



**SK TECH CO., LTD.**

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Certificate of Compliance

Test Report No.:	SKTTRT-050530-009		
NVLAP CODE:	200220-0		
Applicant:	NEXTECH CO., LTD.		
Applicant Address:	E&C Venture Dream Tower the 3 rd , 13 th Floor, 197-33, Guro-Dong, Guro-Gu, Seoul, Korea		
Device Under Test:	TPMS Exciter		
FCC ID:	TBJTE315M	Model No.:	TPMS Exciter 315M
Receipt No.:	SKTEU05-0319	Date of receipt:	May 20, 2005
Date of Issue:	May 30, 2005		
Location of Testing:	SK TECH CO., LTD. 820-2, Wolmoon-Ri, Wabu-Up, Namyangju-Si, Kyunggi-Do, Korea		
Test Procedure:	ANSI C63.4 / 2003		
Test Specification:	47CFR, Part 15 Subpart C		
Equipment Class:	DCD - Part 15 Low Power Transmitter Below 1705kHz CYY - Communications Receiver used with part15 Transmitter		
Test Result:	The above-mentioned device has been tested and passed.		
Tested & Reported by: Chang-Min, Moon		Approved by: Jae-Kyung, Bae	
 2005. 05. 30 Signature Date		 2005. 05. 30 Signature Date	
Other Aspects:			
Abbreviations:	· OK, Pass = passed · Fail = failed · N/A = not applicable		

- This test report is not permitted to copy partly without our permission.
- This test result is dependent on only equipment to be used.
- This test result is based on a single evaluation of one sample of the above mentioned.
- This test report must not be used to claim product endorsement by NVLAP or any agency of the U.S Government.
- We certify that this test report has been based on the measurement standards that is traceable to the national or International standards.



NVLAP Lab. Code: 200220-0

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1. GENERAL

These tests were performed using the test procedure outlined in ANSI C63.4, 2003 for intentional radiators, and in accordance with the limits set forth in FCC Part 15.209, 15.207, 15.109, 15.107.

The EUT (Equipment Under Test) has been shown to be capable of compliance with the applicable technical standards.

We attest to the accuracy of data. All measurements reported herein were performed by SK Tech Co., Ltd. and were made under Chief Engineer's supervision.

We assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

2. TEST SITE

SK TECH Co., Ltd.

2.1 Location

820-2, Wolmoon Ri, Wabu-Up, Namyangju-Si, Kyunggi-Do, Korea

This test site is in compliance with ISO/IEC 17025 for general requirements for the competence of testing and calibration laboratories.

This laboratory is accredited by NVLAP for NVLAP Lab. Code: 200220-0 and DATech for DAR-Registration No.: TTI-P-G155/97-10

**2.2 List of Test and Measurement Instruments**

Description	Manufacturer	Model #	Serial #	
Spectrum Analyzer	Agilent	E4405B	US40520856	
EMC Spectrum Analyzer	Agilent	E7405A	US40240203	☒
EMI Test Receiver	Rohde&Schwarz	ESVS10	825120/013	☒
EMI Test Receiver	Rohde&Schwarz	ESVS10	834468/008	☒
EMI Test Receiver	Rohde&Schwarz	ESHS10	825120/013	☒
EMI Test Receiver	Rohde&Schwarz	ESHS10	834468/008	☒
Artificial Mains Network	Rohde&Schwarz	ESH3-Z5	836679/018	☒
Pre-amplifier	HP	8447F	3113A05153	☒
Pre-amplifier	HP	8349B	2644A03250	☒
Power Meter	Agilent	E4418B	3318A13916	
Power Sensor	HP	8485A	3318A13916	
VHF Precision Dipole Antenna	Schwarzbeck	VHAP	1014	
VHF Precision Dipole Antenna	Schwarzbeck	VHAP	1015	
UHF Precision Dipole Antenna	Schwarzbeck	UHAP	989	
UHF Precision Dipole Antenna	Schwarzbeck	UHAP	990	
Loop Antenna	Schwarzbeck	HFH2-Z2	863048/019	☒
TRILOG Broadband Antenna	Schwarzbeck	VULB9160	3141	☒
Biconical Antenna	Schwarzbeck	VHA9103	2265	☒
Log-Periodic Antenna	Schwarzbeck	UHALP9107	1819	☒
Horn Antenna	AH Systems	SAS-200/571	304	☒
Horn Antenna	Electro Metrics	EM-6961	6297	
Horn Antenna	Electro Metrics	EM-6961	6298	
Vector Signal Generator	Agilent	E4438C	MY42080359	
Signal Generator	HP	8349B	2644A03250	
DC Power Supply	HP	6634A	2926A-01078	
DC Power Supply	HP	6268B	2542A-07856	
Digital Multimeter	HP	HP3458A	2328A14389	☒
PCS Interface	HP	83236B	3711J00881	
CDMA Mobile Test Set	HP	8924C	US35360253	
Hygro/Thermo Graph	SATO	PC-5000TRH-II	-	☒
Temperature/Humidity Chamber	All Three	ATH-50M	20030425	

2.3 Test Date

Date of Application : May 20, 2005

Date of Test : May 20, 2005 ~ May 30, 2005

2.4 Test Environment

See each test item's description.



3. DESCRIPTION OF THE EQUIPMENT UNDER TEST

The product specification described herein was obtained from the product data sheet or user's manual.

3.1 Rating and Physical Characteristics

No. Of Unit	One (125kHz Transmitter + 315MHz Receiver)
Type / Model No.	TPMS Exciter / TPMS Exciter 315M
Power source	Battery (DC 7.4V)
Local Oscillator or X-Tal	X-Tal: 20 MHz, 10.178125 MHz, 6 MHz, 4 MHz
Tx / Rx Frequency	125kHz (Tx) / 315MHz (Rx)
Antenna Type	Loop Coil Antenna (Tx), PCB Pattern Antenna (Rx)
Type of Modulation	AM (Tx), AM (Rx)
External Ports	- Battery Rechargeable AC Adaptor Jack Model: LSE0107A1240 Input: AC 100~240V, 50~60Hz, 1A Output: DC 12V, 3.33A

3.2 Equipment Modifications

None.

3.3 Submitted Documents

Block diagram

Schematic diagram

Part List

User manual

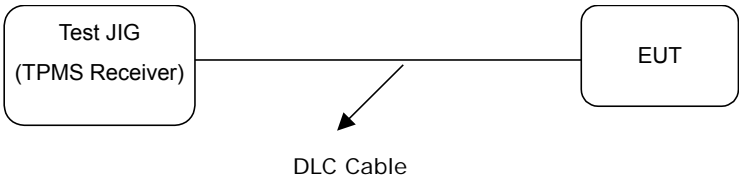


4. MEASUREMENT CONDITIONS

4.1 Description of test configuration

The measurements were taken in continuous transmitting mode and continuous receiving mode

.



4.2 List of Peripherals

Equipment Type	Manufacture	Model	Cable Description
Test JIG (TPMS Receiver)	NEXTECH CO., LTD.	-	1.6m, Unshielded DLC Cable

4.3 Uncertainty

Measurement Item	Combined Standard Uncertainty Uc	Expanded Uncertainty U = KUc (K = 2)
Conducted RF power	± 1.49 dB	± 2.98dB
Radiated disturbance	± 2.37 dB	± 4.74dB



5. TEST AND MEASUREMENTS

Summary of Test Results

Requirement	CFR Section	Report Section	Test Result
Antenna Requirement	15.203	5.1	PASS
Radiated Spurious Emissions	15.209*	5.2	PASS
Conducted Emissions	15.207*	5.3	PASS
Radiated Spurious Emissions	15.109**	5.4	PASS
Conducted Emissions	15.107**	5.5	PASS

* 125kHz Transmitting mode

** 315MHz Receiving mode

5.1 ANTENNA REQUIREMENT

5.1.1 Regulation

FCC section 15.203, An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of Part 15C. The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of Sections 15.211, 15.213, 15.217, 15.219, or 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with Section 15.31 (d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this Part are not exceeded.

5.1.2 Result: **PASS**

The EUT have an integral loop coil antenna (125kHz transmitter) and PCB pattern antenna (315MHz Receiver). These antennas meet the requirements of this section.



5.2 RADIATED EMISSIONS(15.209)

5.2.1 Regulation

- Emissions below 30MHz

According to §15.209, the field strength of emissions from intentional radiators operated under this frequency band shall not exceed the following:

Frequency (MHz)	Field strength	Calculation of Field Strength (uV/m)	Calculation of Field Strength (dBuV/m)
0.009 – 0.490	2400/F(kHz) (uV/m @ 300m)	266.7 – 4.9 (uV/m @ 300m)	48.5 – 13.8 (dBuV/m @ 300m)
0.490 – 1.705	24000/F(kHz) (uV/m @ 30m)	49.0 – 14.1 (uV/m @ 30m)	33.8 – 23.0 (dBuV/m @ 30m)
1.705 – 30.0	30 (uV/m @ 30m)	30 (uV/m @ 30m)	29.5 (dBuV/m @ 30m)

- Emissions above 30MHz

The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in §15.209.

Frequency (MHz)	Field strength (uV/m @ 3m)	Field strength (dBuV/m @ 3m)
30–88	100	40.0
88–216	150	43.5
216–960	200	46.0
Above 960	500	54.0

The emission limits shown in the above table are based on measurement instrumentation employing a CISPR quasi-peak detector. For the frequency bands 9 – 90 kHz, 110 – 490 kHz and above 1000 MHz, the radiated emission limits are based on measurements employing an average detector.

5.2.2 Measurement Procedure

For tabletop equipment, the EUT is placed on a 1 meter by 1.5 meters wide and 0.8 meter high nonconductive table that sits on a flush mounted metal turntable. Preview tests are performed to determine the "worst case" mode of operation. With the EUT operating in "worst case" mode, emissions from the unit are maximized by adjusting the polarization and height of the receive antenna and rotating the EUT on the turntable.

The initial step in collecting radiated data is a peak scan of the measurement range with an EMI test receiver under closer distances as given in the rule.

The significant peaks are then measured with the appropriate detectors (QP, AV and PK).



5.2.3 Calculation of the field strength limits

- Emissions below 30MHz

No special calculation for obtaining the field strength in dBuV/m is necessary, because the EMI receiver and the active loop antenna operate as a system, where the reading gives directly the field strength result (dBuV/m). The gain, antenna factors and cable losses are already taken into consideration.

For test distance other than what is specified, but fulfilling the requirements of section 15.31 (f) (2) the field strength is calculated by adding additionally an extrapolation factor of 40dB/decade (inverse linear distance for field strength measurements).

All following emission measurements were performed using the test receiver's average detector and peak detector function.

The basic equation is as follow ;

$$FS = RA + DF$$

Where

FS = Field strength in dBuV/m

RA = Receiver Amplitude in dBuV/m

DF = Distance Extrapolation Factor in dB

Where $DF = 20\log(D_{test}/D_{spec})$ where D_{test} = Test Distance and D_{spec} = Specified Distance

$DF = 40\log(3m/300m) = -80dB$ (Frequency : 0.009 ~ 0.490MHz)

$DF = 40\log(3m/30m) = -40dB$ (Frequency : 0.490 ~ 30MHz)

5.2.4 Test Results:

PASS

The results of the field strength of the fundamental and spurious/harmonic emissions are shown in Table 1. The worst-case emission level is **68.9 dBuV/m @ 3m at 0.125 MHz**, This is **36.8 dB** below the specified limit.

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Table 1: Measured values of the Field strength (below 30MHz)

Frequency (MHz)	Reading (dBuV)	Limit (dBuV/m)	Margin (dB)
Emissions (Average Detector)			
0.125	68.9	105.7	36.8
0.250	59.5	99.6	40.1
0.375	49.9	96.1	46.2
Emissions (Peak Detector)			
0.125	75.7	125.7	50.0
0.250	60.5	119.6	59.1
0.375	51.3	116.1	64.8
Emissions DATA 15.205 Restricted Bands			
0.500	41.2	73.6	32.4

$$\text{Margin (dB)} = \text{Limit} - \text{Reading}$$

Table 2: Measured values of the Field strength (above 30MHz)

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. (V/H)	Antenna Height [m]	Table Angle [°]	Reading [dB(μV)]	Amp Gain [dB]	AF / CL [dB(1/m)]	Actual [dB(μV/m)]	Limit [dB(μV/m)]	Margin [dB]
Quasi-peak data, emissions in 15.209 bands										
63.52	120	H	4.0	197	51.0	28.6	6.5/0.9	29.8	40.0	10.2
120.00	120	H	4.0	211	49.4	27.8	13.1/1.7	36.4	43.5	7.1
170.01	120	H	1.0	128	48.1	27.4	15.5/2.2	38.4	43.5	5.1
247.14	120	H	1.0	213	46.7	27.0	17.5/2.6	39.8	46.0	6.2
250.01	120	H	1.0	277	48.4	27.0	17.5/2.7	41.6	46.0	4.4
252.26	120	H	1.0	253	49.3	27.0	17.6/2.7	42.6	46.0	3.4

1. H = Horizontal, V = Vertical Polarization

2. AF/CL = Antenna Factor and Cable Loss

3. The spectrum was scanned from 30 MHz to 1 GHz. All emissions not reported were more than 20 dB below the specified limit or in the noise floor.

$$\text{Margin (dB)} = \text{Limit} - \text{Actual}$$

$$[\text{Actual} = \text{Reading} - \text{Amp Gain} + \text{AF} + \text{CL}]$$



5.3 CONDUCTED EMISSIONS(15.207)

5.3.1 Regulation

According to §15.207(a), for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μ H/50 Ω line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency of emission (MHz)	Conducted limit (dB μ V)	
	Quasi-peak	Average
0.15 – 0.5	66 to 56 *	56 to 46 *
0.5 – 5	56	46
5 – 30	60	50

* Decreases with the logarithm of the frequency.

5.3.2 Test Procedure

1. The EUT was placed on a wooden table of size, 1 m by 1.5 m, raised 80 cm in which is located 40 cm away from the vertical wall and 1.5m away from the side wall of the shielded room.
2. Each current-carrying conductor of the EUT power cord was individually connected through a 50 Ω /50 μ H LISN, which is an input transducer to a Spectrum Analyzer or an EMI/Field Intensity Meter, to the input power source.
3. Exploratory measurements were made to identify the frequency of the emission that had the highest amplitude relative to the limit by operating the EUT in a range of typical modes of operation, cable position, and with a typical system equipment configuration and arrangement. Based on the exploratory tests of the EUT, the one EUT cable configuration and arrangement and mode of operation that had produced the emission with the highest amplitude relative to the limit was selected for the final measurement.
4. The final test on all current-carrying conductors of all of the power cords to the equipment that comprises the EUT (but not the cords associated with other non-EUT equipment is the system) was then performed over the frequency range of 0.15 MHz to 30 MHz.
5. The measurements were made with the detector set to PEAK amplitude within a bandwidth of 10 kHz or to QUASI-PEAK and AVERAGE within a bandwidth of 9 kHz. The EUT was in transmitting mode during the measurements.

**5.3.3 Test Results:****PASS****Table 3: Measured values of the Conducted Emissions**

Frequency [MHz]	Reading [dBμV]		CF/CL [dB]	Actual [dBμV]		Limit [dBμV]		Margin [dB]	
	Qp	Ave		Qp	Ave	Qp	Ave	Qp	Ave
LINE – PE									
0.15	37.74	---	0.09/0.0	37.83	---	66.00	56.00	28.17	---
0.18	37.45	---	0.09/0.0	37.54	---	64.49	54.49	26.95	---
0.57	30.99	---	0.09/0.1	31.18	---	56.00	46.00	24.82	---
24.0	39.83	---	0.81/0.6	41.24	---	60.00	50.00	18.76	---
29.25	42.50	---	0.88/0.7	44.08	---	60.00	50.00	15.92	---
30.0	46.16	---	0.77/0.8	47.73	---	60.00	50.00	12.27	---
NEUTRAL – PE									
0.17	41.45	---	0.13/0.0	41.58	---	64.96	54.96	23.38	---
0.23	35.43	---	0.13/0.1	35.66	---	62.45	52.45	26.79	---
22.5	38.73	---	0.6/0.6	39.93	---	60.00	50.00	20.07	---
23.5	39.34	---	0.6/0.6	40.54	---	60.00	50.00	19.46	---
24.0	40.63	---	0.6/0.6	41.83	---	60.00	50.00	18.17	---
30.0	43.89	---	0.49/0.8	45.18	---	60.00	50.00	14.82	---

Margin (dB) = Limit – Actual**[Actual = Reading + CF + CL]**

1. Remark “---” means the level is undetectable or the Quasi-peak value is lower than the limit of Average.
2. CF/CL = Correction Factor and Cable Loss
3. Qp = Quasi-peak, Ave = Average value

NOTE: The frequency range was scanned from 150 kHz to 30 MHz. All emissions not reported were more than 20 dB below the specified limit.

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Figure 1. Plot of the Conducted Emissions

Line - PE

24 May 2005 09:48

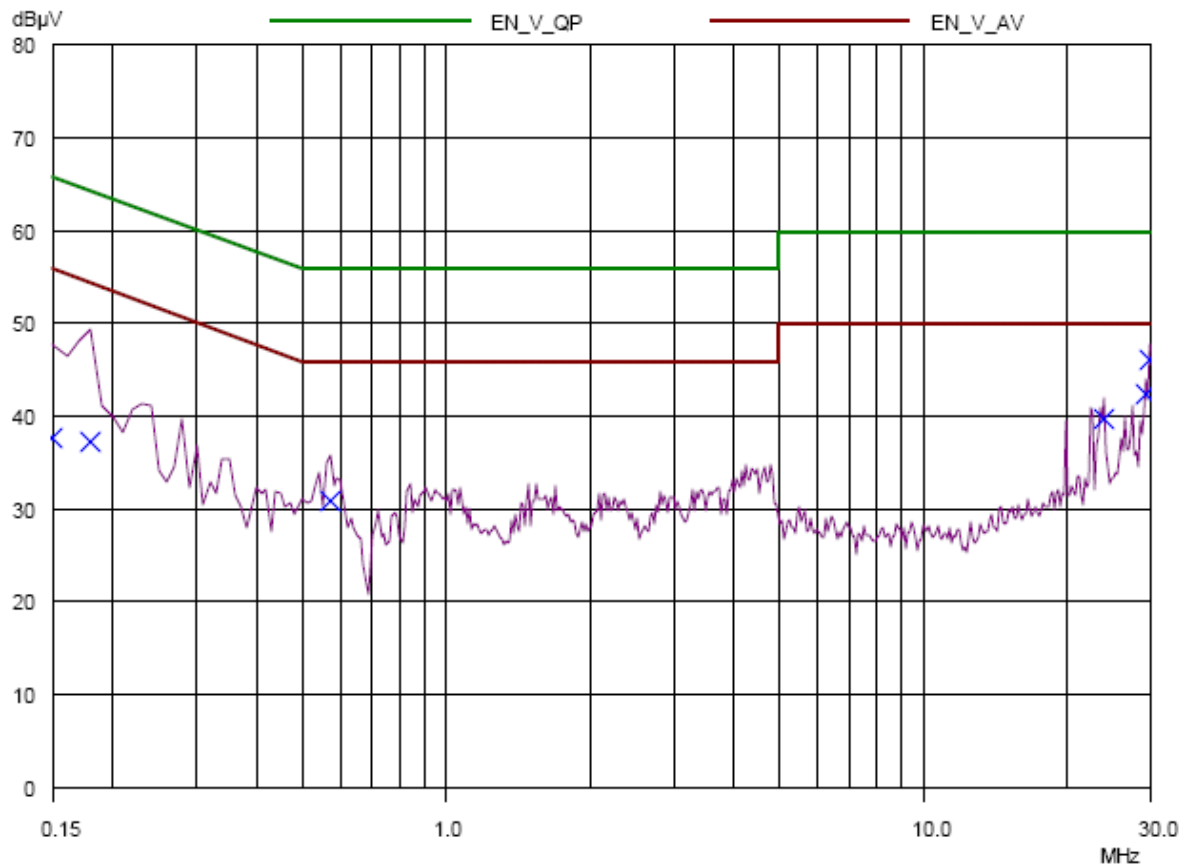
CONDUCTED DISTURBANCE

EUT: TPMS Exciter 315M
Manuf:
Op Cond:
Operator:
Test Spec:
Comment: LINE-PE

Scan Settings (1 Range)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
150kHz	30MHz	10kHz	10kHz	PK	100msec	Auto	OFF	60dB

Final Measurement: Detector: X QP
Meas Time: 1sec
Peaks: 8
Acc Margin: 35 dB



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Neutral - PE

24 May 2005 10:02

CONDUCTED DISTURBANCE

EUT: TPMS Exciter 315M

Manuf:

Op Cond:

Operator:

Test Spec:

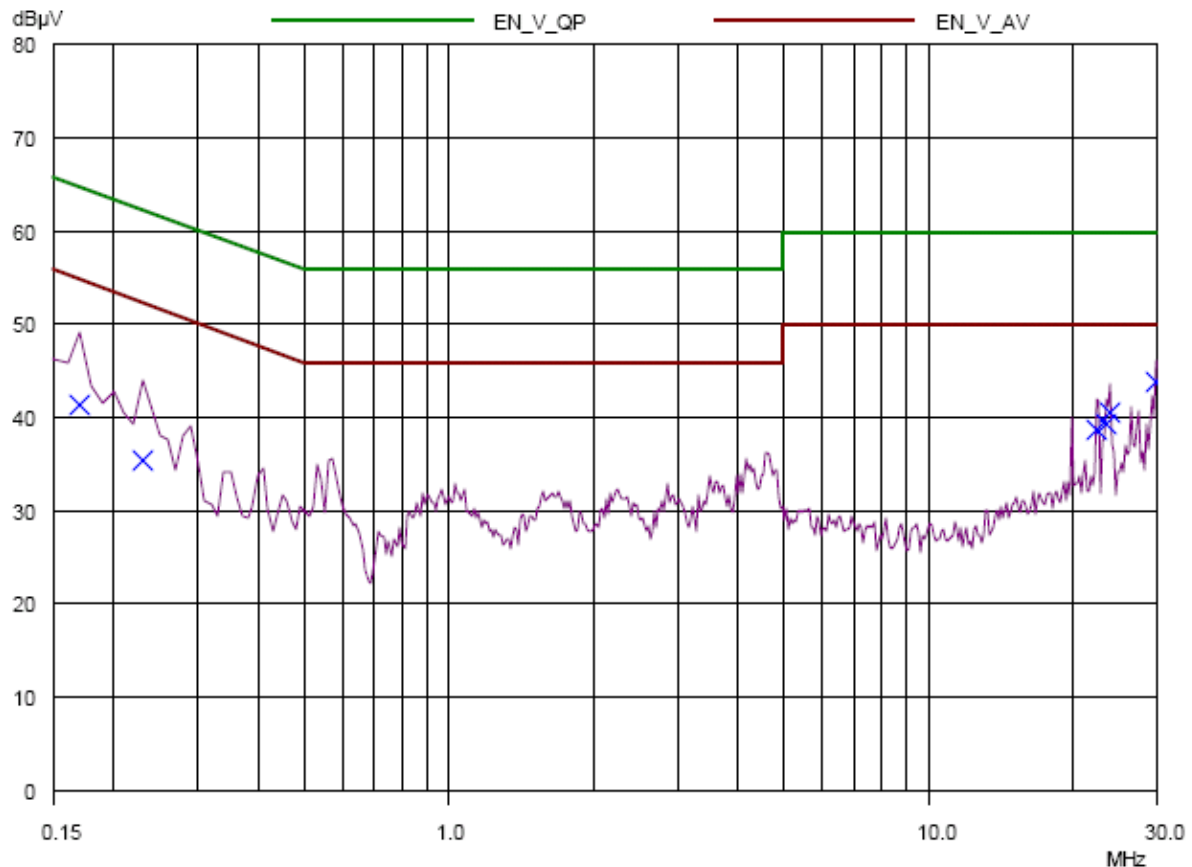
Comment: NEUTRAL-PE

Result File: 315M_N.dat : New Measurement

Scan Settings (1 Range)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
150kHz	30MHz	10kHz	10kHz	PK	100msec	Auto	OFF	60dB

Final Measurement: Detector: X QP
 Meas Time: 1sec
 Peaks: 8
 Acc Margin: 35 dB





5.4 RADIATED EMISSIONS(15.109)

5.4.1 Regulation

Except for class A digital device, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the limits in §15.109(a).

Frequency (MHz)	Field strength (uV/m @ 3m)	Field strength (dBuV/m @ 3m)
30–88	100	40.0
88–216	150	43.5
216–960	200	46.0
Above 960	500	54.0

The emission limits shown in the above table are based on measurement instrumentation employing a CISPR quasi-peak detector and above 1000 MHz are based on the average value of measured emissions.

5.4.2 Measurement Procedure

For tabletop equipment, the EUT is placed on a 1 meter by 1.5 meters wide and 0.8 meter high nonconductive table that sits on a flush mounted metal turntable. Preview tests are performed to determine the "worst case" mode of operation. With the EUT operating in "worst case" mode, emissions from the unit are maximized by adjusting the polarization and height of the receive antenna and rotating the EUT on the turntable.

The initial step in collecting radiated data is a peak scan of the measurement range with an EMI test receiver under closer distances as given in the rule.

The significant peaks are then measured with the appropriate detectors (QP, AV and PK).

**5.4.3 Test Results:****PASS****Table 4: Measured values of the Field strength**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. (V/H)	Antenna Height [m]	Table Angle [°]	Reading [dB(μV)]	Amp Gain [dB]	AF / CL [dB(1/m)]	Actual [dB(μV/m)]	Limit [dB(μV/m)]	Margin [dB]
Quasi-peak data, emissions in 15.109 bands										
120.11	120	H	4.0	208	42.2	27.8	13.1/1.7	36.4	43.5	14.3
170.06	120	H	1.0	131	44.0	27.4	15.5/2.2	38.4	43.5	9.2
240.25	120	H	1.0	213	44.3	27.0	17.4/2.6	37.3	46.0	8.7
250.01	120	H	1.0	248	40.2	27.0	17.6/2.7	33.5	46.0	12.5
252.26	120	H	1.0	273	39.3	27.0	17.7/2.7	32.7	46.0	13.3

1. H = Horizontal, V = Vertical Polarization

2. AF/CL = Antenna Factor and Cable Loss

3. The spectrum was scanned from 30 MHz to 2 GHz. All emissions not reported were more than 20 dB below the specified limit or in the noise floor.

$$\text{Margin (dB)} = \text{Limit} - \text{Actual}$$

$$[\text{Actual} = \text{Reading} - \text{Amp Gain} + \text{AF} + \text{CL}]$$



5.5 CONDUCTED EMISSIONS(15.107)

5.5.1 Regulation

According to §15.107(a), except for class A digital device, for equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μ H/50 Ω line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency of emission (MHz)	Conducted limit (dB μ V)	
	Quasi-peak	Average
0.15 – 0.5	66 to 56 *	56 to 46 *
0.5 – 5	56	46
5 – 30	60	50

* Decreases with the logarithm of the frequency.

5.5.2 Test Procedure

1. The EUT was placed on a wooden table of size, 1 m by 1.5 m, raised 80 cm in which is located 40 cm away from the vertical wall and 1.5m away from the side wall of the shielded room.
2. Each current-carrying conductor of the EUT power cord was individually connected through a 50 Ω /50 μ H LISN, which is an input transducer to a Spectrum Analyzer or an EMI/Field Intensity Meter, to the input power source.
3. Exploratory measurements were made to identify the frequency of the emission that had the highest amplitude relative to the limit by operating the EUT in a range of typical modes of operation, cable position, and with a typical system equipment configuration and arrangement. Based on the exploratory tests of the EUT, the one EUT cable configuration and arrangement and mode of operation that had produced the emission with the highest amplitude relative to the limit was selected for the final measurement.
4. The final test on all current-carrying conductors of all of the power cords to the equipment that comprises the EUT (but not the cords associated with other non-EUT equipment in the system) was then performed over the frequency range of 0.15 MHz to 30 MHz.
5. The measurements were made with the detector set to PEAK amplitude within a bandwidth of 10 kHz or to QUASI-PEAK and AVERAGE within a bandwidth of 9 kHz. The EUT was in transmitting mode during the measurements.

**5.5.3 Test Results:****PASS****Table 5: Measured values of the Conducted Emissions**

Frequency [MHz]	Reading [dBμV]		CF/CL [dB]	Actual [dBμV]		Limit [dBμV]		Margin [dB]	
	Qp	Ave		Qp	Ave	Qp	Ave	Qp	Ave
LINE – PE									
0.15	38.12	---	0.09/0.0	38.21	---	66.00	56.00	27.79	---
0.18	45.74	---	0.09/0.0	45.83	---	64.49	54.49	18.66	---
0.25	40.68	---	0.08/0.1	40.86	---	61.76	51.76	20.90	---
0.30	34.84	---	0.08/0.1	35.02	---	60.24	50.24	25.22	---
4.42	30.66	---	0.13/0.3	31.09	---	56.00	46.00	24.91	---
4.65	30.98	---	0.13/0.3	31.41	---	56.00	46.00	24.59	---
20.0	38.21	---	0.81/0.6	39.62	---	60.00	50.00	20.38	---
NEUTRAL – PE									
0.15	39.83	---	0.13/0.0	39.96	---	66.00	56.00	26.04	---
0.19	43.60	---	0.13/0.0	43.73	---	64.04	54.04	20.31	---
0.25	40.03	---	0.13/0.1	40.26	---	61.76	51.76	21.50	---
0.30	33.75	---	0.13/0.1	33.98	---	60.24	50.24	26.26	---
4.57	30.85	---	0.17/0.3	31.32	---	56.00	46.00	24.68	---
20.0	36.86	---	0.6/0.6	38.06	---	60.00	50.00	21.94	---

Margin (dB) = Limit – Actual**[Actual = Reading + CF + CL]**

1. Remark “---” means the level is undetectable or the Quasi-peak value is lower than the limit of Average.
2. CF/CL = Correction Factor and Cable Loss
3. Qp = Quasi-peak, Ave = Average value

NOTE: The frequency range was scanned from 150 kHz to 30 MHz. All emissions not reported were more than 20 dB below the specified limit.

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Figure 2. Plot of the Conducted Emissions

Line - PE

30 May 2005 14:24

CONDUCTED DISTURBANCE

EUT: TPMS EXCITER 315M

Manuf:

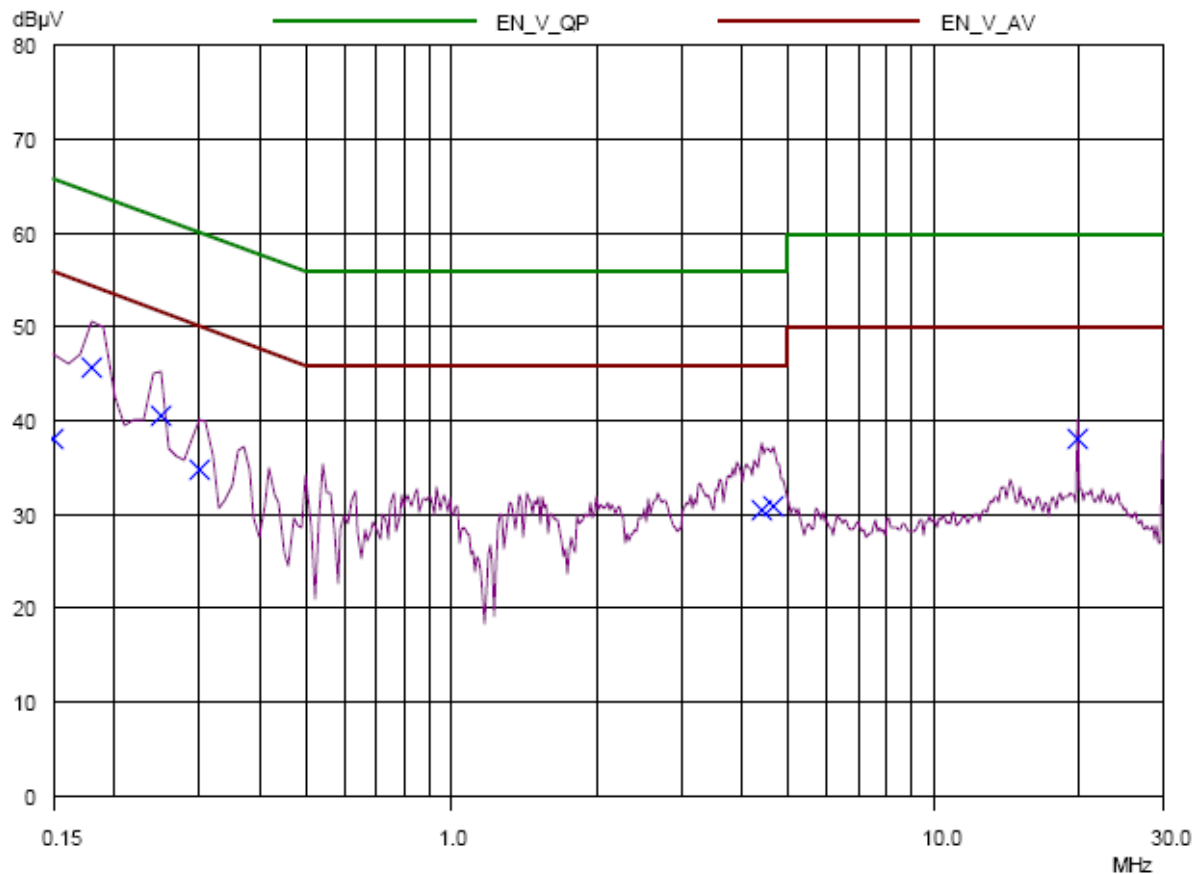
Op Cond:

Operator:

Test Spec:

Comment: LINE-PE

Scan Settings			(1 Range)			Receiver Settings			
Frequencies									
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge	
150kHz	30MHz	10kHz	10kHz	PK	100msec	Auto	OFF	60dB	
Final Measurement:			Detector:	X QP					
			Meas Time:	1sec					
			Peaks:	8					
			Acc Margin:	35 dB					



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Neutral - PE

30 May 2005 14:37

CONDUCTED DISTURBANCE

EUT: TPMS EXCITER 315M
Manuf:
Op Cond:
Operator:
Test Spec:
Comment: NEUTRAL-PE

Scan Settings		(1 Range)						
Frequencies					Receiver Settings			
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
150kHz	30MHz	10kHz	10kHz	PK	100msec	Auto	OFF	60dB

Final Measurement: Detector: X QP
Meas Time: 1sec
Peaks: 8
Acc Margin: 35 dB

