

ELECTROMAGNETIC TESTING SERVICES LTD

17 Jun 2011 16:39

Electric Field Radiated Emissions Test - Vertical Polarisation

EUT: ME Lighting (UK) Ltd - Sylvania ICETRON 100W
Manuf: ME Lighting (UK) Ltd - Test File Q117RV5L
Op Cond: ACTIVE
Operator: GV
Test Spec: EN55022 class B
Comment: Passed case A

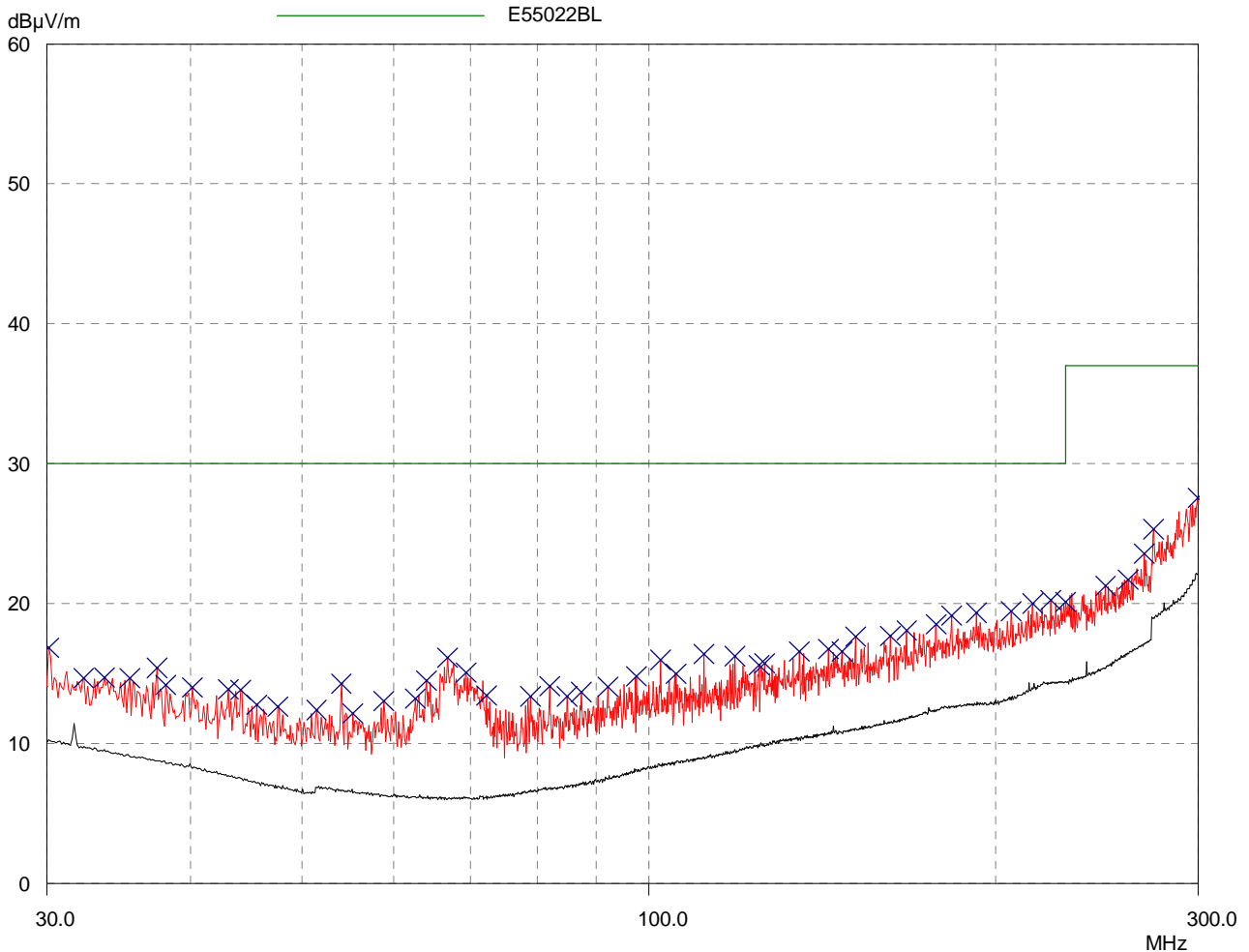
Result File: q122rv5l.dat : ME Lighting (UK) Ltd - Sylvania ICETRON 100W

Scan Settings (1 Range)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
30MHz	300MHz	110kHz	120kHz	PK	10msec	Auto	ON	60dB

Transducer	No.	Start	Stop	Name
1	16	20MHz	1000MHz	OTESVS10
	21	20MHz	300MHz	HK116_08

Prescan Measurement: Detector: X PK
Meas Time: see scan settings
Subranges: 50
Acc Margin: 25 dB



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	21	20MHz	300MHz	HK116_08

Prescan Measurement: Detector: X PK
 Meas Time: see scan settings
 Subranges: 50
 Acc Margin: 25 dB

Peak Search Results

Frequency MHz	PK Level dBµV/m	PK Limit dBµV/m	PK Delta dB	Ref. Offset dB
299.61	27.56	37.00	9.44	-5.48
274.09	25.31	37.00	11.69	-6.35
269.03	23.57	37.00	13.43	-6.51
260.56	21.73	37.00	15.27	-5.31
249.01	21.27	37.00	15.73	-5.93
223.16	20.26	30.00	9.74	-5.95
229.98	20.13	30.00	9.87	-5.77
215.35	20.00	30.00	10.00	-6.11
206.22	19.46	30.00	10.54	-6.44
192.47	19.35	30.00	10.65	-6.62
183.12	19.13	30.00	10.87	-6.46
177.51	18.51	30.00	11.49	-6.19
167.28	18.07	30.00	11.93	-6.32
162.0	17.69	30.00	12.31	-6.18
151.22	17.64	30.00	12.36	-6.58
30.11	16.86	30.00	13.14	-6.60
143.08	16.75	30.00	13.25	-6.07
147.04	16.59	30.00	13.41	-5.83
135.05	16.57	30.00	13.43	-6.15
111.62	16.40	30.00	13.60	-7.39
118.66	16.24	30.00	13.76	-6.87
66.85	16.15	30.00	13.85	-10.11
102.27	15.98	30.00	14.02	-7.52
126.03	15.73	30.00	14.27	-5.94
124.6	15.60	30.00	14.40	-5.83
37.37	15.40	30.00	14.60	-6.64
69.38	15.06	30.00	14.94	-8.91
105.57	14.99	30.00	15.01	-6.35
97.54	14.79	30.00	15.21	-6.67
33.63	14.71	30.00	15.29	-5.16
35.39	14.68	30.00	15.32	-5.63
32.31	14.67	30.00	15.33	-4.88

* limit exceeded

Peak Search Results (continued)

17 Jun 2011 16:39

Frequency MHz	PK Level dB μ V/m	PK Limit dB μ V/m	PK Delta dB	Ref. Offset dB
64.1	14.50	30.00	15.50	-8.39
54.09	14.28	30.00	15.72	-7.59
38.03	14.19	30.00	15.81	-5.59
81.92	14.08	30.00	15.92	-7.31
92.04	14.04	30.00	15.96	-6.63
40.12	14.01	30.00	15.99	-5.77
43.09	13.87	30.00	16.13	-6.18
44.19	13.82	30.00	16.18	-6.30
87.31	13.67	30.00	16.33	-6.61
72.24	13.43	30.00	16.57	-7.21
78.84	13.36	30.00	16.64	-6.70
84.89	13.36	30.00	16.64	-6.39
62.67	13.19	30.00	16.81	-6.99
58.82	13.05	30.00	16.95	-6.76
45.62	12.78	30.00	17.22	-5.63
47.6	12.65	30.00	17.35	-5.71
51.45	12.39	30.00	17.61	-5.53
55.3	12.15	30.00	17.85	-5.68

* limit exceeded

Mains Power Conducted Emissions

EUT: ME Lighting (UK) Ltd - SYLVANIA ICETRON 100 W
 Manuf: ME Lighting (UK) Ltd
 Op Cond: Active
 Operator: PV
 Test Spec: EN55015:2006 + A2 2009 - Live port
 Comment: Passed case A

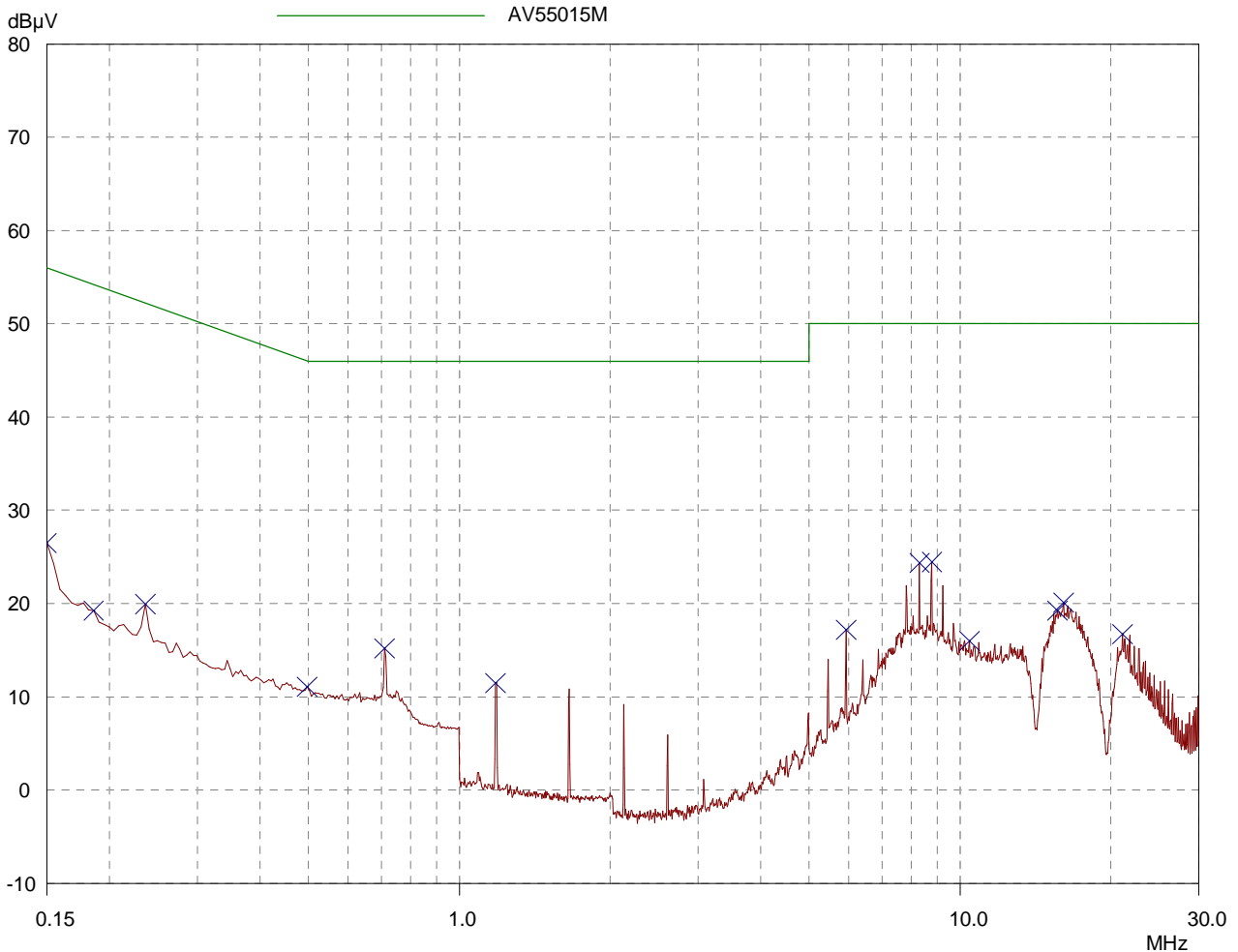
Result File: q122cal5.dat : ME Lighting (UK) Ltd - SYLVANIA ICETRON 100 W

Scan Settings (1 Range)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	OpRge
150kHz	30MHz	4.5kHz	10kHz	AV	10msec	Auto	60dB

Transducer	No.	Start	Stop	Name
1	10	9kHz	30MHz	LISN109
	11	9kHz	30MHz	S9CBCE09

Prescan Measurement: Detector: X AV
 Meas Time: see scan settings
 Subranges: 25
 Acc Margin: 35 dB



Mains Power Conducted Emissions

EUT: ME Lighting (UK) Ltd - SYLVANIA ICETRON 100 W
 Manuf: ME Lighting (UK) Ltd
 Op Cond: Active
 Operator: PV
 Test Spec: EN55015:2006 + A2 2009 - Live port
 Comment: Passed case A

Result File: q122cal5.dat : ME Lighting (UK) Ltd - SYLVANIA ICETRON 100 W

Scan Settings (1 Range)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	OpRge
150kHz	30MHz	4.5kHz	10kHz	AV	10msec	Auto	60dB

Transducer	No.	Start	Stop	Name
1	10	9kHz	30MHz	LISN109
	11	9kHz	30MHz	S9CBCE09

Prescan Measurement: Detector: X AV
 Meas Time: see scan settings
 Subranges: 25
 Acc Margin: 35 dB

Peak Search Results

Frequency MHz	AV Level dBµV	AV Limit dBµV	AV Delta dB	Phase	PE
0.15	26.51	56.00	29.49	L1	gnd
8.7585	24.45	50.00	25.55	L1	gnd
8.286	24.35	50.00	25.65	L1	gnd
16.08899	20.09	50.00	29.91	L1	gnd
0.2355	19.94	52.25	32.31	L1	gnd
15.639	19.26	50.00	30.74	L1	gnd
0.186	19.24	54.21	34.97	L1	gnd
5.9145	17.20	50.00	32.80	L1	gnd
21.075	16.73	50.00	33.27	L1	gnd
10.4235	16.00	50.00	34.00	L1	gnd
30.0	15.79	50.00	34.21	L1	gnd
0.708	15.22	46.00	30.78	L1	gnd
1.1805	11.48	46.00	34.52	L1	gnd
0.4965	11.09	46.06	34.97	L1	gnd

* limit exceeded

Indicated Phase/PE shows Configuration of max. Emission

Mains Power Conducted Emissions

EUT: ME Lighting (UK) Ltd - SYLVANIA ICETRON 100 W
 Manuf: ME Lighting (UK) Ltd -
 Op Cond: Active
 Operator: PV
 Test Spec: EN55015:2009 + A2 2009 - Neutral port
 Comment: Passed case A

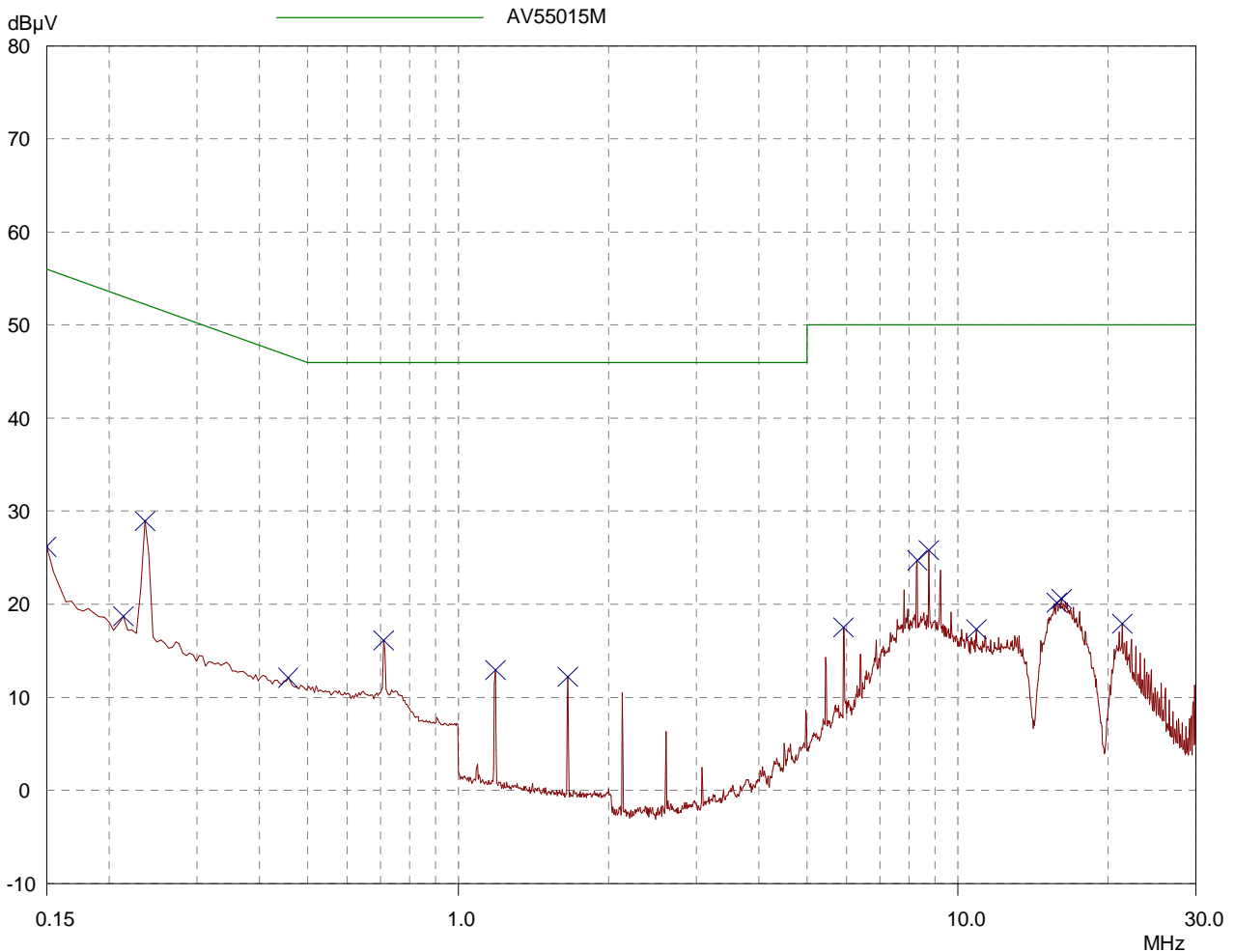
Result File: q122can5.dat : ME Lighting (UK) Ltd - SYLVANIA ICETRON 100 W

Scan Settings (1 Range)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	OpRge
150kHz	30MHz	4.5kHz	10kHz	AV	10msec	Auto	60dB

Transducer	No.	Start	Stop	Name
1	10	9kHz	30MHz	LISN109
	11	9kHz	30MHz	S9CBCE09

Prescan Measurement: Detector: X AV
 Meas Time: see scan settings
 Subranges: 25
 Acc Margin: 35 dB



Mains Power Conducted Emissions

EUT: ME Lighting (UK) Ltd - SYLVANIA ICETRON 100 W
 Manuf: ME Lighting (UK) Ltd -
 Op Cond: Active
 Operator: PV
 Test Spec: EN55015:2009 + A2 2009 - Neutral port
 Comment: Passed case A

Result File: q122can5.dat : ME Lighting (UK) Ltd - SYLVANIA ICETRON 100 W

Scan Settings (1 Range)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	OpRge
150kHz	30MHz	4.5kHz	10kHz	AV	10msec	Auto	60dB

Transducer	No.	Start	Stop	Name
1	10	9kHz	30MHz	LISN109
	11	9kHz	30MHz	S9CBCE09

Prescan Measurement: Detector: X AV
 Meas Time: see scan settings
 Subranges: 25
 Acc Margin: 35 dB

Peak Search Results

Frequency MHz	AV Level dBµV	AV Limit dBµV	AV Delta dB	Phase	PE
0.2355	28.95	52.25	23.30	N	gnd
0.15	26.18	56.00	29.82	N	gnd
8.745	25.83	50.00	24.17	N	gnd
8.27699	24.72	50.00	25.28	N	gnd
16.152	20.57	50.00	29.43	N	gnd
15.765	20.16	50.00	29.84	N	gnd
30.0	19.05	50.00	30.95	N	gnd
0.213	18.70	53.09	34.39	N	gnd
21.345	17.90	50.00	32.10	N	gnd
5.91	17.54	50.00	32.46	N	gnd
10.8825	17.30	50.00	32.70	N	gnd
0.708	16.12	46.00	29.88	N	gnd
1.185	12.94	46.00	33.06	N	gnd
1.6575	12.21	46.00	33.79	N	gnd
0.456	12.10	46.77	34.67	N	gnd

* limit exceeded

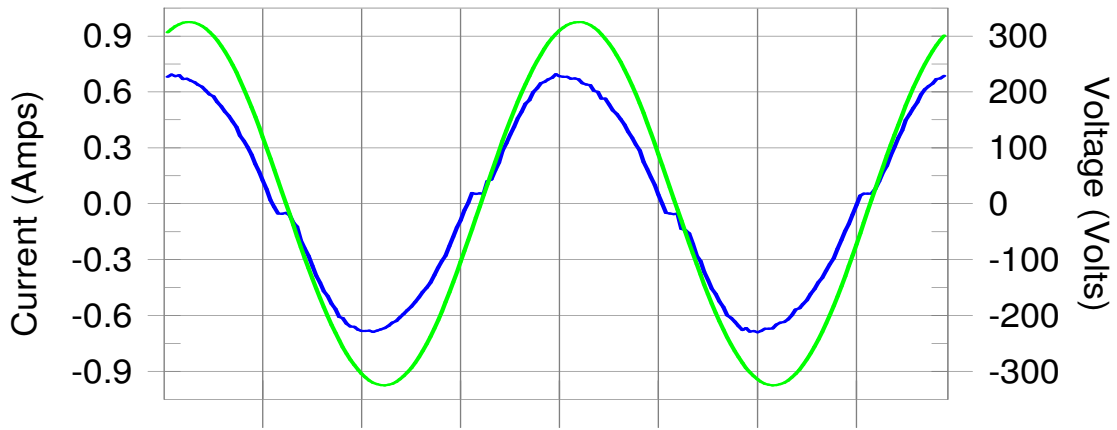
Indicated Phase/PE shows Configuration of max. Emission

Harmonics – Class-C per Ed. 3.0 (2006)(Run time)

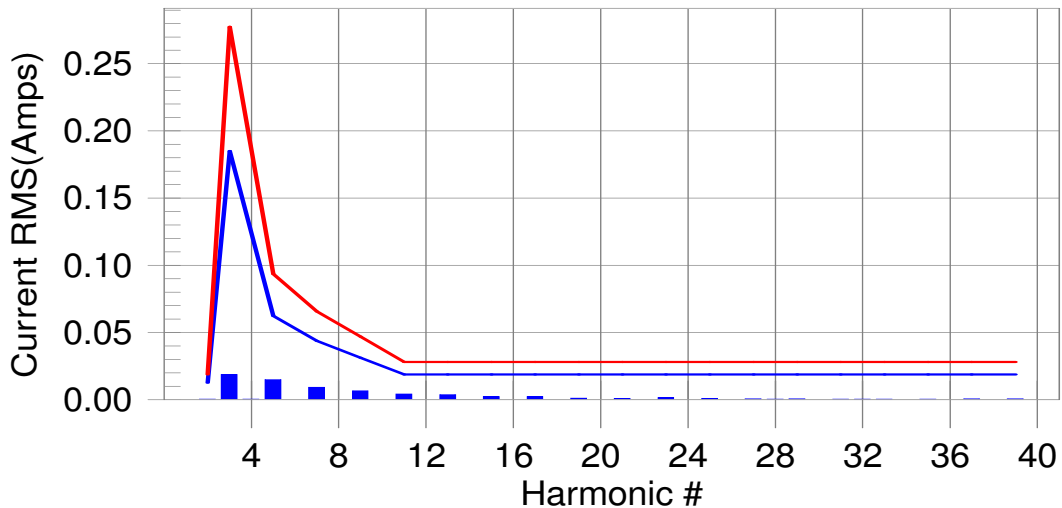
EUT: ME Lighting (UK) Ltd - SYLVANIA ICETRON 100 W Tested by: GV
Test category: Class-C per Ed. 3.0 (2006) (European limits) Test Margin: 100
Test date: 17/06/2011 Start time: 15:05:35 End time: 15:15:55
Test duration (min): 10 Data file name: H-000262.cts_data
Comment: Active
Customer: ME Lighting (UK) Ltd

Test Result: Pass Source qualification: Normal

Current & voltage waveforms



Harmonics and Class C limit line European Limits



Test result: Pass Worst harmonics H5-24.02% of 100% limit, H5-19.19% of 150% limit.

Current Test Result Summary (Run time)

EUT: ME Lighting (UK) Ltd - SYLVANIA ICETRON 100 W Tested by: GV
 Test category: Class-C per Ed. 3.0 (2006) (European limits) Test Margin: 100
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 Test duration (min): 10 Data file name: H-000262.cts_data
 Comment: Active
 Customer: ME Lighting (UK) Ltd

Test Result: Pass Source qualification: Normal
 THC(A): 0.03 I-THD(%): 6.53 POHC(A): 0.000 POHC Limit(A): 0.059
 Highest parameter values during test:

V_RMS (Volts): 230.02	Frequency(Hz): 50.00
I_Peak (Amps): 0.704	I_RMS (Amps): 0.479
I_Fund (Amps): 0.624	Crest Factor: 1.510
Power (Watts): 107.9	Power Factor: 0.988

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.000	0.012	0.0	0.001	0.019	0.00	Pass
3	0.019	0.185	10.2	0.020	0.277	7.15	Pass
4	0.000						
5	0.015	0.062	24.0	0.018	0.094	19.19	Pass
6	0.000						
7	0.009	0.044	21.3	0.011	0.066	17.28	Pass
8	0.000						
9	0.006	0.031	20.8	0.008	0.047	16.43	Pass
10	0.000						
11	0.004	0.019	0.0	0.005	0.028	0.00	Pass
12	0.000						
13	0.004	0.019	0.0	0.004	0.028	0.00	Pass
14	0.000						
15	0.002	0.019	0.0	0.003	0.028	0.00	Pass
16	0.000						
17	0.002	0.019	0.0	0.003	0.028	0.00	Pass
18	0.000						
19	0.001	0.019	0.0	0.002	0.028	0.00	Pass
20	0.000						
21	0.001	0.019	0.0	0.002	0.028	0.00	Pass
22	0.000						
23	0.002	0.019	0.0	0.002	0.028	0.00	Pass
24	0.000						
25	0.001	0.019	0.0	0.002	0.028	0.00	Pass
26	0.000						
27	0.001	0.019	0.0	0.002	0.028	0.00	Pass
28	0.000						
29	0.001	0.019	0.0	0.001	0.028	0.00	Pass
30	0.000						
31	0.000	0.019	0.0	0.001	0.028	0.00	Pass
32	0.000						
33	0.000	0.019	0.0	0.001	0.028	0.00	Pass
34	0.000						
35	0.000	0.019	0.0	0.001	0.028	0.00	Pass
36	0.000						
37	0.001	0.019	0.0	0.001	0.028	0.00	Pass
38	0.000						
39	0.001	0.019	0.0	0.001	0.028	0.00	Pass
40	0.000						

Note: Dynamic limits were applied for this test. The highest harmonics values in the above table may not occur at the same window as the maximum harmonics/limit ratio.

Voltage Source Verification Data (Run time)

EUT: ME Lighting (UK) Ltd - SYLVANIA ICETRON 100 W Tested by: GV
 Test category: Class-C per Ed. 3.0 (2006) (European limits) Test Margin: 100
 Test date: 17/06/2011 Start time: 15:05:35 End time: 15:15:55
 Test duration (min): 10 Data file name: H-000262.cts_data
 Comment: Active
 Customer: ME Lighting (UK) Ltd

Test Result: Pass Source qualification: Normal

Highest parameter values during test:

Voltage (Vrms): 230.02	Frequency(Hz): 50.00
I_Peak (Amps): 0.704	I_RMS (Amps): 0.479
I_Fund (Amps): 0.624	Crest Factor: 1.510
Power (Watts): 107.9	Power Factor: 0.988

Harm#	Harmonics	V-rms	Limit V-rms	% of Limit	Status
2		0.137	0.460	29.78	OK
3		0.553	2.070	26.71	OK
4		0.034	0.460	7.38	OK
5		0.051	0.920	5.52	OK
6		0.019	0.460	4.19	OK
7		0.032	0.690	4.65	OK
8		0.018	0.460	3.99	OK
9		0.029	0.460	6.38	OK
10		0.014	0.460	3.05	OK
11		0.017	0.230	7.54	OK
12		0.009	0.230	3.96	OK
13		0.017	0.230	7.50	OK
14		0.010	0.230	4.43	OK
15		0.015	0.230	6.38	OK
16		0.016	0.230	6.88	OK
17		0.018	0.230	8.00	OK
18		0.014	0.230	6.29	OK
19		0.011	0.230	4.91	OK
20		0.018	0.230	7.64	OK
21		0.011	0.230	4.76	OK
22		0.007	0.230	3.09	OK
23		0.009	0.230	4.11	OK
24		0.004	0.230	1.82	OK
25		0.010	0.230	4.24	OK
26		0.007	0.230	3.18	OK
27		0.008	0.230	3.34	OK
28		0.005	0.230	2.08	OK
29		0.007	0.230	2.93	OK
30		0.005	0.230	2.08	OK
31		0.004	0.230	1.92	OK
32		0.004	0.230	1.92	OK
33		0.006	0.230	2.81	OK
34		0.005	0.230	2.17	OK
35		0.004	0.230	1.61	OK
36		0.003	0.230	1.21	OK
37		0.004	0.230	1.67	OK
38		0.002	0.230	0.88	OK
39		0.003	0.230	1.27	OK
40		0.010	0.230	4.56	OK

ELECTROMAGNETIC TESTING SERVICES LTD

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Electric Field Radiated Emissions Test - Horizontal Polarisation

EUT: ME Lighting (UK) Ltd - Sylvania ICETRON 100W
 Manuf: ME Lighting (UK) Ltd - Test File Q122RH5L
 Op Cond: ACTIVE
 Operator: GV
 Test Spec: EN55022 class B
 Comment: Passed case A

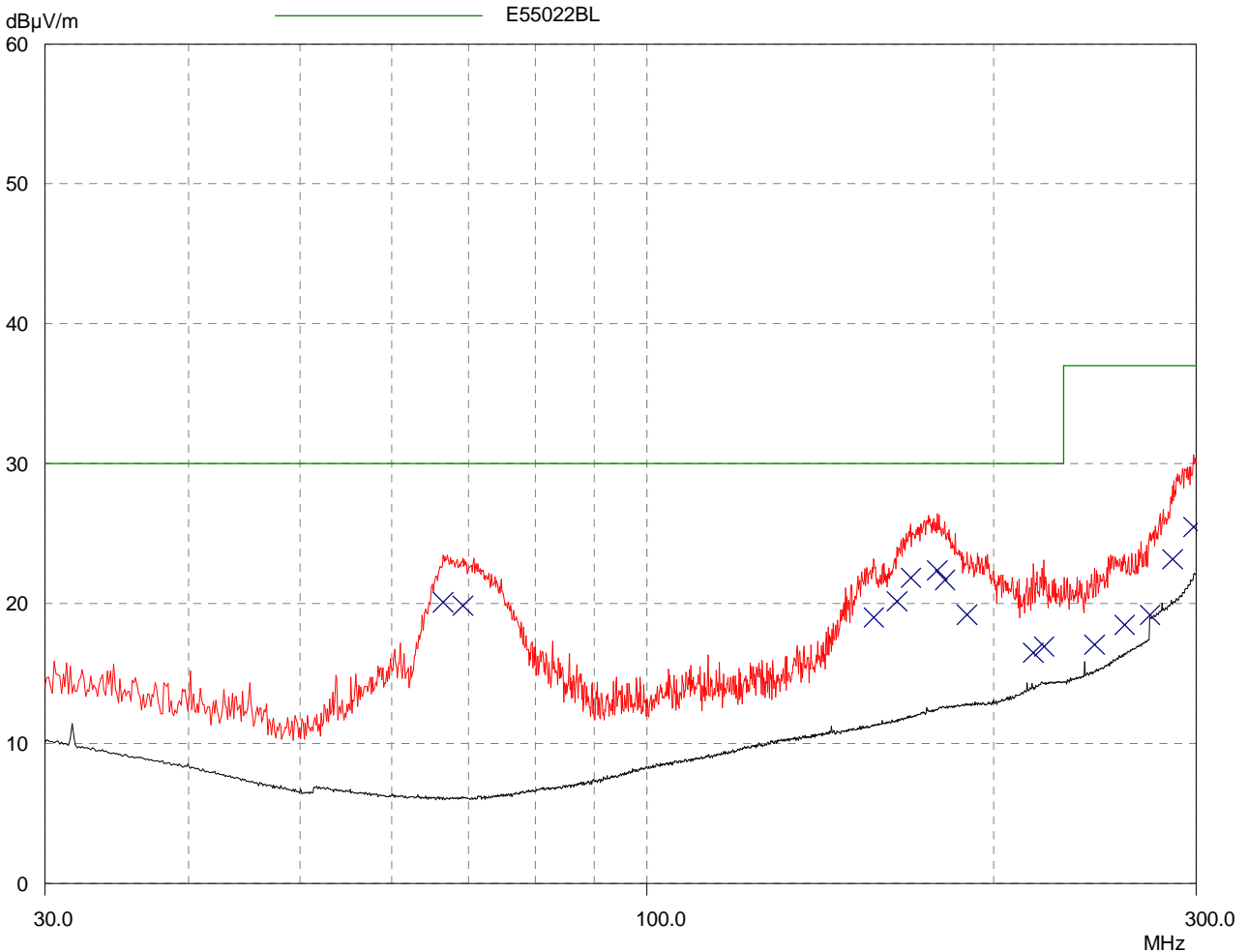
Result File: q122rh5l.dat : ME Lighting (UK) Ltd - Sylvania ICETRON 100W

Scan Settings (1 Range)

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Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
30MHz	300MHz	110kHz	120kHz	PK	20msec	Auto	ON	60dB

Transducer	No.	Start	Stop	Name
1	16	20MHz	1000MHz	OTESVS10
	21	20MHz	300MHz	HK116_08

Final Measurement: Detector: X QP
 Meas Time: 2sec
 Subranges: 50
 Acc Margin: 25 dB



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Electric Field Radiated Emissions Test - Horizontal Polarisation

EUT: ME Lighting (UK) Ltd - Sylvania ICETRON 100W
 Manuf: ME Lighting (UK) Ltd - Test File Q122RH5L
 Op Cond: ACTIVE
 Operator: GV
 Test Spec: EN55022 class B
 Comment: Passed case A

Result File: q122rh5l.dat : ME Lighting (UK) Ltd - Sylvania ICETRON 100W

Scan Settings (1 Range)

Frequencies				Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
30MHz	300MHz	110kHz	120kHz	PK	20msec	Auto	ON	60dB

Transducer	No.	Start	Stop	Name
1	16	20MHz	1000MHz	OTESVS10
	21	20MHz	300MHz	HK116_08

Final Measurement: Detector: X QP
 Meas Time: 2sec
 Subranges: 50
 Acc Margin: 25 dB

Final Measurement Results

Frequency MHz	QP Level dBµV/m	QP Limit dBµV/m	QP Delta dB	Ref. Offset dB
298.51	25.46	37.00	11.54	-3.36
286.08	23.18	37.00	13.82	-3.25
178.61	22.36	30.00	7.64	-9.92
169.37	21.84	30.00	8.16	-9.99
181.36	21.69	30.00	8.31	-9.14
164.75	20.18	30.00	9.82	-8.63
66.52	20.09	30.00	9.91	-13.95
69.16	19.86	30.00	10.14	-13.77
189.5	19.21	30.00	10.79	-6.53
273.1	19.19	37.00	17.81	-1.86
157.16	19.02	30.00	10.98	-7.86
259.79	18.49	37.00	18.51	-2.05
244.61	17.07	37.00	19.93	-2.07
220.96	16.93	30.00	13.07	-2.68
216.34	16.49	30.00	13.51	-2.63

* limit exceeded