Product Service

EMC TEST REPORT

Report Number	:	**68.760.11.155.01**	Date of Issue:	04 July 2011

Model	:	**DP-M04**
Product Type	:	Auto Focus eScope
Applicant	:	Netop Industrial Company Limited
Address	:	Dapu Industrial Zone, Gangzi Village, Changping Town, 523571 Dongguan City, Guangdong Province, P.R. China
Production Facility	:	Netop Industrial Company Limited
Address	:	Dapu Industrial Zone, Gangzi Village, Changping Town, 523571 Dongguan City, Guangdong Province, P.R. China
Test Result	:	■ **Positive** ☐ **Negative**
Total pages including Appendices	:	18

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Jiangsu TÜV Product Service Ltd. – Shenzhen Branch reports apply only to the specific samples tested under stated test conditions. Construction of the actual test samples has been documented. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. The manufacturer/importer is responsible to the Competent Authorities in Europe for any modifications made to the production units which result in non-compliance to the relevant regulations. Jiangsu TÜV Product Service Ltd. – Shenzhen Branch shall have no liability for any deductions, inferences or generalizations drawn by the client or others from Jiangsu TÜV Product Service Ltd. – Shenzhen Branch issued reports.

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2 Details about the Test Laboratory

Details about the Test Laboratory

Company name: Jiangsu TÜV Product Service Ltd. – Shenzhen Branch
6th Floor, H Hall,
Century Craftwork Culture Square,
No. 4001, Fuqiang Road,
Futian District 518048,
Shenzhen,P.R.C.

Telephone: 86 755 8828 6998
Fax: 86 755 8828 5299

Company name: Waltek Services (Shenzhen) Co., Ltd.
1/F, Fukangtai Building, Baima Road,
Songgang, Baoan District
Shenzhen, Guangdong
China

Telephone: 86 755 2755 3488
Fax: 86 755 2755 3868

3 Description of the Equipment Under Test

Description of the Equipment Under Test

Product: Auto Focus eScope

Model no.: DP-M04

Options and accessories: NIL

Rating: DC 5V

Description of the EUT: NIL

Auxiliary Equipment and Cable Used during Test:

DESCRIPTION	MANUFACTURER	MODEL NO.(SHIELD)	S/N(LENGTH)
Personal Computer	Lenovo	T4900V	0100640332
LCD monitor	View Sonic	VA521	922050101551
Keyboard	Shuangfeiyan	KB-3	-
Mouse	JEEJA	M-01	-

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4 Summary of Test Standards

Test Standards	
FCC Part 15 Subpart B	PART 15 - RADIO FREQUENCY DEVICES Subpart B - Unintentional Radiators

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5 Summary of Test Results

Technical Requirements				
FCC Part 15 Subpart B				
Test Condition	Pages	Test Result		
		Pass	Fail	N/A
15.107 Conducted Emission AC Power Port	8	☒	☐	☐
15.109 Spurious radiated emissions	12	☒	☐	☐

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6 General Remarks

Remarks

This submittal(s) (test report) is intended for FCC ID: YIGDP-M04filing to comply with Section 15.107, 15.109 of the FCC Part 15, Subpart B Rules.

SUMMARY:

All tests according to the regulations cited on page 5 were

■ - Performed

☐ - **Not** Performed

The Equipment Under Test

■ - **Fulfills** the general approval requirements.

☐ - **Does not** fulfill the general approval requirements.

Sample Received Date: 21 June 2011

Testing Start Date: 22 June 2011

Testing End Date: 2 July 2011

- Jiangsu TÜV Product Service Ltd. – Shenzhen Branch –

Tested By	**2011-07-04**	**Zero Zhou**	
Test Lab Engineer	**Date**	**Name**	**Signature**
Prepared By	**2011-07-04**	**Laurent Yuan**	
Project Engineer	**Date**	**Name**	**Signature**
Reviewed By	**2011-07-04**	**Paul Yu**	
Assistant EMC Manager	**Date**		**Name**
			Signature

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7 Technical Requirement

7.1 Conducted Emission

Test Method

1 The EUT was placed on a table, which is 0.8m above ground plane
2 The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.).
3 Maximum procedure was performed to ensure EUT compliance
4 A EMI test receiver is used to test the emissions from both sides of AC line

Limit

Frequency MHz	QP Limit dBµV	AV Limit dBµV
0.150-0.500	66-56*	56-46*
0.500-5	56	46
5-30	60	50

*Decreasing linearly with logarithm of the frequency

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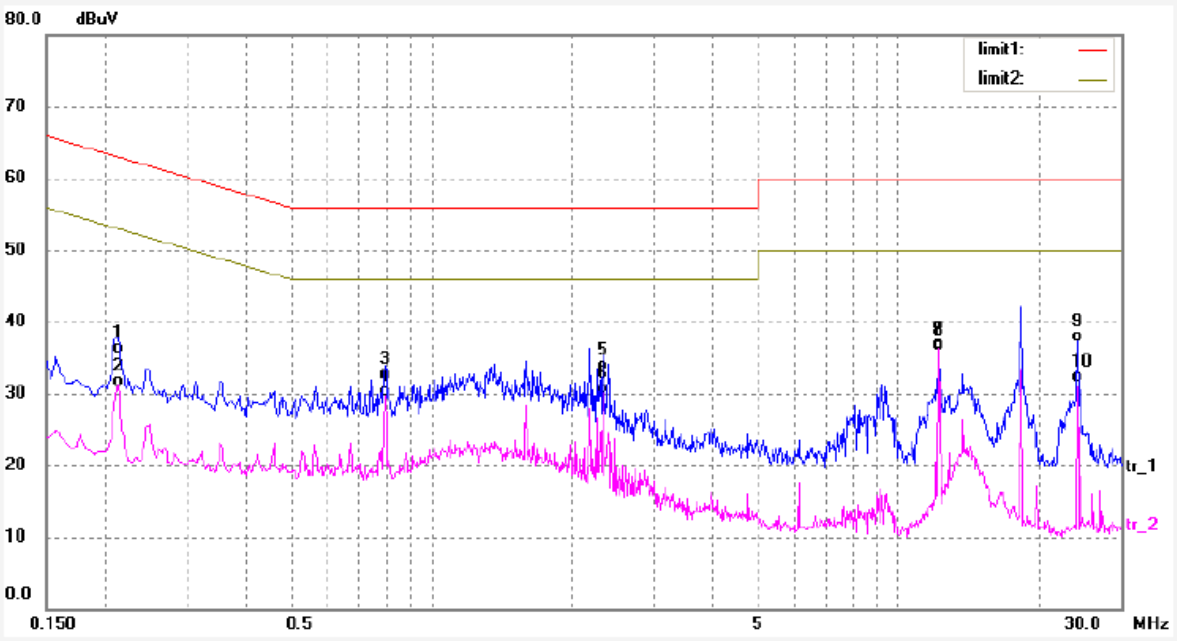
Conducted Emission

EUT: M/N: DP-M04
Op Cond: ON
Test Spec: L
Comment: AC 120V/60Hz



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.2140	24.85	10.66	35.51	63.04	-27.53	QP	
2	0.2140	20.25	10.66	30.91	53.04	-22.13	AVG	
3	0.7980	19.65	12.17	31.82	56.00	-24.18	QP	
4	0.7980	17.35	12.17	29.52	46.00	-16.48	AVG	
5	2.3380	20.90	12.26	33.16	56.00	-22.84	QP	
6	2.3380	17.63	12.26	29.89	46.00	-16.11	AVG	
7	12.2500	23.88	12.15	36.03	60.00	-23.97	QP	
8	12.2500	23.75	12.15	35.90	50.00	-14.10	AVG	
9	24.2020	24.58	12.53	37.11	60.00	-22.89	QP	
10	24.2020	18.93	12.53	31.46	50.00	-18.54	AVG	

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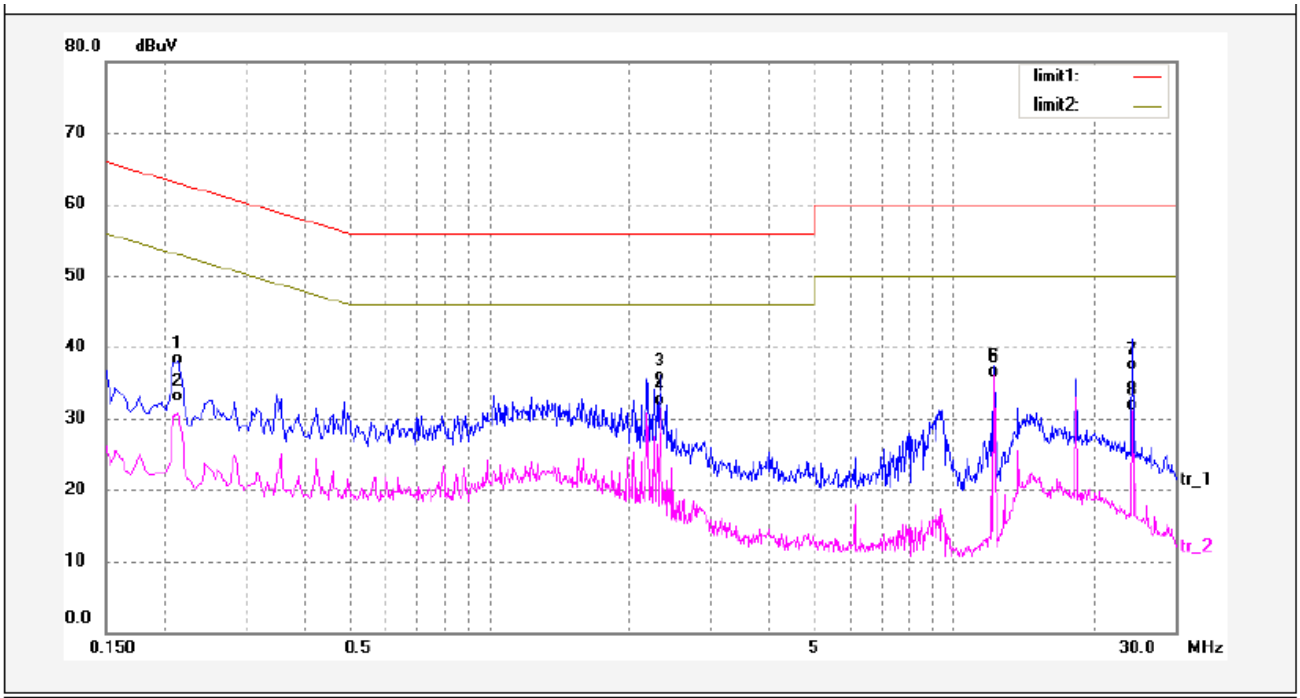
Conducted Emission

EUT: M/N: DP-M04
Op Cond: ON
Test Spec: N
Comment: AC 120V/60Hz



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.2140	26.84	10.66	37.50	63.04	-25.54	QP	
2	0.2140	21.64	10.66	32.30	53.04	-20.74	AVG	
3	2.3420	22.83	12.26	35.09	56.00	-20.91	QP	
4	2.3420	19.38	12.26	31.64	46.00	-14.36	AVG	
5	12.2500	23.56	12.15	35.71	60.00	-24.29	QP	
6	12.2500	23.57	12.15	35.72	50.00	-14.28	AVG	
7	24.2020	24.18	12.53	36.71	60.00	-23.29	QP	
8	24.2020	18.64	12.53	31.17	50.00	-18.83	AVG	

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Test Equipment List

Conducted Emission Test

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL. DUE DATE
Test Receiver	ROHDE&SCHWARZ	ESPI	101155	2012-08-01
Two-Line V-Network	ROHDE&SCHWARZ	ENV216	100115	2012-08-01
Absorbing Clamp	ROHDE&SCHWARZ	MDS-21	100205	2012-08-01
10m 50 Ohm Coaxial Cable with N-plug,individual length,usable up to 3(5)GHz, Connectors	Schwarz Beck Mess-Elektrom	AK 9514	-	N/A

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7.2 Radiated emissions

Test Method

1 The EUT is placed on a turntable, which is 0.8m above ground plane.
2 The turntable shall be rotated for 360 degrees to determine the position of maximum emission level
3 EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
4 Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5 Each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.

Limit

Frequency MHz	Field Strength uV/m	Field Strength dBµV/m	Detector
30-88	100	40	QP
88-216	150	43.5	QP
216-960	200	46	QP
960-1000	500	54	QP
Above 1000	500	54	AV
Above 1000	5000	74	PK

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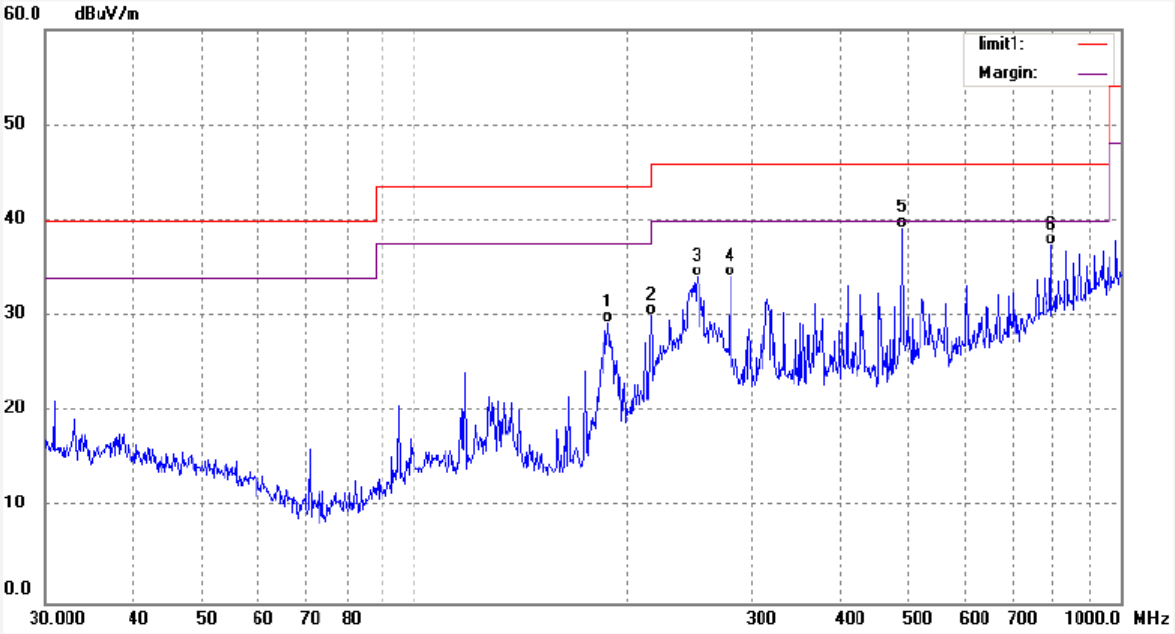
Radiated Emission

EUT: M/N: DP-M04
Op Cond: ON
Test Spec: Horizontal
Comment: DC 5V



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	187.7833	15.30	14.04	29.34	43.50	-14.16	QP	
2	216.1197	14.68	15.33	30.01	46.00	-15.99	QP	
3	251.3676	18.31	15.75	34.06	46.00	-11.94	QP	
4	279.3105	17.27	16.81	34.08	46.00	-11.92	QP	
5	490.0451	13.50	25.75	39.25	46.00	-6.75	QP	
6	795.8192	8.47	29.00	37.47	46.00	-8.53	QP	

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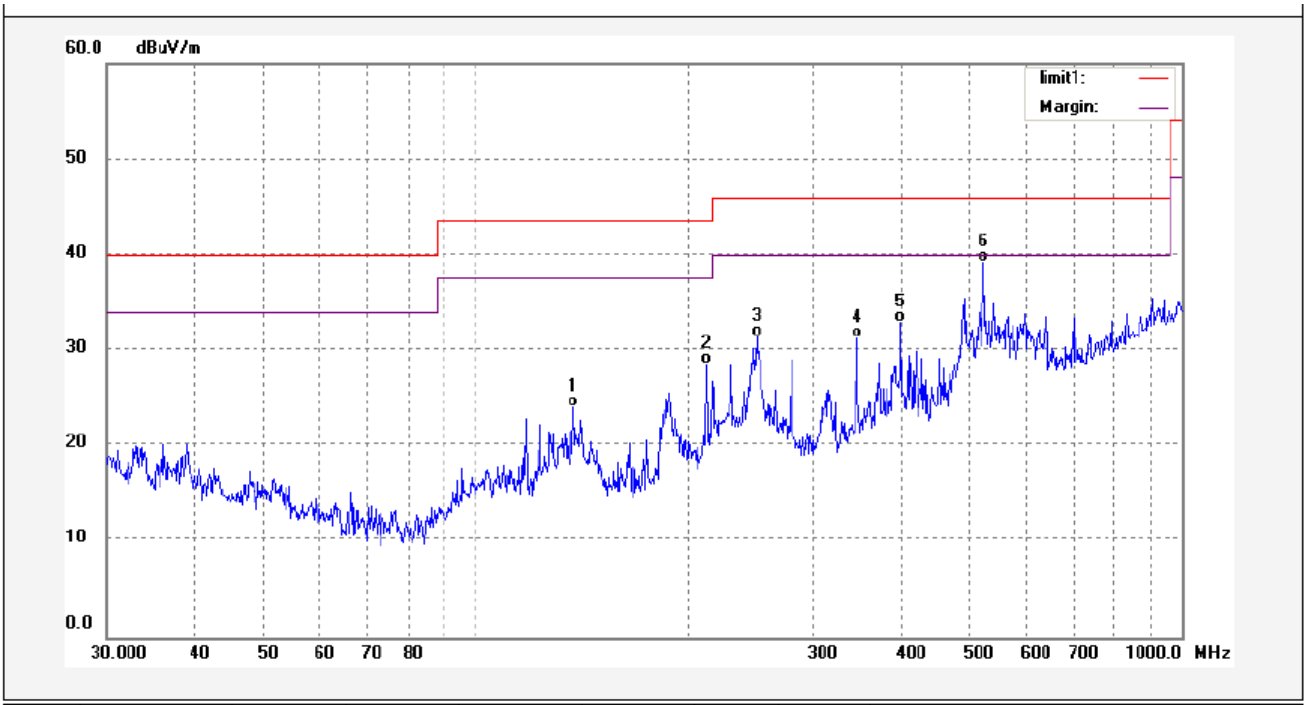
Radiated Emission

EUT: M/N: DP-M04
Op Cond: ON
Test Spec: Vertical
Comment: DC 5V



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	137.3565	12.11	11.90	24.01	43.50	-19.49	QP	
2	212.3560	13.59	14.94	28.53	43.50	-14.97	QP	
3	249.6074	15.74	15.61	31.35	46.00	-14.65	QP	
4	346.0740	11.12	20.17	31.29	46.00	-14.71	QP	
5	399.6981	12.07	20.91	32.98	46.00	-13.02	QP	
6	523.8763	15.60	23.68	39.28	46.00	-6.72	QP	

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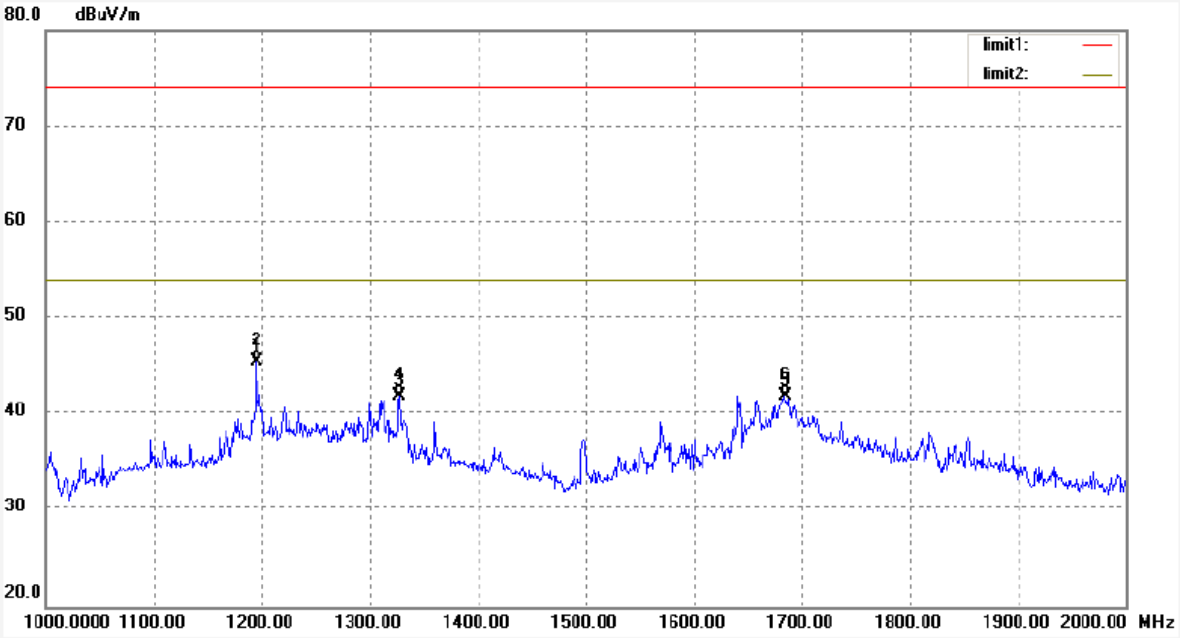
Radiated Emission

EUT: M/N: DP-M04
Op Cond: ON
Test Spec: Horizontal
Comment: DC 5V



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	1194.389	59.94	-14.36	45.58	74.00	-28.42	peak	
2	1194.389	59.94	-14.36	45.58	54.00	-8.42	AVG	
3	1327.655	55.49	-13.56	41.93	74.00	-32.07	peak	
4	1327.655	55.49	-13.56	41.93	54.00	-12.07	AVG	
5	1683.367	55.89	-13.86	42.03	74.00	-31.97	peak	
6	1683.367	55.89	-13.86	42.03	54.00	-11.97	AVG	

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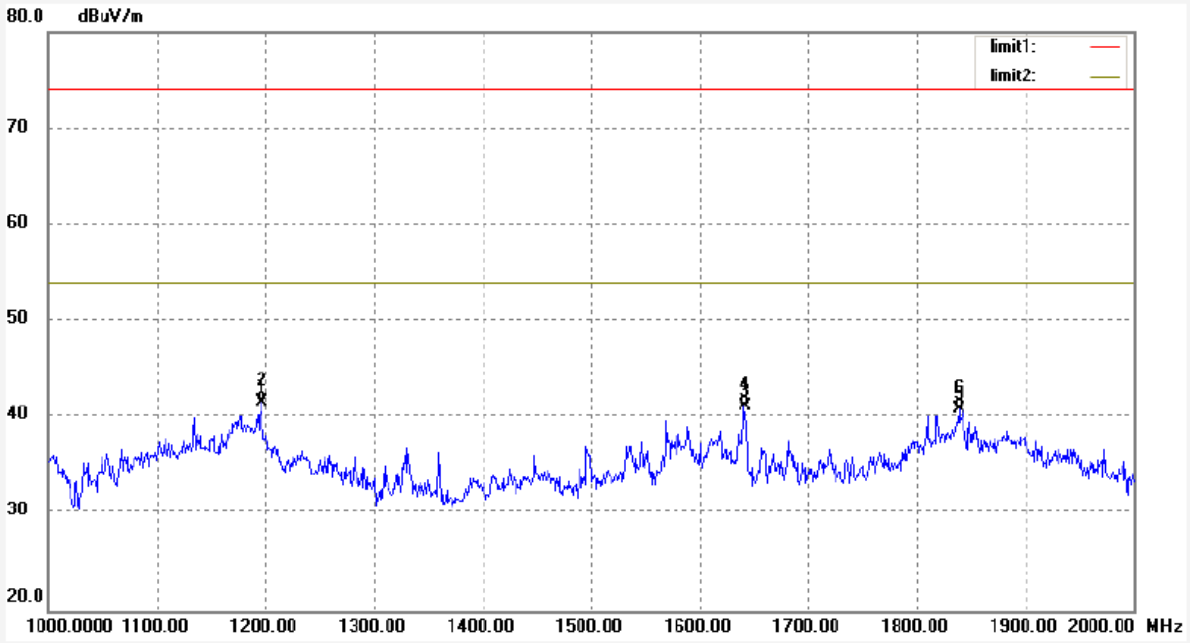
Radiated Emission

EUT: M/N: DP-M04
Op Cond: ON
Test Spec: Vertical
Comment: DC 5V



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	1195.391	56.05	-14.34	41.71	74.00	-32.29	peak	
2	1195.391	56.05	-14.34	41.71	54.00	-12.29	AVG	
3	1641.283	55.22	-13.95	41.27	74.00	-32.73	peak	
4	1641.283	55.22	-13.95	41.27	54.00	-12.73	AVG	
5	1838.677	53.93	-12.93	41.00	74.00	-33.00	peak	
6	1838.677	53.93	-12.93	41.00	54.00	-13.00	AVG	

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Test Equipment List

Radiated Emission Test

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL. DUE DATE
EMC Analyzer	Agilent	E7405A	MY45114943	2012-08-01
Trilog Broadband Antenne	Schwarz Beck Mess-Elektrom	VULB9163	336	2012-08-01
Broad-band Horn Antenna	Schwarz Beck Mess-Elektrom	BBHA 9120 D	667	2012-08-01
Broadband Preamplifier	Schwarz Beck Mess-Elektrom	BBV 9718	9718-148	2012-08-01
10m Coaxial Cable with N-male Connectors usable up to 18GHz,	Schwarz Beck Mess-Elektrom	AK 9515 H	-	N/A
10m 50 Ohm Coaxial Cable with N-plug,individual length,usable up to 3(5)GHz, Connectors	Schwarz Beck Mess-Elektrom	AK 9513	-	N/A
Positioning Controller	C&C LAB	CC-C-IF	MF7802108	N/A
Color Monitor	SUNSPO	SP-14C	-	N/A

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8 System Measurement Uncertainty

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

System Measurement Uncertainty

Items		Extended Uncertainty
RE	Field strength (dBμV/m)	U=±5.03 (30MHz-1GHz)
RE	Field strength (dBμV/m)	U=±3.88 (1GHz-2GHz)
CE	Disturbance Voltage (dBμV)	U=±2.66dB

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