV)	(dB)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
96.60	96.57	V	290.00	322.00	57.78	2.10	8.28	43.93	24.22	43.52	-19.30
178.84	178.94	H	177.00	189.90	53.55	2.84	13.77	43.95	26.20	43.52	-17.32
179.24	179.26	I	167.00	182.30	52.79	2.84	13.80	43.95	25.48	43.52	-18.04
208.56	208.59	V	191.00	349.90	47.14	3.07	13.08	43.94	19.35	43.52	-24.17
209.36	209.40	H	171.00	250.00	54.37	3.07	13.05	43.94	26.55	43.52	-16.97
210.60	210.53	H	203.00	247.90	54.03	3.08	13.01	43.94	26.18	43.52	-17.34
217.52	217.46	V	158.00	359.60	54.70	3.13	12.74	43.93	26.64	46.02	-19.38
222.52	222.49	V	185.00	16.90	59.19	3.16	12.55	43.93	30.98	46.02	-15.04

Table 12: 40 MHz, 17 dBi, Low Channel: Quasi Peak Table from 30 MHz to 1 GHz

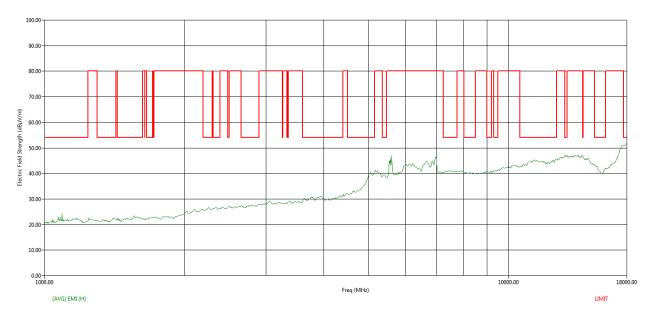


Figure 9: 40 MHz, 17 dBi, Low Channel: Average RE Graph – 1 GHz to 18 GHz - Horizontal





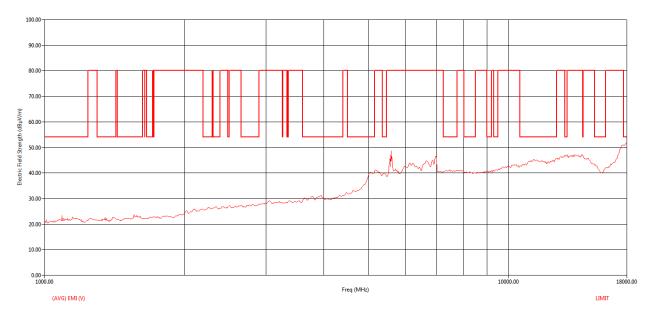


Figure 10: 40 MHz, 17 dBi, Low Channel: Average RE Graph – 1 GHz to 18 GHz – Vertical

Freq	Freq (Max)	Pol	EUT Ttbl Agl	Twr Ht	(AVG) Trace	Cable	Transducer	Preamp	(AVG) EMI	Limit	(AVG) Margin
(MHz)	(MHz)		(deg)	(cm)	(dBµV)	(dB)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
1090.33	1090.33	Н	180.00	101.00	29.45	1.87	25.12	32.48	23.96	54.00	-30.04
4635.55	4635.55	Н	179.90	101.00	26.89	3.56	31.48	28.98	32.96	54.00	-21.04
5164.87	5164.87	V	180.00	200.00	31.28	3.80	32.92	28.32	39.69	80.00	-40.31
6969.03	6969.03	V	4.90	100.00	34.48	4.20	35.83	28.30	46.21	80.00	-33.79

Table 13: 40 MHz, 17 dBi, Low Channel: Average Table from 1 GHz to 18 GHz

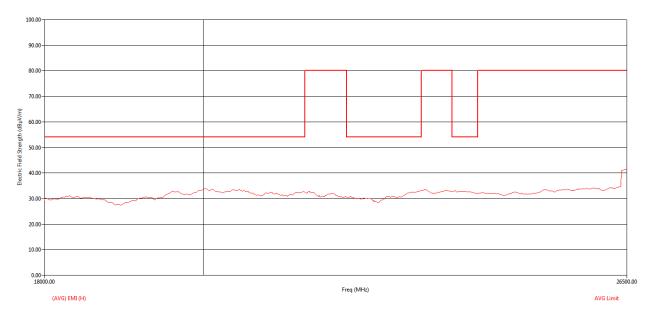


Figure 11: 40 MHz, 17 dBi, Low Channel: Average RE Graph – 18 GHz to 26.5 GHz - Horizontal





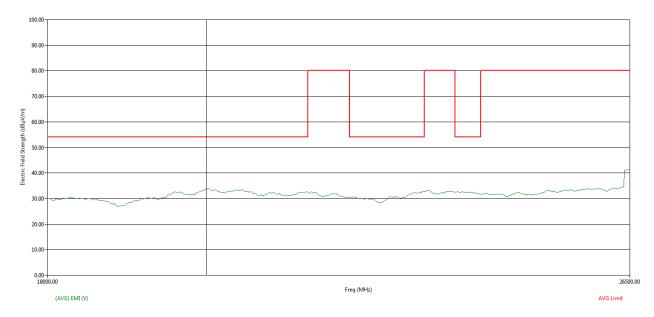


Figure 12: 40 MHz, 17 dBi, Low Channel: Average RE Graph - 18 GHz to 26.5 GHz - Vertical

Freq	Freq (Max)	Pol	EUT Ttbl Agl	Twr Ht	(AVG) Trace	Cable	Transducer	Preamp	(AVG) EMI	Limit	(AVG) Margin
(MHz)	(MHz)		(deg)	(cm)	(dBµV)	(dB)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
2002	4.60 19175.86	Н	84.60	100.00	33.54	6.62	36.52	46.83	29.85	53.98	-24.13
232:	9.00 22890.96	Н	285.70	100.00	33.70	7.80	37.40	47.05	31.85	80.00	-48.15

Table 14: 40 MHz, 17 dBi, Low Channel: Average Table from 18 GHz to 26.5 GHz

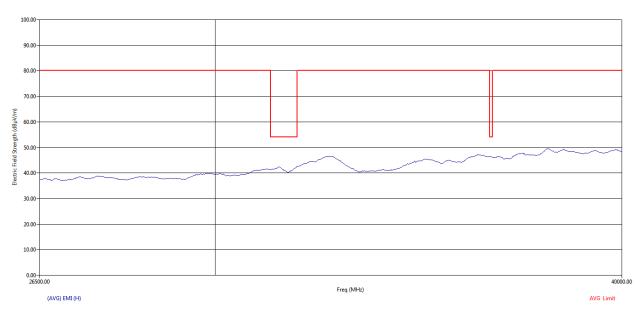


Figure 13: 40 MHz, 17 dBi, Low Channel: Average RE Graph – 26.5 GHz to 40 GHz – Horizontal





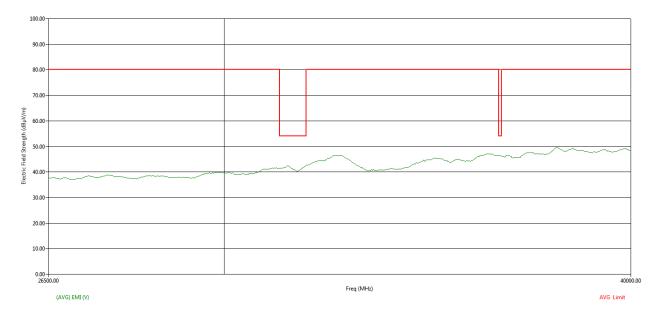


Figure 14: 40 MHz, 17 dBi, Low Channel: Average RE Graph – 26.5 GHz to 40 GHz – Vertical

ſ	Freq	Freq (Max)	Pol	EUT Ttbl Agl	Twr Ht	(AVG) Trace	Cable	Transducer	Preamp	(AVG) EMI	Limit	(AVG) Margin
-1	(MHz)	(MHz)		(deg)	(cm)	(dBµV)	(dB)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
	32610.20	33619.87	V	282.30	100.00	41.68	10.67	39.42	51.08	40.69	80.00	-39.31
ſ	37950.90	37909.07	Н	179.90	100.00	42.65	12.32	40.68	46.54	49.11	80.00	-30.89

Table 15: 40 MHz, 17 dBi, Low Channel: Average Table from 26.5 GHz to 40 GHz

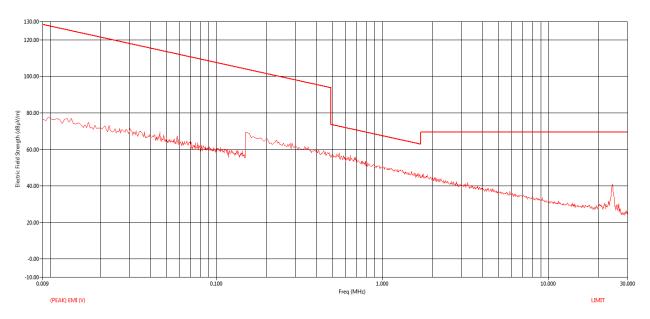


Figure 15: 40 MHz, 17 dBi, Mid Channel: Peak RE Graph – 9 kHz to 30 MHz – Parallel





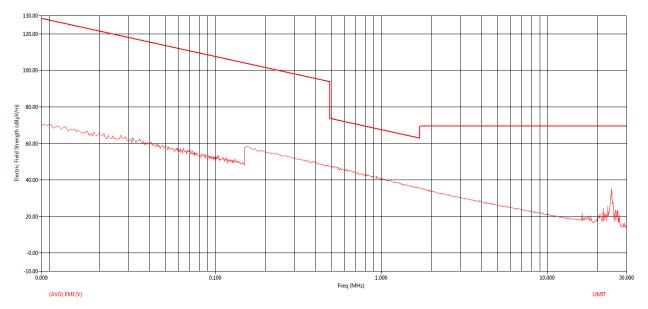


Figure 16: 40 MHz, 17 dBi, Mid Channel: Average RE Graph – 9 kHz to 30 MHz – Parallel

Freq (MHz)	Freq (Max) (MHz)	EUT Ttbl Agl (deg)	(QP) Trace (dBµV)	Cable (dB)	Transducer (dB)	(QP) EMI (dBµV/m)	Limit (dBµV/m)	(QP) Margin (dB)
0.050	0.050	15.60	33.22	0.03	19.71	52.97	113.65	-60.68
0.150	0.150	273.30	25.31	0.04	18.30	43.65	104.09	-60.44
0.150	0.152	292.30	45.02	0.04	18.30	63.35	103.94	-40.59
24.350	24.342	38.90	14.13	1.07	16.15	31.35	69.54	-38.19

 $Table\ 16:\ 40\ MHz,\ 17\ dBi,\ Mid\ Channel:\ Quasi\ Peak\ Table\ from\ 9\ kHz\ to\ 30\ MHz-Parallel$ 

Freq	Freq (Max)	EUT Ttbl Agl	(AVG) Trace	Cable	Transducer	(AVG) EMI	Limit	(AVG) Margin
(MHz)	(MHz)	(deg)	(dBµV)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
0.050	0.050	15.60	37.52	0.03	19.71	57.27	113.65	-56.38
0.150	0.150	273.30	29.78	0.04	18.30	48.11	104.09	-55.97
0.150	0.152	292.30	39.19	0.04	18.30	57.53	103.94	-46.41
24.350	24.342	38.90	8.67	1.07	16.15	25.89	69.54	-43.65

Table 17: 40 MHz, 17 dBi, Mid Channel: Average Table from 9 kHz to 30 MHz - Parallel





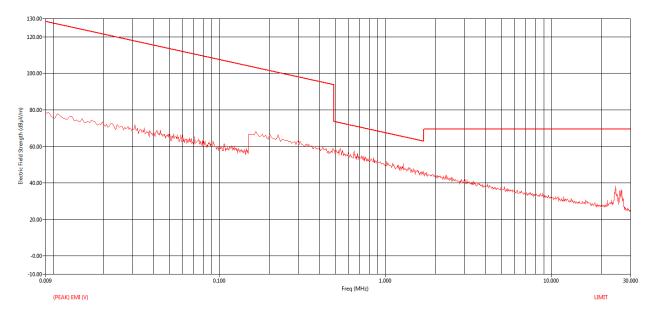


Figure 17: 40 MHz, 17 dBi, Mid Channel: Peak RE Graph - 9 kHz to 30 MHz - Perpendicular

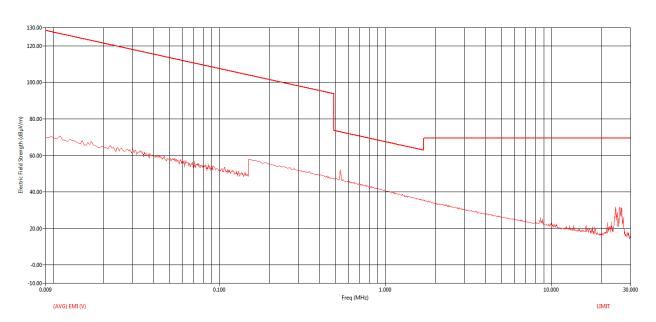


Figure 18: 40 MHz, 17 dBi, Mid Channel: Average RE Graph – 9 kHz to 30 MHz – Perpendicular

Freq	Freq (Max)	EUT Ttbl Agl	(QP) Trace	Cable	Transducer	(QP) EMI	Limit	(QP) Margin
(MHz)	(MHz)	(deg)	(dBµV)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
0.166	0.169	279.20	44.14	0.04	18.28	62.45	103.07	-40.61
24.350	24.351	36.50	11.02	1.07	16.15	28.24	69.54	-41.30
26.490	26.487	98.20	4.86	1.11	16.00	21.98	69.54	-47.56

Table 18: 40 MHz, 17 dBi, Mid Channel: Quasi Peak Table from 9 kHz to 30 MHz - Perpendicular





Freq	Freq (Max)	EUT Ttbl Agl	(AVG) Trace	Cable	Transducer	(AVG) EMI	Limit	(AVG) Margin
(MHz)	(MHz)	(deg)	(dBµV)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
0.166	0.169	279.20	38.31	0.04	18.28	56.63	103.07	-46.44
24.350	24.351	36.50	5.57	1.07	16.15	22.79	69.54	-46.75
26.490	26.487	98.20	-0.77	1.11	16.00	16.34	69.54	-53.20

Table 19: 40 MHz, 17 dBi, Mid Channel: Average Table from 9 kHz to 30 MHz - Perpendicular

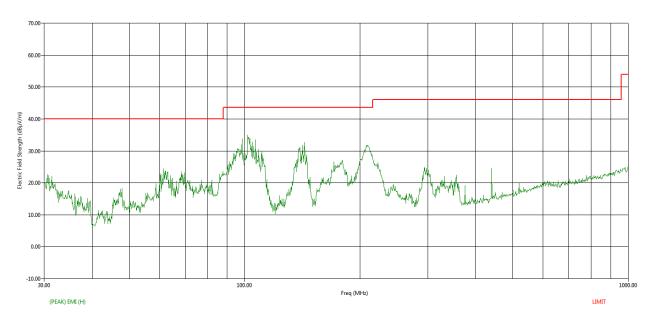


Figure 19: 40 MHz, 17 dBi, Mid Channel: Peak RE Graph – 30 MHz to 1 GHz – Horizontal

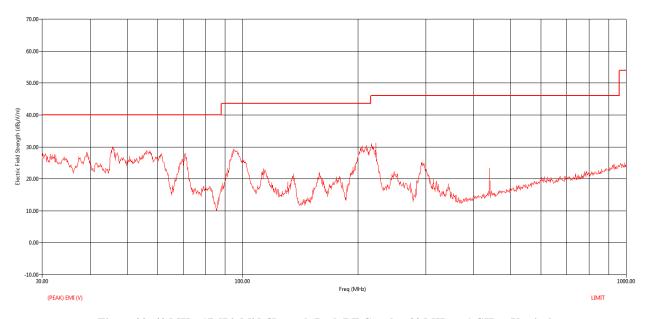


Figure 20: 40 MHz, 17 dBi, Mid Channel: Peak RE Graph – 30 MHz to 1 GHz – Vertical





Freq	Freq (Max)	Pol	Twr Ht	EUT Ttbl Agl	(QP) Trace	Cable	Transducer	Preamp	(QP) EMI	Limit	(QP) Margin
(MHz)	(MHz)		(cm)	(deg)	(dBµV)	(dB)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
45.72	45.79	V	160.00	251.80	53.77	1.48	10.31	43.82	21.74	40.00	-18.26
101.88	101.87	Н	384.00	84.80	42.81	2.15	8.35	43.94	9.38	43.52	-34.14
106.68	106.62	I	396.00	21.40	35.75	2.20	9.18	43.94	3.19	43.52	-40.33
143.34	143.30	Н	367.00	161.80	36.49	2.54	10.49	43.95	5.58	43.52	-37.94
210.00	209.97	H	183.00	236.80	55.46	3.08	13.03	43.94	27.63	43.52	-15.89
222.56	222.48	V	166.00	16.20	58.52	3.16	12.55	43.93	30.31	46.02	-15.71

Table 20: 40 MHz, 17 dBi, Mid Channel: Quasi Peak Table from 30 MHz to 1 GHz

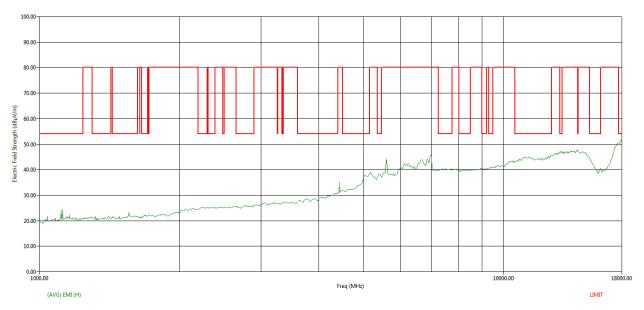


Figure 21: 40 MHz, 17 dBi, Mid Channel: Peak RE Graph – 1 GHz to 18 GHz – Horizontal

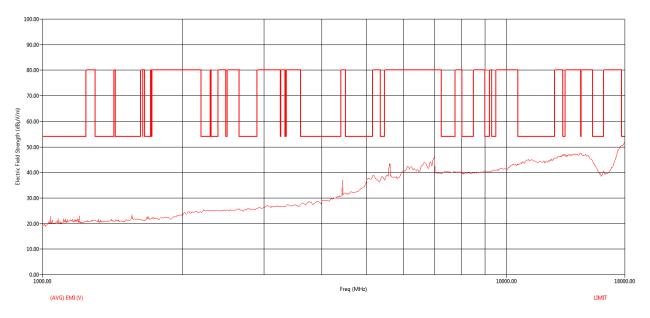


Figure 22: 40 MHz, 17 dBi, Mid Channel: Peak RE Graph – 1 GHz to 18 GHz – Vertical





Freq	Freq (Max)	Pol	EUT Ttbl Agl	Twr Ht	(AVG) Trace	Cable	Transducer	Preamp	(AVG) EMI	Limit	(AVG) Margin
(MHz)	(MHz)		(deg)	(cm)	(dBµV)	(dB)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
1090.33	1090.33	Н	180.00	101.00	29.45	1.87	25.12	32.48	23.96	53.98	-30.02
4635.55	4635.55	Н	179.90	101.00	26.89	3.56	31.48	28.98	32.96	53.98	-21.02
5164.87	5164.87	V	180.00	200.00	31.28	3.80	32.92	28.32	39.69	80.00	-40.31
6969.03	6969.03	V	4.90	100.00	34.48	4.20	35.83	28.30	46.21	80.00	-33.79

Table 21: 40 MHz, 17 dBi, Mid Channel: Average Table from 1 GHz to 18 GHz

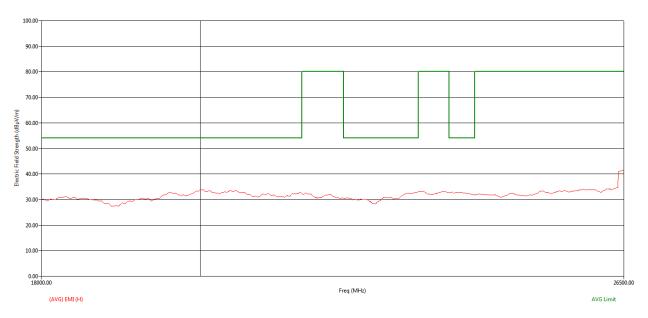


Figure 23: 40 MHz, 17 dBi, Mid Channel: Average RE Graph – 18 GHz to 26.5 GHz – Horizontal

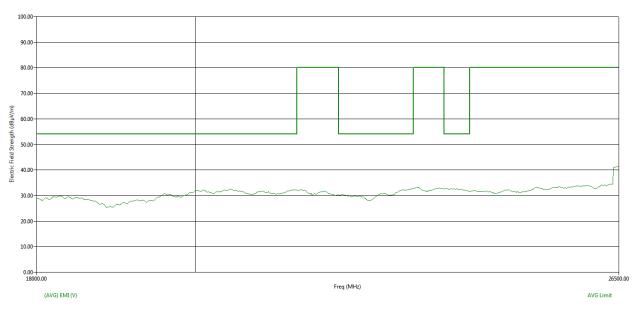


Figure 24: 40 MHz, 17 dBi, Mid Channel: Average RE Graph – 18 GHz to 26.5 GHz – Vertical





Freq	Freq (Max)	Pol	EUT Ttbl Agl	Twr Ht	(AVG) Trace	Cable	Transducer	Preamp	(AVG) EMI	Limit	(AVG) Margin
(MHz)	(MHz)		(deg)	(cm)	(dBµV)	(dB)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
20067.30	19212.73	Н	80.20	100.00	33.60	6.64	36.53	46.66	30.10	53.98	-23.88
23197.80	22219.22	V	4.60	100.00	32.74	6.70	36.79	46.51	29.72	80.00	-50.28

Table 22: 40 MHz, 17 dBi, Mid Channel: Average Table from 18 GHz to 26.5 GHz

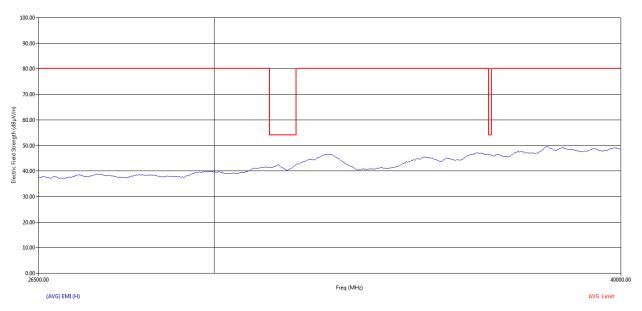


Figure 25: 40 MHz, 17 dBi, Mid Channel: Average RE Graph – 26.5 GHz to 40 GHz – Horizontal

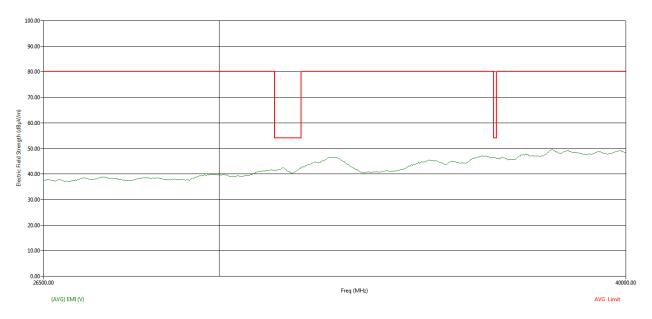


Figure 26: 40 MHz, 17 dBi, Mid Channel: Average RE Graph - 26.5 GHz to 40 GHz - Vertical





Freq	Freq (Max)	Pol	EUT Ttbl Agl	Twr Ht	(AVG) Trace	Cable	Transducer	Preamp	(AVG) EMI	Limit	(AVG) Margin
(MHz)	(MHz)		(deg)	(cm)	(dBµV)	(dB)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
32505.10	33674.37	V	137.10	100.00	41.71	10.65	39.43	50.81	40.98	80.00	-39.02
38393.90	37958.01	Н	311.20	100.00	42.80	12.32	40.75	46.50	49.37	80.00	-30.63

Table 23: 40 MHz, 17 dBi, Mid Channel: Average Table from 26.5 GHz to 40 GHz

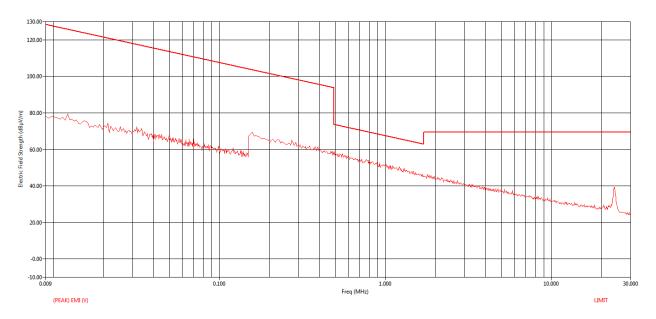


Figure 27: 40 MHz, 17 dBi, High Channel: Peak RE Graph – 9 kHz to 30 MHz – Parallel

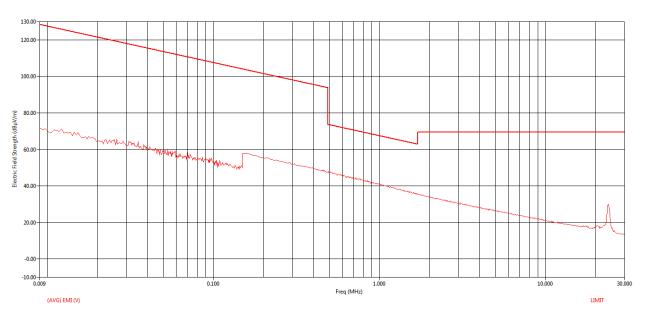


Figure 28: 40 MHz, 17 dBi, High Channel: Average RE Graph – 9 kHz to 30 MHz – Parallel





Freq	Freq (Max)	EUT Ttbl Agl	(QP) Trace	Cable	Transducer	(QP) EMI	Limit	(QP) Margin
(MHz)	(MHz)	(deg)	(dBµV)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
0.013	0.013	207.60	35.03	0.03	27.75	62.81	125.25	-62.45
0.154	0.153	323.90	45.06	0.04	18.30	63.40	103.90	-40.51
25.998	26.003	91.20	5.94	1.10	16.04	23.08	69.54	-46.46
26.490	26.494	104.20	4.96	1.11	16.00	22.08	69.54	-47.46

Table 24: 40 MHz, 17 dBi, High Channel: Quasi Peak Table from 9 kHz to 30 MHz - Parallel

Freq	Freq (Max)	EUT Ttbl Agl	(AVG) Trace	Cable	Transducer	(AVG) EMI	Limit	(AVG) Margin
(MHz)	(MHz)	(deg)	(dBµV)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
0.013	0.013	207.60	39.47	0.03	27.75	67.25	125.25	-58.01
0.154	0.153	323.90	39.30	0.04	18.30	57.63	103.90	-46.27
25.998	26.003	91.20	0.40	1.10	16.04	17.54	69.54	-52.00
26.490	26.494	104.20	-0.90	1.11	16.00	16.22	69.54	-53.32

Table 25: 40 MHz, 17 dBi, High Channel: Average Table from 9 kHz to 30 MHz - Parallel

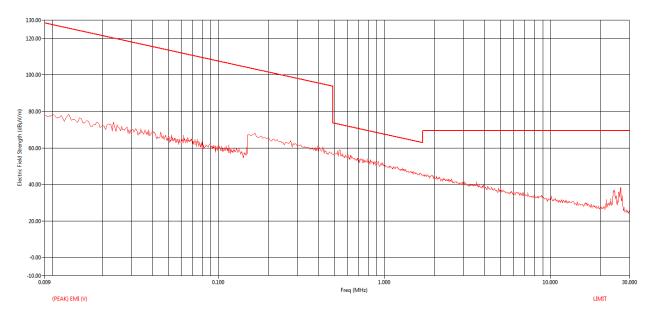


Figure 29: 40 MHz, 17 dBi, High Channel: Peak RE Graph – 9 kHz to 30 MHz – Perpendicular





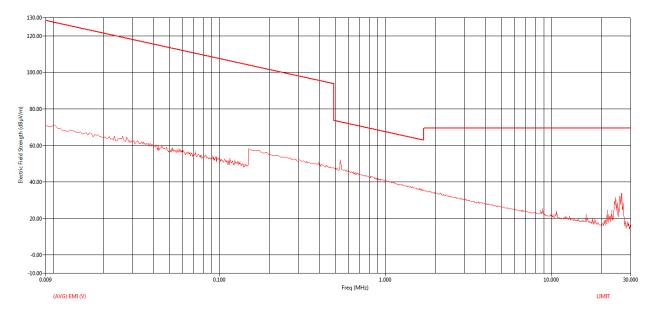


Figure 30: 40 MHz, 17 dBi, High Channel: Average RE Graph - 9 kHz to 30 MHz - Perpendicular

Freq	Freq (Max)	EUT Ttbl Agl	(QP) Trace	Cable	Transducer	(QP) EMI	Limit	(QP) Margin
(MHz)	(MHz)	(deg)	(dBµV)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
0.013	0.013	207.60	35.03	0.03	27.75	62.81	125.25	-62.45
0.154	0.153	323.90	45.06	0.04	18.30	63.40	103.90	-40.51
25.998	26.003	91.20	5.94	1.10	16.04	23.08	69.54	-46.46
26.490	26.494	104.20	4.96	1.11	16.00	22.08	69.54	-47.46

Table 26: 40 MHz, 17 dBi, High Channel: Quasi Peak Table from 9 kHz to 30 MHz - Perpendicular

Freq	Freq (Max)	EUT Ttbl Agl	(AVG) Trace	Cable	Transducer	(AVG) EMI	Limit	(AVG) Margin
(MHz)	(MHz)	(deg)	(dBµV)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
0.013	0.013	207.60	39.47	0.03	27.75	67.25	125.25	-58.01
0.154	0.153	323.90	39.30	0.04	18.30	57.63	103.90	-46.27
25.998	26.003	91.20	0.40	1.10	16.04	17.54	69.54	-52.00
26.490	26.494	104.20	-0.90	1.11	16.00	16.22	69.54	-53.32

Table 27: 40 MHz, 17 dBi, High Channel: Average Table from 9 kHz to 30 MHz - Perpendicular





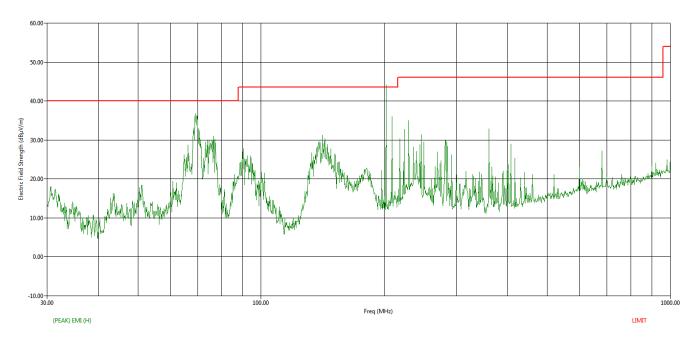


Figure 31: 40 MHz, 17 dBi, High Channel: Peak RE Graph – 30 MHz to 1 GHz– Horizontal

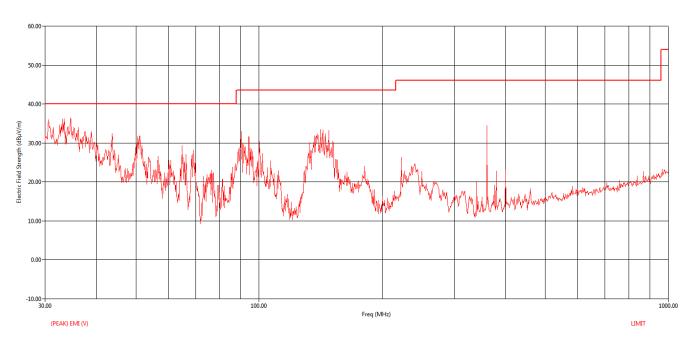


Figure 32: 40 MHz, 17 dBi, High Channel: Peak RE Graph – 30 MHz to 1 GHz– Vertical





Freq	Freq (Max)	Pol	EUT Ttbl Agl	Twr Ht	(QP) Trace	Cable	Transducer	Preamp	(QP) EMI	Limit	(QP) Margin
(MHz)	(MHz)		(deg)	(cm)	(dBµV)	(dB)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
34.64	34.63	V	63.60	103.00	66.99	1.28	9.44	43.81	33.89	40.00	-6.11
69.16	69.13	Н	355.60	240.00	65.96	1.79	9.79	43.88	33.65	40.00	-6.35
69.72	69.70	Н	348.20	230.00	68.69	1.79	9.84	43.88	36.44	40.00	-3.56
141.20	141.20	V	354.20	103.00	62.02	2.51	11.21	43.94	31.80	43.52	-11.72
143.32	143.28	V	4.90	100.00	61.33	2.53	11.28	43.95	31.20	43.52	-12.32
148.16	148.10	V	358.10	100.00	60.75	2.57	11.43	43.95	30.81	43.52	-12.71

Table 28: 40 MHz, 17 dBi, High Channel: Quasi Peak Table from 30 MHz to 1 GHz

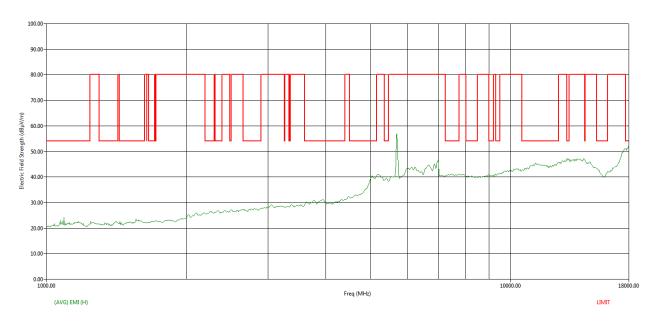


Figure 33: 40 MHz, 17 dBi, High Channel: Average RE Graph - 1 GHz to 18 GHz- Horizontal

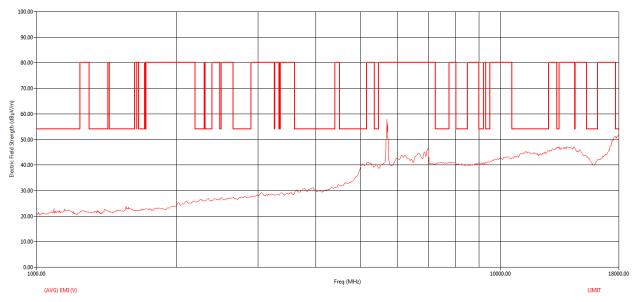


Figure 34: 40 MHz, 17 dBi, High Channel: Average RE Graph – 1 GHz to 18 GHz– Vertical





Freq	Freq (Max)	Pol	EUT Ttbl Agl	Twr Ht	(AVG) Trace	Cable	Transducer	Preamp	(AVG) EMI	Limit	(AVG) Margin
(MHz)	(MHz)		(deg)	(cm)	(dBµV)	(dB)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
1090.64	1090.64	Н	172.90	101.00	27.45	1.87	25.12	32.47	21.96	54.00	-32.04
4483.41	4483.41	V	180.10	102.00	27.16	3.47	30.88	29.28	32.24	80.00	-47.76
5164.87	5164.87	V	135.20	200.00	31.27	3.80	32.92	28.32	39.68	80.00	-40.32
6975.32	6975.32	V	343.60	143.00	34.48	4.21	35.84	28.30	46.23	80.00	-33.77

Table 29: 40 MHz, 17 dBi, High Channel: Average Table from 1 GHz to 18 GHz

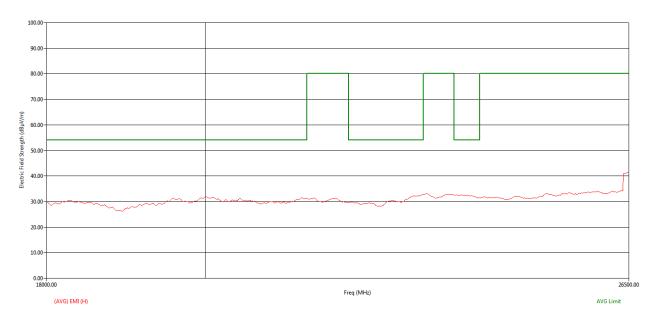


Figure 35: 40 MHz, 17 dBi, High Channel: Average RE Graph – 18 GHz to 26.5 GHz– Horizontal

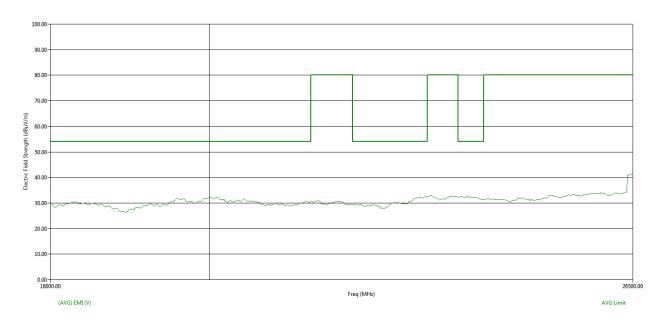


Figure 36: 40 MHz, 17 dBi, High Channel: Average RE Graph – 18 GHz to 26.5 GHz– Vertical





Freq	Freq (Max)	Pol	EUT Ttbl Agl	Twr Ht	(AVG) Trace	Cable	Transducer	Preamp	(AVG) EMI	Limit	(AVG) Margin
(MHz)	(MHz)		(deg)	(cm)	(dBµV)	(dB)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
19566.40	19325.25	Н	353.90	100.00	32.22	6.68	36.55	45.89	29.56	53.98	-24.42
23197.80	22986.28	V	359.10	100.00	33.24	8.09	37.64	46.93	32.04	80.00	-47.96

Table 30: 40 MHz, 17 dBi, High Channel: Average Table from 18 GHz to 26.5 GHz

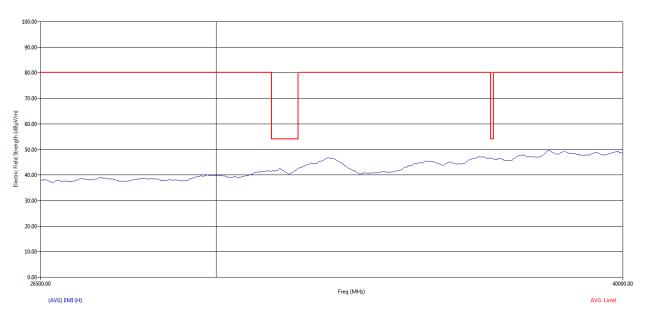


Figure 37: 40 MHz, 17 dBi, High Channel: Average RE Graph - 26.5 GHz to 40 GHz- Horizontal

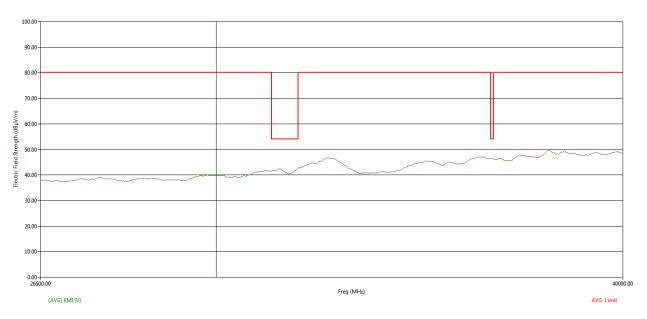


Figure 38: 40 MHz, 17 dBi, High Channel: Average RE Graph -26.5 GHz to 40 GHz- Horizontal





Freq	Freq (Max)	Pol	EUT Ttbl Agl	Twr Ht	(AVG) Trace	Cable	Transducer	Preamp	(AVG) EMI	Limit	(AVG) Margin
(MHz)	(MHz)		(deg)	(cm)	(dBµV)	(dB)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
32515.60	32297.31	V	306.50	100.00	41.28	10.42	38.89	45.42	45.16	80.00	-34.84
37962.70	37951.29	Н	180.00	100.00	42.84	12.32	40.74	46.51	49.39	80.00	-30.61

Table 31: 40 MHz, 17 dBi, High Channel: Average Table from 26.5 GHz to 40 GHz

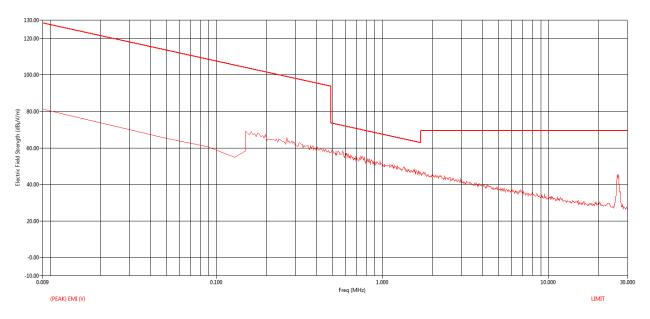


Figure 39: 10 MHz, 17 dBi, Low Channel: Peak RE Graph – 9 kHz to 30 MHz – Parallel

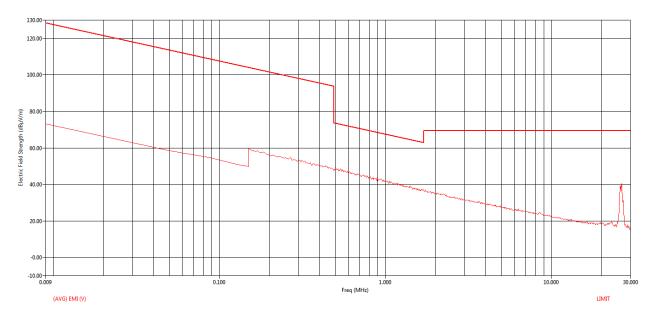


Figure 40: 10 MHz, 17 dBi, Low Channel: Average RE Graph – 9 kHz to 30 MHz – Parallel





Freq	Freq (Max)	Pol	Ttbl Agl	(AVG) Trace	Cable	Transducer	(AVG) EMI	Limit	(AVG) Margin
(MHz)	(MHz)		(deg)	(dBµV)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
26.00	26.00	V	142.90	25.65	1.10	16.04	42.78	69.54	-26.76
27.16	27.16	V	73.20	14.42	1.12	15.96	31.51	69.54	-38.03

Table 32: 10 MHz, 17 dBi, Low Channel: Quasi Peak Table from 9 kHz to 30 MHz - Parallel

Freq	Freq (Max)	Pol	(QP) Trace	Cable	Transducer	(QP) EMI	Limit	(QP) Margin
(MHz)	(MHz)		(dBµV)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
26.00	26.00	V	30.74	1.10	16.04	47.88	69.54	-21.66
27.16	27.16	V	18.27	1.12	15.96	35.36	69.54	-34.18

Table 33: 10 MHz, 17 dBi, Low Channel: Average Table from 9 kHz to 30 MHz - Parallel

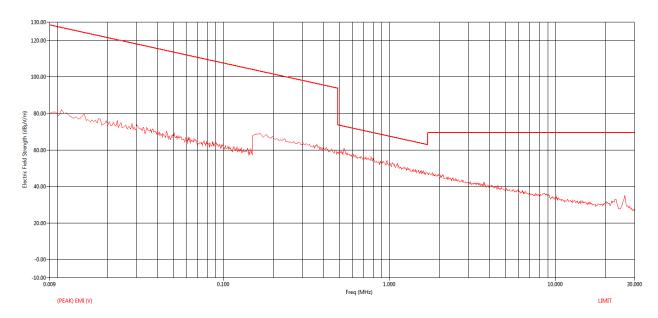
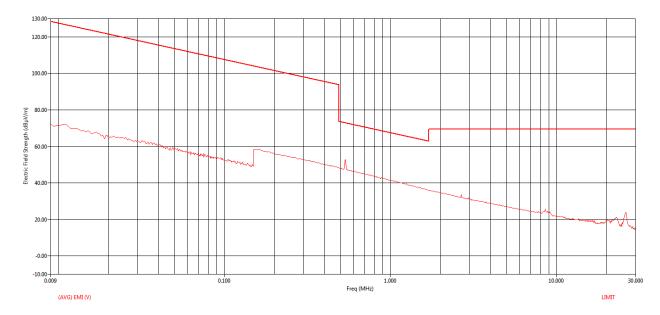


Figure 41: 10 MHz, 17 dBi, Low Channel: Peak RE Graph – 9 kHz to 30 MHz – Perpendicular







Figure~42:10~MHz, 17~dBi, Low~Channel:~Average~RE~Graph-9~kHz~to~30~MHz-Perpendicular

	Freq	Freq (Max)	Pol	EUT Ttbl Agl	(QP) Trace	Cable	Transducer	(QP) EMI	Limit	(QP) Margin
	(MHz)	(MHz)		(deg)	(dBµV)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
	0.54	0.54	V	214.40	40.23	0.13	18.10	58.46	73.00	-14.54
ſ	26.29	26.28	V	115.90	13.64	1.11	16.02	30.77	69.54	-38.77

Table 34: 10 MHz, 17 dBi, Low Channel: Quasi Peak Table from 9 kHz to 30 MHz - Perpendicular

Freq	Freq (Max)	Pol	EUT Ttbl Agl	(AVG) Trace	Cable	Transducer	(AVG) EMI	Limit	(AVG) Margin
(MHz)	(MHz)		(deg)	(dBµV)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
0.54	0.54	V	214.40	36.48	0.13	18.10	54.71	73.00	-18.29
26.29	26.28	V	115.90	8.38	1.11	16.02	25.50	69.54	-44.04

Table 35: 10 MHz, 17 dBi, Low Channel: Average Table from 9 kHz to 30 MHz - Perpendicular





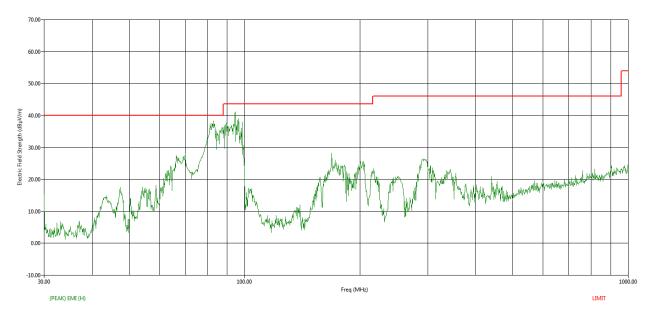


Figure 43: 10 MHz, 17 dBi, Low Channel: Peak RE Graph – 30 MHz to 1 GHz – Horizontal

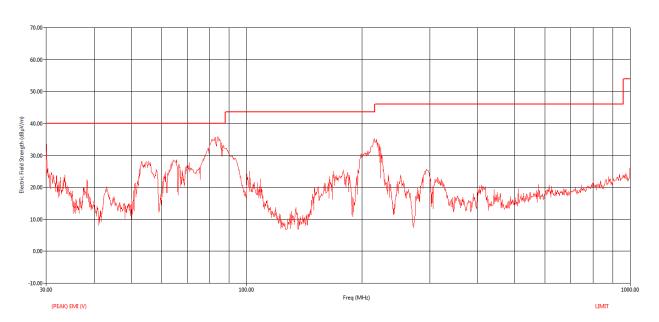


Figure 44: 10 MHz, 17 dBi, Low Channel: Peak RE Graph - 30 MHz to 1 GHz - Vertical

Freq	Freq (Max)	Pol	EUT Ttbl Agl	Twr Ht	(QP) Trace	Cable	Transducer	Preamp	(QP) EMI	Limit	(QP) Margin
(MHz)	(MHz)		(deg)	(cm)	(dBµV)	(dB)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
8	2.92 82.9	1 H	80.80	180.00	72.23	1.94	8.28	43.91	38.53	40.00	-1.47
8	2.92 82.8	9 V	303.30	100.00	71.45	1.94	8.28	43.91	37.76	40.00	-2.24
9	4.44 94.3	8 H	79.50	179.00	76.15	2.07	8.46	43.93	42.75	43.52	-0.77
9	6.36 96.3	4 H	66.70	190.00	74.35	2.10	8.30	43.93	40.80	43.52	-2.72

Table 36: 10 MHz, 17 dBi, Low Channel: Quasi Peak Table from 30 MHz to 1 GHz





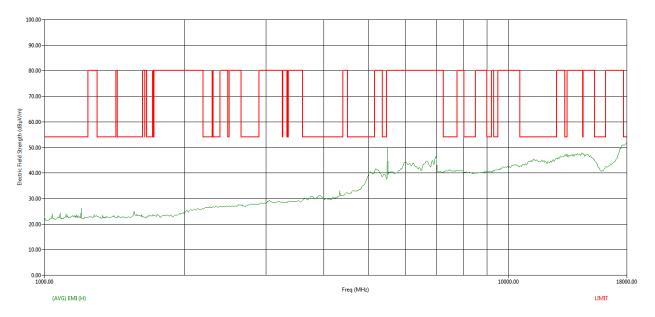


Figure 45: 10 MHz, 17 dBi, Low Channel: Average RE Graph – 1 GHz to 18 GHz – Horizontal

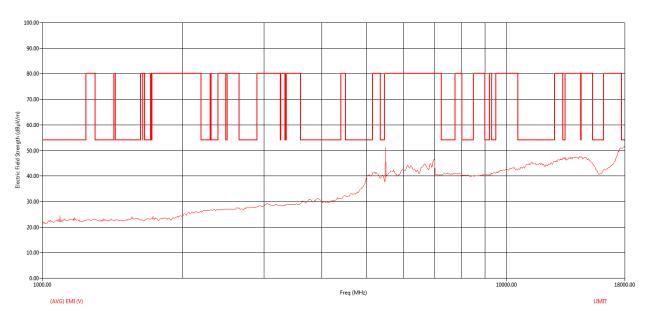


Figure 46: 10 MHz, 17 dBi, Low Channel: Average RE Graph – 1 GHz to 18 GHz – Vertical

Freq	Freq (Max)	Pol	EUT Ttbl Agl	Twr Ht	(AVG) Trace	Cable	Transducer	Preamp	(AVG) EMI	Limit	(AVG) Margin
(MHz)	(MHz)		(deg)	(cm)	(dBµV)	(dB)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
1200.67	1200.67	Н	180.10	178.00	28.04	1.94	24.53	32.45	22.07	54.00	-31.93
4330.48	4330.48	Н	180.10	160.00	26.57	3.43	30.34	29.59	30.76	54.00	-23.24
5171.77	5171.77	V	32.40	138.00	31.33	3.80	32.04	28.32	38.86	80.00	-41.14
6975.32	6975.32	V	67.80	133.00	34.45	4.21	35.22	28.30	45.58	80.00	-34.42

Table 37: 10 MHz, 17 dBi, Low Channel: Average Table from 1 GHz to 18 GHz





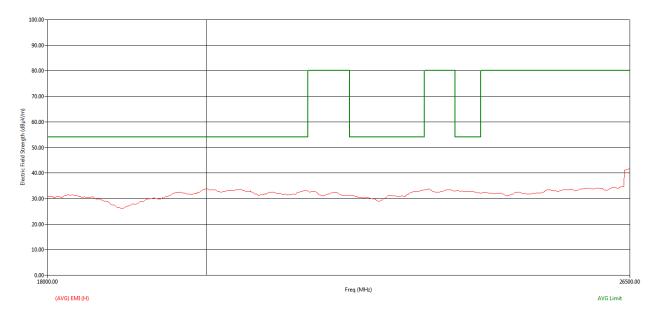


Figure 47: 10 MHz, 17 dBi, Low Channel: Average RE Graph - 18 GHz to 26.5 GHz - Horizontal

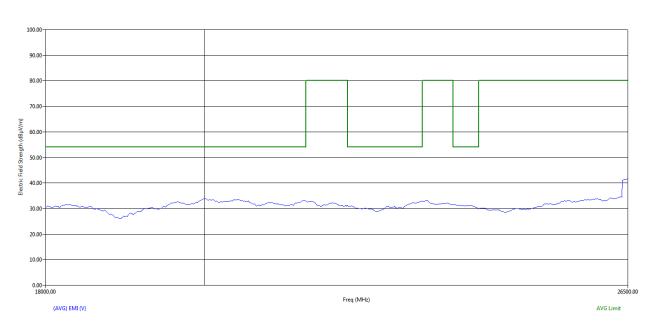


Figure 48: 10 MHz, 17 dBi, Low Channel: Average RE Graph – 18 GHz to 26.5 GHz – Vertical

Freq	Freq (Max)	Pol	EUT Ttbl Agl	Twr Ht	(AVG) Trace	Cable	Transducer	Preamp	(AVG) EMI	Limit	(AVG) Margin
(MHz)	(MHz)		(deg)	(cm)	(dBµV)	(dB)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
18567.30	18806.28	Н	328.80	100.00	34.03	6.77	36.41	48.80	28.42	53.98	-25.56
21341.80	21741.69	Н	216.90	100.00	33.25	7.41	37.39	46.04	32.02	53.98	-21.96

Table 38: 10 MHz, 17 dBi, Low Channel: Average Table from 18 GHz to 26.5 GHz





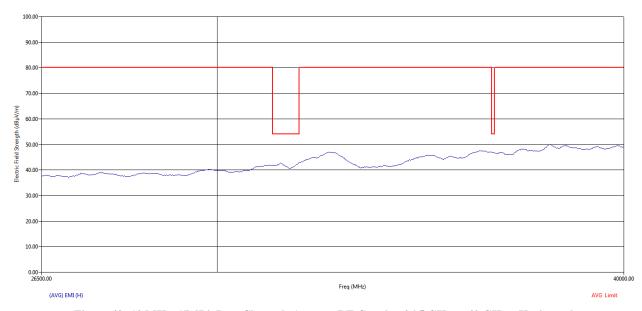


Figure 49: 10 MHz, 17 dBi, Low Channel: Average RE Graph – 26.5 GHz to 40 GHz – Horizontal

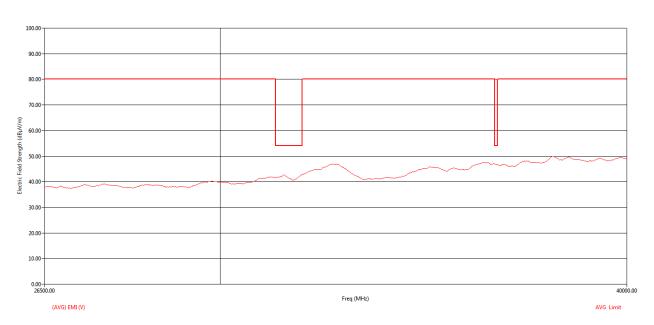


Figure 50: 10 MHz, 17 dBi, Low Channel: Average RE Graph - 26.5 GHz to 40 GHz - Vertical

Freq	Freq (Max)	Pol	EUT Ttbl Agl	Twr Ht	(AVG) Trace	Cable	Transducer	Preamp	(AVG) EMI	Limit	(AVG) Margin
(MHz)	(MHz)		(deg)	(cm)	(dBµV)	(dB)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
32610.10	33489.07	V	215.70	100.00	42.20	10.70	39.39	51.25	41.04	80.00	-38.96
38024.00	38431.67	Н	243.10	100.00	42.90	12.14	41.16	47.08	49.12	80.00	-30.88

Table 39: 10 MHz, 17 dBi, Low Channel: Average Table from 26.5 GHz to 40 GHz





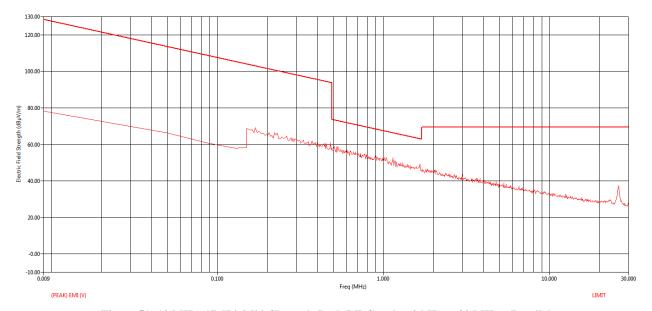
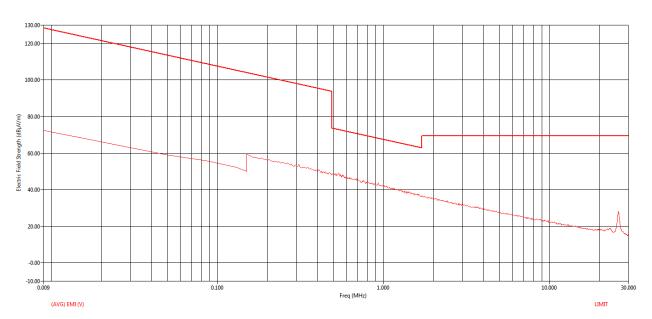


Figure 51: 10 MHz, 17 dBi, Mid Channel: Peak RE Graph – 9 kHz to 30 MHz – Parallel



Figure~52:~10~MHz,~17~dBi,~Mid~Channel:~Average~RE~Graph-9~kHz~to~30~MHz-Parallel

Freq	Freq (Max)	Pol	(QP) Trace	Cable	Transducer	(QP) EMI	Limit	(QP) Margin
(MHz)	(MHz)		(dBµV)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
0.15	0.16	V	47.51	0.04	18.29	65.84	103.60	-37.77
26.03	26.02	V	19.72	1.10	16.03	36.85	69.54	-32.69

Table 40: 10 MHz, 17 dBi, Mid Channel: Quasi Peak Table from 9 kHz to 30 MHz – Parallel





Freq	Freq (Max)	Pol	Ttbl Agl	(AVG) Trace	Cable	Transducer	(AVG) EMI	Limit	(AVG) Margin
(MHz)	(MHz)		(deg)	(dBµV)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
0.15	0.16	V	41.60	40.18	0.04	18.29	58.51	103.60	-45.09
26.03	26.02	V	180.10	12.96	1.10	16.03	30.10	69.54	-39.44

Table 41: 10 MHz, 17 dBi, Mid Channel: Average Table from 9 kHz to 30 MHz - Parallel

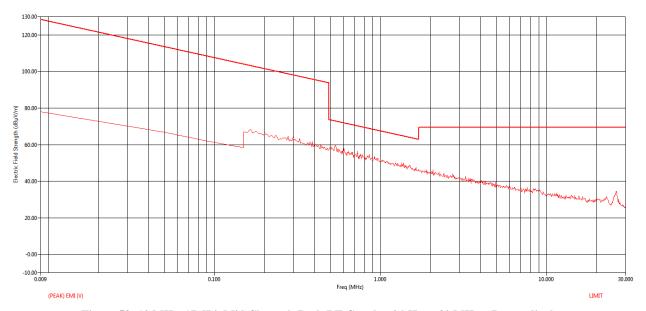


Figure 53: 10 MHz, 17 dBi, Mid Channel: Peak RE Graph – 9 kHz to 30 MHz – Perpendicular

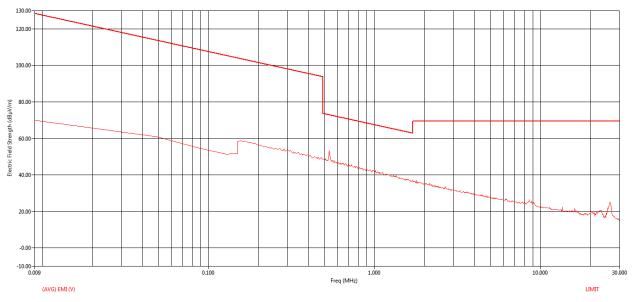


Figure 54: 10 MHz, 17 dBi, Mid Channel: Average RE Graph – 9 kHz to 30 MHz – Perpendicular





Freq	Freq (Max)	Pol	EUT Ttbl Agl	(QP) Trace	Cable	Transducer	(QP) EMI	Limit	(QP) Margin
(MHz)	(MHz)		(deg)	(dBµV)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
0.16	0.16	V	98.00	47.49	0.04	18.29	65.81	103.47	-37.66
26.22	26.22	V	169.70	14.13	1.11	16.02	31.25	69.54	-38.29

Table 42: 10 MHz, 17 dBi, Mid Channel: Quasi Peak Table from 9 kHz to 30 MHz - Perpendicular

Freq	Freq (Max)	Pol	EUT Ttbl Agl	(AVG) Trace	Cable	Transducer	(AVG) EMI	Limit	(AVG) Margin
(MHz)	(MHz)		(deg)	(dBµV)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
0.16	0.16	V	98.00	40.12	0.04	18.29	58.44	103.47	-45.03
26.22	26.22	V	169.70	7.37	1.11	16.02	24.50	69.54	-45.04

Table~43:~10~MHz,~17~dBi,~Mid~Channel:~Average~Table~from~9~kHz~to~30~MHz-Perpendicular

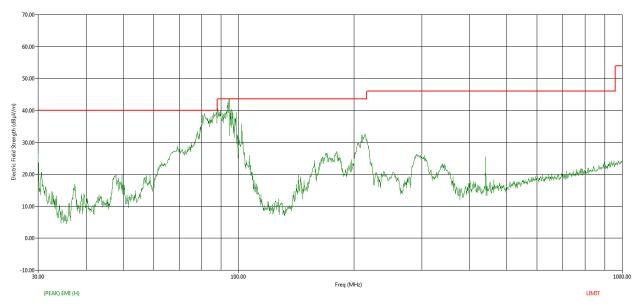


Figure 55: 10 MHz, 17 dBi, Mid Channel: Peak RE Graph – 30 MHz to 1 GHz – Horizontal





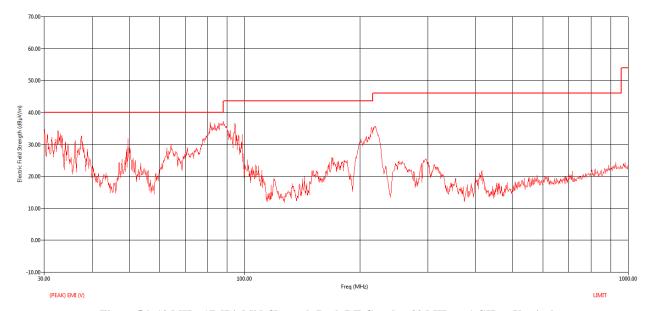


Figure 56: 10 MHz, 17 dBi, Mid Channel: Peak RE Graph – 30 MHz to 1 GHz – Vertical

Freq	Freq (Max)	Pol	EUT Ttbl Agl	Twr Ht	(QP) Trace	Cable	Transducer	Preamp	(QP) EMI	Limit	(QP) Margin
(MHz)	(MHz)		(deg)	(cm)	(dBµV)	(dB)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
81.	24 81.20	V	314.00	351.00	72.95	1.92	8.14	43.91	39.10	40.00	-0.93
85.	36 85.41	V	307.70	164.00	71.57	1.97	8.47	43.91	38.10	40.00	-1.90
87.	96 87.89	V	352.80	187.00	71.29	2.00	8.66	43.92	38.04	40.00	-1.96
94.	40 94.38	Н	70.70	237.00	76.10	2.07	8.46	43.93	42.70	43.52	-0.82

Table 44: 10 MHz, 17 dBi, Mid Channel: Quasi Peak Table from 30 MHz to 1 GHz

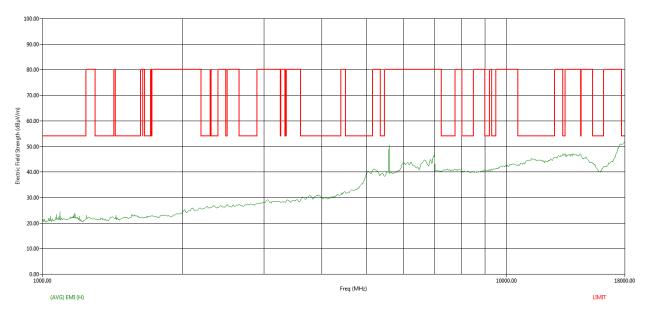


Figure 57: 10 MHz, 17 dBi, Mid Channel: Average RE Graph - 1 GHz to 18 GHz - Horizontal





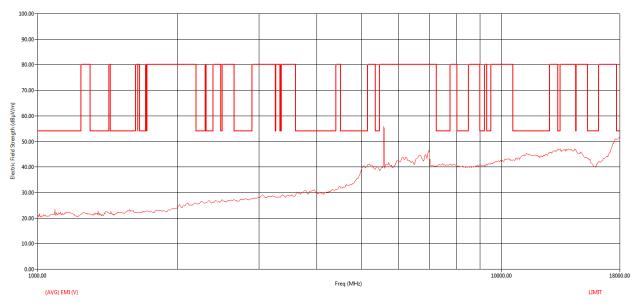


Figure 58: 10 MHz, 17 dBi, Mid Channel: Average RE Graph – 1 GHz to 18 GHz – Vertical

Freq	Freq (Max)	Pol	EUT Ttbl Agl	Twr Ht	(AVG) Trace	Cable	Transducer	Preamp	(AVG) EMI	Limit	(AVG) Margin
(MHz)	(MHz)		(deg)	(cm)	(dBµV)	(dB)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
109	0.33 1090.33	В	172.90	149.00	28.91	1.87	24.16	32.48	22.46	53.98	-31.52
304	3.38 3048.38	В	96.80	100.00	27.25	2.88	28.57	30.39	28.30	80.00	-51.70
517	1.77 5171.77	V	180.10	138.00	31.28	3.80	32.04	28.32	38.80	80.00	-41.20
696	9.03 6969.03	y v	183.00	143.00	34.45	4.20	35.21	28.30	45.57	80.00	-34.43

Table 45: 10 MHz, 17 dBi, Mid Channel: Average Table from 1 GHz to 18 GHz

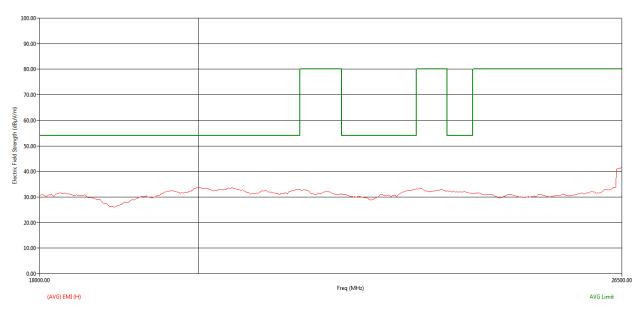


Figure 59: 10 MHz, 17 dBi, Mid Channel: Average RE Graph - 18 GHz to 26.5 GHz - Horizontal





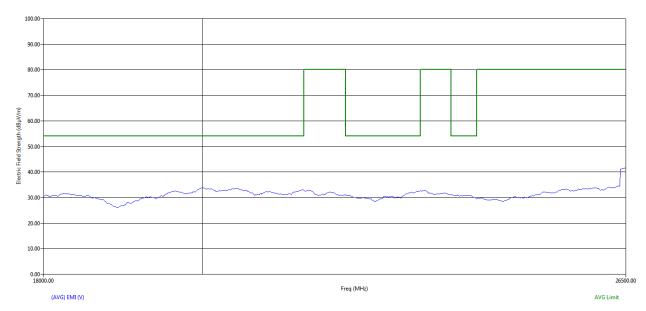


Figure 60: 10 MHz, 17 dBi, Mid Channel: Average RE Graph – 18 GHz to 26.5 GHz – Vertical

	Freq	Freq (Max)	Pol	EUT Ttbl Agl	Twr Ht	(AVG) Trace	Cable	Transducer	Preamp	(AVG) EMI	Limit	(AVG) Margin
	(MHz)	(MHz)		(deg)	(cm)	(dBµV)	(dB)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
	20067.30	19212.73	Н	80.20	100.00	33.60	6.64	36.53	46.66	30.10	53.98	-23.88
ı	23197.80	22219.22	V	4.60	100.00	32.74	6.70	36.79	46,51	29.72	80.00	-50.28

Table 46: 10 MHz, 17 dBi, Mid Channel: Average Table from 18 GHz to 26.5 GHz

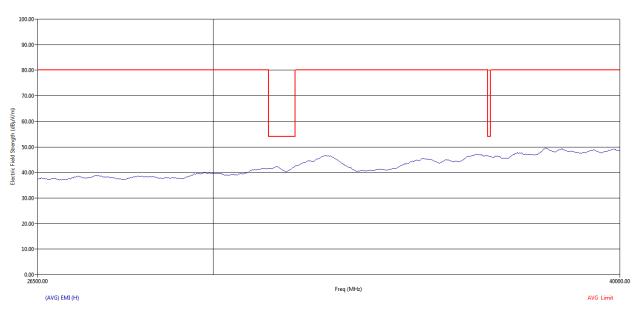


Figure 61: 10 MHz, 17 dBi, Mid Channel: Average RE Graph – 26.5 GHz to 40 GHz – Horizontal





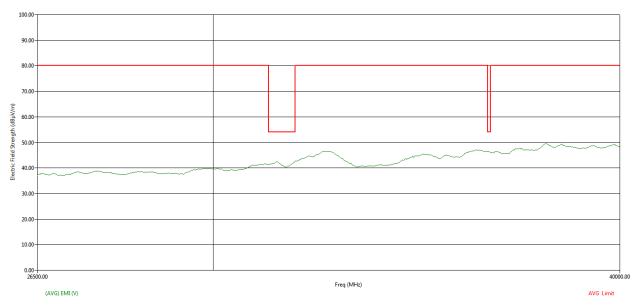


Figure 62: 10 MHz, 17 dBi, Mid Channel: Average RE Graph – 26.5 GHz to 40 GHz – Vertical

Freq (MHz)	Freq (Max) (MHz)	Pol	EUT Ttbl Agl (deg)	Twr Ht (cm)	(AVG) Trace (dBµV)	Cable (dB)	Transducer (dB)	Preamp (dB)	(AVG) EMI (dBµV/m)	Limit (dBµV/m)	(AVG) Margin (dB)
32505.10	33674.37	V	137.10	100.00	41.71	10.65	39.43	50.81	40.98	80.00	-39.02
38393.90	37958.01	Н	311.20	100.00	42.80	12.32	40.75	46.50	49.37	80.00	-30.63

Table 47: 10 MHz, 17 dBi, Mid Channel: Average Table from 26.5 GHz to 40 GHz

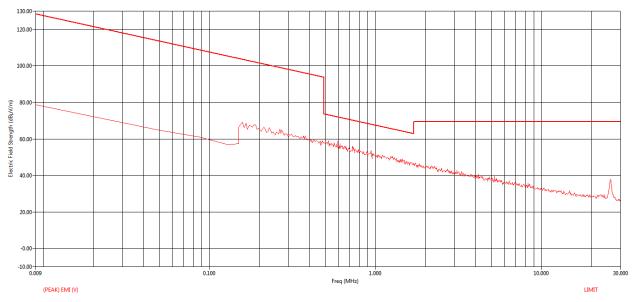


Figure 63: 10 MHz, 17 dBi, High Channel: Peak RE Graph – 9 kHz to 30 MHz – Parallel





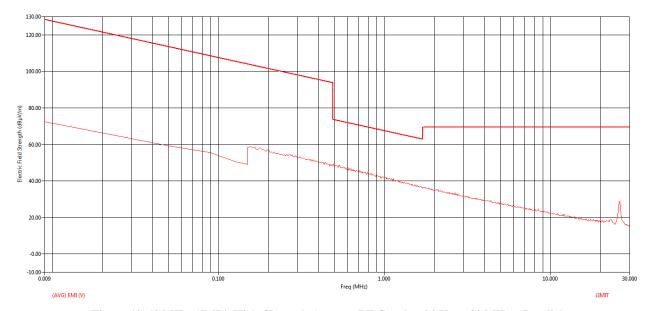


Figure 64: 10 MHz, 17 dBi, High Channel: Average RE Graph – 9 kHz to 30 MHz – Parallel

	Freq	Freq (Max)	Pol	(QP) Trace	Cable	Transducer	(QP) EMI	Limit	(QP) Margin
	(MHz)	(MHz)		(dBµV)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
	0.16	0.15	V	47.72	0.04	18.30	66.06	104.05	-37.99
Γ	26.01	26.00	V	20.12	1.10	16.04	37.26	69.54	-32.28

Table 48: 10 MHz, 17 dBi, High Channel: Quasi Peak Table from 9 kHz to 30 MHz – Parallel

	Freq	Freq (Max)	Pol	Ttbl Agl	(AVG) Trace	Cable	Transducer	(AVG) EMI	Limit	(AVG) Margin
-	(MHz)	(MHz)		(deg)	(dBµV)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
[	0.16	0.15	V	-2.50	40.21	0.04	18.30	58.55	104.05	-45.50
	26.01	26.00	V	148.00	13.28	1.10	16.04	30.41	69.54	-39.13

Table 49: 10 MHz, 17 dBi, High Channel: Average Table from 9 kHz to 30 MHz – Parallel





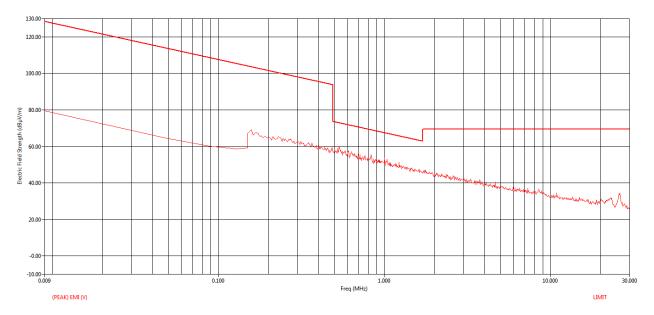


Figure 65: 10 MHz, 17 dBi, High Channel: Peak RE Graph - 9 kHz to 30 MHz - Perpendicular

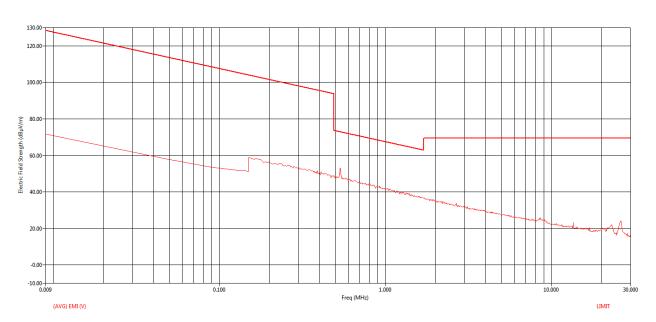


Figure 66: 10 MHz, 17 dBi, High Channel: Average RE Graph - 9 kHz to 30 MHz - Perpendicular

Freq	Freq (Max)	Pol	EUT Ttbl Agl	(QP) Trace	Cable	Transducer	(QP) EMI	Limit	(QP) Margin
(MHz)	(MHz)		(deg)	(dBµV)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
0.16	0.16	V	44.10	47.51	0.04	18.29	65.84	103.62	-37.78
26.22	26.21	V	139.40	15.55	1.11	16.02	32.68	69.54	-36.86

Table 50: 10 MHz, 17 dBi, High Channel: Quasi Peak Table from 9 kHz to 30 MHz – Perpendicular





Freq	Freq (Max)	Pol	EUT Ttbl Agl	(AVG) Trace	Cable	Transducer	(AVG) EMI	Limit	(AVG) Margin
(MHz)	(MHz)		(deg)	(dBµV)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
0.16	0.16	V	44.10	40.05	0.04	18.29	58.38	103.62	-45.24
26.22	26.21	V	139.40	8.87	1.11	16.02	25.99	69.54	-43.55

Table 51: 10 MHz, 17 dBi, High Channel: Average Table from 9 kHz to 30 MHz - Perpendicular

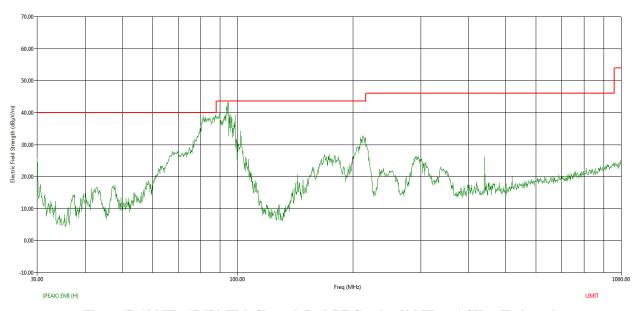


Figure 67: 10 MHz, 17 dBi, High Channel: Peak RE Graph – 30 MHz to 1 GHz – Horizontal

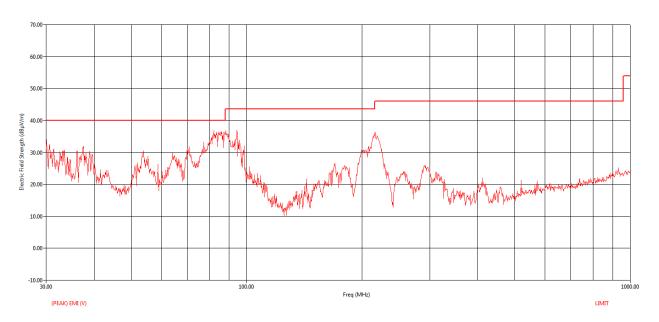


Figure 68: 10 MHz, 17 dBi, High Channel: Peak RE Graph – 30 MHz to 1 GHz – Vertical





Freq	Freq (Max)	Pol	EUT Ttbl Agl	Twr Ht	(QP) Trace	Cable	Transducer	Preamp	(QP) EMI	Limit	(QP) Margin
(MHz)	(MHz)		(deg)	(cm)	(dBµV)	(dB)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
81.28	81.19	Н	266.80	228.00	71.54	1.92	8.14	43.91	37.68	40.00	-2.32
88.20	88.10	V	319.40	142.00	72.37	2.00	8.68	43.92	39.13	43.52	-4.39
89.76	89.65	Н	70.30	199.00	71.93	2.02	8.79	43.92	38.82	43.52	-4.70
94.44	94.37	Н	162.10	334.00	60.68	2.07	8.46	43.93	27.28	43.52	-16.24

Table 52: 10 MHz, 17 dBi, High Channel: Quasi Peak Table from 30 MHz to 1 GHz

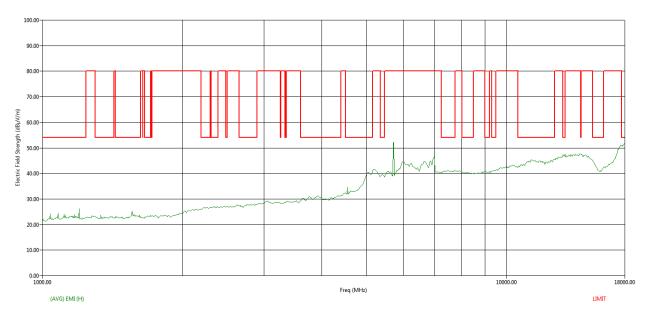


Figure 69: 10 MHz, 17 dBi, High Channel: Average RE Graph – 1 GHz to 18 GHz – Horizontal

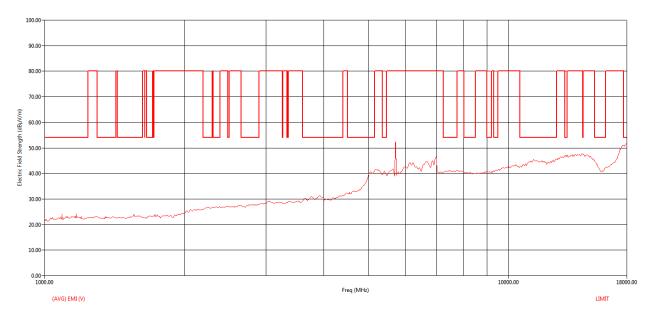


Figure 70: 10 MHz, 17 dBi, High Channel: Average RE Graph – 1 GHz to 18 GHz – Vertical





Freq	Freq (Max)	Pol	EUT Ttbl Agl	Twr Ht	(AVG) Trace	Cable	Transducer	Preamp	(AVG) EMI	Limit	(AVG) Margin
(MHz)	(MHz)		(deg)	(cm)	(dBµV)	(dB)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
1199.70	1199.70	Н	47.80	118.00	30.63	1.94	24.53	32.45	24.66	54.00	-29.34
4542.43	4542.43	Н	12.90	111.00	26.28	3.51	30.82	29.16	31.45	54.00	-22.55
5183.41	5183.41	V	6.80	122.00	36.44	3.80	32.06	28.32	43.99	80.00	-36.01
6968.00	6968.00	V	1.40	100.00	34.43	4.20	35.21	28.30	45.54	80.00	-34.46

Table 53: 10 MHz, 17 dBi, High Channel: Average Table from 1 GHz to 18 GHz

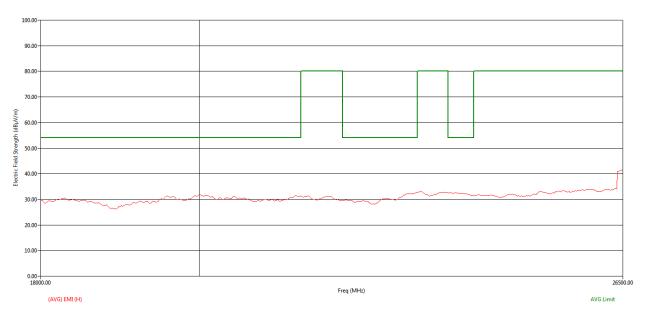


Figure 71: 10 MHz, 17 dBi, High Channel: Average RE Graph - 18 GHz to 26.5 GHz - Horizontal

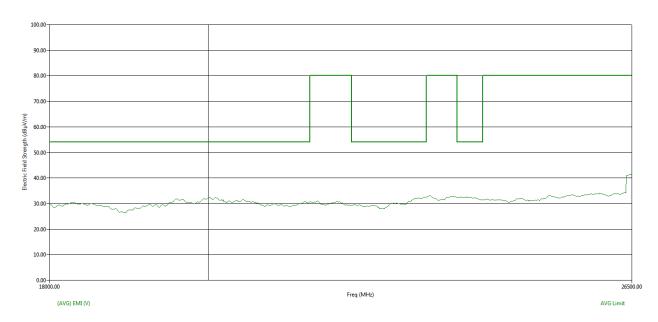


Figure 72: 10 MHz, 17 dBi, High Channel: Average RE Graph – 18 GHz to 26.5 GHz – Vertical





Freq	Freq (Max)	Pol	EUT Ttbl Agl	Twr Ht	(AVG) Trace	Cable	Transducer	Preamp	(AVG) EMI	Limit	(AVG) Margin
(MHz)	(MHz)		(deg)	(cm)	(dBµV)	(dB)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
19566.40	19325.25	Н	353.90	100.00	32.22	6.68	36.55	45.89	29.56	53.98	-24.42
23197.80	22986.28	V	359.10	100.00	33.24	8.09	37.64	46.93	32.04	80.00	-47.96

Table 54: 10 MHz, 17 dBi, High Channel: Average Table from 18 GHz to 26.5 GHz

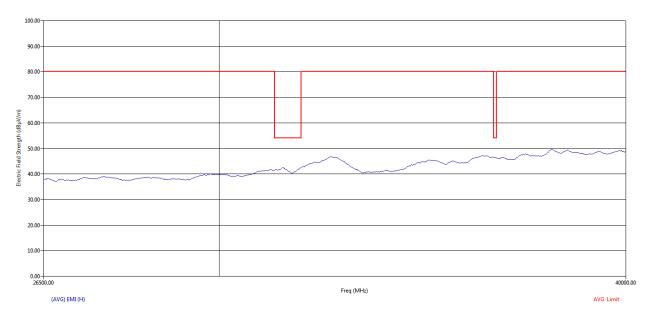


Figure 73: 10 MHz, 17 dBi, High Channel: Average RE Graph – 26.5 GHz to 40 GHz – Horizontal

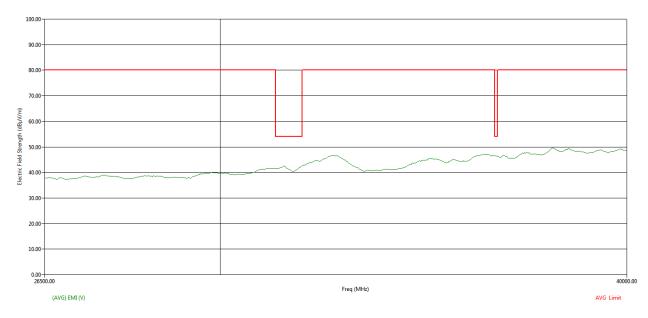


Figure 74: 10 MHz, 17 dBi, High Channel: Average RE Graph - 26.5 GHz to 40 GHz - Vertical





Freq	Freq (Max)	Pol	EUT Ttbl Agl	Twr Ht	(AVG) Trace	Cable	Transducer	Preamp	(AVG) EMI	Limit	(AVG) Margin
(MHz)	(MHz)		(deg)	(cm)	(dBµV)	(dB)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
32515.60	32297.31	V	306.50	100.00	41.28	10.42	38.89	45.42	45.16	80.00	-34.84
37962.70	37951.29	Н	180.00	100.00	42.84	12.32	40.74	46.51	49.39	80.00	-30.61

Table 55: 10 MHz, 17 dBi, High Channel: Average Table from 26.5 GHz to 40 GHz

# **5.3.1.6 RESULT**

Radiated emissions from the EUT are within the specified limits.





# 5.3.2 CONDUCTED EMISSION TEST

# 5.3.2.1 TEST SPECIFICATION

Test Standard	RSS – GEN, ISSUE 4-NOV 2014			
Test Procedure	ANSI C63.4-2014			
Class / Group	Class 'B'			
Type of Cable (Shielded/Unshielded)	Unshielded Cable			
Frequency Range	150 kHz - 30 MHz			
Resolution Bandwidth	9 kHz			
Video Bandwidth	30 kHz			
Step size	4 kHz			
Pre Scan Measurement Time	20 ms			
Final Measurement Time	1 second			
Attenuation	10 dB			
Detector	Quasi Peak and Average			
Input Voltage	120 V AC 230 V AC			
Input Frequency	60 Hz 50 Hz			
Temperature	22.0 °C			
Humidity	53.0 %			
Tested By	Dikshit Raviteja			
Test Date	06 <sup>th</sup> May 2016			

## **5.3.2.2 LIMITS**

Maximum permissible voltage levels of Conducted Emission as per RSS-Gen issue 4 Class 'B' on Power lines are as shown below:

Frequency (MHz)	Voltag	ge limits Class 'A' (dBµV)
r requency (MHZ)	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.5 to 5	56	46
5 to 30	60	50





#### **5.3.2.3 TEST SETUP**

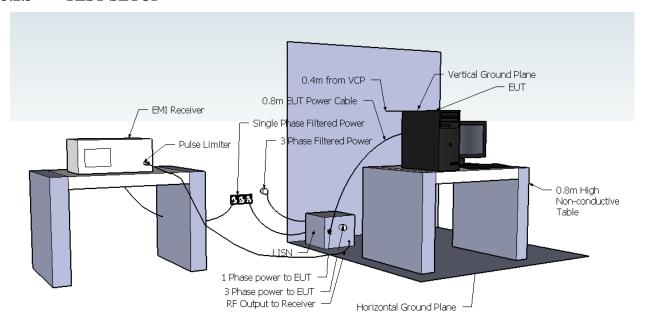


Figure 75: Sample Conducted Emission test setup

#### 5.3.2.4 TEST PROCEDURE

The test procedure is in accordance with ANSI C63.10

The EUT was tested at the conducted emission test site with a horizontal ground reference plane and a vertical ground reference plane bonded together. The EUT was placed on non-conductive table of 0.8 m height as per standard. The power supply to the EUT and auxiliary equipment was feed through LISN.

#### LISN (Voltage Method):

The conducted emission (disturbance) was measured through the 50  $\Omega$  RF port of the LISN using an EMI receiver. Pre-scan (Peak and Average) was carried out in max hold mode and conducted emission from the EUT coupled through the Power (mains) port was plotted in the graph. The dominant peaks at various frequencies, closer to and above the limit line were identified using peak search option and listed. Quasi peak and Average measurement was carried out for the listed frequencies and compared with the limit specified in the standard.

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## 5.3.2.5 MEASUREMENT DATA

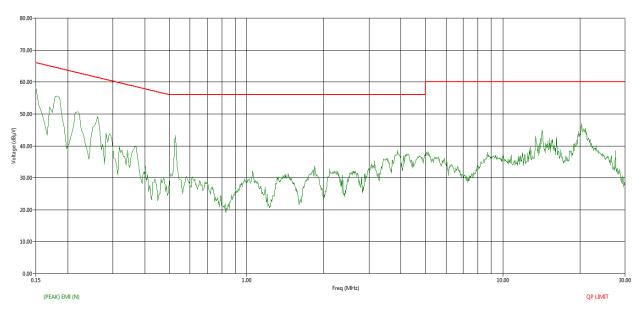


Figure 76: 40 MHz, 230 V AC / 50 Hz. Low channel: Peak CE Graph-150 kHz to 30 MHz - Neutral

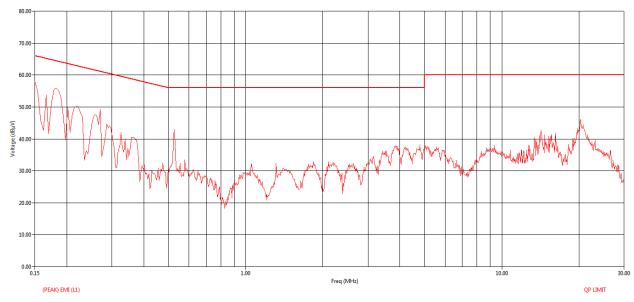


Figure 77: 40 MHz, 230 V AC / 50 Hz. Low channel: Peak CE Graph-150 kHz to 30 MHz - Line





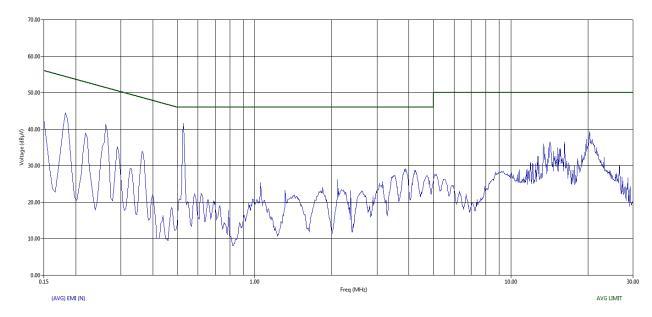


Figure 78: 40 MHz, 230 V AC / 50 Hz. Low channel: Average CE Graph-150 kHz to 30 MHz - Neutral

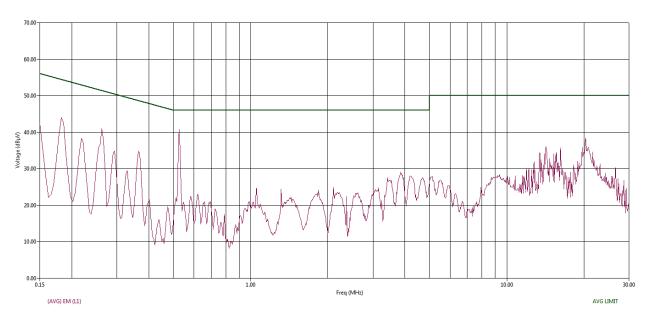


Figure 79: 40 MHz, 230 V AC / 50 Hz. Low channel: Average CE Graph-150 kHz to 30 MHz - Line





Freq	Freq (Max)	Line	(QP) Trace	Cable+Pulse Limiter	Transducer N	Transducer L	(QP) EMI	(QP) Limit	(QP) Margin
(MHz)	(MHz)		(dBµV)	(dB)	(dB)	(dB)	(dBµV)	(dBµV)	(dB)
0.150	0.151	N	39.962	9.820	2.167	0.000	51.948	65.937	-13.989
0.150	0.156	L1	32.837	9.824	0.000	2.146	44.807	65.677	-20.870
0.166	0.158	L1	31.689	9.826	0.000	2.127	43.642	65.570	-21.928
0.182		N	41.261	9.845	1.906	0.000		64.451	-11.438
0.182		L1	40.976	9.845	0.000	1.932		64.474	-11.721
0.218		N	34.718	9.861	1.651	0.000	46.230	63.003	-16.773
0.218		L1	34.963	9.861	0.000	1.669		62.988	-16.495
0.262		N	33.739	9.863	1.365	0.000		61.376	-16.410
0.270		L1	33.433	9.863	0.000	1.384		61.382	-16.702
0.282	0.290	N	30.287	9.864	1.216	0.000		60.526	-19.159
0.286		L1	29.411	9.864	0.000	1.243		60.584	-20.066
0.326		L1	22.647	9.865	0.000	1.083		59.681	-26.086
0.526		N	32.242	9.869	0.414	0.000	42.525	56.000	-13.475
0.526		L1	31.671	9.869	0.000	0.424		56.000	-14.036
13.422		N	19.443	9.970	0.636	0.000		60.000	-29.951
14.214		N	20.887	9.965	0.690	0.000		60.000	-28.458
14.214		L1	21.882	9.965	0.000	0.741		60.000	-27.412
16.230	16.228	N	26.160	9.930	0.688	0.000		60.000	-23.222
20.258		L1	32.447	9.869	0.000	0.413		60.000	-17.270
20.262	20.262	N	32.344	9.869	0.560	0.000	42.773	60.000	-17.227

Table 56: 40 MHz, 230 V AC / 50 Hz. Low channel: Quasi Peak Table for CE from 150 kHz to 30 MHz

Freq	Freq (Max)	Line	(AVG) Trace	Cable+Pulse Limiter	Transducer N	Transducer L	(AVG) EMI	(AVG) Limit	(AVG) Margin
(MHz)	(MHz)		(dBµV)	(dB)	(dB)	(dB)	(dBµV)	(dBµV)	(dB)
0.150	0.151	N	28.851	9.820	2.167	0.000	40.837	55.937	-15.100
0.150	0.156	L1	18.849	9.824	0.000	2.146	30.819	55.677	-24.858
0.166		L1	15.104		0.000	2.127	27.056	55.570	-28.513
0.182	0.181	N	32.491	9.845	1.906	0.000		54.451	-10.209
0.182	0.180	L1	31.440	9.845	0.000	1.932	43.218	54.474	-11.256
0.218		N	25.414		1.651	0.000		53.003	-16.077
0.218		L1	25.403	9.861	0.000	1.669	36.932	52.988	-16.056
0.262		N	30.602		1.365	0.000	41.830	51.376	-9.546
0.270		L1	29.919		0.000	1.384		51.382	-10.216
0.282	0.290	N	24.313	9.864	1.216	0.000	35.393	50.526	-15.133
0.286	0.288	L1	22.369	9.864	0.000	1.243	33.476	50.584	-17.108
0.326		L1	13.497	9.865	0.000	1.083	24.445	49.681	-25.236
0.526	0.523	N	31.147	9.869	0.414	0.000	41.431	46.000	-4.569
0.526	0.523	L1	30.500	9.869	0.000	0.424	40.793	46.000	-5.207
13.422	13.421	N	13.418	9.970	0.636	0.000	24.024	50.000	-25.976
14.214	14.215	N	15.490	9.965	0.690	0.000		50.000	-23.856
14.214	14.215	L1	17.629	9.965	0.000	0.741	28.335	50.000	-21.665
16.230	16.228	N	20.328	9.930	0.688	0.000	30.946	50.000	-19.054
20.258			27.232		0.000	0.413		50.000	-12.486
20.262	20.262	N	27.026	9.869	0.560	0.000	37.455	50.000	-12.545

Table 57: 40 MHz, 230 V AC / 50 Hz. Low channel: Average Table for CE from 150 kHz to 30 MHz





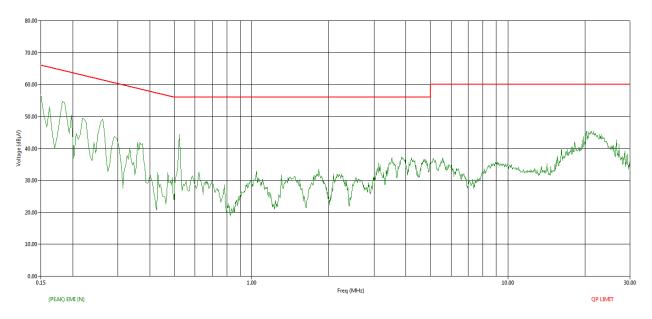


Figure 80:  $40~\mathrm{MHz}$ ,  $230~\mathrm{V}$  AC / 50 Hz. Mid channel: Peak CE Graph- $150~\mathrm{kHz}$  to  $30~\mathrm{MHz}$  - Neutral

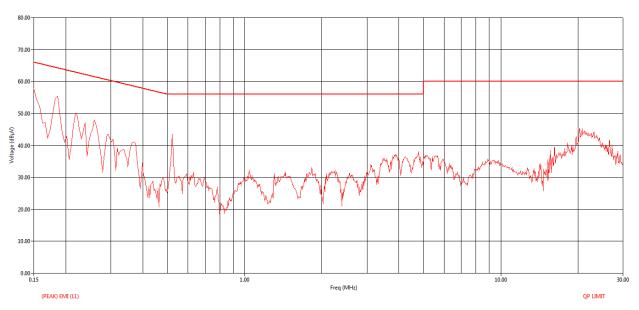


Figure 81: 40 MHz, 230 V AC / 50 Hz. Mid channel: Peak CE Graph-150 kHz to 30 MHz - Line





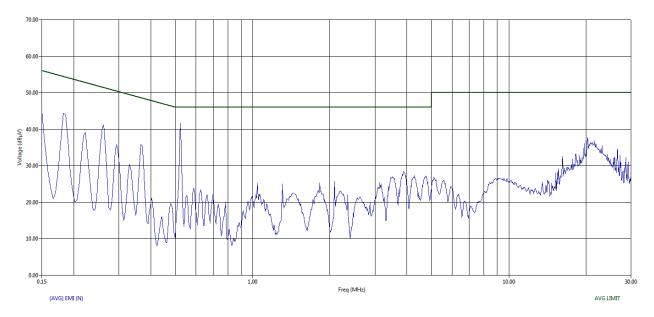


Figure 82: 40 MHz, 230 V AC / 50 Hz. Mid channel: Average CE Graph-150 kHz to 30 MHz - Neutral

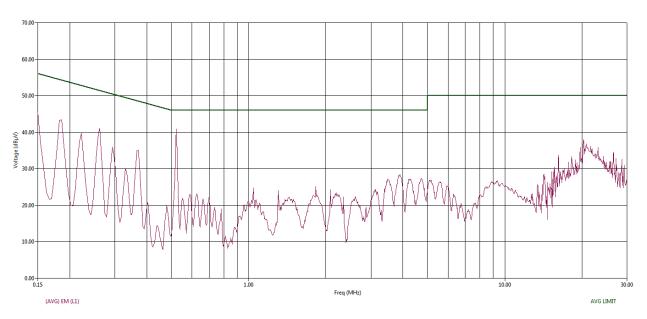


Figure 83: 40 MHz, 230 V AC / 50 Hz. Mid channel: Average CE Graph-150 kHz to 30 MHz - Line





Freq	Freq (Max)	Line	(QP) Trace	Cable+Pulse Limiter	Transducer N	Transducer L	(QP) EMI	(QP) Limit	(QP) Margin
(MHz)	(MHz)		(dBµV)	(dB)	(dB)	(dB)	(dBµV)	(dBµV)	(dB)
0.150	0.152	N	40.777	9.820	2.161	0.000	52.758	65.902	-13.144
0.150	0.154	L1	36.868	9.822	0.000	2.164	48.854	65.778	-16.924
0.166	0.157	L1	31.725	9.825	0.000	2.132	43.682	65.598	-21.916
0.182	0.184	N	41.159	9.848	1.877	0.000	52.884	64.290	-11.406
0.182		L1	40.858	9.847	0.000	1.911	52.616	64.352	-11.736
0.218	0.222	N	35.474	9.861	1.602	0.000	46.937	62.725	-15.788
0.218		L1	35.479	9.861	0.000	1.627	46.967	62.750	-15.783
0.262		N	35.862	9.863	1.375	0.000		61.435	-14.335
0.270	0.261	L1	34.817	9.863	0.000	1.386		61.390	-15.325
0.282	0.282	N	20.328	9.864	1.255	0.000	31.447	60.749	-29.302
0.286		L1	30.101	9.864	0.000	1.209		60.395	-19.220
0.326		L1	17.529	9.865	0.000	1.093		59.740	-31.252
0.526		N	32.649	9.869	0.415	0.000		56.000	-13.067
0.526		L1	31.947	9.869	0.000	0.424		56.000	-13.759
13.422		N	19.201	9.970	0.636	0.000		60.000	-30.194
14.214		N	20.284	9.965	0.690	0.000		60.000	-29.061
14.214		L1	22.278	9.965	0.000	0.741		60.000	-27.016
16.230		N	27.000	9.930	0.688	0.000		60.000	-22.382
20.258		L1	32.771	9.869	0.000	0.413		60.000	-16.947
20.262	20.261	N	32.572	9.869	0.560	0.000	43.001	60.000	-16.999

Table 58:  $40~\mathrm{MHz}$ ,  $230~\mathrm{V}$  AC /  $50~\mathrm{Hz}$ , Mid channel: Quasi Peak Table for CE from 150 kHz to  $30~\mathrm{MHz}$ 

Freq (MHz)	Freq (Max) (MHz)	Line	(AVG) Trace (dBµV)	Cable+Pulse Limiter (dB)	Transducer N (dB)	Transducer L (dB)	(AVG) EMI (dBµV)	(AVG) Limit (dBµV)	(AVG) Margin (dB)
	. ,								
0.150	0.152	N	30.558	9.820	2.161	0.000		55.902	-13.362
0.150		L1	25.707	9.822	0.000			55.778	-18.086
0.166	0.157	L1	18.691	9.825	0.000			55.598	-24.949
0.182	0.184	N	33.132	9.848	1.877	0.000	44.858	54.290	-9.432
0.182	0.183	L1	32.044	9.847	0.000	1.911	43.802	54.352	-10.550
0.218	0.222	N	27.553	9.861	1.602	0.000	39.016	52.725	-13.709
0.218	0.222	L1	27.391	9.861	0.000	1.627	38.879	52.750	-13.872
0.262	0.260	N	31.139	9.863	1.375	0.000	42.377	51.435	-9.058
0.270	0.261	L1	30.078	9.863	0.000	1.386	41.326	51.390	-10.064
0.282	0.282	N	9.236	9.864	1.255	0.000	20.355	50.749	-30.394
0.286	0.295	L1	24.644	9.864	0.000	1.209	35.717	50.395	-14.677
0.326	0.319	L1	5.784	9.865	0.000	1.093	16.742	49.740	-32.998
0.526	0.521	N	31.241	9.869	0.415	0.000	41.525	46.000	-4.475
0.526	0.520	L1	30.371	9.869	0.000	0.424	40.665	46.000	-5.335
13.422	13.422	N	13.223	9.970	0.636	0.000	23.829	50.000	-26.171
14.214	14.217	N	14.741	9.965	0.690	0.000	25.396	50.000	-24.604
14.214	14.214	L1	17.730	9.965	0.000	0.741	28.436	50.000	-21.564
16.230	16.230	N	21.814	9.930	0.688	0.000	32.432	50.000	-17.568
20.258	20.259	L1	27.531	9.869	0.000	0.413	37.813	50.000	-12.187
20.262	20.261	N	27.332	9.869	0.560	0.000	37.761	50.000	-12.239

Table 59: 40 MHz, 230 V AC / 50 Hz, Mid channel: Average Table for CE from 150 kHz to 30 MHz





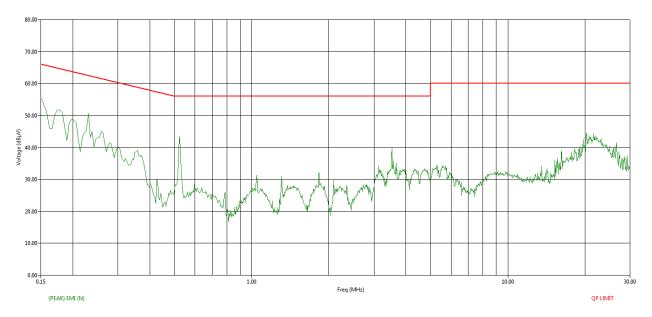


Figure 84: 40 MHz, 230 V AC / 50 Hz. High channel: Peak CE Graph-150 kHz to 30 MHz - Neutral

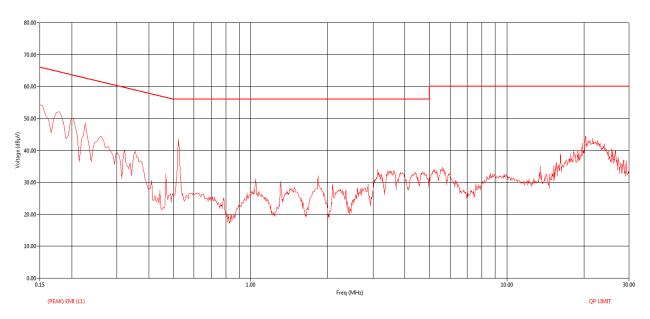


Figure 85: 40 MHz, 230 V AC / 50 Hz. High channel: Peak CE Graph-150 kHz to 30 MHz - Line





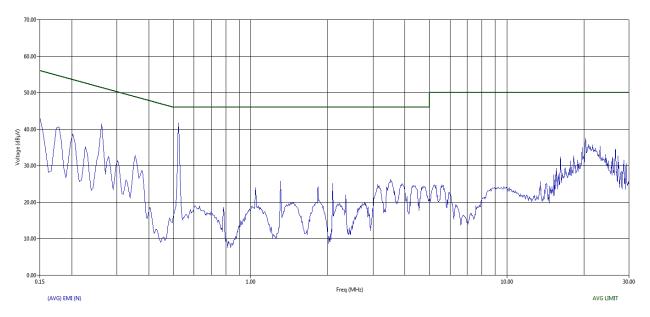


Figure 86: 40 MHz, 230 V AC / 50 Hz. High channel: Average CE Graph-150 kHz to 30 MHz - Neutral

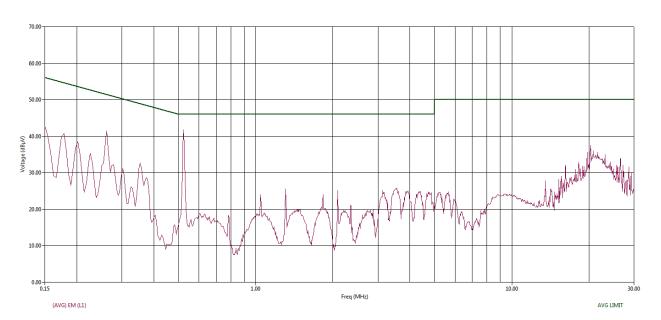


Figure 87: 40 MHz, 230 V AC / 50 Hz. High channel: Average CE Graph-150 kHz to 30 MHz - Line





Freq (MHz)	Freq (Max) (MHz)	Line	(QP) Trace (dBµV)	Cable+Pulse Limiter (dB)	Transducer N (dB)	Transducer L (dB)	(QP) EMI (dBµV)	(QP) Limit (dBµV)	(QP) Margin (dB)
0.150	0.152	N	40.435	9.820	2.161	0.000	52.416	65.902	-13.486
0.150	0.158	L1	34.027	9.826	0.000	2.130	45.983	65.588	-19.605
0.226	0.218	L1	27.945	9.861	0.000	1.655	39.460	62.907	-23.447
0.230	0.223	N	30.745	9.861	1.597	0.000	42.203	62.694	-20.491
0.258	0.259	L1	30.057	9.863	0.000	1.400	41.319	61.469	-20.150
0.322	0.314	L1	19.521	9.865	0.000	1.116	30.502	59.869	-29.368
0.522	0.524	N	31.581	9.869	0.414	0.000	41.864	56.000	-14.136
0.522	0.522	L1	31.726	9.869	0.000	0.424	42.019	56.000	-13.981
3.138	3.138	N	20.716	9.869	0.305	0.000	30.890	56.000	-25.110
3.534	3.529	N	20.451	9.880	0.306	0.000	30.637	56.000	-25.363
5.286	5.284	N	19.370	9.914	0.314	0.000	29.598	60.000	-30.402
5.602	5.607	L1	20.733	9.918	0.000	0.362	31.013	60.000	-28.987
13.558	13.561	L1	22.006	9.969	0.000	0.698	32.673	60.000	-27.327
20.262	20.260	N	31.991	9.869	0.560	0.000	42.420	60.000	-17.580
20.382	20.383	L1	30.959	9.868	0.000	0.415	41.242	60.000	-18.758
26.490	26.488	N	26.741	9.844	0.765	0.000	37.349	60.000	-22.651
28.686	28.690	N	24.143	9.835	0.826	0.000	34.804	60.000	-25.196
28.690	28.688	L1	24.337	9.835	0.000	0.508	34.680	60.000	-25.320
29.238	29.238	N	23.294	9.833	0.840	0.000	33.967	60.000	-26.033
29.238	29.237	L1	22.991	9.833	0.000	0.513	33.337	60.000	-26.663

Table 60: 40 MHz, 230 V AC / 50 Hz, High channel: Quasi Peak Table for CE from 150 kHz to 30 MHz

Freq	Freq (Max)	Line	(AVG) Trace	Cable+Pulse Limiter	Transducer N	Transducer L	(AVG) EMI	(AVG) Limit	(AVG) Margin
(MHz)	(MHz)		(dBµV)	(dB)	(dB)	(dB)	(dBµV)	(dBµV)	(dB)
0.150	0.152	N	30.698	9.820	2.161	0.000	42.678	55.902	-13.223
0.150	0.158	L1	22.114	9.826	0.000	2.130	34.069	55.588	-21.518
0.226	0.218	L1	14.930	9.861	0.000	1.655	26.446	52.907	-26.461
0.230	0.223	N	21.594	9.861	1.597	0.000	33.052	52.694	-19.642
0.258	0.259	L1	27.694	9.863	0.000	1.400	38.956	51.469	-12.513
0.322	0.314	L1	10.611	9.865	0.000	1.116	21.592	49.869	-28.277
0.522	0.524	N	30.407	9.869	0.414	0.000	40.690	46.000	-5.310
0.522	0.522	L1	30.612	9.869	0.000	0.424	40.905	46.000	-5.095
3.138	3.138	N	14.798	9.869	0.305	0.000	24.972	46.000	-21.028
3.534	3.529	N	15.016	9.880	0.306	0.000	25.202	46.000	-20.798
5.286	5.284	N	12.398	9.914	0.314	0.000	22.626	50.000	-27.374
5.602	5.607	L1	14.133	9.918	0.000	0.362	24.413	50.000	-25.587
13.558	13.561	L1	11.548	9.969	0.000	0.698	22.215	50.000	-27.785
20.262	20.260	N	26.712	9.869	0.560	0.000	37.141	50.000	-12.859
20.382	20.383	L1	25.828	9.868	0.000	0.415	36.112	50.000	-13.888
26.490	26.488	N	22.385	9.844	0.765	0.000	32.993	50.000	-17.007
28.686	28.690	N	21.053	9.835	0.826	0.000	31.714	50.000	-18.286
28.690	28.688	L1	21.121	9.835	0.000	0.508	31.464	50.000	-18.536
29.238	29.238	N	19.748	9.833	0.840	0.000	30.421	50.000	-19.579
29.238	29.237	L1	19.357	9.833	0.000	0.513	29.702	50.000	-20.298

Table 61: 40 MHz, 230 V AC / 50 Hz, High channel: Average Table for CE from 150 kHz to 30 MHz





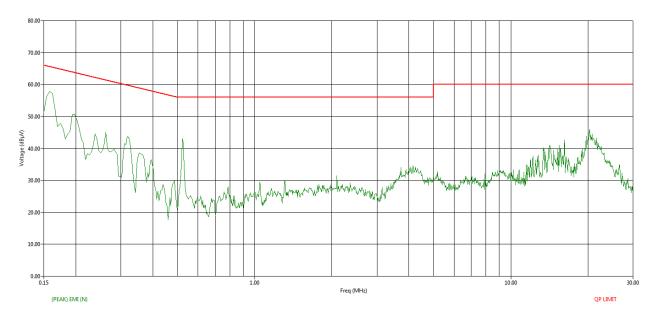


Figure 88: 40 MHz, 120 V AC / 60 Hz. Low channel: Peak CE Graph-150 kHz to 30 MHz - Neutral

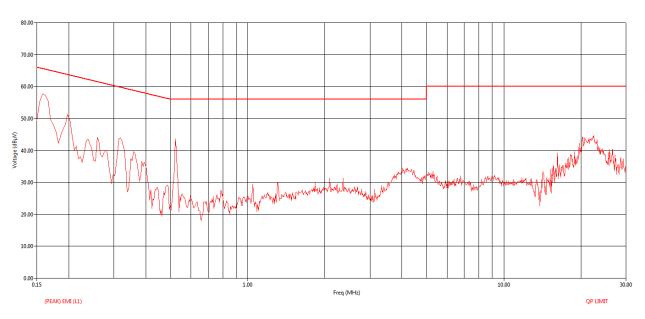


Figure 89: 40 MHz, 120 V AC / 60 Hz. Low channel: Peak CE Graph-150 kHz to 30 MHz - Line





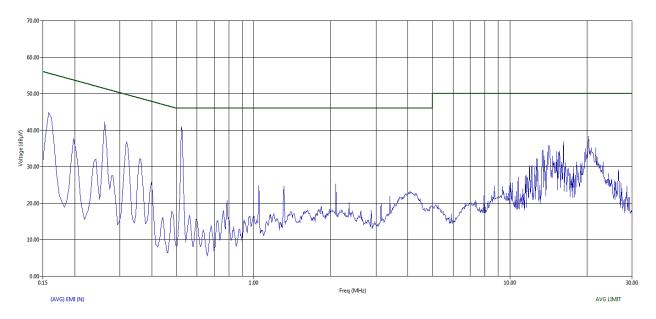


Figure 90: 40 MHz, 120 V AC / 60 Hz. Low channel: Average CE Graph-150 kHz to 30 MHz - Neutral

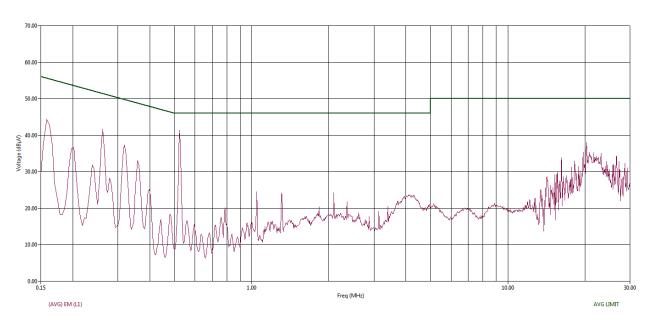


Figure 91: 40 MHz, 120 V AC / 60 Hz. Low channel: Average CE Graph-150 kHz to 30 MHz - Line





Freq (MHz)	Freq (Max) (MHz)	Line	(QP) Trace (dBµV)	Cable+Pulse Limiter (dB)	Transducer N (dB)	Transducer L (dB)	(QP) EMI (dBµV)	(QP) Limit (dBµV)	(QP) Margin (dB)
0.158	0.159	N	43.933	9.827	2.089	0.000	55.849	65.491	-9.643
0.158	0.159	L1	43.877	9.827	0.000	2.113	55.817	65.491	-9.674
0.198	0.201	L1	36.221	9.860	0.000	1.775	47.857	63.588	-15.731
0.262	0.261	N	31.561	9.863	1.367	0.000	42.790	61.384	-18.594
0.318	0.317	N	30.358	9.865	1.087	0.000	41.310	59.794	-18.484
0.318	0.318	L1	30.688	9.865	0.000	1.097	41.650	59.763	-18.113
0.358	0.358	L1	26.327	9.866	0.000	0.920	37.114	58.765	-21.652
0.522	0.523	N	32.659	9.869	0.414	0.000	42.942	56.000	-13.058
0.522	0.522	L1	32.204	9.869	0.000	0.424	42.497	56.000	-13.503
14.154	14.153	N	18.008	9.965	0.686	0.000	28.659	60.000	-31.341
14.214	14.215	N	18.550	9.965	0.690	0.000	29.204	60.000	-30.796
15.434	15.437	N	21.216	9.949	0.721	0.000	31.886	60.000	-28.114
16.170	16.168	N	24.627	9.931	0.690	0.000	35.248	60.000	-24.752
16.230	16.229	N	25.726	9.930	0.688	0.000	36.343	60.000	-23.657
16.230	16.229	L1	27.200	9.930	0.000	0.686	37.816	60.000	-22.184
20.258	20.260	N	31.526	9.869	0.560	0.000	41.954	60.000	-18.046
22.518	22.523	L1	28.069	9.859	0.000	0.442	38.370	60.000	-21.630
25.882	25.880	L1	25.911	9.846	0.000	0.480	36.237	60.000	-23.763
26.490	26.489	L1	27.198	9.844	0.000	0.486	37.528	60.000	-22.472
26.610	26.614	L1	26.914	9.843	0.000	0.488	37.245	60.000	-22.755

Table 62: 40 MHz, 120 V AC / 60 Hz, Low channel: Quasi Peak Table for CE from 150 kHz to 30 MHz

Freq	Freq (Max)	Line	(AVG) Trace	Cable+Pulse Limiter	Transducer N	Transducer L	(AVG) EMI	(AVG) Limit	(AVG) Margin
(MHz)	(MHz)		(dBµV)	(dB)	(dB)	(dB)	(dBµV)	(dBµV)	(dB)
0.158	0.159	N	33.009	9.827	2.089	0.000	44.925	55.491	-10.566
0.158	0.159	L1	32.723	9.827	0.000	2.113	44.663	55.491	-10.828
0.198	0.201	L1	25.033	9.860	0.000	1.775	36.668	53.588	-16.920
0.262	0.261	N	31.120	9.863	1.367	0.000	42.350	51.384	-9.035
0.318	0.317	N	25.435	9.865	1.087	0.000	36.387	49.794	-13.408
0.318	0.318	L1	26.098	9.865	0.000	1.097	37.060	49.763	-12.703
0.358	0.358	L1	21.748	9.866	0.000	0.920	32.535	48.765	-16.230
0.522	0.523	N	31.496	9.869	0.414	0.000	41.779	46.000	-4.221
0.522	0.522	L1	30.949	9.869	0.000	0.424	41.242	46.000	-4.758
14.154	14.153	N	13.230	9.965	0.686	0.000	23.881	50.000	-26.119
14.214	14.215	N	14.182	9.965	0.690	0.000	24.836	50.000	-25.164
15.434	15.437	N	16.399	9.949	0.721	0.000		50.000	-22.931
16.170	16.168	N	19.657	9.931	0.690	0.000		50.000	-19.722
16.230	16.229	N	20.921	9.930	0.688	0.000	31.539	50.000	-18.461
16.230	16.229	L1	22.545	9.930	0.000	0.686		50.000	-16.839
20.258	20.260	N	26.384	9.869	0.560	0.000	36.812	50.000	-13.188
22.518	22.523	L1	21.931	9.859	0.000	0.442	32.233	50.000	-17.767
25.882	25.880	L1	21.813	9.846	0.000	0.480	32.139	50.000	-17.861
26.490	26.489	L1	23.216	9.844	0.000	0.486	33.546	50.000	-16.454
26.610	26.614	L1	23.819	9.843	0.000	0.488	34.150	50.000	-15.850

Table 63: 40 MHz, 120 V AC / 60 Hz, Low channel: Average Table for CE from 150 kHz to 30 MHz





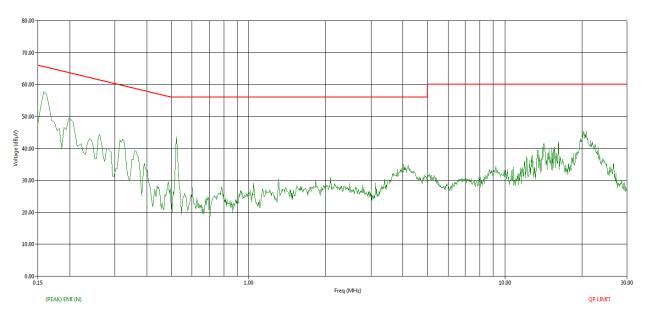


Figure 92: 40 MHz, 120 V AC / 60 Hz. Mid channel: Peak CE Graph-150 kHz to 30 MHz - Neutral

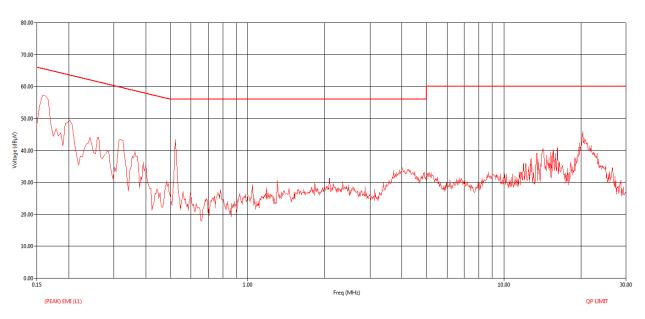


Figure 93: 40 MHz, 120 V AC / 60 Hz. Mid channel: Peak CE Graph-150 kHz to 30 MHz - Line





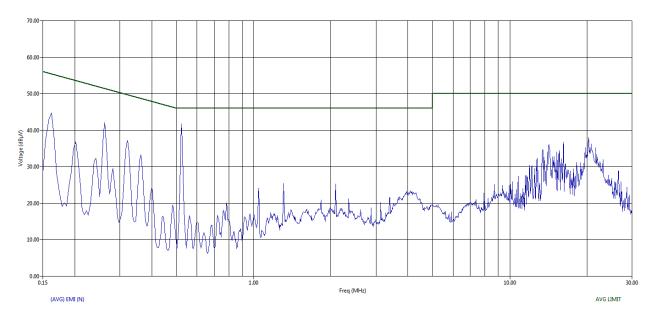


Figure 94: 40 MHz, 120 V AC / 60 Hz. Mid channel: Average CE Graph-150 kHz to 30 MHz - Neutral

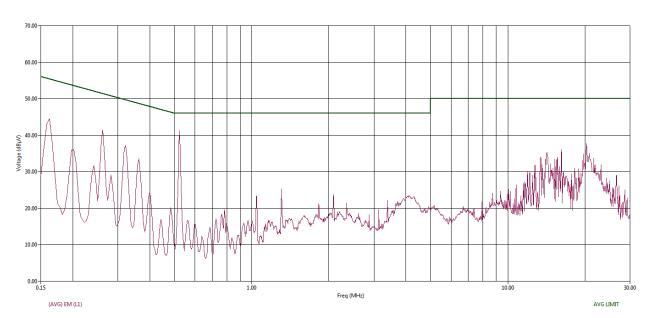


Figure 95: 40 MHz, 120 V AC / 60 Hz. Mid channel: Average CE Graph-150 kHz to 30 MHz – Line





Freq	Freq (Max)	Line	(QP) Trace	Cable+Pulse Limiter	Transducer N	Transducer L	(QP) EMI	(QP) Limit	(QP) Margin
(MHz)	(MHz)		(dBµV)	(dB)	(dB)	(dB)	(dBµV)	(dBµV)	(dB)
0.158	0.158	N	43.005	9.826	2.100	0.000	54.932	65.557	-10.626
0.158	0.160	L1	43.629	9.828	0.000	2.108	55.565	65.465	-9.900
0.198	0.201	N	36.173	9.860	1.752	0.000	47.784	63.576	-15.792
0.202	0.200	L1	36.163	9.860	0.000	1.777	47.800	63.599	-15.798
0.262	0.262	L1	30.608	9.863	0.000	1.381	41.852	61.365	-19.512
0.318	0.321	L1	30.453	9.865	0.000	1.080	41.399	59.668	-18.270
0.322	0.318	N	30.173	9.865	1.082	0.000	41.120	59.766	-18.646
0.522	0.522	N	32.772	9.869	0.415	0.000		56.000	-12.944
0.522		L1	32.185	9.869	0.000	0.424		56.000	-13.522
14.154		N	18.146	9.965	0.686	0.000	28.796	60.000	-31.204
14.154		L1	21.350	9.965	0.000	0.737	32.052	60.000	-27.948
14.214		N	18.821	9.965	0.690	0.000		60.000	-30.524
14.214		L1	22.179	9.965	0.000	0.741	32.885	60.000	-27.115
14.274		N	18.758	9.964	0.694	0.000		60.000	-30.584
15.618		L1	24.343	9.944	0.000	0.737		60.000	-24.976
16.170	16.168	N	24.912	9.931	0.690	0.000		60.000	-24.466
16.230	16.229	N	25.654	9.930	0.688	0.000		60.000	-23.728
16.230		L1	27.228	9.930	0.000	0.686		60.000	-22.156
20.382		L1	30.631	9.868	0.000	0.415		60.000	-19.085
20.810	20.811	N	30.532	9.866	0.580	0.000	40.979	60.000	-19.021

Table 64: 40 MHz, 120 V AC / 60 Hz, Mid channel: Quasi Peak Table for CE from 150 kHz to 30 MHz

Freq	Freq (Max)	Line	(AVG) Trace	Cable+Pulse Limiter	Transducer N	Transducer L	(AVG) EMI	(AVG) Limit	(AVG) Margin
(MHz)	(MHz)		(dBµV)	(dB)	(dB)	(dB)	(dBµV)	(dBµV)	(dB)
0.158	0.158	N	31.412	9.826	2.100	0.000	43.338	55.557	-12.219
0.158	0.160	L1	32.414	9.828	0.000	2.108	44.349	55.465	-11.115
0.198	0.201	N	25.562	9.860	1.752	0.000	37.173	53.576	-16.403
0.202	0.200	L1	25.147	9.860	0.000	1.777	36.784	53.599	-16.815
0.262	0.262	L1	30.001	9.863	0.000	1.381	41.245	51.365	-10.120
0.318	0.321	L1	26.462	9.865	0.000	1.080		49.668	-12.261
0.322	0.318	N	24.380	9.865	1.082	0.000		49.766	-14.439
0.522		N	31.553	9.869	0.415	0.000		46.000	-4.163
0.522	0.521	L1	30.889	9.869	0.000	0.424	41.183	46.000	-4.817
14.154	14.154	N	13.619	9.965	0.686	0.000	24.269	50.000	-25.731
14.154	14.154	L1	17.133	9.965	0.000	0.737	27.835	50.000	-22.165
14.214	14.214	N	14.095	9.965	0.690	0.000		50.000	-25.251
14.214	14.214	L1	17.561	9.965	0.000	0.741	28.266	50.000	-21.734
14.274	14.275	N	14.045	9.964	0.694	0.000	24.703	50.000	-25.297
15.618	15.619	L1	19.579	9.944	0.000	0.737		50.000	-19.740
16.170	16.168	N	19.824	9.931	0.690	0.000	30.446	50.000	-19.554
16.230	16.229	N	20.558	9.930	0.688	0.000		50.000	-18.825
16.230	16.229	L1	22.403	9.930	0.000	0.686	33.019	50.000	-16.981
20.382	20.384	L1	25.459	9.868	0.000	0.415		50.000	-14.257
20.810	20.811	N	24.731	9.866	0.580	0.000	35.178	50.000	-14.822

Table 65: 40 MHz, 120 V AC / 60 Hz, Mid channel: Average Table for CE from 150 kHz to 30 MHz





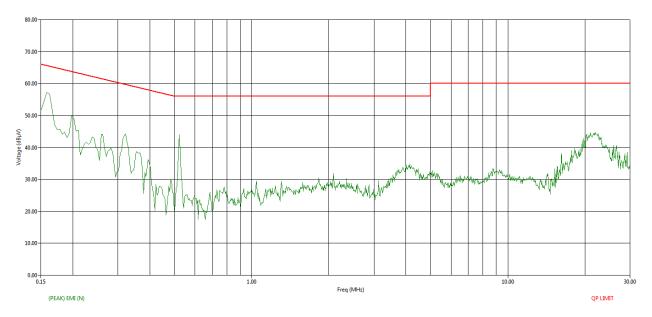


Figure 96: 40 MHz, 120 V AC / 60 Hz. High channel: Peak CE Graph-150 kHz to 30 MHz - Neutral

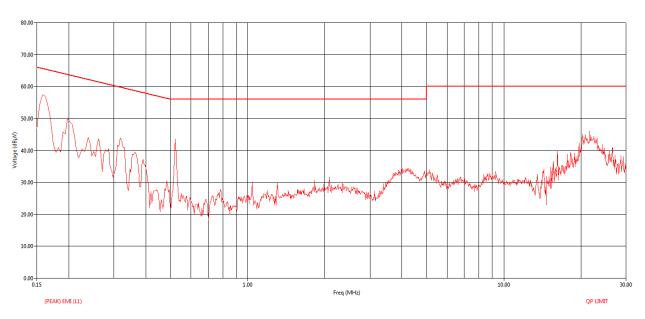


Figure 97: 40 MHz, 120 V AC / 60 Hz. High channel: Peak CE Graph-150 kHz to 30 MHz - Line





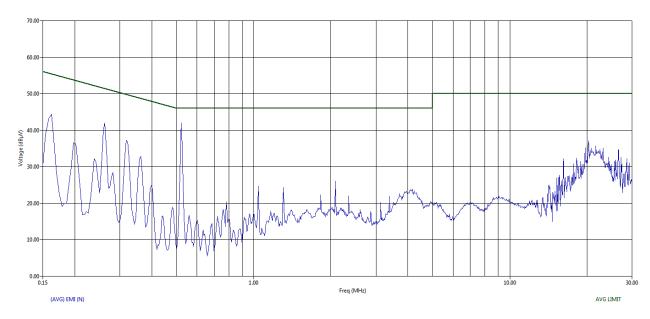


Figure 98: 40 MHz, 120 V AC / 60 Hz. High channel: Average CE Graph-150 kHz to 30 MHz - Neutral

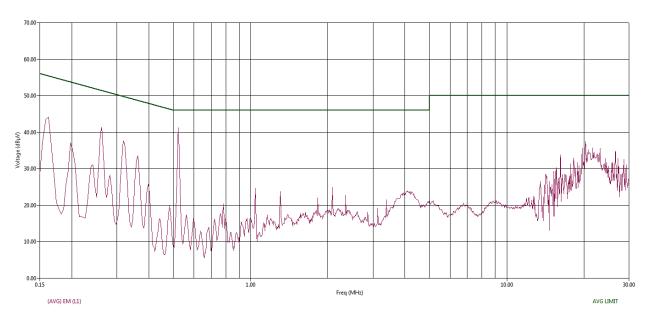


Figure 99: 40 MHz, 120 V AC / 60 Hz. High channel: Average CE Graph-150 kHz to 30 MHz - Line





Freq	Freq (Max)	Line	(QP) Trace	Cable+Pulse Limiter	Transducer N	Transducer L	(QP) EMI	(QP) Limit	(QP) Margin
(MHz)	(MHz)		(dBµV)	(dB)	(dB)	(dB)	(dBµV)	(dBµV)	(dB)
0.158	0.159	N	43.468	9.827	2.093	0.000	55.387	65.515	-10.127
0.158		L1	43.328	9.827	0.000	2.120		65.532	-10.258
0.198	0.201	L1	36.034	9.860	0.000	1.775	47.669	63.587	-15.917
0.258	0.259	N	31.452	9.863	1.378	0.000	42.693	61.450	-18.756
0.318		L1	30.827	9.865	0.000	1.090		59.724	-17.941
0.322	0.318	N	30.647	9.865	1.080	0.000	41.592	59.752	-18.160
0.362		L1	26.552	9.866	0.000	0.907		58.693	-21.367
0.394		N	16.760	9.867	0.797	0.000		58.143	-30.719
0.522		N	32.769	9.869	0.415	0.000		56.000	-12.947
0.522		L1	32.115	9.869	0.000	0.424		56.000	-13.592
16.166		N	24.616		0.690	0.000		60.000	-24.762
16.230	16.231	N	15.047	9.930	0.688	0.000	25.664	60.000	-34.336
16.230	16.237	L1	13.842	9.930	0.000	0.685		60.000	-35.544
21.666	21.663	L1	27.102	9.863	0.000	0.432	37.397	60.000	-22.603
21.926	21.923	N	28.072	9.862	0.620	0.000	38.554	60.000	-21.446
26.490	26.483	L1	19.140	9.844	0.000	0.486	29.470	60.000	-30.530
26.614	26.609	L1	19.039	9.843	0.000	0.487	29.369	60.000	-30.631
27.162	27.155	N	17.041	9.841	0.784	0.000	27.666	60.000	-32.334
27.162		L1	16.899	9.841	0.000	0.493		60.000	-32.767
29.238	29.231	N	15.580	9.833	0.840	0.000	26.253	60.000	-33.747

Table 66: 40 MHz, 120 V AC / 60 Hz, High channel: Quasi Peak Table for CE from 150 kHz to 30 MHz

Freq	Freq (Max)	Line	(AVG) Trace	Cable+Pulse Limiter	Transducer N	Transducer L	(AVG) EMI	(AVG) Limit	(AVG) Margin
(MHz)	(MHz)		(dBµV)	(dB)	(dB)	(dB)	(dBµV)	(dBµV)	(dB)
0.158	0.159	N	32.605	9.827	2.093	0.000	44.525	55.515	-10.990
0.158	0.159	L1	32.165	9.827	0.000	2.120	44.112	55.532	-11.421
0.198	0.201	L1	25.217	9.860	0.000	1.775	36.852	53.587	-16.735
0.258	0.259	N	30.978	9.863	1.378	0.000	42.219	51.450	-9.231
0.318	0.319	L1	26.657	9.865	0.000	1.090		49.724	-12.112
0.322	0.318	N	26.236	9.865	1.080			49.752	-12.571
0.362	0.362	L1	22.409	9.866	0.000	0.907		48.693	-15.510
0.394	0.386	N	4.825	9.867	0.797	0.000		48.143	-32.654
0.522	0.521	N	31.544	9.869	0.415	0.000	41.828	46.000	-4.172
0.522	0.522	L1	30.772	9.869	0.000	0.424	41.065	46.000	-4.935
16.166	16.168	N	19.465	9.931	0.690	0.000	30.087	50.000	-19.913
16.230	16.231	N	9.086	9.930	0.688	0.000	19.704	50.000	-30.296
16.230	16.237	L1	7.942	9.930	0.000	0.685	18.557	50.000	-31.443
21.666	21.663	L1	21.126	9.863	0.000	0.432	31.421	50.000	-18.579
21.926	21.923	N	22.004	9.862	0.620	0.000		50.000	-17.514
26.490	26.483	L1	13.282	9.844	0.000	0.486	23.612	50.000	-26.388
26.614	26.609	L1	13.055	9.843	0.000	0.487		50.000	-26.615
27.162	27.155	N	11.371	9.841	0.784	0.000	21.996	50.000	-28.004
27.162	27.160	L1	11.252	9.841	0.000	0.493		50.000	-28.414
29.238	29.231	N	9.722	9.833	0.840	0.000	20.395	50.000	-29.605

Table 67: 40 MHz, 120 V AC / 60 Hz, High channel: Average Table for CE from 150 kHz to 30 MHz





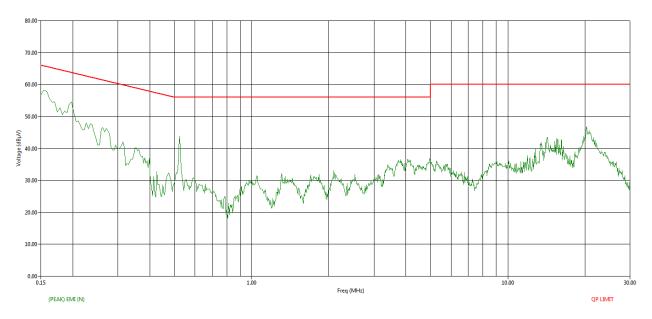


Figure 100: 10 MHz, 230 V AC / 50 Hz. Low channel: Peak CE Graph-150 kHz to 30 MHz - Neutral

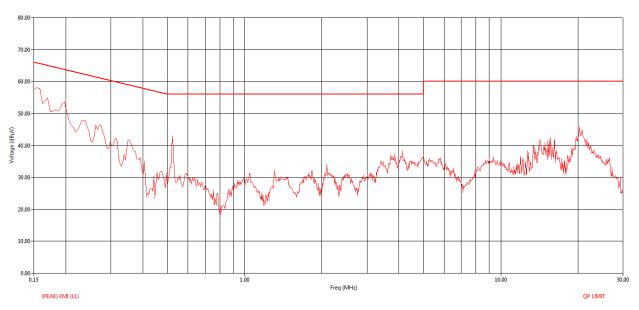


Figure 101: 10 MHz, 230 V AC / 50 Hz. Low channel: Peak CE Graph-150 kHz to 30 MHz - Line





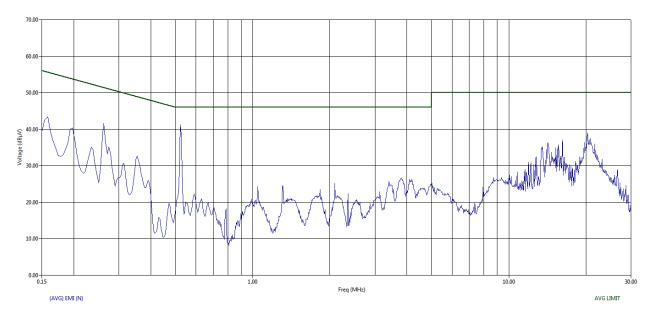


Figure 102: 10 MHz, 230 V AC / 50 Hz. Low channel: Average CE Graph-150 kHz to 30 MHz - Neutral

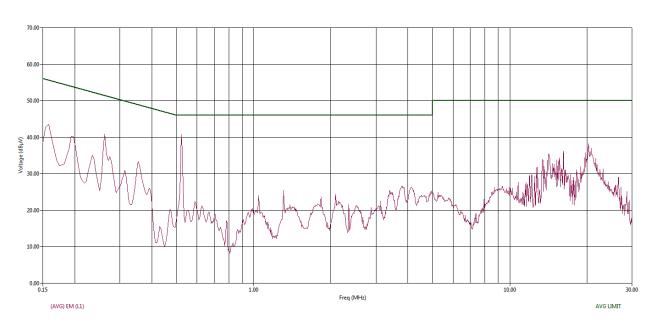


Figure 103: 10 MHz, 230 V AC / 50 Hz. Low channel: Average CE Graph-150 kHz to 30 MHz - Line





Freq	Freq (Max)	Line	(QP) Trace	Cable+Pulse Limiter	Transducer N	Transducer L	(QP) EMI	(QP) Limit	(QP) Margin
(MHz)	(MHz)		(dBµV)	(dB)	(dB)	(dB)	(dBµV)	(dBµV)	(dB)
0.154	0.158	N	44.108	9.826	2.101	0.000	56.036	65.564	-9.529
0.154	0.154	L1	42.069	9.822	0.000	2.168	54.058	65.800	-11.742
0.354	0.352	L1	28.307	9.866	0.000	0.947	39.120	58.914	-19.794
0.522	0.522	N	32.610	9.869	0.415	0.000	42.894	56.000	-13.106
0.522	0.522	L1	31.778	9.869	0.000	0.424		56.000	-13.929
13.358	13.362	N	18.358	9.970	0.632	0.000		60.000	-31.040
13.422	13.419	N	19.028	9.970	0.636	0.000		60.000	-30.366
13.482	13.481	N	19.090	9.970	0.640	0.000		60.000	-30.301
13.558	13.561	N	19.783	9.969	0.645	0.000		60.000	-29.603
14.154	14.153	L1	21.586		0.000	0.737		60.000	-27.712
14.214	14.216	N	20.394	9.965	0.690	0.000		60.000	-28.951
14.214	14.215	L1	22.093	9.965	0.000	0.741	32.799	60.000	-27.201
14.274	14.276	N	20.741	9.964	0.694	0.000		60.000	-28.600
15.434	15.437	N	22.890	9.949	0.721	0.000	33.560	60.000	-26.440
15.434	15.437	L1	23.805	9.949	0.000	0.752		60.000	-25.494
15.618	15.618	L1	24.823	9.944	0.000	0.737	35.505	60.000	-24.495
16.166	16.166	L1	25.978	9.931	0.000	0.691	36.600	60.000	-23.400
16.230	16.228	L1	26.842	9.930	0.000	0.686	37.457	60.000	-22.543
20.262	20.261	N	32.359	9.869	0.560	0.000	42.787	60.000	-17.213
20.262	20.261	L1	32.603	9.869	0.000	0.414	42.886	60.000	-17.114

Table 68:  $10\,\mathrm{MHz}$ ,  $230\,\mathrm{V}$  AC /  $50\,\mathrm{Hz}$ , Low channel: Quasi Peak Table for CE from  $150\,\mathrm{kHz}$  to  $30\,\mathrm{MHz}$ 

Freq	Freq (Max)	Line	(AVG) Trace	Cable+Pulse Limiter	Transducer N	Transducer L	(AVG) EMI	(AVG) Limit	(AVG) Margin
(MHz)	(MHz)		(dBµV)	(dB)	(dB)	(dB)	(dBµV)	(dBµV)	(dB)
0.154	0.158	N	31.641	9.826	2.101	0.000	43.569	55.564	-11.996
0.154	0.154	L1	29.434	9.822	0.000	2.168	41.424	55.800	-14.376
0.354	0.352	L1	21.928	9.866	0.000	0.947	32.741	48.914	-16.173
0.522	0.522	N	31.354	9.869	0.415	0.000	41.638	46.000	-4.362
0.522	0.522	L1	30.515	9.869	0.000	0.424	40.808	46.000	-5.192
13.358	13.362	N	12.507	9.970	0.632	0.000	23.109	50.000	-26.891
13.422	13.419	N	12.860	9.970	0.636	0.000	23.466	50.000	-26.534
13.482	13.481	N	12.932	9.970	0.640	0.000	23.542	50.000	-26.458
13.558	13.561	N	12.193	9.969	0.645	0.000	22.808	50.000	-27.192
14.154	14.153	L1	16.966	9.965	0.000	0.737	27.668	50.000	-22.332
14.214	14.216	N	14.954	9.965	0.690	0.000	25.608	50.000	-24.392
14.214	14.215	L1	17.581	9.965	0.000	0.741	28.287	50.000	-21.713
14.274	14.276	N	15.103	9.964	0.694	0.000		50.000	-24.239
15.434	15.437	N	17.312	9.949	0.721	0.000	27.982	50.000	-22.018
15.434	15.437	L1	18.870	9.949	0.000	0.752		50.000	-20.429
15.618	15.618	L1	19.442	9.944	0.000	0.737	30.123	50.000	-19.877
16.166	16.166	L1	20.398	9.931	0.000	0.691	31.020	50.000	-18.980
16.230	16.228	L1	21.460	9.930	0.000	0.686	32.076	50.000	-17.924
20.262	20.261	N	27.203	9.869	0.560	0.000	37.632	50.000	-12.368
20.262	20.261	L1	27.709	9.869	0.000	0.414	37.991	50.000	-12.009

Table 69: 10 MHz, 230 V AC / 50 Hz, Low channel: Average Table for CE from 150 kHz to 30 MHz





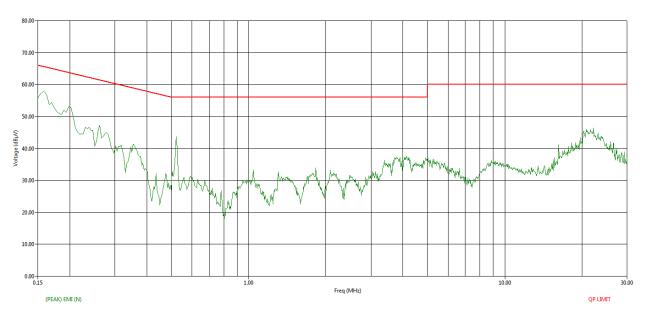


Figure 104: 10 MHz, 230 V AC / 50 Hz. Mid channel: Peak CE Graph-150 kHz to 30 MHz - Neutral

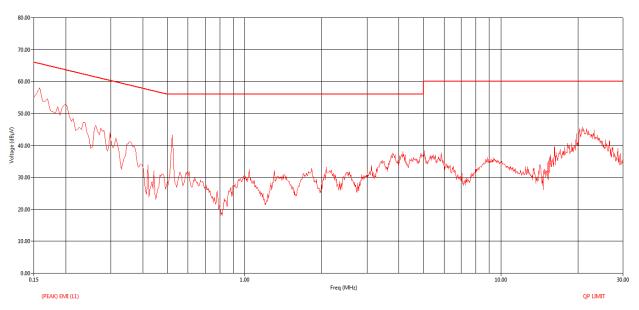


Figure 105: 10 MHz, 230 V AC / 50 Hz. Mid channel: Peak CE Graph-150 kHz to 30 MHz - Line





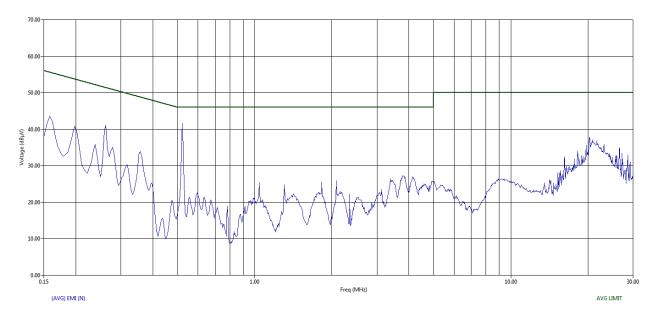


Figure 106: 10 MHz, 230 V AC / 50 Hz. Mid channel: Average CE Graph-150 kHz to 30 MHz - Neutral

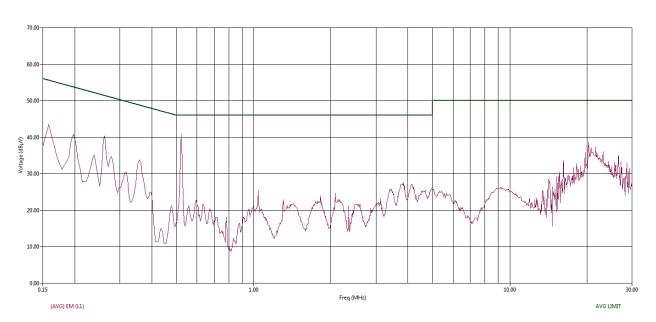


Figure 107: 10 MHz, 230 V AC / 50 Hz. Mid channel: Average CE Graph-150 kHz to 30 MHz - Line





Freq	Freq (Max)	Line	(QP) Trace	Cable+Pulse Limiter	Transducer N	Transducer L	(QP) EMI	(QP) Limit	(QP) Margin
(MHz)	(MHz)		(dBµV)	(dB)	(dB)	(dB)	(dBµV)	(dBµV)	(dB)
0.158	0.157	N	43.887	9.825	2.109	0.000	55.821	65.606	-9.785
0.158		L1	38.370	9.820	0.000	2.186		65.904	-15.528
0.354	0.363	N	27.445	9.866	0.889	0.000	38.200	58.669	-20.468
0.354	0.354	L1	28.713	9.866	0.000	0.937	39.516	58.858	-19.342
0.434	0.432	N	13.165	9.868	0.635	0.000	23.668	57.223	-33.554
0.522	0.521	N	32.770	9.869	0.415	0.000	43.054	56.000	-12.946
0.522	0.520	L1	32.145	9.869	0.000	0.424	42.439	56.000	-13.561
1.042	1.041	N	20.477	9.858	0.328	0.000	30.663	56.000	-25.337
1.306	1.303	N	20.507	9.849	0.319	0.000	30.674	56.000	-25.326
1.826	1.824	N	20.368	9.834	0.304	0.000	30.506	56.000	-25.494
2.086	2.084	N	20.970	9.834	0.300	0.000	31.104	56.000	-24.896
4.130		N	22.926	9.893	0.308	0.000	33.127	56.000	-22.873
5.026		L1	21.815	9.910	0.000	0.350	32.076	60.000	-27.924
8.850	8.858	L1	20.494	9.951	0.000	0.408	30.853	60.000	-29.147
15.618	15.619	L1	25.599	9.944	0.000	0.737	36.280	60.000	-23.720
16.170	16.168	L1	26.697	9.931	0.000	0.691	37.319	60.000	-22.681
16.230	16.230	L1	27.705	9.930	0.000	0.686	38.321	60.000	-21.679
20.810	20.809	L1	31.800	9.866	0.000	0.421	42.088	60.000	-17.912
22.214	22.216	N	30.077	9.861	0.630	0.000	40.568	60.000	-19.432
28.690	28.686	L1	24.540	9.835	0.000	0.508	34.883	60.000	-25.117

Table 70: 10 MHz, 230 V AC / 50 Hz, Mid channel: Quasi Peak Table for CE from 150 kHz to 30 MHz

Freq	Freq (Max)	Line	(AVG) Trace	Cable+Pulse Limiter	Transducer N	Transducer L	(AVG) EMI	(AVG) Limit	(AVG) Margin
(MHz)	(MHz)		(dBµV)	(dB)	(dB)	(dB)	(dBµV)	(dBµV)	(dB)
0.158	0.157	N	31.691	9.825	2.109	0.000	43.625	55.606	-11.981
0.158	0.152	L1	26.504	9.820	0.000	2.186	38.511	55.904	-17.394
0.354	0.363	N	21.281	9.866	0.889	0.000	32.036	48.669	-16.632
0.354	0.354	L1	22.392	9.866	0.000	0.937	33.195	48.858	-15.663
0.434	0.432	N	3.939	9.868	0.635	0.000	14.442	47.223	-32.780
0.522	0.521	N	31.264	9.869	0.415	0.000	41.549	46.000	-4.451
0.522	0.520	L1	30.625	9.869	0.000	0.424	40.919	46.000	-5.081
1.042	1.041	N	14.903	9.858	0.328	0.000	25.090	46.000	-20.910
1.306	1.303	N	15.610	9.849	0.319	0.000	25.777	46.000	-20.223
1.826	1.824	N	14.241	9.834	0.304	0.000	24.379	46.000	-21.621
2.086	2.084	N	15.382	9.834	0.300	0.000	25.516	46.000	-20.484
4.130	4.132	N	15.879	9.893	0.308	0.000	26.080	46.000	-19.920
5.026	5.021	L1	14.901	9.910	0.000	0.350	25.162	50.000	-24.838
8.850	8.858	L1	14.734	9.951	0.000	0.408	25.093	50.000	-24.907
15.618	15.619	L1	20.221	9,944	0.000	0.737	30.902	50.000	-19.098
16.170	16.168	L1	21.501	9.931	0.000	0.691	32.124	50.000	-17.876
16.230	16.230	L1	22.793	9.930	0.000	0.686	33.409	50.000	-16.591
20.810	20.809	L1	25.993	9.866	0.000	0.421	36.281	50.000	-13.719
22.214	22.216	N	24.162	9.861	0.630	0.000	34.653	50.000	-15.347
28,690	28.686	[1]	20.628	9.835	0.000	0.508	30.970	50.000	-19.030

Table 71: 10 MHz, 230 V AC / 50 Hz, Mid channel: Average Table for CE from 150 kHz to 30 MHz





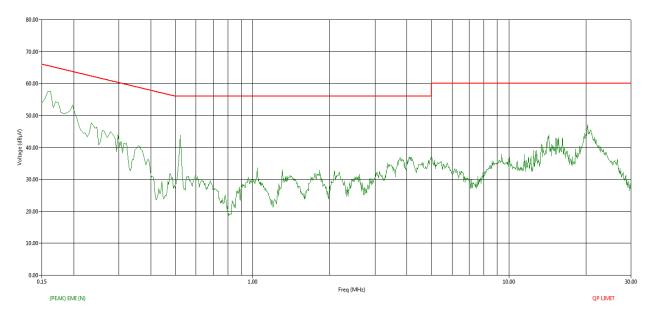


Figure 108: 10 MHz, 230 V AC / 50 Hz. High channel: Peak CE Graph-150 kHz to 30 MHz - Neutral

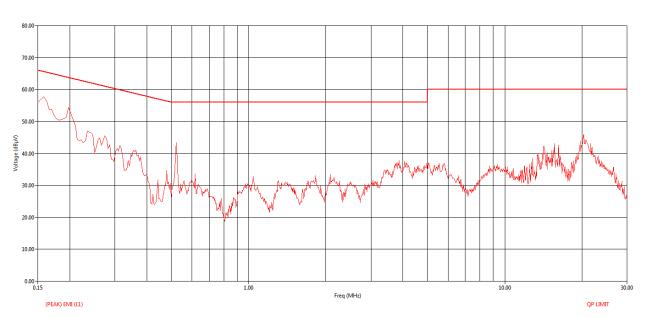


Figure 109: 10 MHz, 230 V AC / 50 Hz. High channel: Peak CE Graph-150 kHz to 30 MHz - Line





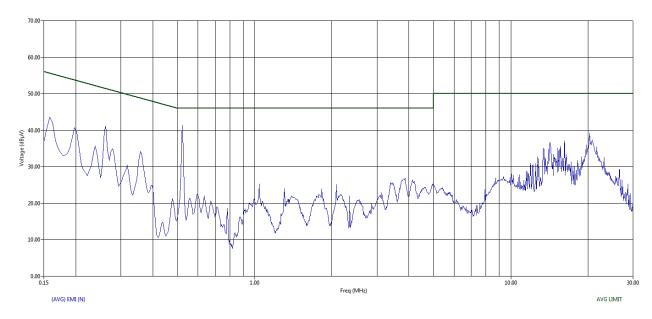


Figure 110: 10 MHz, 230 V AC / 50 Hz. High channel: Average CE Graph-150 kHz to 30 MHz - Neutral

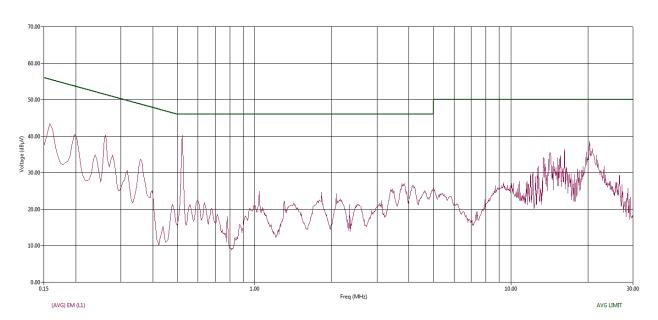


Figure 111: 10 MHz, 230 V AC / 50 Hz. High channel: Average CE Graph-150 kHz to 30 MHz - Line





Freq	Freq (Max)	Line		Cable+Pulse Limiter	Transducer N	Transducer L	(QP) EMI	(QP) Limit	(QP) Margin
(MHz)	(MHz)		(dBµV)	(dB)	(dB)	(dB)	(dBµV)	(dBµV)	(dB)
0.158	0.160	L1	43.635	9.827	0.000	2.111	55.573	65.483	-9.909
0.162	0.157	N	43.491	9.825	2.113	0.000	55.429	65.631	-10.202
0.522	0.520	N	32.752	9.869	0.415	0.000	43.036	56.000	-12.964
0.522	0.521	L1	32.144	9.869	0.000	0.424	42.438	56.000	-13.562
1.302		N	20.164	9.849	0.319	0.000		56.000	-25.669
4.074	4.081	N	22.494	9.892	0.308	0.000	32.694	56.000	-23.306
9.390	9.390	N	21.184	9.955	0.355	0.000	31.495	60.000	-28.505
13.422	13.421	N	19.290	9.970	0.636	0.000	29.896	60.000	-30.104
14.154	14.153	L1	21.815	9.965	0.000	0.737	32.517	60.000	-27.483
14.334	14.338	N	16.345	9.964	0.698	0.000	27.007	60.000	-32.993
14.702	14.709	L1	9.643	9.962	0.000	0.772	20.377	60.000	-39.623
20.262	20.270	N	25.737	9.869	0.560	0.000	36.167	60.000	-23.833
20.322	20.330	L1	25.130	9.869	0.000	0.414	35.413	60.000	-24.587

Table 72: 10 MHz, 230 V AC / 50 Hz, High channel: Quasi Peak Table for CE from 150 kHz to 30 MHz

Freq	Freq (Max)	Line	(AVG) Trace	Cable+Pulse Limiter	Transducer N	Transducer L	(AVG) EMI	(AVG) Limit	(AVG) Margin
(MHz)	(MHz)		(dBµV)	(dB)	(dB)	(dB)	(dBµV)	(dBµV)	(dB)
0.158	0.160	L1	31.012	9.827	0.000	2.111	42.950	55.483	-12.532
0.162	0.157	N	31.171	9.825	2.113	0.000	43.109	55.631	-12.522
0.522	0.520	N	31.240	9.869	0.415	0.000	41.524	46.000	-4.476
0.522	0.521	L1	30.588	9.869	0.000	0.424	40.882	46.000	-5.118
1.302	1.303	N	15.445	9.849	0.319	0.000	25.612	46.000	-20.388
4.074	4.081	N	14.644	9.892	0.308	0.000	24.844	46.000	-21.156
9.390	9.390	N	15.321	9.955	0.355	0.000	25.632	50.000	
13.422	13.421	N	13.261	9.970	0.636	0.000	23.866	50.000	
14.154	14.153	L1	16.928	9.965	0.000	0.737	27.630	50.000	
14.334	14.338	N	14.545	9.964	0.698	0.000	25.207	50.000	-24.793
14.702		L1	3.612	9.962	0.000	0.772		50.000	-35.654
20.262		N	22.475	9.869	0.560	0.000	32.904	50.000	
20.322	20.330	L1	20.272	9.869	0.000	0.414	30.555	50.000	-19.445

Table 73: 10 MHz, 230 V AC / 50 Hz, High channel: Average Table for CE from 150 kHz to 30 MHz





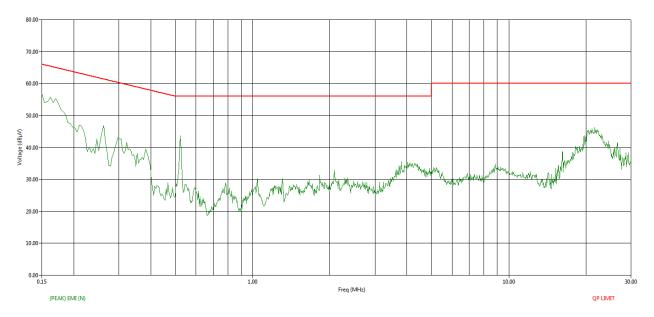


Figure 112: 10 MHz, 120 V AC / 60 Hz. Low channel: Peak CE Graph-150 kHz to 30 MHz - Neutral

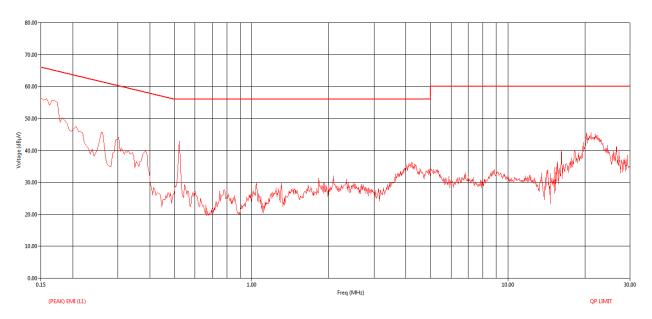


Figure 113: 10 MHz, 120 V AC / 60 Hz. Low channel: Peak CE Graph-150 kHz to 30 MHz - Line





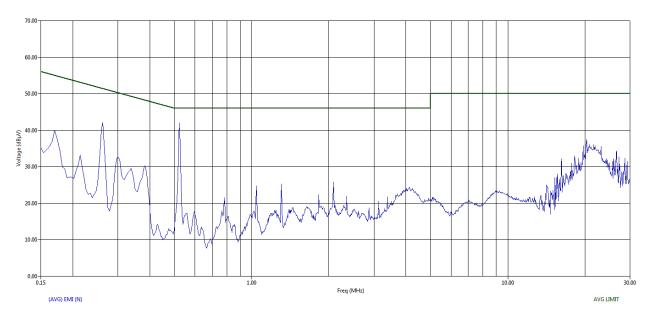


Figure 114: 10 MHz, 120 V AC / 60 Hz. Low channel: Average CE Graph-150 kHz to 30 MHz - Neutral

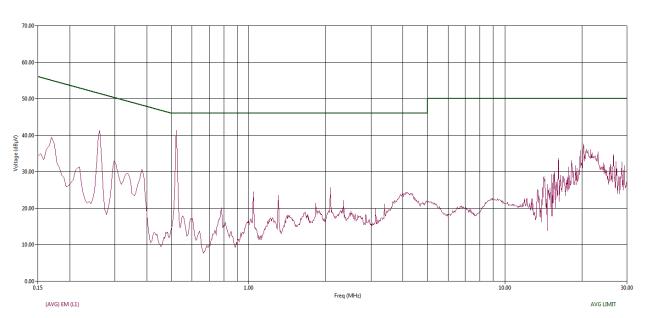


Figure 115:  $10\,\mathrm{MHz}$ ,  $120\,\mathrm{V}$  AC /  $60\,\mathrm{Hz}$ . Low channel: Average CE Graph-150 kHz to  $30\,\mathrm{MHz}$  – Line





Freq (MHz)	Freq (Max) (MHz)	Line	(QP) Trace (dBµV)	Cable+Pulse Limiter (dB)	Transducer N (dB)	Transducer L (dB)	(QP) EMI (dBµV)	(QP) Limit (dBµV)	(QP) Margin (dB)
0.150	0.152	N	39.578	9.821	2.154	0.000	51.553	65.866	-14.313
0.150	0.151	L1	40.655	9.819	0.000	2.197	52.671	65.966	-13.295
0.262	0.261	N	33.060	9.863	1.367	0.000	44.290	61.387	-17.097
0.298	0.302	N	29.514	9.864	1.156	0.000	40.534	60.186	-19.652
0.302	0.297	L1	29.322	9.864	0.000	1.195	40.381	60.314	-19.933
0.522	0.521	N	32.470	9.869	0.415	0.000	42.755	56.000	-13.245
0.522	0.522	L1	31.851	9.869	0.000	0.424	42.144	56.000	-13.856
3.794	3.787	N	17.951	9.886	0.307	0.000	28.143	56.000	-27.857
8.870	8.865	N	18.146	9.951	0.351	0.000	28.448	60.000	-31.552
15.618	15.617	L1	23.983	9.945	0.000	0.737	34.664	60.000	-25.336
16.170	16.170	L1	26.001	9.931	0.000	0.691	36.623	60.000	-23.377
16.230	16.231	N	25.326	9.930	0.688	0.000	35.944	60.000	-24.056
16.230	16.229	L1	27.318	9.930	0.000	0.686	37.933	60.000	-22.067
21.118	21.116	L1	30.197	9.865	0.000	0.425	40.486	60.000	-19.514
21.666	21.666	N	31.291	9.863	0.611	0.000	41.765	60.000	-18.235
26.490	26.491	N	27.194	9.844	0.765	0.000	37.803	60.000	-22.197
26.490	26.490	L1	27.648	9.844	0.000	0.486	37.978	60.000	-22.022
27.162	27.161	L1	25.778	9.841	0.000	0.493	36.111	60.000	-23.889
29.238	29.238	N	24.340	9.833	0.840	0.000	35.013	60.000	-24.987
29.238	29.236	L1	23.819	9.833	0.000	0.513	34.165	60.000	-25.835

Table 74: 10 MHz, 120 V AC / 60 Hz, Low channel: Quasi Peak Table for CE from 150 kHz to 30 MHz

Freq	Freq (Max)	Line	(AVG) Trace	Cable+Pulse Limiter	Transducer N	Transducer L	(AVG) EMI	(AVG) Limit	(AVG) Margin
(MHz)	(MHz)		(dBµV)	(dB)	(dB)	(dB)	(dBµV)	(dBµV)	(dB)
0.150	0.152	N	22.184	9.821	2.154	0.000	34.159	55.866	-21.707
0.150	0.151	L1	22.389	9.819	0.000	2.197	34.405	55.966	-21.561
0.262	0.261	N	31.119	9.863	1.367	0.000	42.349	51.387	-9.038
0.298	0.302	N	21.709	9.864	1.156	0.000	32.729	50.186	-17.457
0.302	0.297	L1	21.600	9.864	0.000	1.195		50.314	-17.655
0.522	0.521	N	31.511	9.869	0.415	0.000	41.795	46.000	-4.205
0.522	0.522	L1	30.856	9.869	0.000	0.424		46.000	-4.851
3.794	3.787	N	11.302	9.886	0.307	0.000		46.000	-24.505
8.870	8.865	N	11.820	9.951	0.351	0.000	22.123	50.000	-27.877
15.618	15.617	L1	18.719	9.945	0.000	0.737	29.400	50.000	-20.600
16.170	16.170	L1	21.539	9.931	0.000	0.691	32.161	50.000	-17.839
16.230	16.231	N	20.998	9.930	0.688	0.000	31.616	50.000	-18.384
16.230	16.229	L1	22.451	9.930	0.000	0.686	33.067	50.000	-16.933
21.118	21.116	L1	24.294	9.865	0.000	0.425	34.583	50.000	-15.417
21.666	21.666	N	25.406	9.863	0.611	0.000		50.000	-14.120
26.490	26.491	N	23.376	9.844	0.765	0.000	33.985	50.000	-16.015
26.490	26.490	L1	23.886	9.844	0.000	0.486		50.000	-15.784
27.162	27.161	L1	21.848	9.841	0.000	0.493	32.182	50.000	-17.818
29.238	29.238	N	20.401	9.833	0.840	0.000	31.075	50.000	-18.925
29.238	29.236	L1	19.805	9.833	0.000	0.513	30.151	50.000	-19.849

Table 75: 10 MHz, 120 V AC / 60 Hz, Low channel: Average Table for CE from 150 kHz to 30 MHz





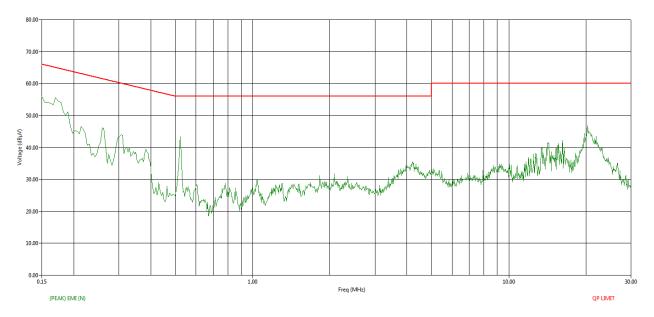


Figure 116: 10 MHz, 120 V AC / 60 Hz. Mid channel: Peak CE Graph-150 kHz to 30 MHz - Neutral

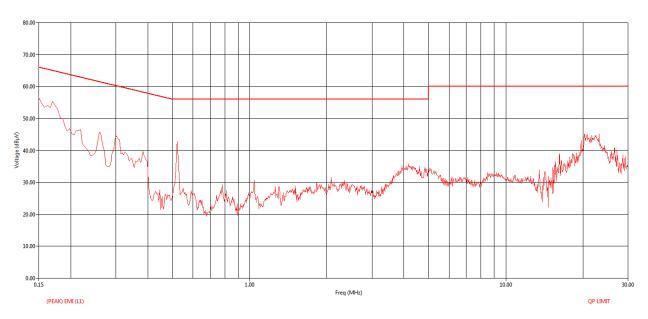


Figure 117: 10 MHz, 120 V AC / 60 Hz. Mid channel: Peak CE Graph-150 kHz to 30 MHz - Line





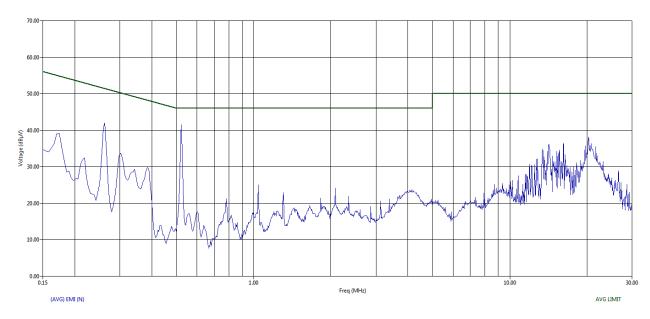


Figure 118: 10 MHz, 120 V AC / 60 Hz. Mid channel: Average CE Graph-150 kHz to 30 MHz - Neutral

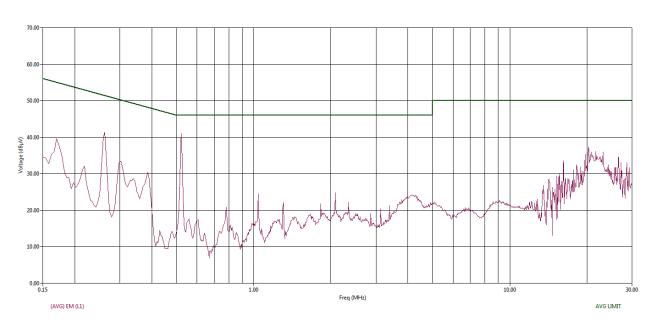


Figure 119: 10 MHz, 120 V AC / 60 Hz. Mid channel: Average CE Graph-150 kHz to 30 MHz - Line





Freq (MHz)	Freq (Max) (MHz)	Line	(QP) Trace (dBµV)	Cable+Pulse Limiter (dB)	Transducer N (dB)	Transducer L (dB)	(QP) EMI (dBµV)	(QP) Limit (dBµV)	(QP) Margin (dB)
0.150	0.150	N	40.765		2.176	0.000	52,760	65,988	-13.228
0.150	0.151	L1	40.813	9.819	0.000	2.197	52.828	65.964	-13.136
0.258	0.259	N	33.568	9.863	1.378	0.000	44.808	61.447	-16.639
0.302	0.301	L1	30.073	9.864	0.000	1.177	41.114	60.213	-19.099
0.306	0.304	N	29.697	9.865	1.146	0.000	40.708	60.130	-19.422
0.522	0.520	N	32.522	9.869	0.415	0.000	42.807	56.000	-13.193
0.522	0.521	L1	32.063	9.869	0.000	0.424	42.357	56.000	-13.643
14.154	14.154	N	18.408	9.965	0.686	0.000	29.059	60.000	-30.941
14.214	14.215	N	19.039	9.965	0.690	0.000	29.693	60.000	-30.307
14.274	14.274	N	18.484	9.964	0.693	0.000	29.142	60.000	-30.858
14.334	14.337	N	18.598	9.964	0.698	0.000	29.260	60.000	-30.740
16.170	16.168	L1	26.180	9.931	0.000	0.691	36.802	60.000	-23.198
16.230	16.228	N	25,346	9.930	0.688	0.000	35.964	60.000	-24.036
16.230	16.230	L1	27.276	9.930	0.000	0.686	37.892	60.000	-22.108
20.262	20.260	N	32.019	9.869	0.560	0.000	42.448	60.000	-17.552
23.130	23.132	L1	30.513	9.857	0.000	0.449	40.820	60.000	-19.180
26.614	26.611	L1	27.495	9.843	0.000	0.487	37.826	60.000	-22.174
27.162	27.161	L1	25.843	9.841	0.000	0.493	36.177	60.000	-23.823
28.690	28.689	L1	25.299	9.835	0.000	0.508	35.641	60.000	-24.359
29.238	29.238	L1	24.907	9.833	0.000	0.513	35.253	60.000	-24.747

Table 76:  $10\,\mathrm{MHz}$ ,  $120\,\mathrm{V}$  AC /  $60\,\mathrm{Hz}$ , Mid channel: Quasi Peak Table for CE from  $150\,\mathrm{kHz}$  to  $30\,\mathrm{MHz}$ 

Freq	Freq (Max)	Line	(AVG) Trace	Cable+Pulse Limiter	Transducer N	Transducer L	(AVG) EMI	(AVG) Limit	(AVG) Margin
(MHz)	(MHz)		(dBµV)	(dB)	(dB)	(dB)	(dBµV)	(dBµV)	(dB)
0.150	0.150	N	22.532	9.819	2.176	0.000	34.526	55.988	-21.462
0.150	0.151	L1	22.352	9.819	0.000	2.197	34.367	55.964	-21.597
0.258	0.259	N	31.291	9.863	1.378	0.000	42.532	51.447	-8.916
0.302	0.301	L1	22.769	9.864	0.000	1.177	33.810	50.213	-16.403
0.306	0.304	N	22.148		1.146	0.000		50.130	-16.971
0.522	0.520	N	31.518	9.869	0.415	0.000	41.802	46.000	-4.198
0.522	0.521	L1	31.021	9.869	0.000	0.424	41.314	46.000	-4.686
14.154	14.154	N	13.795	9.965	0.686	0.000	24.446	50.000	-25.554
14.214	14.215	N	14.381	9.965	0.690	0.000	25.036	50.000	-24.964
14.274	14.274	N	13.130	9.964	0.693	0.000	23.788	50.000	-26.212
14.334	14.337	N	13.666	9.964	0.698	0.000	24.328	50.000	-25.672
16.170	16.168	L1	21.151	9.931	0.000	0.691	31.774	50.000	-18.226
16.230	16.228	N	19.959	9.930	0.688	0.000		50.000	-19.424
16.230	16.230	L1	22.871	9.930	0.000	0.686	33.487	50.000	-16.513
20.262	20.260	N	26.581	9.869	0.560	0.000		50.000	-12.991
23.130	23.132	L1	25.463	9.857	0.000	0.449	35.769	50.000	-14.231
26.614	26.611	L1	23.518	9.843	0.000	0.487		50.000	-16.151
27.162	27.161	L1	22.092	9.841	0.000	0.493	32.426	50.000	-17.574
28.690	28.689	L1	22.181	9.835	0.000	0.508	32.523	50.000	-17.477
29.238	29.238	L1	21.520	9.833	0.000	0.513	31.866	50.000	-18.134

Table 77: 10 MHz, 120 V AC / 60 Hz, Mid channel: Average Table for CE from 150 kHz to 30 MHz





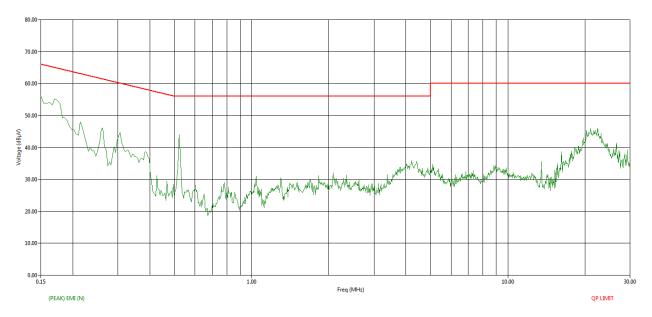


Figure 120: 10 MHz, 120 V AC / 60 Hz. High channel: Peak CE Graph-150 kHz to 30 MHz - Neutral

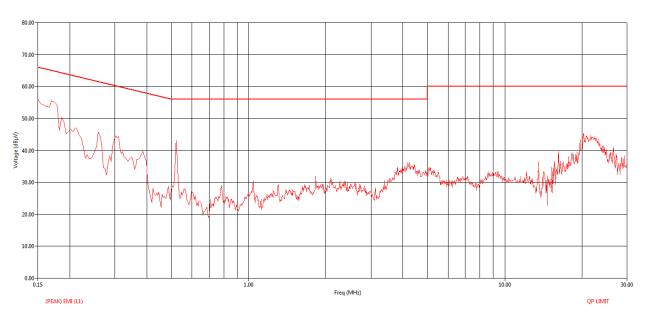


Figure 121: 10 MHz, 120 V AC / 60 Hz. High channel: Peak CE Graph-150 kHz to 30 MHz – Line





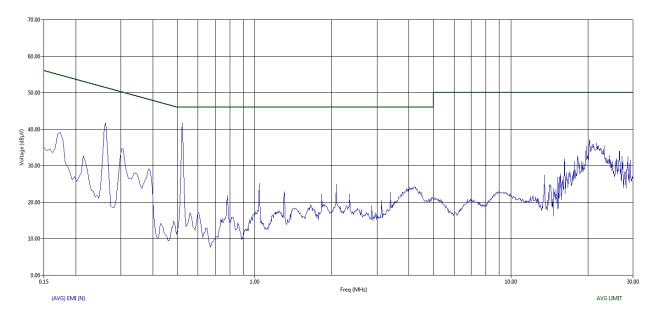


Figure 122: 10 MHz, 120 V AC / 60 Hz. High channel: Average CE Graph-150 kHz to 30 MHz - Neutral

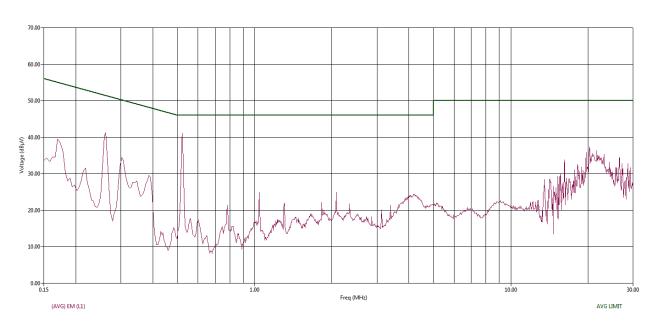


Figure 123: 10 MHz, 120 V AC / 60 Hz. High channel: Average CE Graph-150 kHz to 30 MHz - Line





Freq	Freq (Max)	Line	(QP) Trace	Cable+Pulse Limiter	Transducer N	Transducer L	(QP) EMI	(QP) Limit	(QP) Margin
(MHz)	(MHz)		(dBµV)	(dB)	(dB)	(dB)	(dBµV)	(dBµV)	(dB)
0.150	0.151	N	40.814	9.819	2.173	0.000	52.806	65.969	-13.163
0.150	0.152	L1	40.310	9.821	0.000	2.180	52.310	65.869	-13.559
0.258	0.260	L1	33.364		0.000	1.394	44.620	61.436	-16.816
0.262	0.260	N	33.778		1.373	0.000	45.014	61.422	-16.408
0.302	0.308	L1	29.324	9.865	0.000	1.144	40.332	60.026	-19.694
0.306	0.308	N	29.386	9.865	1.128	0.000	40.379	60.028	-19.649
0.522	0.521	N	32.594	9.869	0.415	0.000	42.878	56.000	-13.122
0.522	0.520	L1	31.910	9.869	0.000	0.424	42.204	56.000	-13.796
19.710	19.711	L1	30.198	9.873	0.000	0.429	40.500	60.000	-19.500
20.262	20.258	L1	31.197	9.869	0.000	0.413	41.479	60.000	-18.521
21.054	21.055	N	30.295	9.865	0.589	0.000	40.750	60.000	-19.250
26.490	26.488	N	26.860	9.844	0.765	0.000	37.469	60.000	-22.531

Table 78: 10 MHz, 120 V AC / 60 Hz, High channel: Quasi Peak Table for CE from 150 kHz to 30 MHz

Freq	Freq (Max)	Line	(AVG) Trace	Cable+Pulse Limiter	Transducer N	Transducer L	(AVG) EMI	(AVG) Limit	(AVG) Margin
(MHz)	(MHz)		(dBµV)	(dB)	(dB)	(dB)	(dBµV)	(dBµV)	(dB)
0.150	0.151	N	22.426	9.819	2.173	0.000	34.418	55.969	-21.552
0.150	0.152	L1	22.209	9.821	0.000	2.180	34.210	55.869	-21.659
0.258	0.260	L1	30.892	9.863	0.000	1.394	42.149	51.436	-9.287
0.262	0.260	N	31.509	9.863	1.373	0.000	42.745	51.422	-8.677
0.302	0.308	L1	21.905	9.865	0.000	1.144	32.914	50.026	-17.112
0.306	0.308	N	21.941	9.865	1.128	0.000	32.934	50.028	-17.094
0.522	0.521	N	31.569	9.869	0.415	0.000	41.853	46.000	-4.147
0.522	0.520	L1	30.811	9.869	0.000	0.424	41.104	46.000	-4.896
19.710	19.711	L1	25.398	9.873	0.000	0.429	35.700	50.000	-14.300
20.262	20.258	L1	26.054	9.869	0.000	0.413	36.336	50.000	-13.664
21.054	21.055	N	24.478	9.865	0.589	0.000	34.932	50.000	-15.068
26.490	26.488	N	22.535	9.844	0.765	0.000	33.143	50.000	-16.857

Table 79: 10 MHz, 120 V AC / 60 Hz, High channel: Average Table for CE from 150 kHz to 30 MHz

#### Note:

(QP) EMI  $(dB\mu V) = (QP)$  Trace  $(dB\mu V) + Transducer$   $(dB) + \{Cable + Pulse \ limiter\}$  (dB) QP Margin QPL (dB) = (QP) EMI  $(dB\mu V) - (QP)$  Limit  $(dB\mu V)$  (AVG) EMI  $(dB\mu V) = (AVG)$  Trace  $(dB\mu V) + Transducer$   $(dB) + \{Cable + Pulse \ limiter\}$  (dB) AVG Margin AVL (dB) = (AVG) EMI  $(dB\mu V) - (AVG)$  Limit  $(dB\mu V)$ 

### **5.3.2.6 RESULT**

Conducted Emission from the EUT was within the specified limits.





## ANNEXURE I: EUT SOFTWARE SETTINGS

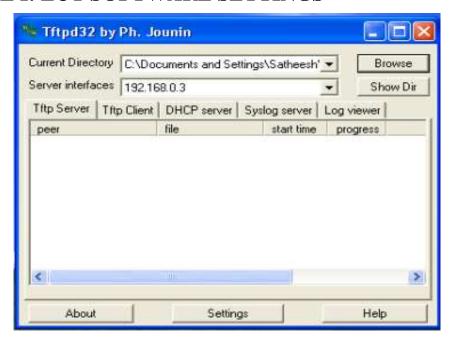


Figure 124: tftpd32 application screenshot



Figure 125: tftpd32 application initialization root\_screenshot





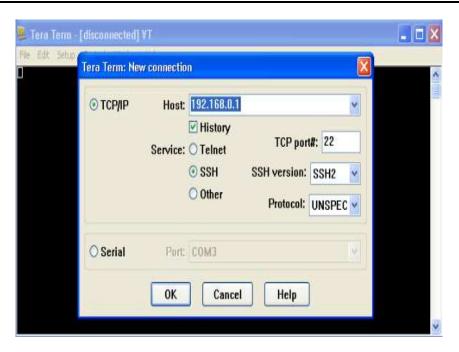


Figure 126: Tera term application screenshot

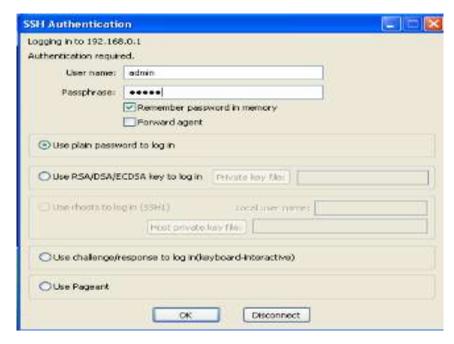


Figure 127: Tera term application Login screenshot





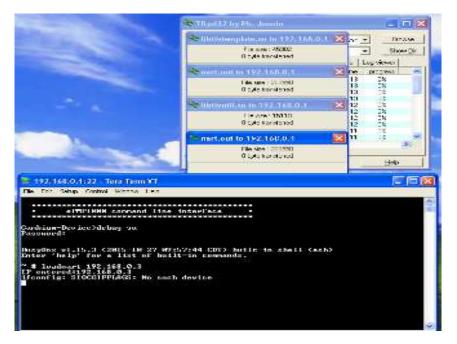


Figure 128: Initializing EUT screenshot

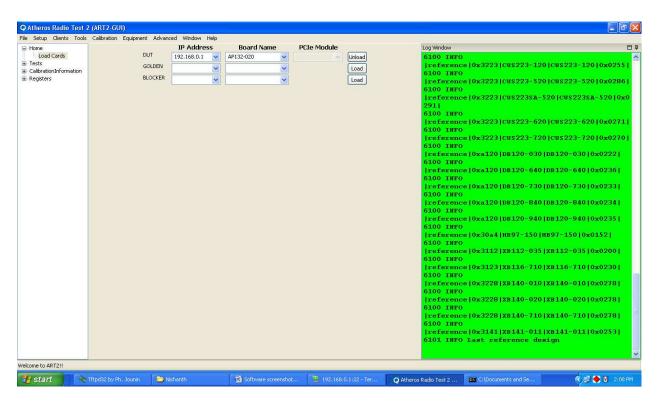


Figure 129: Atheros Radio Test GUI screenshot-1





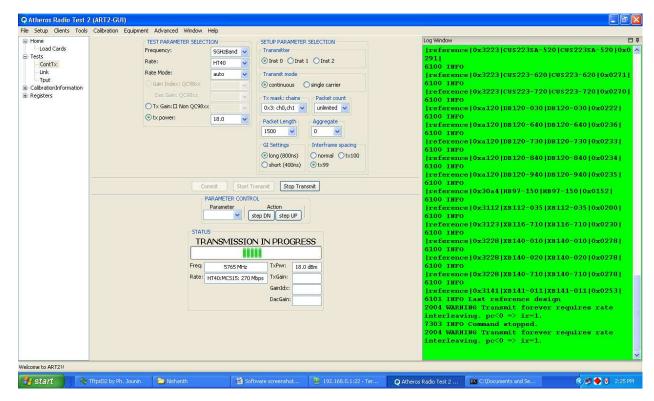


Figure 130: Atheros Radio Test GUI screenshot -2





# **ANNEXURE II: ACRONYMS**

dΒμV	Decibel in micro Volt					
dBm	Decibel in milli Watt					
EUT	Equipment Under Test					
FCC	Federal Communications Commission					
GHz	Giga Hertz					
kHz	Kilo Hertz					
LISN	Line Impedance Stabilization Network					
MHz	Mega Hertz					
POE	Power over Ethernet					
PSD	Power Spectral density					
QP	Quasi Peak					
RF	Radio Frequency					

### **END OF REPORT**