

TEST REPORT

ACCORDING TO: FCC 47CFR part 15 subpart C § 15.247 and subpart B

FOR:

Telematics Wireless Ltd.

Water reader

Model: ETMW Universal

This report is in conformity with ISO/ IEC 17025. The A2LA logo endorsement applies only to the test methods and the standards that are listed in the scope of Hermon Laboratories accreditation. The test results relate only to the items tested.
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1 Applicant information

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Contact name: Mr. Slava Snitkovsky

2 Equipment under test attributes

Product name: Water reader
Product type: Transceiver
Operating frequency range: 905.43 – 923.55 MHz
Model(s): ETMW Universal
Receipt date 10/3/2005

3 Manufacturer information

Manufacturer name: Telematics Wireless Ltd.
Address: 26 Hamelaha, POB 1911, Holon, 58117, Israel
Telephone: +972 3557 5767
Fax: +972 3557 5753
E-Mail: slavas@tadiran-telematics.com
Contact name: Mr. Slava Snitkovsky

4 Test details

Project ID: 16716
Location: Hermon Laboratories Ltd. P.O.Box 23, Binyamina 30500, Israel
Test started: 10/3/2005
Test completed: 11/2/2005
Test specification(s): FCC 47CFR part 15: 2004, subpart C §§15.247, 15.209, subpart B § 15.109
Test suite: FCC_15.247_DTS_without_RF_connector (5/3/2004 5:43:35 PM, modified)




5 Tests summary

Test	Status
Transmitter characteristics	
Section 15.247(a)2, 6 dB bandwidth	Pass
Section 15.247(b)3, Peak output power	Pass
Section 15.247(d), Radiated spurious emissions	Pass
Section 15.247(e), Peak power density	Pass
Section 15.247(i), RF exposure	Pass, the exhibit to the application of certification is provided
Section 15.207(a), Conducted emission	Not required
Unintentional emissions	
Section 15.107, Conducted emission at AC power port	Not required
Section 15.109, Radiated emission	Pass

Testing was completed against all relevant requirements of the test standard. Results obtained indicate that the product under test complies in full with the requirements tested.

The test results relate only to the items tested. Pass/ fail decision was based on nominal values.

This test report replaces the previously issued test report identified by Doc. ID: TELRAD_FCC.16716_rev1

	Name and Title	Date	Signature
Tested by:	Mr. A. Adelberg, test engineer	November 2, 2005	
Reviewed by:	Mrs. M. Cherniavsky, certification engineer	November 28, 2005	
Approved by:	Mr. M. Nikishin, EMC and Radio group leader	November 28, 2005	

6 EUT description

6.1 General information

The EUT, ETMW-Universal, is actually a water odometer, offering Automatic Meter Reading – AMR. The device is a 2-Way RF communicator built-in water meter. The RF capabilities enable the transmission of the meter reading and some extra information to a collecting unit. In addition specific parameters can be programmed via the RF link.

The ETMW- Universal consists of the following units: RF transmitter & receiver with integral antenna and a microcontroller plus simple digital logic and interface (to external reed switches).

The EUT is powered from 3.6 VDC supplied by two lithium internal batteries.

6.2 Ports and lines

Port type	Port description	Connected		Connector type	Qty.	Cable type	Cable length
		From	To				
Signal	8 signal ports	EUT	Open circuit	Terminal block	1	unshielded	1 m

6.3 Changes made in the EUT

No changes were implemented.

6.4 EUT view



6.5 Transmitter characteristics

Type of equipment							
Stand-alone (Equipment with or without its own control provisions)							
X Combined equipment (Equipment where the radio part is fully integrated within another type of equipment)							
Plug-in card (Equipment intended for a variety of host systems)							
Intended use				Condition of use			
fixed				Always at a distance more than 2 m from all people			
X mobile				Always at a distance more than 20 cm from all people			
portable				May operate at a distance closer than 20 cm to human body			
Assigned frequency range				902 - 928 MHz			
Operating frequency range				905.43 – 923.55 MHz			
RF channel spacing				3.62 MHz			
Maximum rated output power				At transmitter 50 Ω RF output connector		dBm	
				Equivalent isotropically radiated power (for equipment with no RF connector)		21.72 dBm (FSK) 26.6 dBm (PSK)	
Is transmitter output power variable?				X No			
				Yes		continuous variable	
						stepped variable with stepsize	
						minimum RF power	
						maximum RF power	
Antenna connection							
unique coupling		standard connector		X integral		with temporary RF connector	
						X without temporary RF connector	
Antenna/s technical characteristics							
Type		Manufacturer		Model number		Gain	
Integral		Telematics Wireless		Printed inverted F antenna		5 dBi	
Transmitter aggregate data rate/s				60 kbps (PSK modulated), 120 kbps (FSK modulated)			
Transmitter aggregate symbol (baud) rate/s				0.9 Msymbols (Mbaud) per second (FSK modulated)			
Type of modulation				PSK, FSK			
Modulating test signal (baseband)				PRBS			
Maximum transmitter duty cycle in normal use				0.12 %			
Transmitter duty cycle supplied for test				5.69 % (PSK)		Tx ON time 4.5 ms	
				1.27 % (FSK)			
						Period 79 ms (PSK)	
						78.5 ms (FSK)	
Transmitter power source							
X Battery		Nominal rated voltage		3.6 VDC		Battery type Lithium	
DC		Nominal rated voltage		VDC			
AC mains		Nominal rated voltage		VAC		Frequency Hz	
Common power source for transmitter and receiver				X yes no			
Spread spectrum technique used				Frequency hopping (FHSS)			
				X Digital transmission system (DTS)			
				Hybrid			
Spread spectrum parameters for transmitters tested per FCC 15.247 only							
DSSS		Chip sequence length		15 bits			
		Spectrum width		2 MHz			

Test specification:	Section 15.247(a)2, 6 dB bandwidth		
Test procedure:	FR Vol.62, page 26243, Section 15.247(a)2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/3/2005 1:08:40 PM		
Temperature: 24 °C	Air Pressure: 1010 hPa	Relative Humidity: 48 %	Power Supply: 3.6 V DC
Remarks:			

7 Transmitter tests according to 47CFR part 15 subpart C requirements

7.1 Minimum 6 dB bandwidth

7.1.1 General

This test was performed to measure 6 dB bandwidth of the EUT carrier frequency. Specification test limits are given in Table 7.1.1.

Table 7.1.1 6 dB bandwidth limits

Assigned frequency, MHz	Modulation envelope reference points*, dBc	Minimum bandwidth, kHz
902.0 – 928.0	6.0	500.0

* - Modulation envelope reference points provided in terms of attenuation below the peak of modulated carrier.

7.1.2 Test procedure

7.1.2.1 The EUT was set up as shown in Figure 7.1.1, energized and its proper operation was checked.

7.1.2.2 The EUT was set to transmit modulated carrier.

7.1.2.3 The transmitter minimum 6 dB bandwidth was measured with spectrum analyzer as frequency delta between reference points on modulation envelope and provided in Table 7.1.2 and associated plot.

Figure 7.1.1 The 6 dB bandwidth test setup



Test specification:		Section 15.247(a)2, 6 dB bandwidth	
Test procedure:		FR Vol.62, page 26243, Section 15.247(a)2	
Test mode:	Compliance	Verdict: PASS	
Date & Time:	10/3/2005 1:08:40 PM		
Temperature: 24 °C	Air Pressure: 1010 hPa	Relative Humidity: 48 %	Power Supply: 3.6 V DC
Remarks:			

Table 7.1.2 The 6 dB bandwidth test results

ASSIGNED FREQUENCY BAND: 902 - 928 MHz
DETECTOR USED: Peak
SWEEP MODE: Single
SWEEP TIME: Auto
RESOLUTION BANDWIDTH: 100 kHz
VIDEO BANDWIDTH: 300 kHz
MODULATION ENVELOPE REFERENCE POINTS: 6.0 dBc

MODULATION: PSK
MODULATING SIGNAL: PRBS
BIT RATE: 60 kbps

Carrier frequency, MHz	6 dB bandwidth, kHz	Limit, kHz	Margin, kHz	Verdict
Low frequency				
905.428	975	500.0	475	Pass
Mid frequency				
916.293	983	500.0	483	Pass
High frequency				
923.523	975	500.0	475	Pass

MODULATION: FSK
MODULATING SIGNAL: PRBS
BIT RATE: 120 kbps

Carrier frequency, MHz	6 dB bandwidth, kHz	Limit, kHz	Margin, kHz	Verdict
Low frequency				
905.493	935	500.0	435	Pass
Mid frequency				
916.350	840	500.0	340	Pass
High frequency				
923.555	880	500.0	380	Pass

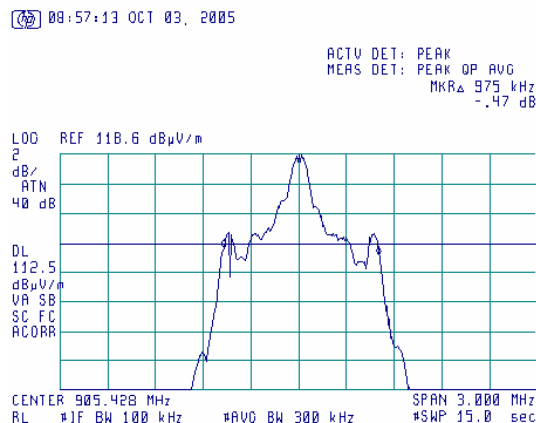
Reference numbers of test equipment used

HL 0521	HL 0589	HL 0604	HL 2009				
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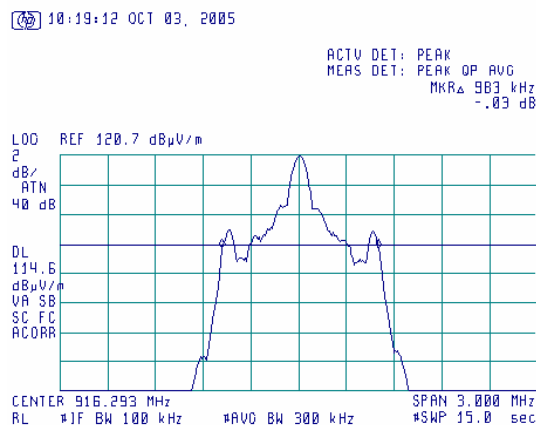
Full description is given in Appendix A.

Test specification:	Section 15.247(a)2, 6 dB bandwidth		
Test procedure:	FR Vol.62, page 26243, Section 15.247(a)2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/3/2005 1:08:40 PM		
Temperature: 24 °C	Air Pressure: 1010 hPa	Relative Humidity: 48 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.1.1 The 6 dB bandwidth test result at low frequency, PSK modulation



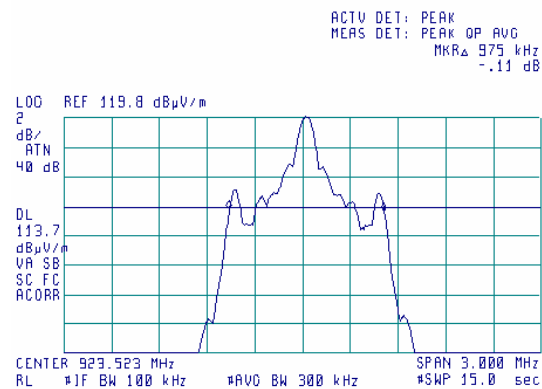
Plot 7.1.2 6 The dB bandwidth test result at mid frequency, PSK modulation



Test specification:		Section 15.247(a)2, 6 dB bandwidth	
Test procedure:		FR Vol.62, page 26243, Section 15.247(a)2	
Test mode:		Compliance	Verdict: PASS
Date & Time:		10/3/2005 1:08:40 PM	
Temperature: 24 °C	Air Pressure: 1010 hPa	Relative Humidity: 48 %	Power Supply: 3.6 V DC
Remarks:			

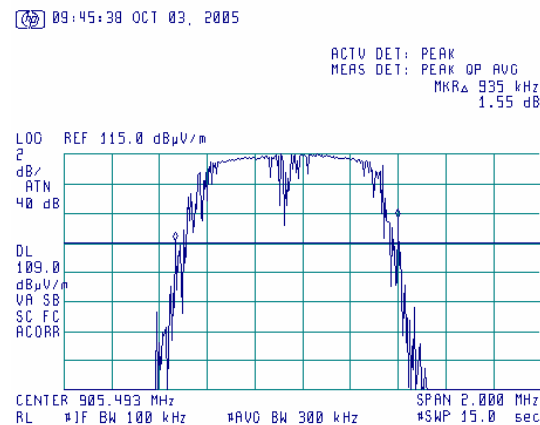
Plot 7.1.3 The 6 dB bandwidth test result at high frequency, PSK modulation

10:50:17 OCT 03, 2005

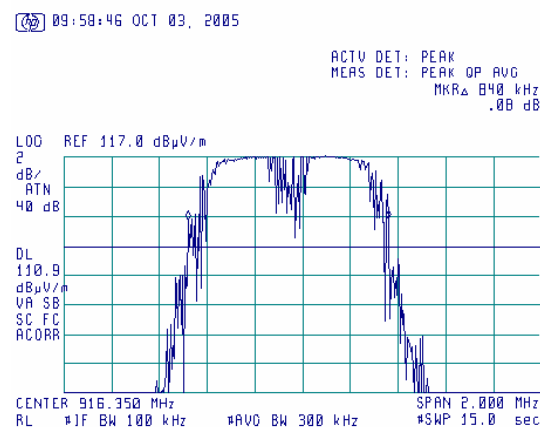


Test specification:	Section 15.247(a)2, 6 dB bandwidth		
Test procedure:	FR Vol.62, page 26243, Section 15.247(a)2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/3/2005 1:08:40 PM		
Temperature: 24 °C	Air Pressure: 1010 hPa	Relative Humidity: 48 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.1.4 The 6 dB bandwidth test result at low frequency, FSK modulation



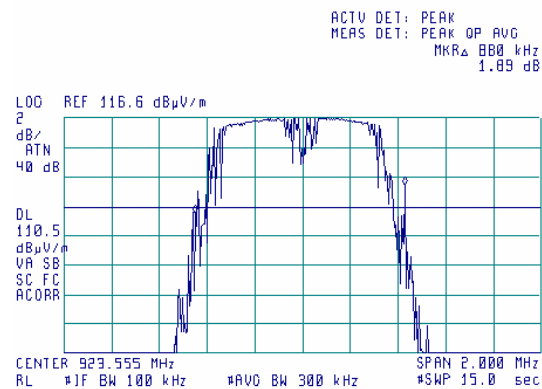
Plot 7.1.5 The 6 dB bandwidth test result at mid frequency, FSK modulation



Test specification:		Section 15.247(a)2, 6 dB bandwidth	
Test procedure:		FR Vol.62, page 26243, Section 15.247(a)2	
Test mode:		Compliance	Verdict: PASS
Date & Time:		10/3/2005 1:08:40 PM	
Temperature: 24 °C	Air Pressure: 1010 hPa	Relative Humidity: 48 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.1.6 The 6 dB bandwidth test result at high frequency, FSK modulation

11:04:27 OCT 03, 2005



Test specification:		Section 15.247(b)3, Peak output power	
Test procedure:		FR Vol.62, page 26243, Section 15.247(b)	
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/3/2005 12:44:56 PM		
Temperature: 24 °C	Air Pressure: 1010 hPa	Relative Humidity: 48 %	Power Supply: 3.6 V DC
Remarks:			

7.2 Peak output power

7.2.1 General

This test was performed to measure the maximum peak output power radiated by transmitter. Specification test limits are given in Table 7.2.1.

Table 7.2.1 Peak output power limits

Assigned frequency range, MHz	Maximum antenna gain, dBi	Peak output power*		Equivalent field strength limit @ 3m, dB(μV/m)**
		W	dBm	
902.0 – 928.0	5.0	1.0	30.0	131.2

*- The limit is provided in terms of conducted RF power at the antenna connector. If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power limit shall be reduced below the stated value as follows:

- by 1 dB for every 3 dB that the directional gain of antenna exceeds 6 dBi for fixed point-to-point transmitters operate in 2400-2483.5 MHz band;
- without any corresponding reduction for fixed point-to-point transmitters operate in 5725-5850 MHz band;
- by the amount in dB that the directional gain of antenna exceeds 6 dBi for the rest of transmitters.

** - Equivalent field strength limit was calculated from the peak output power as follows: $E = \sqrt{30 \times P \times G} / r$, where P is peak output power in Watts, r is antenna to EUT distance in meters and G is transmitter antenna gain in dBi.

7.2.2 Test procedure

7.2.2.1 The EUT was set up as shown in Figure 7.2.1, energized and its proper operation was checked.

7.2.2.2 The EUT was adjusted to produce maximum available to end user RF output power.

7.2.2.3 The resolution bandwidth of spectrum analyzer was set wider than 6 dB bandwidth of the EUT and the field strength of the EUT carrier frequency was measured with antenna connected to spectrum analyzer/ EMI receiver. To find maximum radiation the turntable was rotated 360° and the measuring antenna height was swept in both vertical and horizontal polarizations.

7.2.2.4 The maximum field strength of the EUT carrier frequency was measured as provided in Table 7.2.2 and associated plots.

7.2.2.5 The maximum peak output power was calculated from the field strength of carrier as follows:

$$P = (E \times d)^2 / (30 \times G),$$

where P is the peak output power in W, E is the field strength in V/m, d is the test distance and G is the transmitter numeric antenna gain over an isotropic radiator.

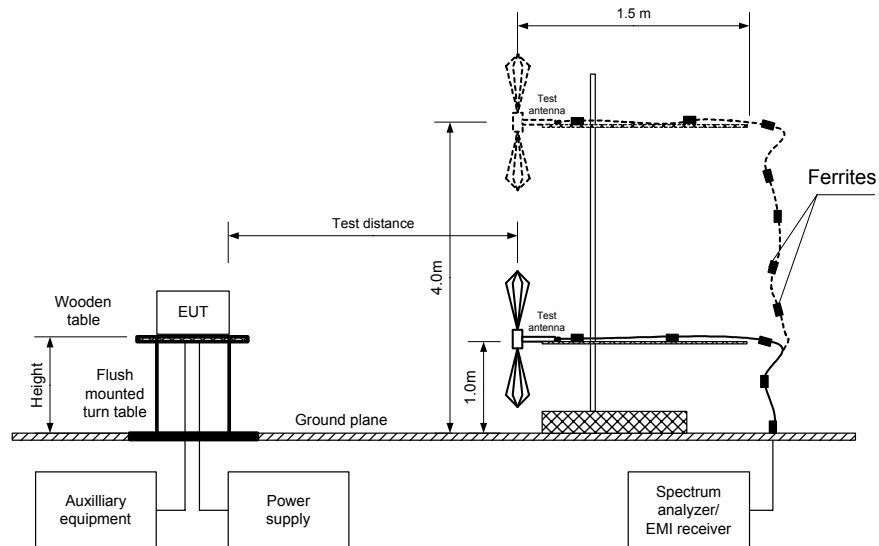
The above equation was converted in logarithmic units for 3 m test distance:

$$\text{Peak output power in dBm} = \text{Field strength in dB}(\mu\text{V/m}) - \text{Transmitter antenna gain in dBi} - 95.2 \text{ dB}$$

7.2.2.6 The worst test results (the lowest margins) were recorded in Table 7.2.2.

Test specification:		Section 15.247(b)3, Peak output power	
Test procedure:		FR Vol.62, page 26243, Section 15.247(b)	
Test mode:	Compliance	Verdict: PASS	
Date & Time:	10/3/2005 12:44:56 PM		
Temperature: 24 °C	Air Pressure: 1010 hPa	Relative Humidity: 48 %	Power Supply: 3.6 V DC
Remarks:			

Figure 7.2.1 Setup for carrier field strength measurements



Test specification:		Section 15.247(b)3, Peak output power			
Test procedure:		FR Vol.62, page 26243, Section 15.247(b)			
Test mode:		Compliance		Verdict: PASS	
Date & Time:		10/3/2005 12:44:56 PM			
Temperature: 24 °C		Air Pressure: 1010 hPa		Relative Humidity: 48 %	
Remarks:		Power Supply: 3.6 V DC			

Table 7.2.2 Peak output power test results

ASSIGNED FREQUENCY: 902 - 928 MHz
 TEST DISTANCE: 3 m
 TEST SITE: Semi anechoic chamber
 EUT HEIGHT: 0.8 m
 DETECTOR USED: Peak
 TEST ANTENNA TYPE: Biconilog (30 MHz – 1000 MHz)
 TRANSMITTER OUTPUT POWER SETTINGS: Maximum
 DETECTOR USED: Peak
 RESOLUTION BANDWIDTH: 3.0 MHz
 VIDEO BANDWIDTH: 3.0 MHz

EUT 6 dB BANDWIDTH: 1.0 MHz
 MODULATION: PSK
 MODULATING SIGNAL: PRBS
 BIT RATE: 60 kbps

Frequency, MHz	Field strength, dB(μV/m)	Antenna polarization	Antenna height, m	Azimuth, degrees*	EUT antenna gain, dBi	Peak output power, dBm**	Limit, dBm	Margin, dB***	Verdict
906.00	120.65	Vertical	1.0	55	5	20.42	30	-9.58	Pass
916.60	121.25	Vertical	1.0	51	5	21.02	30	-8.92	Pass
923.83	121.83	Vertical	1.0	52	5	21.60	30	-8.40	Pass

EUT 6 dB BANDWIDTH: 1.0 MHz
 MODULATION: FSK
 MODULATING SIGNAL: PRBS
 BIT RATE: 120 kbps

Frequency, MHz	Field strength, dB(μV/m)	Antenna polarization	Antenna height, m	Azimuth, degrees*	EUT antenna gain, dBi	Peak output power, dBm**	Limit, dBm	Margin, dB***	Verdict
905.94	115.34	Vertical	1.0	55	5	15.11	30	-14.89	Pass
916.67	116.05	Vertical	1.0	51	5	15.82	30	-14.18	Pass
924.09	116.95	Vertical	1.0	52	5	16.72	30	-13.28	Pass

*- EUT front panel refer to 0 degrees position of turntable.

**- Peak output power was calculated from the field strength of carrier as follows: $P = (E \times d)^2 / (30 \times G)$, where P is the peak output power in W, E is the field strength in V/m, d is the test distance in meters and G is the transmitter numeric antenna gain over an isotropic radiator. The above equation was converted in logarithmic units for 3 m test distance: *Peak output power in dBm = Field strength in dB(μV/m) - Transmitter antenna gain in dBi - 95.2 dB*

***- Margin = Peak output power – specification limit.

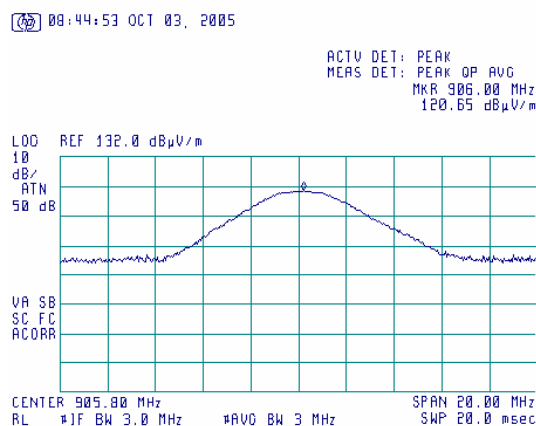
Reference numbers of test equipment used

HL 0521	HL 0589	HL 0604	HL 2009				
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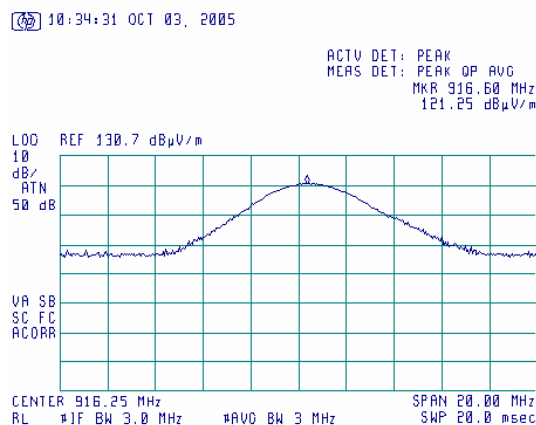
Full description is given in Appendix A.

Test specification:	Section 15.247(b)3, Peak output power		
Test procedure:	FR Vol.62, page 26243, Section 15.247(b)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/3/2005 12:44:56 PM		
Temperature: 24 °C	Air Pressure: 1010 hPa	Relative Humidity: 48 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.2.1 Field strength of carrier at low frequency, PSK modulation

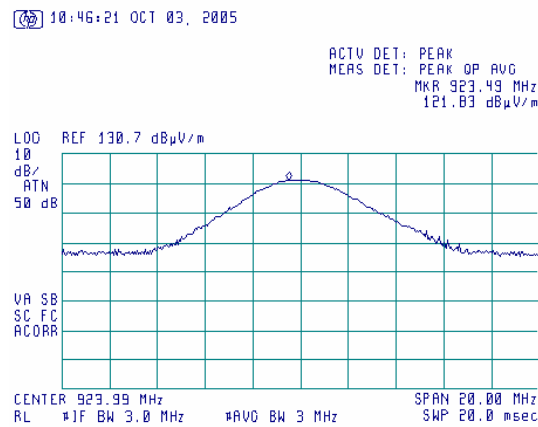


Plot 7.2.2 Field strength of carrier at mid frequency, PSK modulation



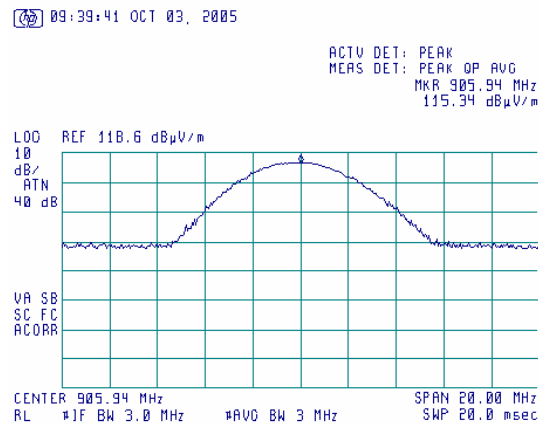
Test specification:		Section 15.247(b)3, Peak output power	
Test procedure:		FR Vol.62, page 26243, Section 15.247(b)	
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/3/2005 12:44:56 PM		
Temperature: 24 °C	Air Pressure: 1010 hPa	Relative Humidity: 48 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.2.3 Field strength of carrier at high frequency, PSK modulation

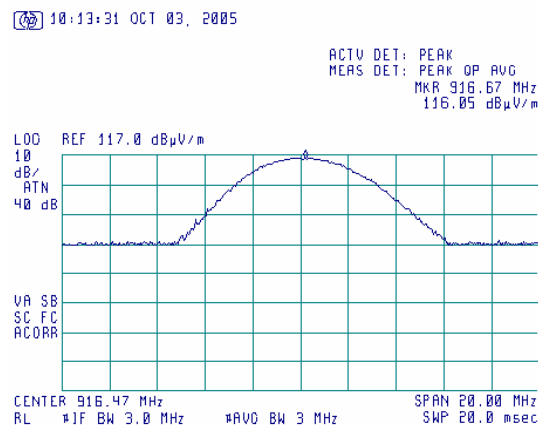


Test specification:	Section 15.247(b)3, Peak output power		
Test procedure:	FR Vol.62, page 26243, Section 15.247(b)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/3/2005 12:44:56 PM		
Temperature: 24 °C	Air Pressure: 1010 hPa	Relative Humidity: 48 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.2.4 Field strength of carrier at low frequency, FSK modulation

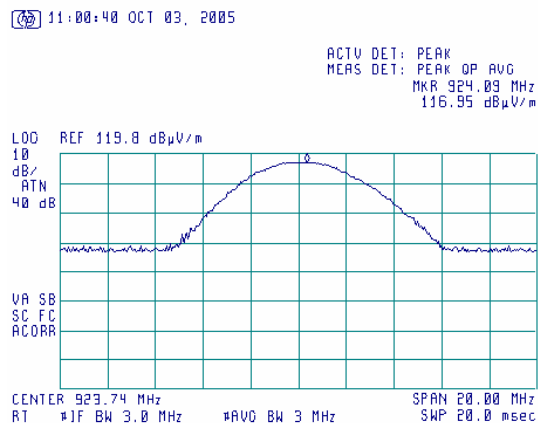


Plot 7.2.5 Field strength of carrier at mid frequency, FSK modulation



Test specification:		Section 15.247(b)3, Peak output power	
Test procedure:		FR Vol.62, page 26243, Section 15.247(b)	
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/3/2005 12:44:56 PM		
Temperature: 24 °C	Air Pressure: 1010 hPa	Relative Humidity: 48 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.2.6 Field strength of carrier at high frequency, FSK modulation



Test specification:		Section 15.247(d), Radiated spurious emissions	
Test procedure:		FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4	
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

7.3 Field strength of spurious emissions

7.3.1 General

This test was performed to measure field strength of spurious emissions from the EUT. Specification test limits are given in Table 7.3.1.

Table 7.3.1 Radiated spurious emissions limits

Frequency, MHz	Field strength at 3 m within restricted bands, dB(μV/m)***			Attenuation of field strength of spurious versus carrier outside restricted bands, dBc***
	Peak	Quasi Peak	Average	
0.009 – 0.490*	NA	128.5 – 93.8**	NA	20.0
0.490 – 1.705*		73.8 – 63.0**		
1.705 – 30.0*		69.5**		
30 – 88		40.0		
88 – 216		43.5		
216 – 960		46.0		
960 – 1000		54.0		
Above 1000	74.0	NA	54.0	

* - The limit for 3 m test distance was calculated using the inverse square distance extrapolation factor as follows:

$$\text{Lim}_{S2} = \text{Lim}_{S1} + 40 \log (S_1/S_2),$$

where S_1 and S_2 – standard defined and test distance respectively in meters.

** - The limit decreases linearly with the logarithm of frequency.

*** - The field strength limits applied from the lowest radio frequency generated in the device, without going below 9 kHz up to the tenth harmonic of the highest fundamental frequency.

7.3.2 Test procedure for spurious emission field strength measurements in 9 kHz to 30 MHz band

7.3.2.1 The EUT was set up as shown in Figure 7.3.1, energized and the performance check was conducted.

7.3.2.2 The specified frequency range was investigated with antenna connected to spectrum analyzer/ EMI receiver. To find maximum radiation the turntable was rotated 360° and the measuring antenna was rotated around its vertical axis.

7.3.2.3 The worst test results (the lowest margins) were recorded and shown in the associated plots.

7.3.3 Test procedure for spurious emission field strength measurements above 30 MHz

7.3.3.1 The EUT was set up as shown in Figure 7.3.2, energized and the performance check was conducted.

7.3.3.2 The specified frequency range was investigated with antenna connected to spectrum analyzer/ EMI receiver. To find maximum radiation the turntable was rotated 360°, the measuring antenna height was changed from 1 to 4 m, its polarization was switched from vertical to horizontal.

7.3.3.3 The worst test results (the lowest margins) were recorded and shown in the associated plots.

Test specification:		Section 15.247(d), Radiated spurious emissions	
Test procedure:		FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4	
Test mode:	Compliance	Verdict: PASS	
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Figure 7.3.1 Setup for spurious emission field strength measurements below 30 MHz

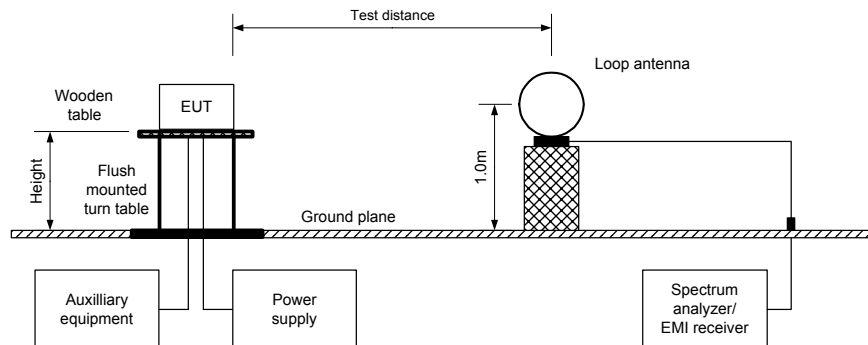
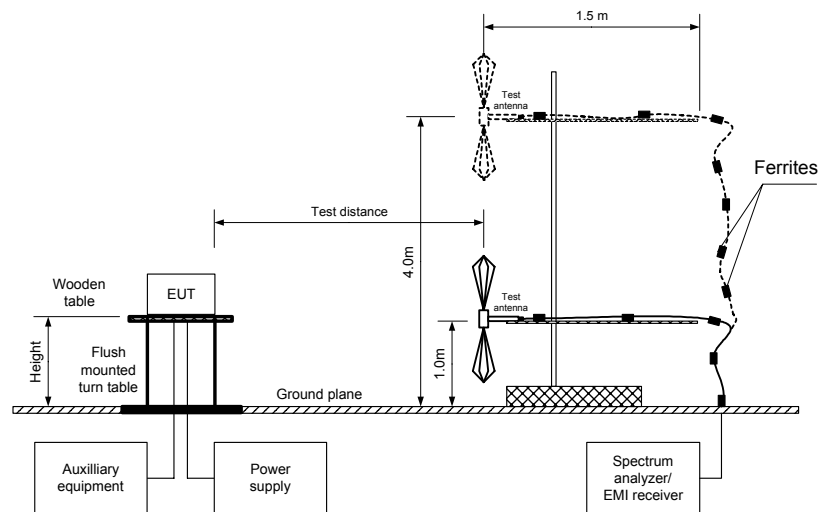


Figure 7.3.2 Setup for spurious emission field strength measurements above 30 MHz



Test specification:		Section 15.247(d), Radiated spurious emissions	
Test procedure:		FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4	
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Table 7.3.2 Field strength of emissions outside restricted bands

ASSIGNED FREQUENCY RANGE: 902 - 928 MHz
INVESTIGATED FREQUENCY RANGE: 0.009 - 9500 MHz
TEST DISTANCE: 3 m
TRANSMITTER OUTPUT POWER SETTINGS: Maximum
DETECTOR USED: Peak
RESOLUTION BANDWIDTH: 100 kHz
VIDEO BANDWIDTH: 300 kHz
TEST ANTENNA TYPE: Active loop (9 kHz – 30 MHz)
Biconilog (30 MHz – 1000 MHz)
Double ridged guide (above 1000 MHz)

MODULATION: PSK
MODULATING SIGNAL: PRBS
BIT RATE: 60 kbps
DUTY CYCLE: 5.69 %
TRANSMITTER OUTPUT POWER: 20.42 dBm at low carrier frequency
21.02 dBm at mid carrier frequency
21.60 dBm at high carrier frequency

27.00 dBm at high carrier frequency									
Frequency, MHz	Field strength of spurious, dB(μV/m)	Antenna polarization	Antenna height, m	Azimuth, degrees*	Field strength of carrier, dB(μV/m)	Attenuation below carrier, dBc	Limit, dBc	Margin, dB**	Verdict
Low carrier frequency									
1810.85	69.91	Horizontal	1.2	54	117.60	47.69	20.00	-27.69	Pass
6337.83	58.17	Vertical	1.1	30		59.43		-39.43	
7243.47	50.83	Vertical	1.0	44		66.77		-46.77	
Mid carrier frequency									
1832.58	68.68	Horizontal	1.2	0	119.10	50.42	20.00	-30.42	Pass
5497.83	53.00	Vertical	1.2	54		66.10		-46.10	
6414.18	56.83	Vertical	1.1	55		62.27		-42.27	
High carrier frequency									
1847.06	71.13	Horizontal	2.1	60	119.78	48.65	20.00	-28.65	Pass
5541.28	53.83	Vertical	2.0	22		65.95		-45.95	
6464.85	56.83	Vertical	1.0	18		62.95		-42.95	
9235.44	49.50	Vertical	1.1	27		70.28		-50.28	

*- EUT front panel refers to 0 degrees position of turntable.

**- Margin = Attenuation below carrier – specification limit.

Test specification:	Section 15.247(d), Radiated spurious emissions			
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4			
Test mode:	Compliance	Verdict: PASS		
Date & Time:	10/10/2005 12:50:22 PM			
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC	
Remarks:				

MODULATION: FSK
 MODULATING SIGNAL: PRBS
 BIT RATE: 120 kbps
 DUTY CYCLE: 1.27 %
 TRANSMITTER OUTPUT POWER: 15.11 dBm at low carrier frequency
 15.82 dBm at mid carrier frequency
 16.72 dBm at high carrier frequency

10.72 dBm at high carrier frequency									
Frequency, MHz	Field strength of spurious, dB(μV/m)	Antenna polarization	Antenna height, m	Azimuth, degrees*	Field strength of carrier, dB(μV/m)	Attenuation below carrier, dBc	Limit, dBc	Margin, dB**	Verdict
Low carrier frequency									
1810.35	64.63	Horizontal	1.2	54	112.19	47.56	20.00	-27.56	Pass
6336.62	54.50	Vertical	1.1	30		57.69		-37.69	
7245.10	36.50	Vertical	1.0	44		75.69		-55.69	
Mid carrier frequency									
1832.59	69.25	Horizontal	1.8	228	115.36	46.11	20.00	-26.11	Pass
5496.57	49.33	Vertical	1.2	54		66.03		-46.03	
6412.60	50.00	Vertical	1.1	55		65.36		-45.36	
High carrier frequency									
1846.8	66.87	Horizontal	1.9	230	115.74	48.87	20.00	-28.87	Pass
5540.05	53.50	Vertical	2.0	22		62.24		-42.24	
6463.32	51.00	Vertical	1.0	18		64.74		-44.74	
9233.09	41.00	Vertical	1.1	27		74.74		-54.74	

*- EUT front panel refers to 0 degrees position of turntable.

** - Margin = Attenuation below carrier – specification limit.

Test specification:	Section 15.247(d), Radiated spurious emissions			
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4			
Test mode:	Compliance	Verdict: PASS		
Date & Time:	10/10/2005 12:50:22 PM			
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC	
Remarks:				

Table 7.3.3 Field strength of spurious emissions above 1 GHz within restricted bands

ASSIGNED FREQUENCY RANGE: 902 – 928 MHz
 INVESTIGATED FREQUENCY RANGE: 1000 - 9500 MHz
 TEST DISTANCE: 3 m
 TRANSMITTER OUTPUT POWER SETTINGS: Maximum
 DETECTOR USED: Peak
 RESOLUTION BANDWIDTH: 1000 kHz
 TEST ANTENNA TYPE: Double ridged guide

MODULATION: PSK
 MODULATING SIGNAL: PRBS
 BIT RATE: 60 kbps
 DUTY CYCLE: 5.69 %
 TRANSMITTER OUTPUT POWER: 20.42 dBm at low carrier frequency
 21.02 dBm at mid carrier frequency
 21.60 dBm at high carrier frequency

Frequency, MHz	Antenna		Azimuth, degrees*	Peak field strength(VBW=3 MHz)			Average field strength(VBW=300 Hz)				Verdict
	Polarization	Height, m		Measured, dB(μV/m)	Limit, dB(μV/m)	Margin, dB**	Measured, dB(μV/m)	Calculated, dB(μV/m)	Limit, dB(μV/m)	Margin, dB***	
Low carrier frequency											
2716.25	Vertical	1.2	24	68.67	74.00	-5.33	60.35	35.45	54.00	-24.55	Pass
3621.65	Vertical	1.3	17	69.33		-4.67	59.50	34.60		-19.40	
4527.10	Vertical	1.0	32	63.83		-10.17	58.33	33.43		-20.57	
5432.58	Vertical	2.0	65	60.83		-13.17	40.50	15.60		-38.40	
8148.62	Vertical	1.8	11	55.83		-18.17	43.33	18.43		-35.57	
9054.17	Vertical	1.1	110	61.00		-13.00	41.83	16.93		-37.07	
Mid carrier frequency											
2748.83	Vertical	1.0	35	73.58	74.00	-0.42	65.74	40.84	54.00	-13.16	Pass
3665.13	Vertical	1.1	27	67.67		-6.33	57.67	32.77		-21.23	
4581.40	Vertical	1.8	67	61.00		-13.00	53.67	28.77		-25.23	
7330.32	Vertical	1.2	15	67.00		-7.00	55.17	30.27		-23.73	
8246.77	Vertical	1.0	19	57.00		-17.00	47.83	22.93		-31.07	
9161.22	Vertical	1.0	90	56.67		-17.33	40.67	15.77		-38.23	
High carrier frequency											
2769.99	Vertical	1.2	40	66.17	74.00	-7.83	47.67	22.77	54.00	-31.23	Pass
3694.20	Vertical	1.4	28	67.67		-6.33	58.33	33.43		-20.57	
4617.63	Vertical	1.3	22	61.00		-13.00	54.67	29.77		-24.23	
7388.21	Vertical	1.2	25	65.33		-8.67	54.50	29.60		-24.40	
8311.70	Vertical	1.0	99	57.17		-16.83	46.83	21.93		-32.07	

*- EUT front panel refers to 0 degrees position of turntable.

** - Margin = Measured field strength - specification limit.

*** - Margin = Calculated field strength - specification limit,
 where Calculated field strength = Measured field strength + average factor.

Test specification:	Section 15.247(d), Radiated spurious emissions			
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4			
Test mode:	Compliance	Verdict: PASS		
Date & Time:	10/10/2005 12:50:22 PM			
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC	
Remarks:				

MODULATION: FSK
MODULATING SIGNAL: PRBS
BIT RATE: 120 kbps
DUTY CYCLE: 1.27 %
TRANSMITTER OUTPUT POWER: 15.11 dBm at low carrier frequency
15.82 dBm at mid carrier frequency
16.72 dBm at high carrier frequency

Frequency, MHz	Antenna		Azimuth, degrees	Peak field strength(VBW=3 MHz)			Average field strength(VBW=1 kHz)					Verd.
	Polarization	Height, m		Measured, dB(μV/m)	Limit, dB(μV/m)	Margin, dB**	Measured, dB(μV/m)	Average factor, dB	Calculated, dB(μV/m)*** *	Limit, dB(μV/m)	Margin, dB***	
Low carrier frequency												
2715.96	Vertical	1.2	24	68.27	74.00	-5.73	61.71	-37.9	23.81	54.00	-30.19	Pass
3620.73	Vertical	1.3	17	62.00		-12.00	51.83	-37.9	13.93		-40.07	
4526.22	Vertical	1.0	32	58.33		-15.67	46.67	-37.9	8.77		-45.23	
5431.57	Vertical	2.0	65	58.00		-16.00	41.00	-37.9	3.10		-50.90	
8147.08	Vertical	1.8	11	56.83		-17.17	40.83	-37.9	2.93		-51.07	
9051.38	Vertical	1.1	110	56.67		-17.33	38.50	-37.9	0.60		-53.40	
Mid carrier frequency												
2748.17	Vertical	1.0	35	68.46	74.00	-5.54	62.07	-37.9	24.17	54.00	-29.83	Pass
3664.47	Vertical	1.1	27	60.83		-13.17	53.67	-37.9	15.77		-38.23	
4580.35	Vertical	1.8	67	57.00		-17.00	47.67	-37.9	9.77		-44.23	
7328.84	Vertical	1.2	15	60.00		-14.00	49.50	-37.9	11.60		-42.40	
8244.90	Vertical	1.0	19	57.33		-16.67	39.00	-37.9	1.10		-52.90	
9160.82	Vertical	1.0	90	54.00		-20.00	37.17	-37.9	-0.73		-54.73	
High carrier frequency												
2770.09	Vertical	1.2	48	58.50	74.00	-15.50	54.00	-37.9	16.10	54.00	-37.90	Pass
3694.77	Vertical	1.4	28	62.00		-12.00	54.50	-37.9	16.60		-37.40	
4616.77	Vertical	1.3	22	56.50		-17.50	47.33	-37.9	9.43		-44.57	
7386.44	Vertical	1.2	25	57.33		-16.67	46.67	-37.9	8.77		-45.23	
8310.00	Vertical	1.0	99	51.83		-22.17	39.33	-37.9	1.43		-52.57	

*- EUT front panel refers to 0 degrees position of turntable.

** - Margin = Measured field strength - specification limit.

*** - Margin = Calculated field strength - specification limit,

where Calculated field strength = Measured field strength + average factor;

**** - Calculated average field strength = Measured average field strength + average factor.

Test specification:		Section 15.247(d), Radiated spurious emissions	
Test procedure:		FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4	
Test mode:		Compliance	Verdict: PASS
Date & Time:		10/10/2005 12:50:22 PM	
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Table 7.3.4 Average factor calculation

Transmission pulse		Average factor, dB
Duration, ms	Period, ms	
PSK modulated signal		
4.500	79.000	-24.9
FSK modulated signal		
1.000	78.500	-37.9

* - Average factor was calculated as follows

for pulse train shorter than 100 ms:
$$\text{Average factor} = 20 \times \log_{10} \left(\frac{\text{Pulse duration}}{\text{Pulse period}} \times \frac{\text{Burst duration}}{\text{Train duration}} \times \text{Number of bursts within pulse train} \right)$$

for pulse train longer than 100 ms:
$$\text{Average factor} = 20 \times \log_{10} \left(\frac{\text{Pulse duration}}{\text{Pulse period}} \times \frac{\text{Burst duration}}{100 \text{ ms}} \times \text{Number of bursts within 100 ms} \right)$$

Test specification:		Section 15.247(d), Radiated spurious emissions	
Test procedure:		FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4	
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Table 7.3.5 Field strength of spurious emissions below 1 GHz within restricted bands

ASSIGNED FREQUENCY RANGE: 902 – 928 MHz
 INVESTIGATED FREQUENCY RANGE: 0.009 – 1000 MHz
 TEST DISTANCE: 3 m
 TRANSMITTER OUTPUT POWER SETTINGS: Maximum
 RESOLUTION BANDWIDTH: 0.2 kHz (9 kHz – 150 kHz)
 9.0 kHz (150 kHz – 30 MHz)
 120 kHz (30 MHz – 1000 MHz)
 VIDEO BANDWIDTH: > Resolution bandwidth
 TEST ANTENNA TYPE: Active loop (9 kHz – 30 MHz)
 Biconilog (30 MHz – 1000 MHz)
 MODULATION: PSK
 MODULATING SIGNAL: PRBS
 BIT RATE: 60 kbps
 DUTY CYCLE: 5.99 %
 TRANSMITTER OUTPUT POWER: 20.42 dBm at low carrier frequency
 21.02 dBm at mid carrier frequency
 21.60 dBm at high carrier frequency

Frequency, MHz	Peak emission, dB(μV/m)	Quasi-peak			Antenna polarization	Antenna height, m	Turn-table position**, degrees	Verdict
		Measured emission, dB(μV/m)	Limit, dB(μV/m)	Margin, dB*				
21.00 dBm at high carrier frequency								
Low carrier frequency								
No spurious emissions were found.								Pass
Mid carrier frequency								
No spurious emissions were found.								Pass
High carrier frequency								
No spurious emissions were found.								Pass

MODULATION: FSK
 MODULATING SIGNAL: PRBS
 BIT RATE: 120 kbps
 DUTY CYCLE: 1.27 %
 TRANSMITTER OUTPUT POWER: 15.11 dBm at low carrier frequency
 15.82 dBm at mid carrier frequency
 16.72 dBm at high carrier frequency

Frequency, MHz	Peak emission, dB(μV/m)	Quasi-peak			Antenna polarization	Antenna height, m	Turn-table position**, degrees	Verdict
		Measured emission, dB(μV/m)	Limit, dB(μV/m)	Margin, dB*				
10.72 uhm at high carrier frequency								
Low carrier frequency								
No spurious emissions were found.								Pass
Mid carrier frequency								
No spurious emissions were found.								Pass
High carrier frequency								
No spurious emissions were found.								Pass

*- Margin = Measured emission - specification limit.

** - EUT front panel refer to 0 degrees position of turntable.

Reference numbers of test equipment used

HL 0287	HL 0410	HL 0446	HL 0465	HL 0521	HL 0589	HL 0593	HL 0594
HL 0604	HL 0813	HL 1004	HL 1200	HL 1424	HL 1430	HL 1552	HL 1848
HL 1941	HL 1947	HL 1984	HL 2009	HL 2254	HL 2259	HL 2387	HL 2499

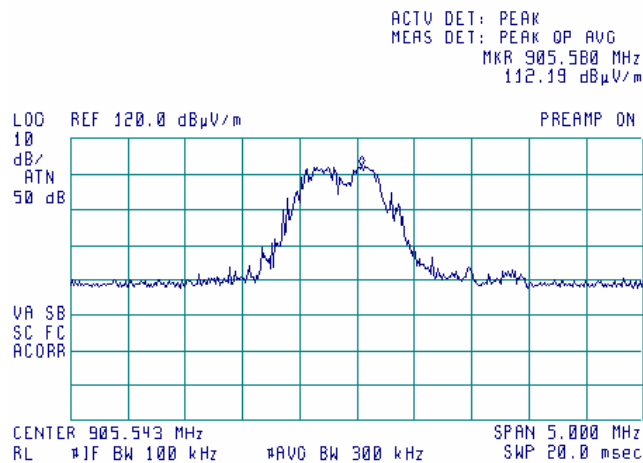
Full description is given in Appendix A.

Test specification:		Section 15.247(d), Radiated spurious emissions	
Test procedure:		FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4	
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.1 Field strength measurements at the low carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical
MODULATION: FSK

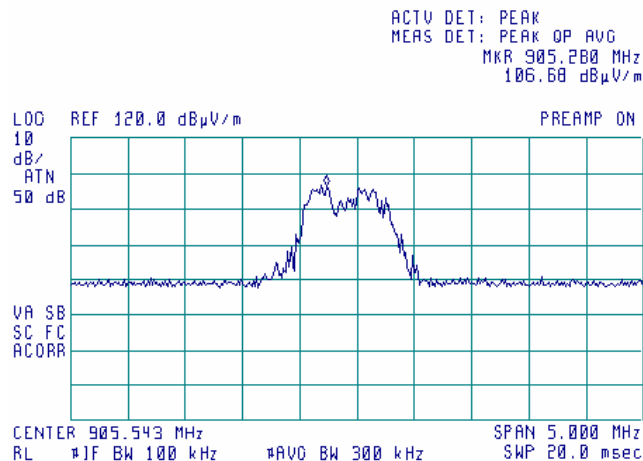
09:23:36 OCT 06, 2005



Plot 7.3.2 Field strength measurements at the low carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Horizontal
MODULATION: FSK

09:26:18 OCT 06, 2005

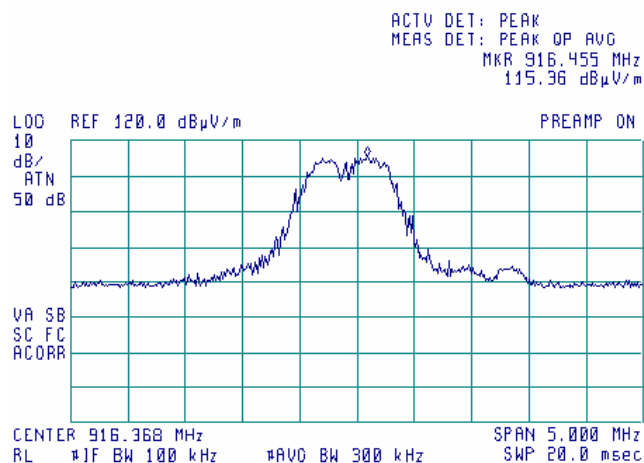


Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.3 Field strength measurements at the mid carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical
MODULATION: FSK

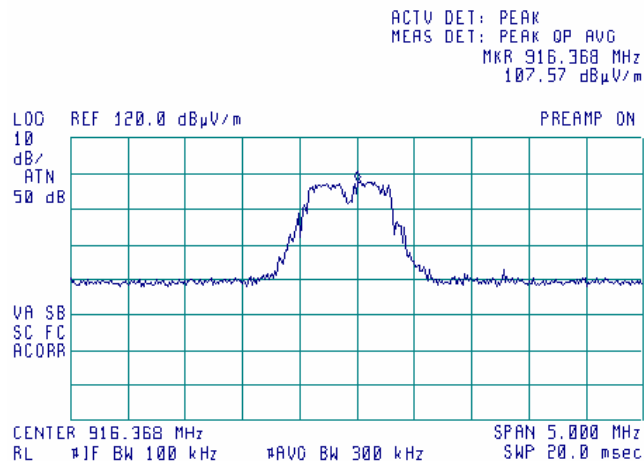
09:37:19 OCT 06, 2005



Plot 7.3.4 Field strength measurements at the mid carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Horizontal
MODULATION: FSK

09:33:05 OCT 06, 2005

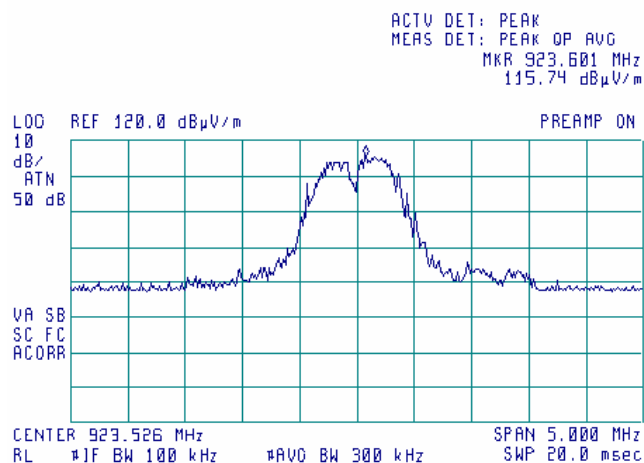


Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.5 Field strength measurements at the high carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical
MODULATION: FSK

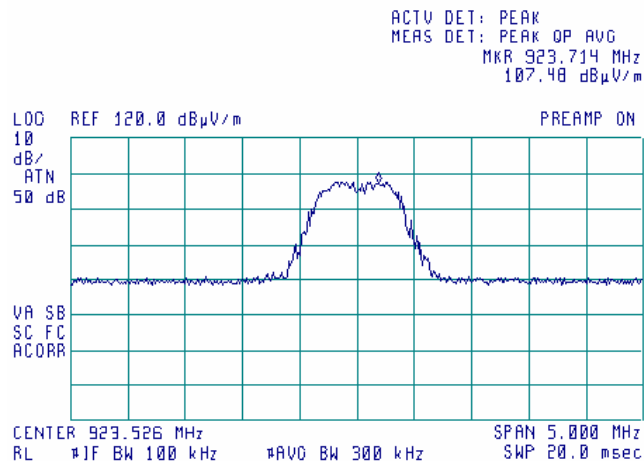
09:58:38 OCT 06, 2005



Plot 7.3.6 Field strength measurements at the high carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Horizontal
MODULATION: FSK

10:04:47 OCT 06, 2005

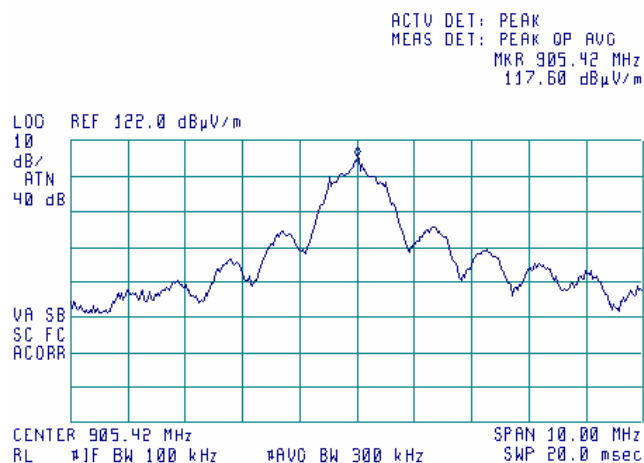


Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.7 Field strength measurements at the low carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical
MODULATION: PSK

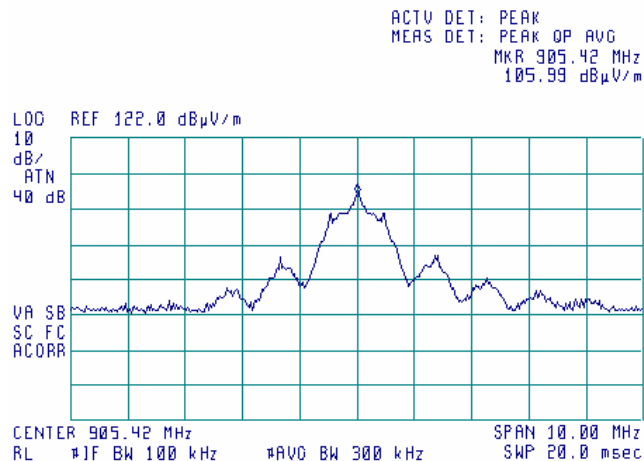
11:40:36 OCT 03, 2005



Plot 7.3.8 Field strength measurements at the low carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Horizontal
MODULATION: PSK

11:42:35 OCT 03, 2005

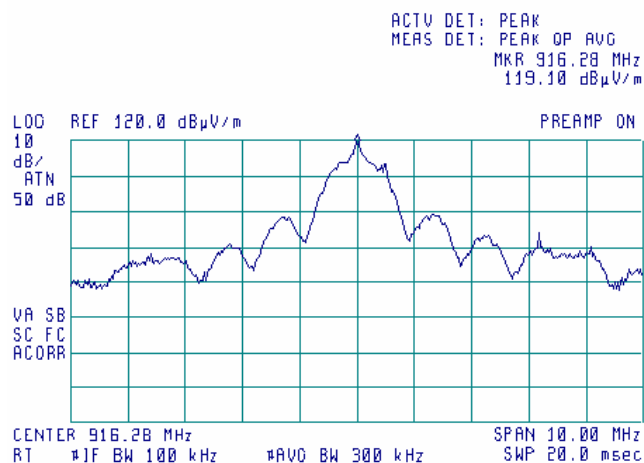


Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.9 Field strength measurements at the mid carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical
MODULATION: PSK

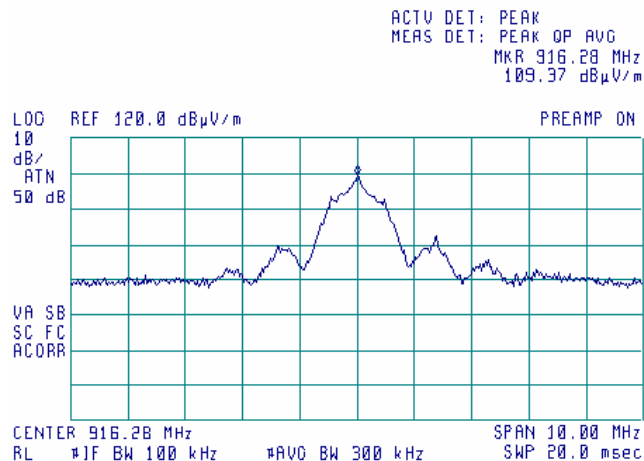
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Plot 7.3.10 Field strength measurements at the mid carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Horizontal
MODULATION: PSK

11:30:19 OCT 03, 2005

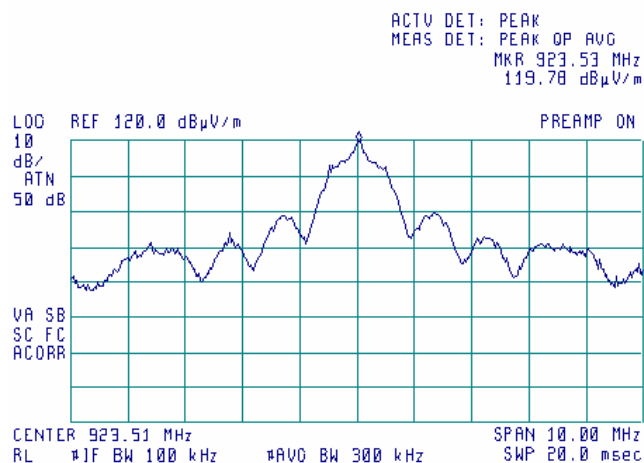


Test specification:		Section 15.247(d), Radiated spurious emissions	
Test procedure:		FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4	
Test mode:		Compliance	Verdict: PASS
Date & Time:		10/10/2005 12:50:22 PM	
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.11 Field strength measurements at the high carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical
MODULATION: PSK

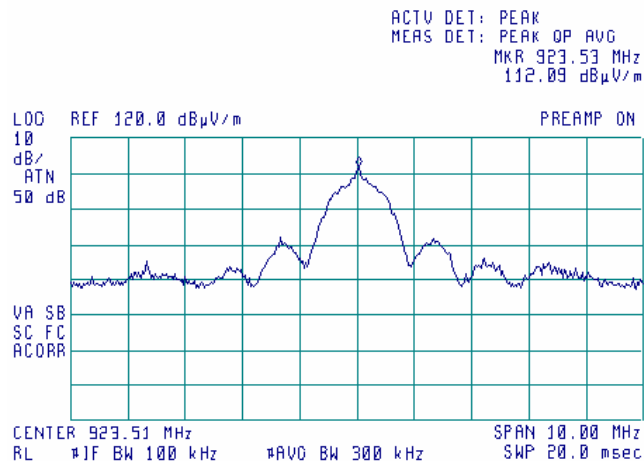
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Plot 7.3.12 Field strength measurements at the high carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Horizontal
MODULATION: PSK

11:22:45 OCT 03, 2005

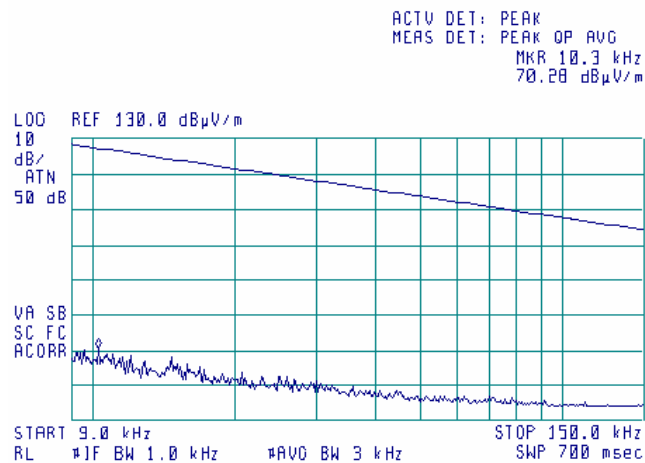


Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.13 Radiated emission measurements from 9 to 150 kHz at the low carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical
MODULATION: PSK

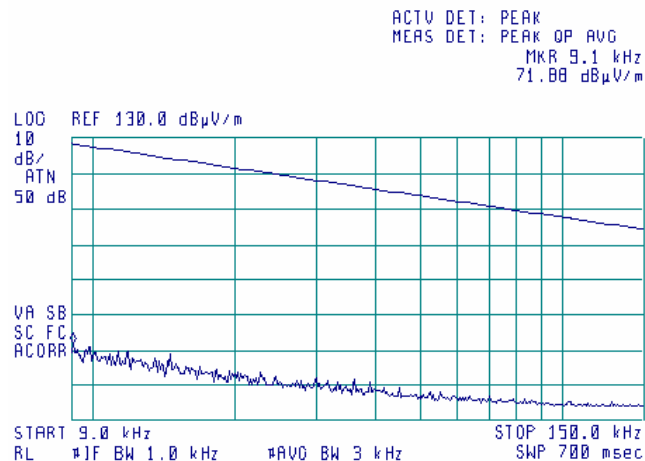
15:51:33 OCT 06, 2005



Plot 7.3.14 Radiated emission measurements from 9 to 150 kHz at the low carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical
MODULATION: FSK

15:59:28 OCT 06, 2005

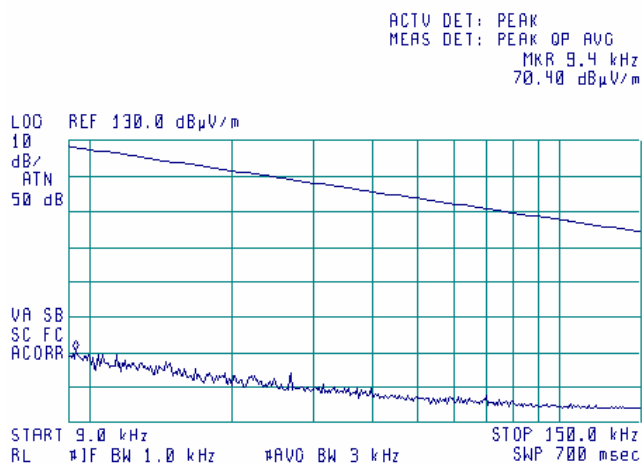


Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.15 Radiated emission measurements from 9 to 150 kHz at the mid carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical
MODULATION: PSK

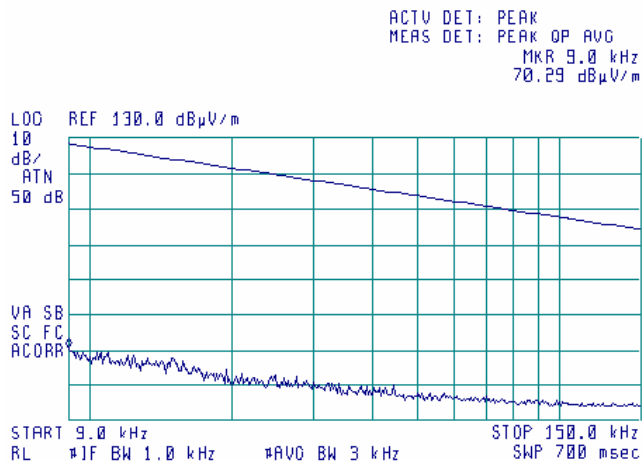
15:53:14 OCT 06, 2005



Plot 7.3.16 Radiated emission measurements from 9 to 150 kHz at the mid carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical
MODULATION: FSK

16:01:15 OCT 06, 2005

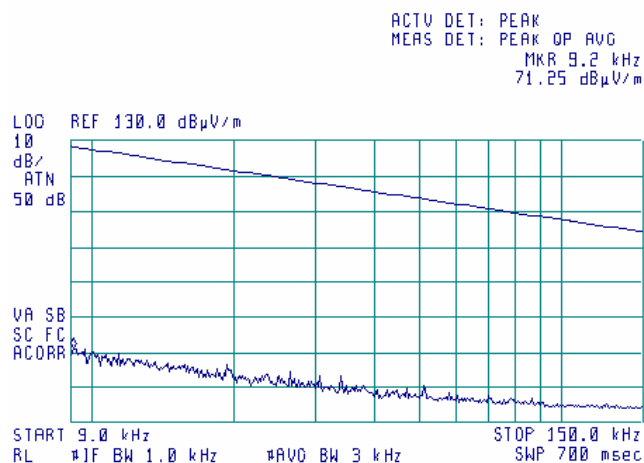


Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.17 Radiated emission measurements from 9 to 150 kHz at the high carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical
MODULATION: PSK

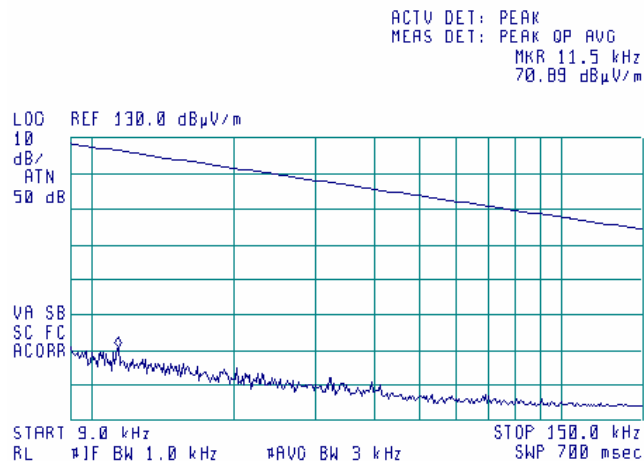
15:58:09 OCT 06, 2005



Plot 7.3.18 Radiated emission measurements from 9 to 150 kHz at the high carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical
MODULATION: FSK

16:02:31 OCT 06, 2005

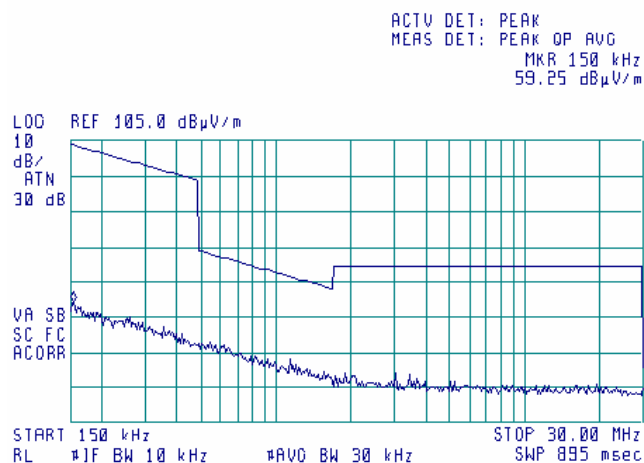


Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.19 Radiated emission measurements from 0.15 to 30 MHz at the low carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical
MODULATION: PSK

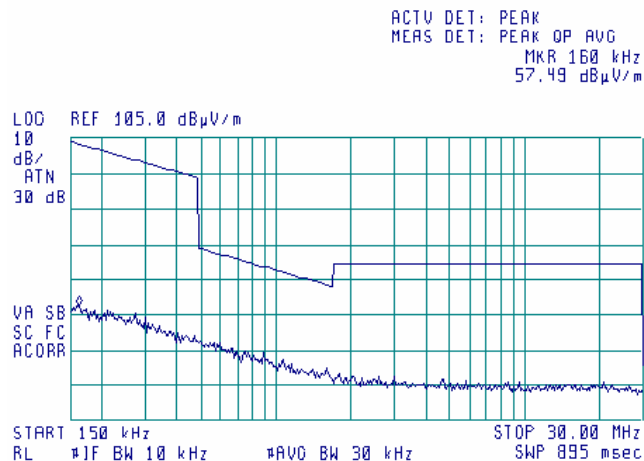
15:43:40 OCT 06, 2005



Plot 7.3.20 Radiated emission measurements from 0.15 to 30 MHz at the low carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical
MODULATION: FSK

15:46:26 OCT 06, 2005

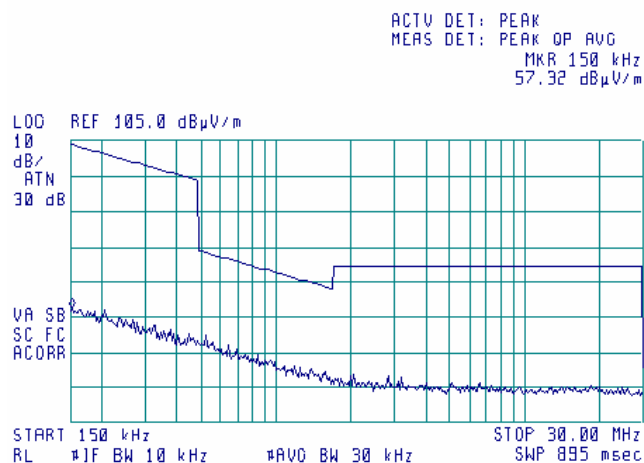


Test specification:		Section 15.247(d), Radiated spurious emissions	
Test procedure:		FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4	
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.21 Radiated emission measurements from 0.15 to 30 MHz at the mid carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical
MODULATION: PSK

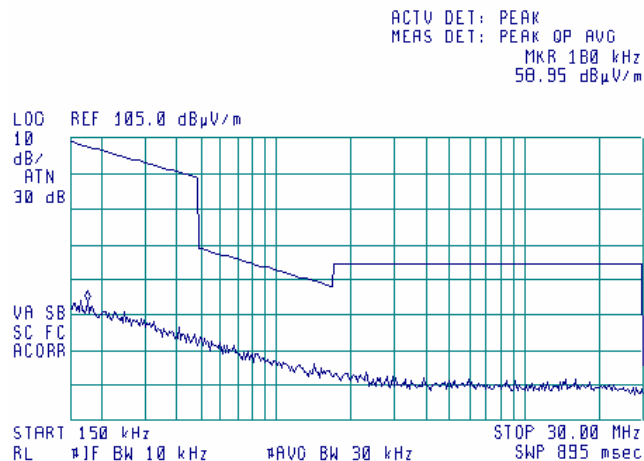
15:44:48 OCT 06, 2005



Plot 7.3.22 Radiated emission measurements from 0.15 to 30 MHz at the mid carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical
MODULATION: FSK

15:47:22 OCT 06, 2005

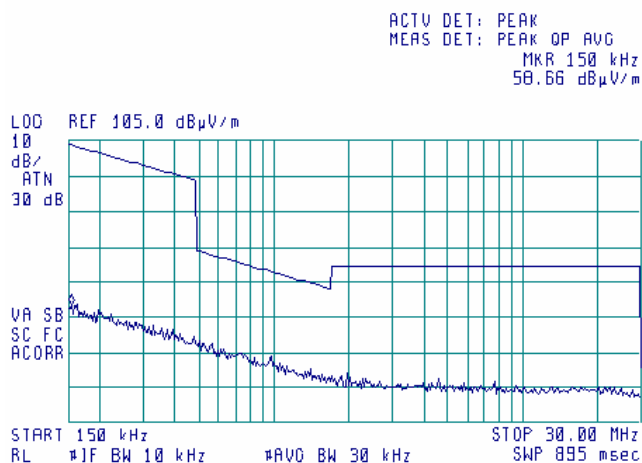


Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.23 Radiated emission measurements from 0.15 to 30 MHz at the high carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical
MODULATION: PSK

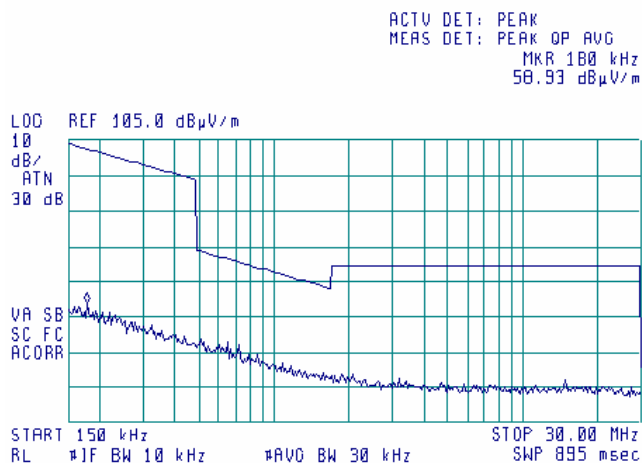
15:45:38 OCT 06, 2005



Plot 7.3.24 Radiated emission measurements from 0.15 to 30 MHz at the high carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical
MODULATION: FSK

15:48:16 OCT 06, 2005

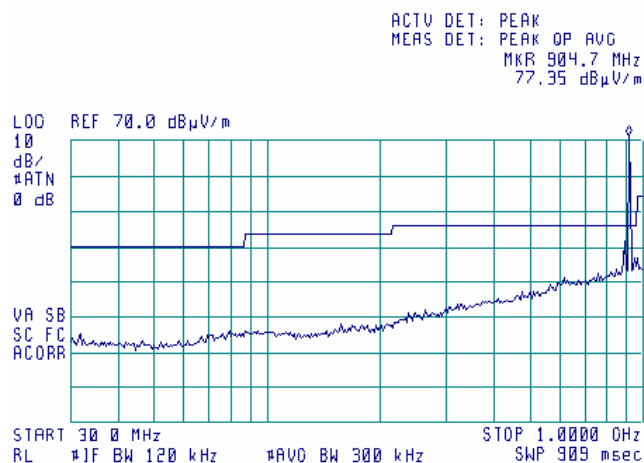


Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.25 Radiated emission measurements from 30 to 1000 MHz at the low carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: PSK

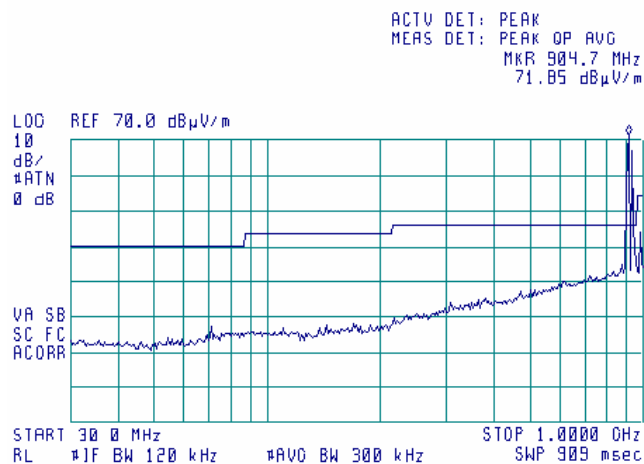
11:37:33 OCT 03, 2005



Plot 7.3.26 Radiated emission measurements from 30 to 1000 MHz at the mid carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: PSK

11:33:43 OCT 03, 2005

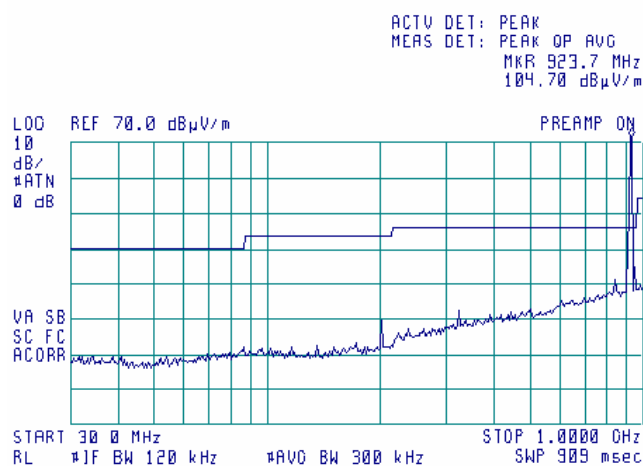


Test specification:		Section 15.247(d), Radiated spurious emissions	
Test procedure:		FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4	
Test mode:		Compliance	Verdict: PASS
Date & Time:		10/10/2005 12:50:22 PM	
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.27 Radiated emission measurements from 30 to 1000 MHz at the high carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: PSK

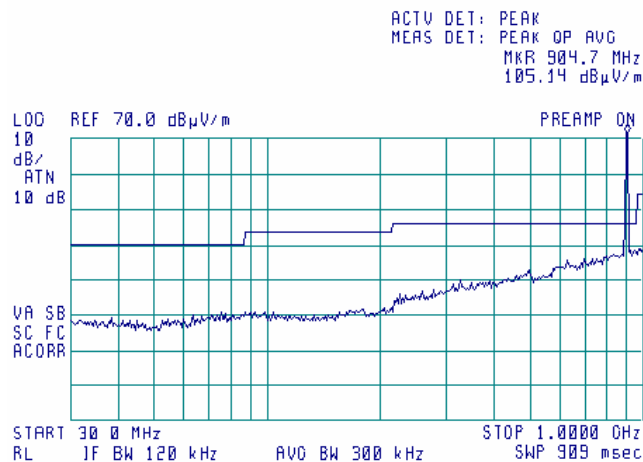
11:18:04 OCT 03, 2005



Plot 7.3.28 Radiated emission measurements from 30 to 1000 MHz at the low carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: FSK

09:16:45 OCT 06, 2005

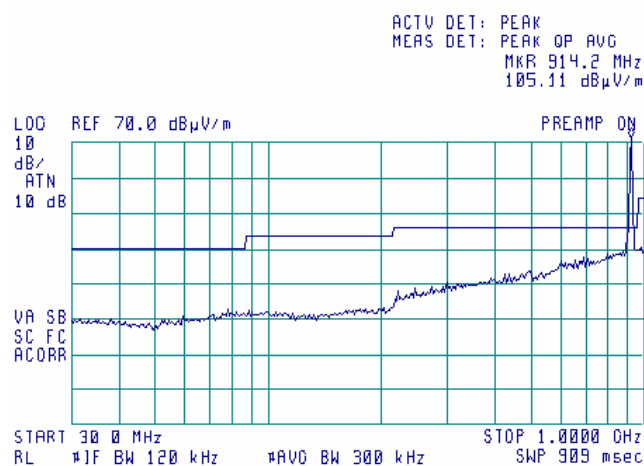


Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.29 Radiated emission measurements from 30 to 1000 MHz at the mid carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: FSK

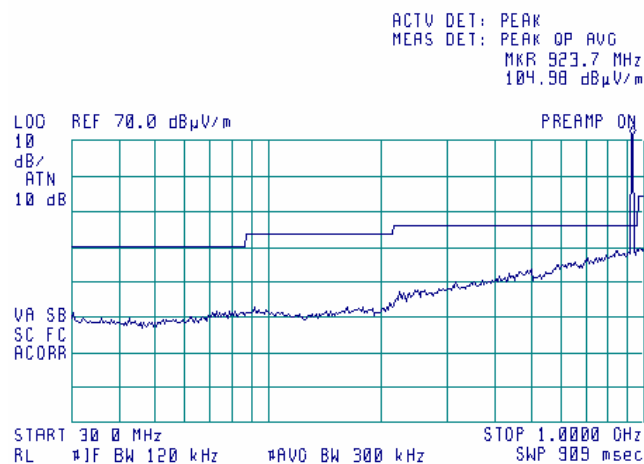
09:43:10 OCT 06, 2005



Plot 7.3.30 Radiated emission measurements from 30 to 1000 MHz at the high carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: FSK

10:06:46 OCT 06, 2005

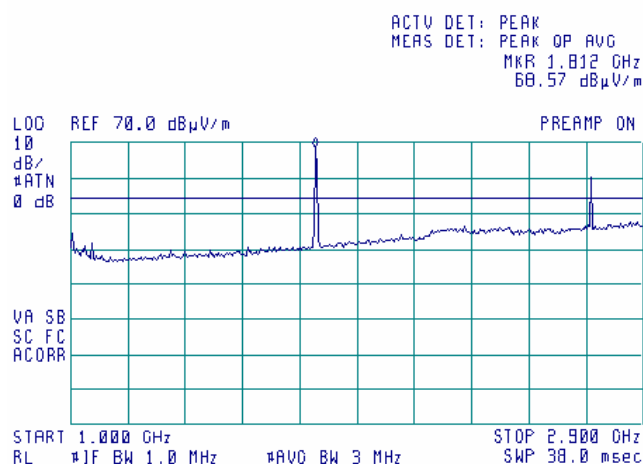


Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.31 Radiated emission measurements from 1000 to 2900 MHz at the low carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: PSK

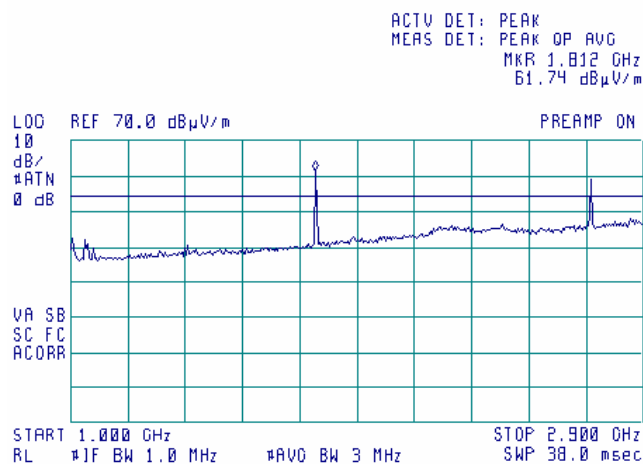
10:19:10 OCT 06, 2005



Plot 7.3.32 Radiated emission measurements from 1000 to 2900 MHz at the low carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: FSK

13:21:08 OCT 06, 2005

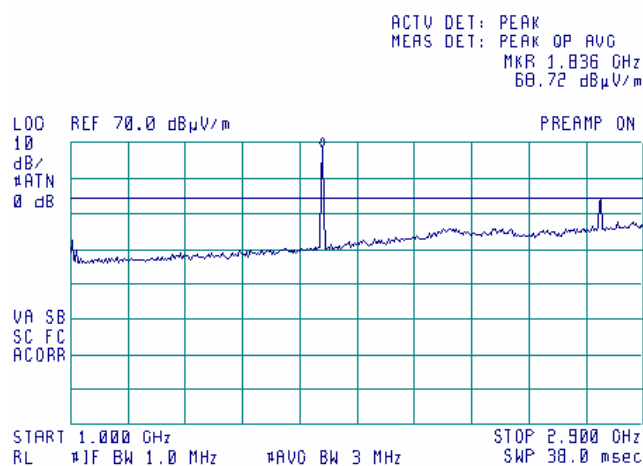


Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.33 Radiated emission measurements from 1000 to 2900 MHz at the mid carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: PSK

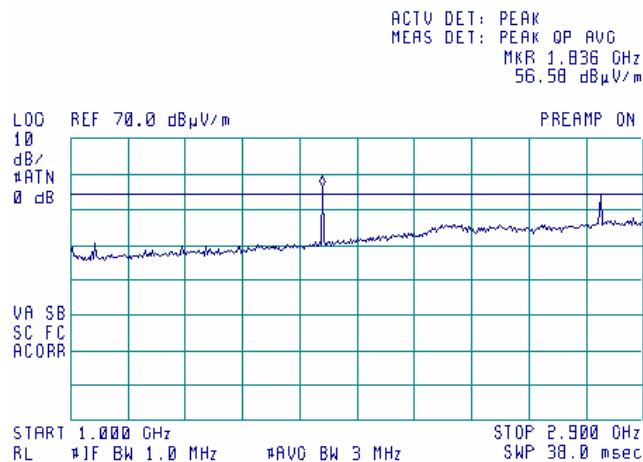
13:49:44 OCT 06, 2005



Plot 7.3.34 Radiated emission measurements from 1000 to 2900 MHz at the mid carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: FSK

13:42:41 OCT 06, 2005

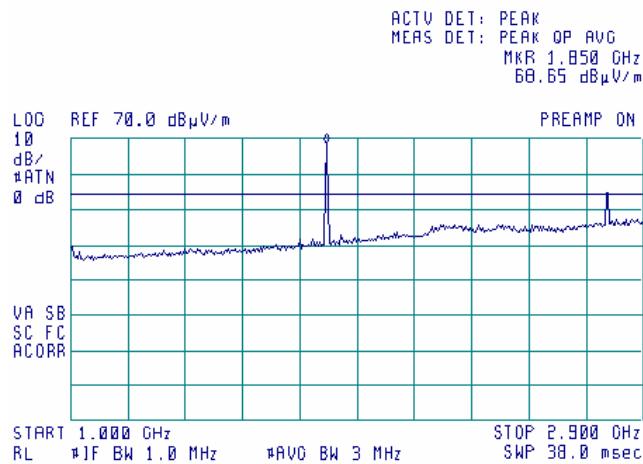


Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.35 Radiated emission measurements from 1000 to 2900 MHz at the high carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: PSK

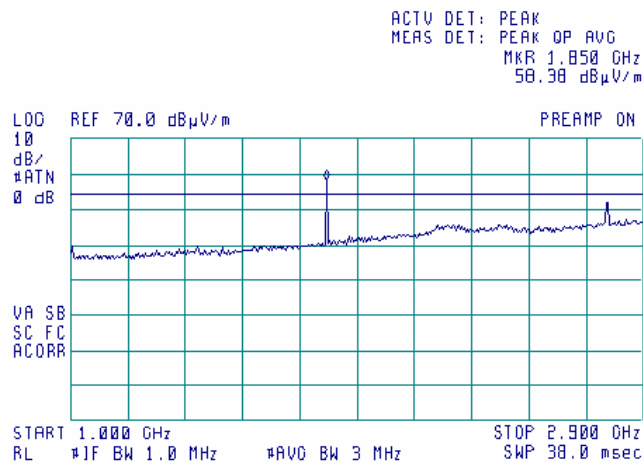
13:54:38 OCT 06, 2005



Plot 7.3.36 Radiated emission measurements from 1000 to 2900 MHz at the high carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: FSK

13:40:17 OCT 06, 2005

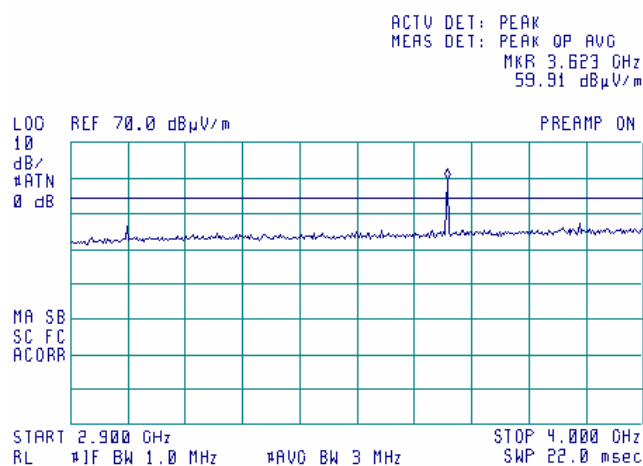


Test specification:		Section 15.247(d), Radiated spurious emissions	
Test procedure:		FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4	
Test mode:		Compliance	Verdict: PASS
Date & Time:		10/10/2005 12:50:22 PM	
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.37 Radiated emission measurements from 2900 to 4000 MHz at the low carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: PSK

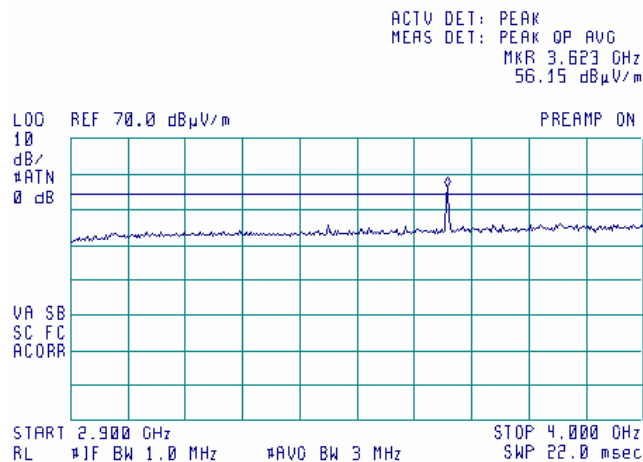
11:53:28 OCT 06, 2005



Plot 7.3.38 Radiated emission measurements from 2900 to 4000 MHz at the low carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: FSK

12:05:57 OCT 06, 2005

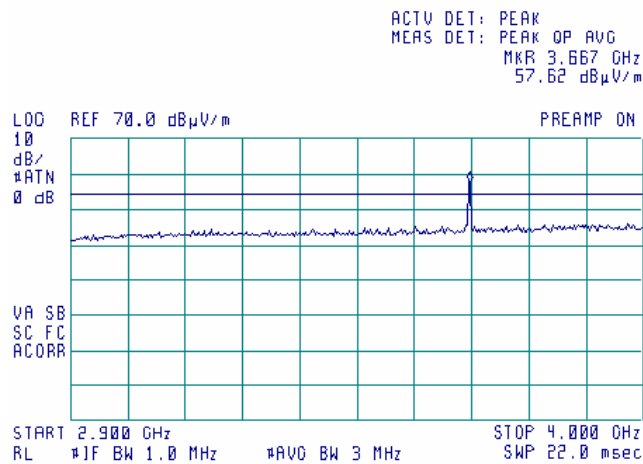


Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.39 Radiated emission measurements from 2900 to 4000 MHz at the mid carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: PSK

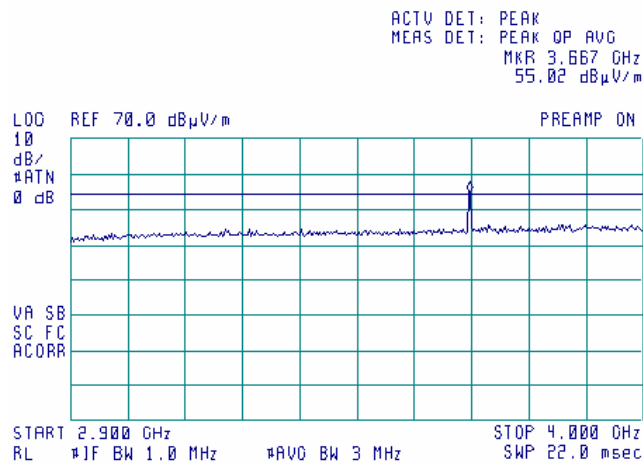
11:58:30 OCT 06, 2005



Plot 7.3.40 Radiated emission measurements from 2900 to 4000 MHz at the mid carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: FSK

12:08:41 OCT 06, 2005

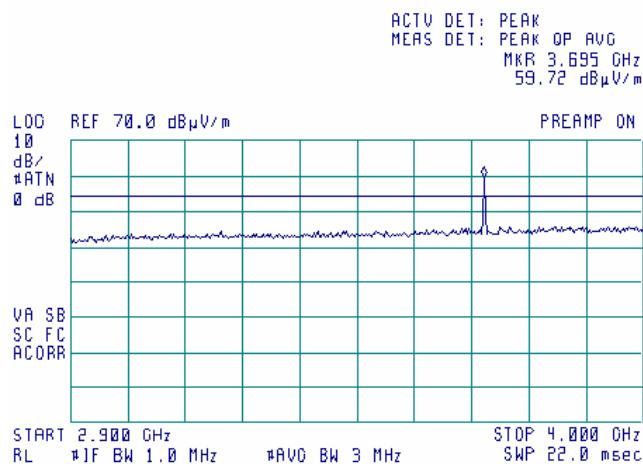


Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.41 Radiated emission measurements from 2900 to 4000 MHz at the high carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: PSK

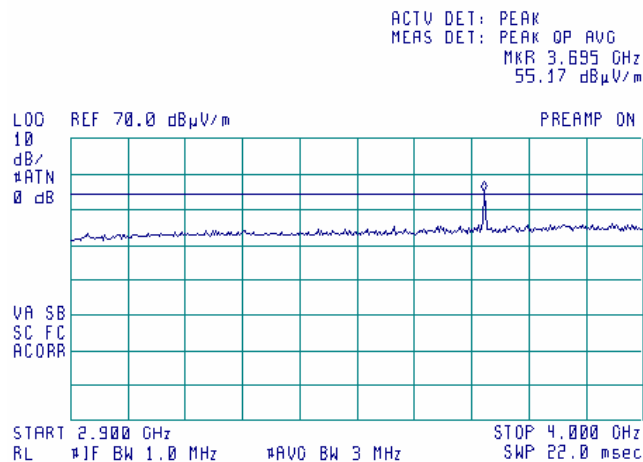
12:01:56 OCT 06, 2005



Plot 7.3.42 Radiated emission measurements from 2900 to 4000 MHz at the high carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: FSK

12:11:40 OCT 06, 2005

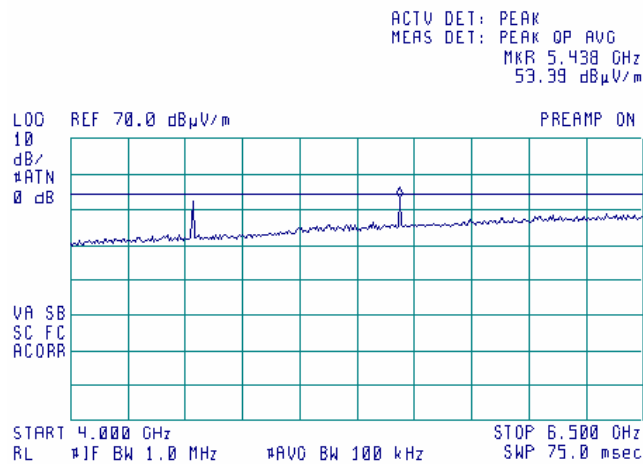


Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.43 Radiated emission measurements from 4000 to 6500 MHz at the low carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: PSK

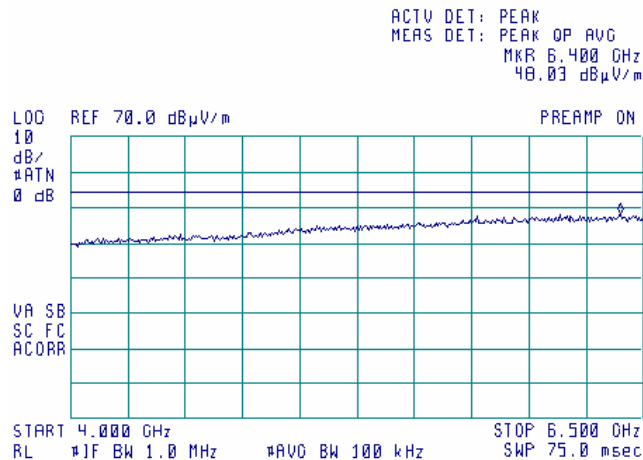
12:25:38 OCT 06, 2005



Plot 7.3.44 Radiated emission measurements from 4000 to 6500 MHz at the low carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: FSK

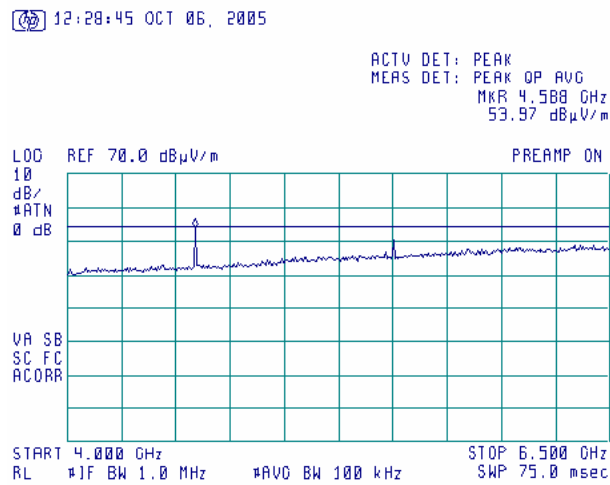
12:20:48 OCT 06, 2005



Test specification:		Section 15.247(d), Radiated spurious emissions	
Test procedure:		FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4	
Test mode:		Compliance	Verdict: PASS
Date & Time:		10/10/2005 12:50:22 PM	
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

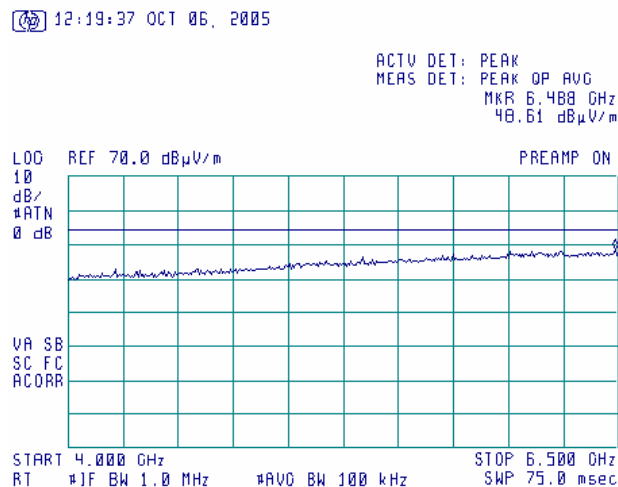
Plot 7.3.45 Radiated emission measurements from 4000 to 6500 MHz at the mid carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: PSK



Plot 7.3.46 Radiated emission measurements from 4000 to 6500 MHz at the mid carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: FSK

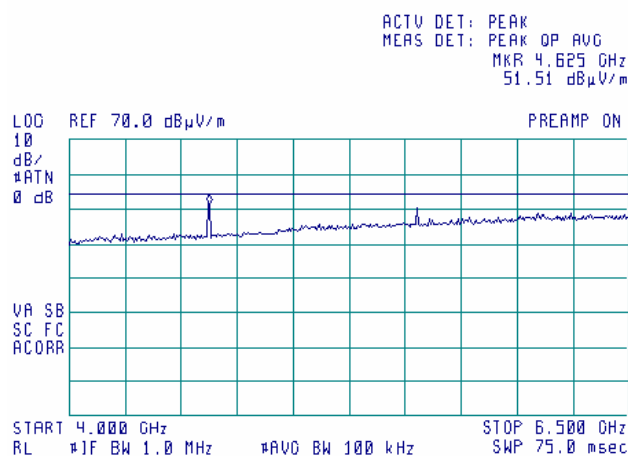


Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.47 Radiated emission measurements from 4000 to 6500 MHz at the high carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: PSK

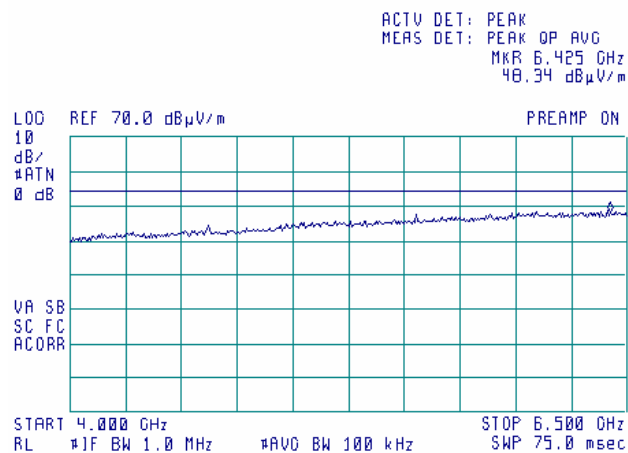
12:32:14 OCT 06, 2005



Plot 7.3.48 Radiated emission measurements from 4000 to 6500 MHz at the high carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: FSK

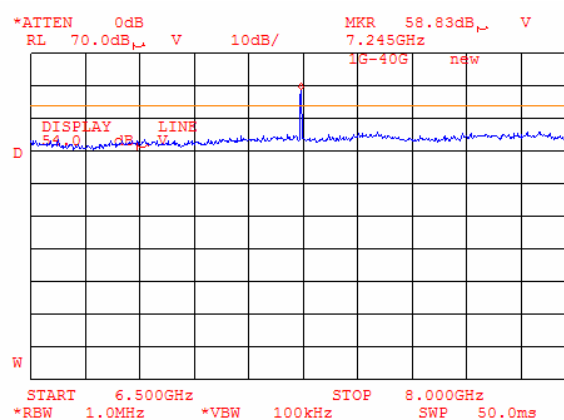
12:16:01 OCT 06, 2005



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

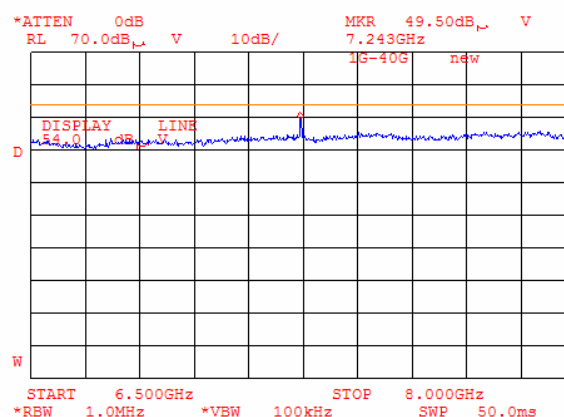
Plot 7.3.49 Radiated emission measurements from 6500 to 8000 MHz at the low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: PSK



Plot 7.3.50 Radiated emission measurements from 6500 to 8000 MHz at the low carrier frequency

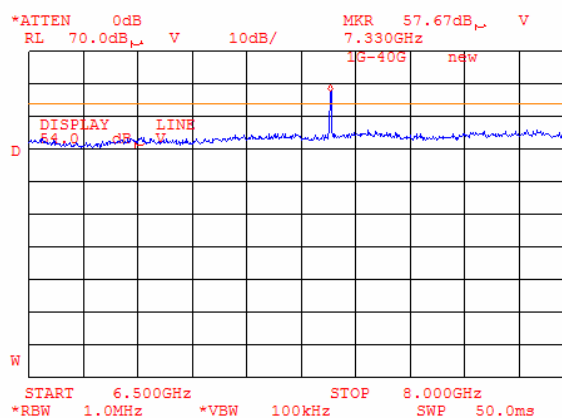
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: FSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

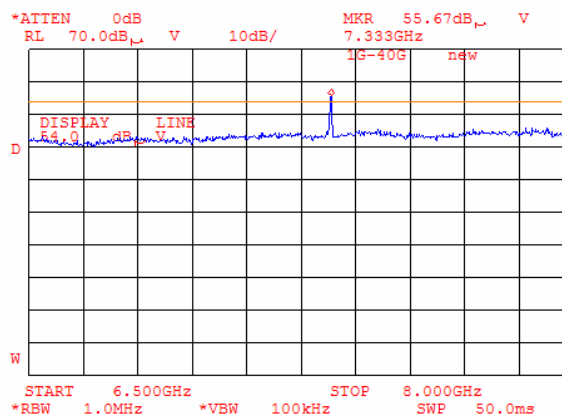
Plot 7.3.51 Radiated emission measurements from 6500 to 8000 MHz at the mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: PSK



Plot 7.3.52 Radiated emission measurements from 6500 to 8000 MHz at the mid carrier frequency

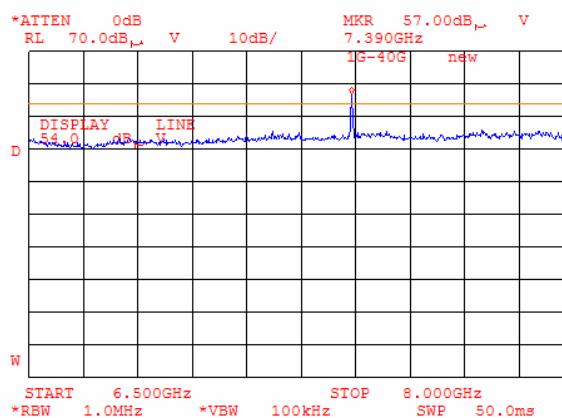
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: FSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

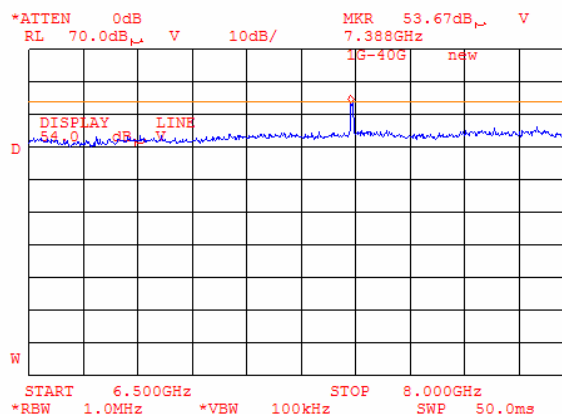
Plot 7.3.53 Radiated emission measurements from 6500 to 8000 MHz at the high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: PSK



Plot 7.3.54 Radiated emission measurements from 6500 to 8000 MHz at the high carrier frequency

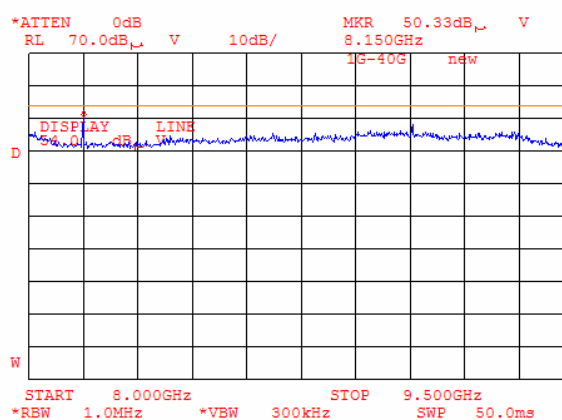
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: FSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

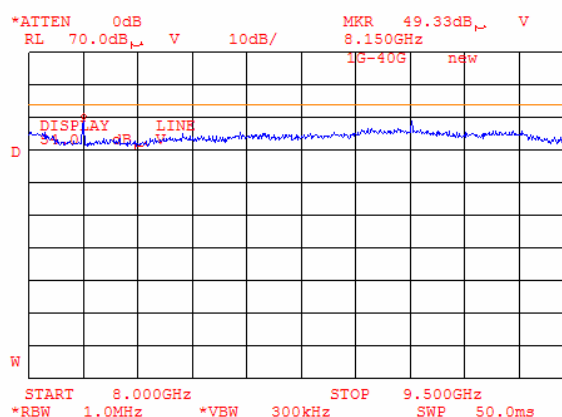
Plot 7.3.55 Radiated emission measurements from 8000 to 9500 MHz at the low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: PSK



Plot 7.3.56 Radiated emission measurements from 8000 to 9500 MHz at the low carrier frequency

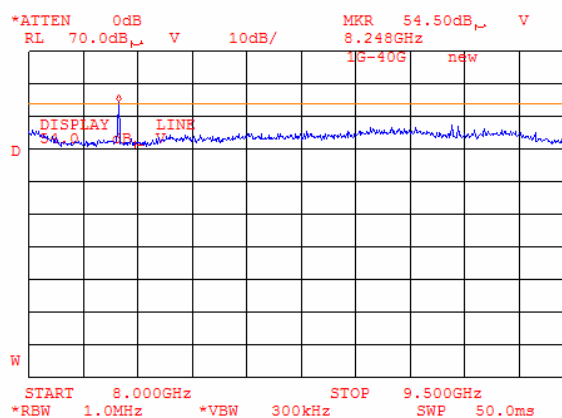
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: FSK



Test specification:		Section 15.247(d), Radiated spurious emissions	
Test procedure:		FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4	
Test mode:		Compliance	Verdict: PASS
Date & Time:		10/10/2005 12:50:22 PM	
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

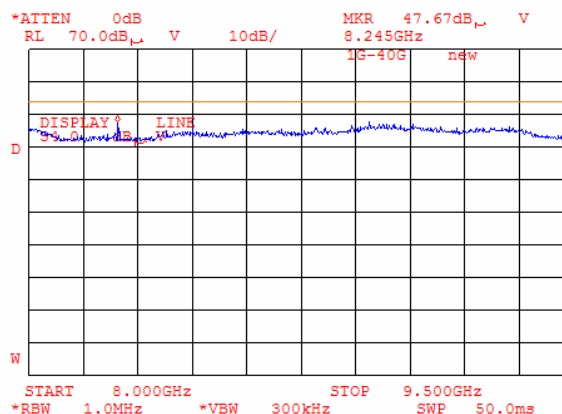
Plot 7.3.57 Radiated emission measurements from 8000 to 9500 MHz at the mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: PSK



Plot 7.3.58 Radiated emission measurements from 8000 to 9500 MHz at the mid carrier frequency

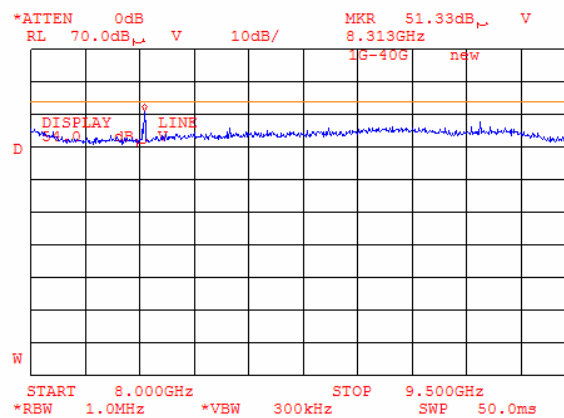
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: FSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

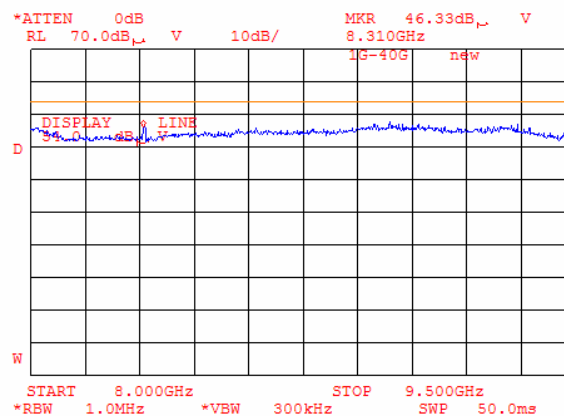
Plot 7.3.59 Radiated emission measurements from 8000 to 9500 MHz at the high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: PSK



Plot 7.3.60 Radiated emission measurements from 8000 to 9500 MHz at the high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: FSK

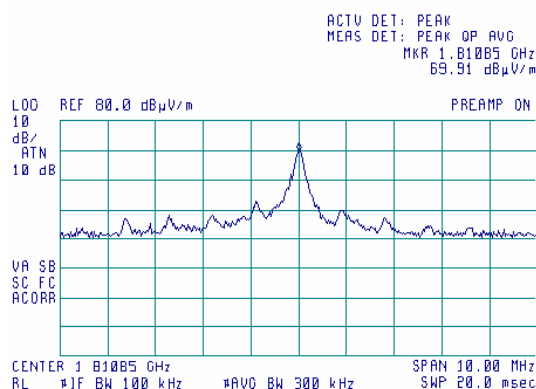


Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.61 Radiated emission measurements at the second harmonic of low carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 kHz
MODULATION: PSK

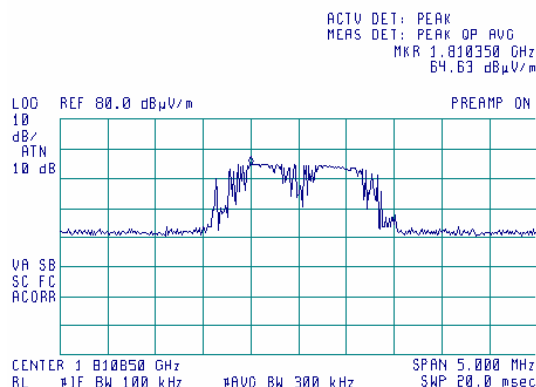
14:18:53 OCT 06, 2005



Plot 7.3.62 Radiated emission measurements at the second harmonic of low carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 kHz
MODULATION: FSK

14:30:02 OCT 06, 2005

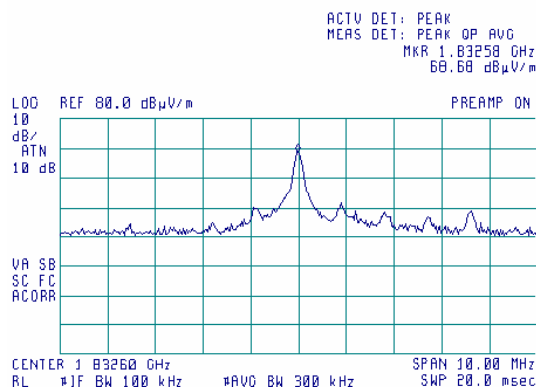


Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.63 Radiated emission measurements at the second harmonic of mid carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 kHz
MODULATION: PSK

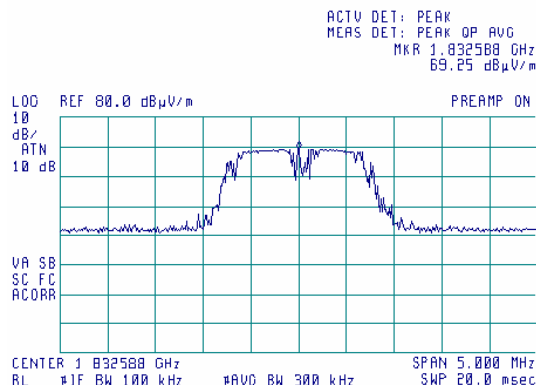
14:14:28 OCT 06, 2005



Plot 7.3.64 Radiated emission measurements at the second harmonic of mid carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 kHz
MODULATION: FSK

14:41:29 OCT 06, 2005

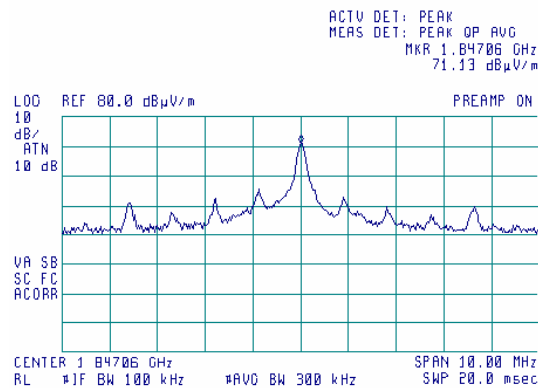


Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.65 Radiated emission measurements at the second harmonic of high carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 kHz
MODULATION: PSK

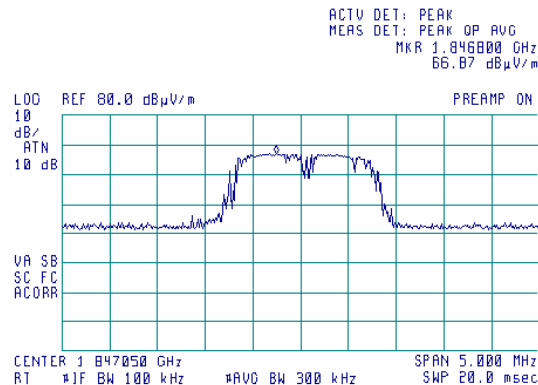
14:00:27 OCT 06, 2005



Plot 7.3.66 Radiated emission measurements at the second harmonic of high carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 kHz
MODULATION: FSK

14:49:43 OCT 06, 2005

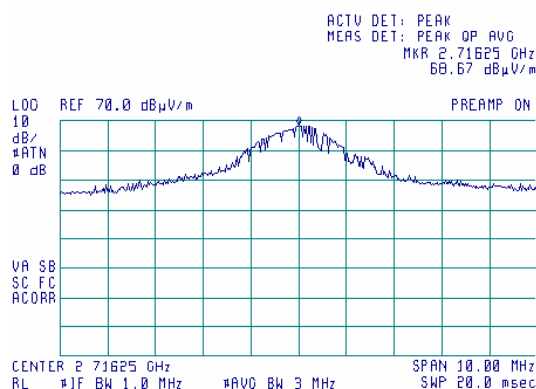


Test specification:		Section 15.247(d), Radiated spurious emissions	
Test procedure:		FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4	
Test mode:		Compliance	Verdict: PASS
Date & Time:		10/10/2005 12:50:22 PM	
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.67 Radiated emission measurements at the third harmonic of low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: PSK

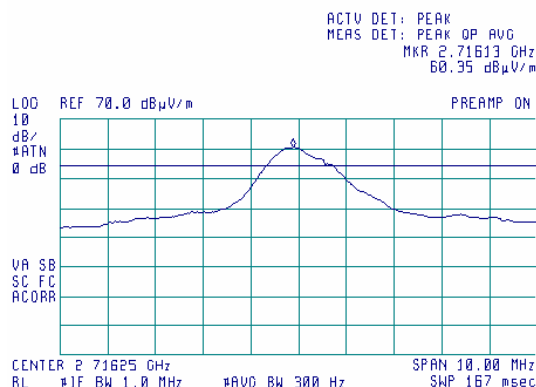
10:55:13 OCT 06, 2005



Plot 7.3.68 Radiated emission measurements at the third harmonic of low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 Hz
MODULATION: PSK

10:57:02 OCT 06, 2005

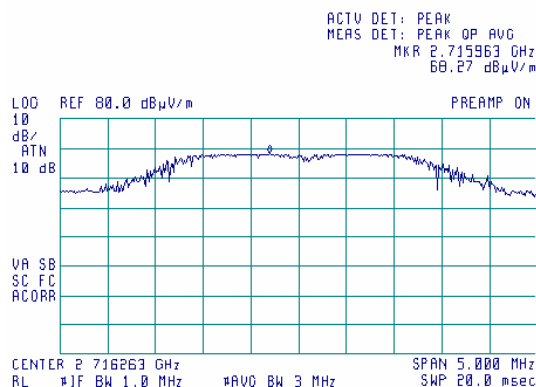


Test specification:		Section 15.247(d), Radiated spurious emissions	
Test procedure:		FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4	
Test mode:		Compliance	Verdict: PASS
Date & Time:		10/10/2005 12:50:22 PM	
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.69 Radiated emission measurements at the third harmonic of low carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: FSK

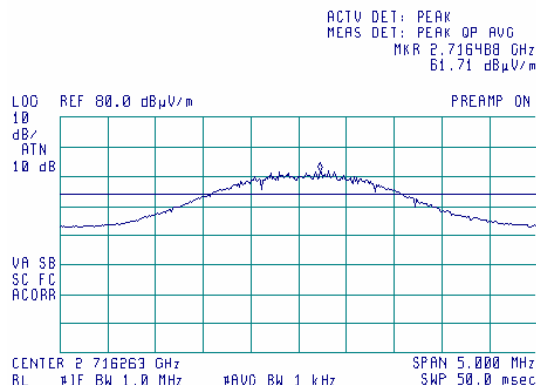
11:17:24 OCT 10, 2005



Plot 7.3.70 Radiated emission measurements at the third harmonic of low carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 1000 Hz
MODULATION: FSK

11:19:53 OCT 10, 2005

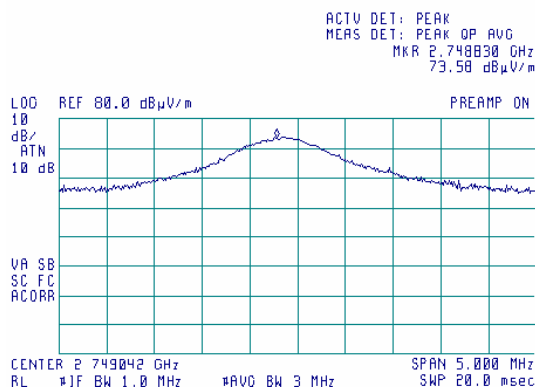


Test specification:		Section 15.247(d), Radiated spurious emissions	
Test procedure:		FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4	
Test mode:		Compliance	Verdict: PASS
Date & Time:		10/10/2005 12:50:22 PM	
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.71 Radiated emission measurements at the third harmonic of mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: PSK

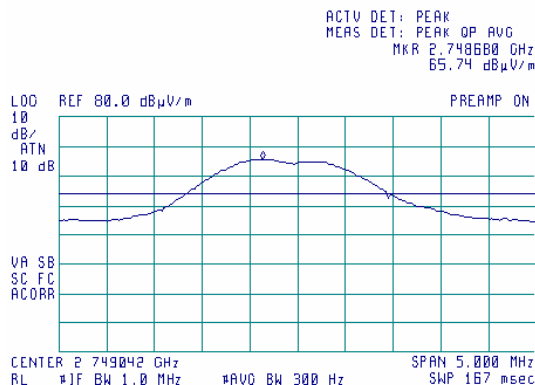
11:33:04 OCT 10, 2005



Plot 7.3.72 Radiated emission measurements at the third harmonic of mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 Hz
MODULATION: PSK

11:34:04 OCT 10, 2005

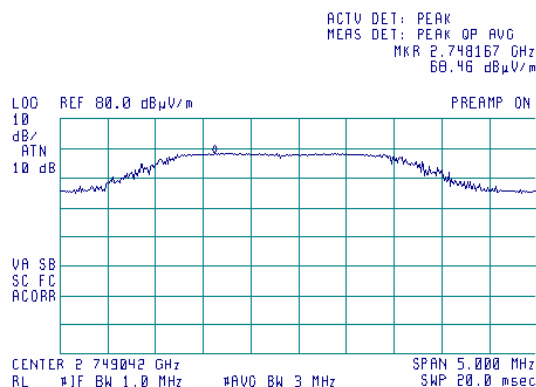


Test specification:		Section 15.247(d), Radiated spurious emissions	
Test procedure:		FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4	
Test mode:		Compliance	Verdict: PASS
Date & Time:		10/10/2005 12:50:22 PM	
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.73 Radiated emission measurements at the third harmonic of mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: FSK

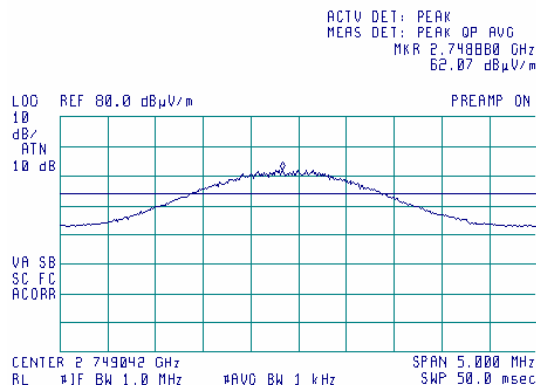
11:27:55 OCT 10, 2005



Plot 7.3.74 Radiated emission measurements at the third harmonic of mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 1000 Hz
MODULATION: FSK

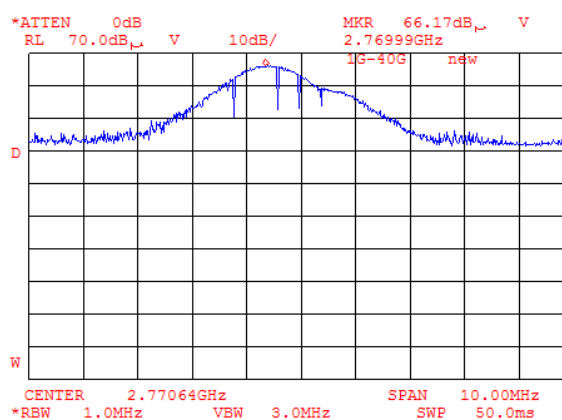
11:25:41 OCT 10, 2005



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

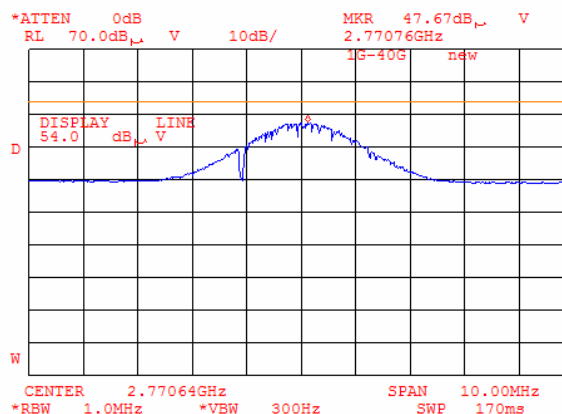
Plot 7.3.75 Radiated emission measurements at the third harmonic of high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: PSK



Plot 7.3.76 Radiated emission measurements at the third harmonic of high carrier frequency

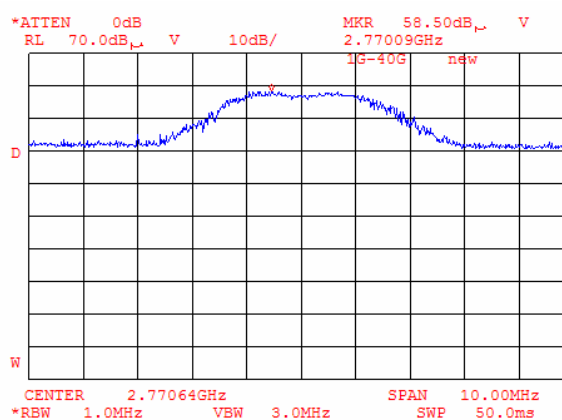
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 Hz
MODULATION: PSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

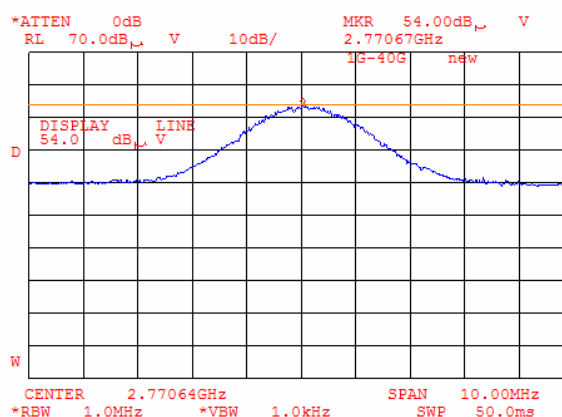
Plot 7.3.77 Radiated emission measurements at the third harmonic of high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: FSK



Plot 7.3.78 Radiated emission measurements at the third harmonic of high carrier frequency

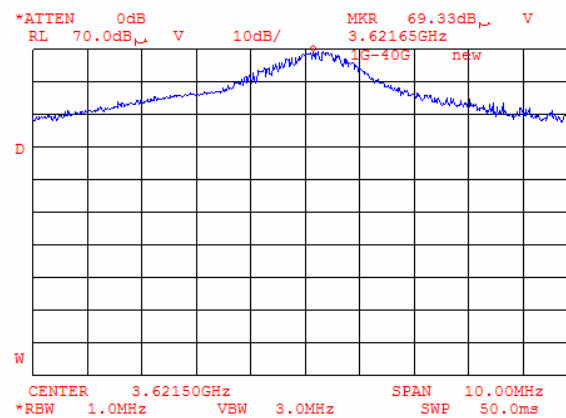
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 1000 Hz
MODULATION: FSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

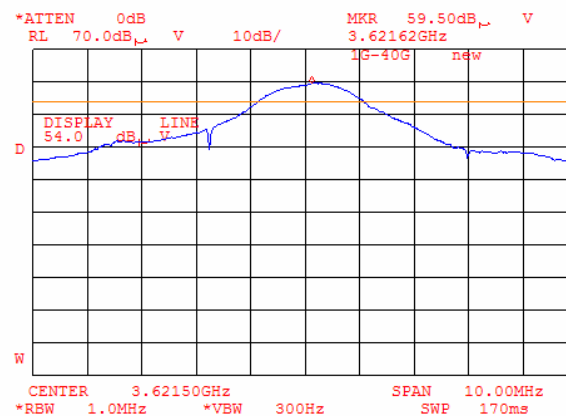
Plot 7.3.79 Radiated emission measurements at the forth harmonic of low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: PSK



Plot 7.3.80 Radiated emission measurements at the forth harmonic of low carrier frequency

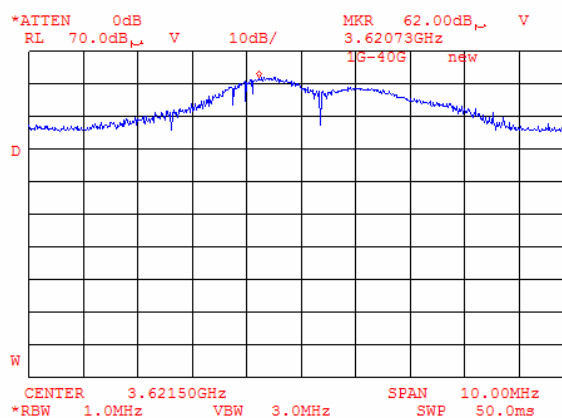
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 Hz
MODULATION: PSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

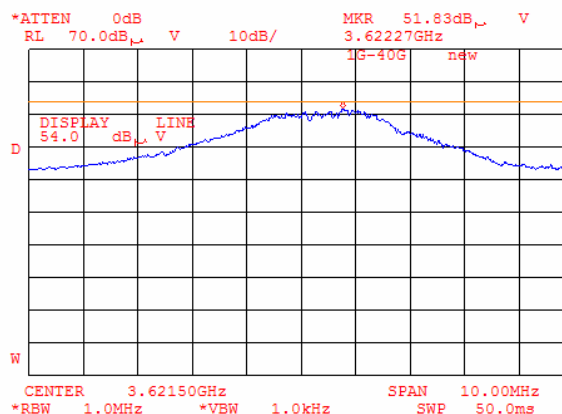
Plot 7.3.81 Radiated emission measurements at the forth harmonic of low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: FSK



Plot 7.3.82 Radiated emission measurements at the forth harmonic of low carrier frequency

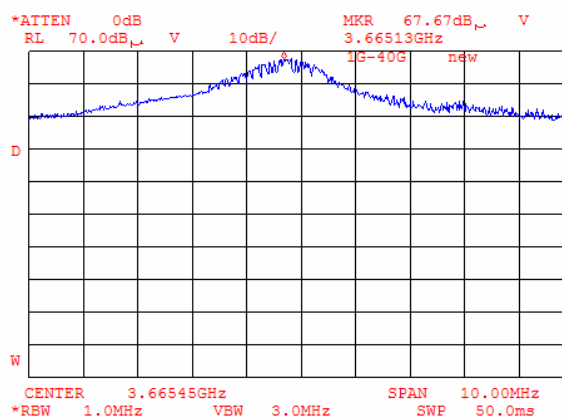
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 1000 Hz
MODULATION: FSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

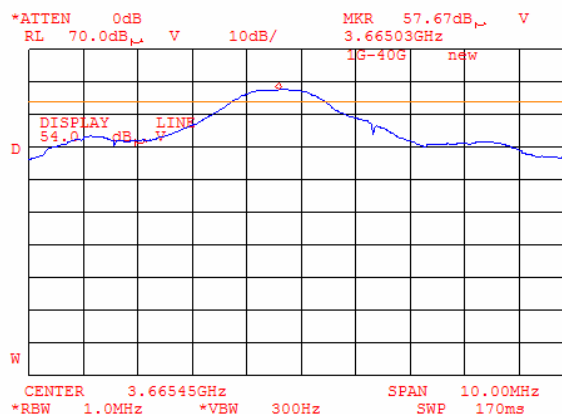
Plot 7.3.83 Radiated emission measurements at the forth harmonic of mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: PSK



Plot 7.3.84 Radiated emission measurements at the forth harmonic of mid carrier frequency

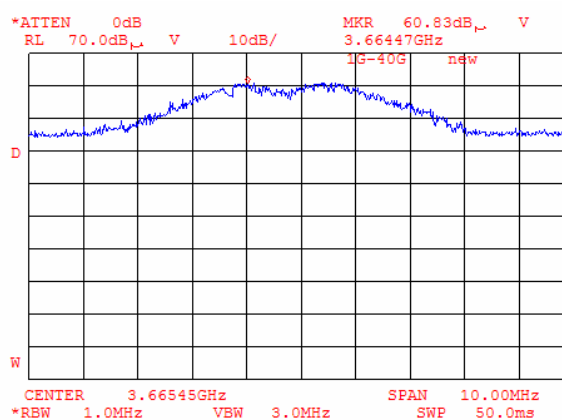
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 Hz
MODULATION: PSK



Test specification:		Section 15.247(d), Radiated spurious emissions	
Test procedure:		FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4	
Test mode:		Compliance	Verdict: PASS
Date & Time:		10/10/2005 12:50:22 PM	
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

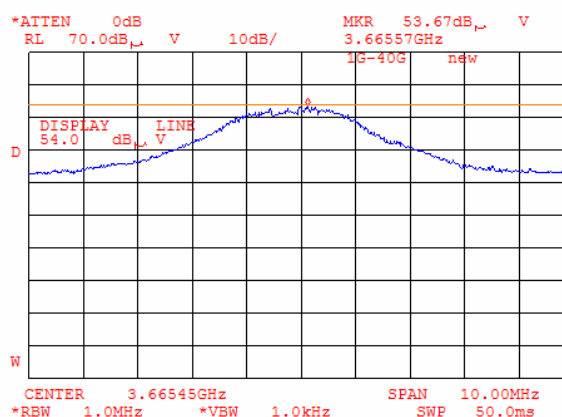
Plot 7.3.85 Radiated emission measurements at the forth harmonic of mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: FSK



Plot 7.3.86 Radiated emission measurements at the forth harmonic of mid carrier frequency

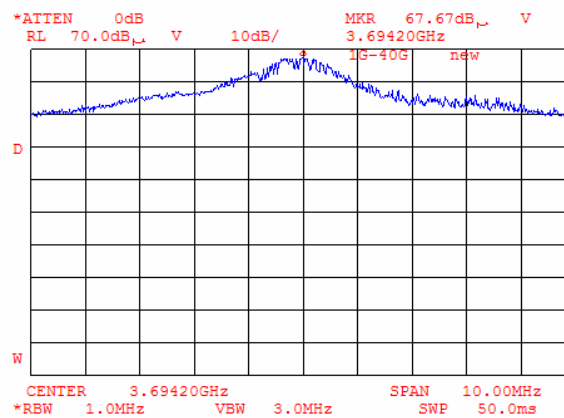
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 1000 Hz
MODULATION: FSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

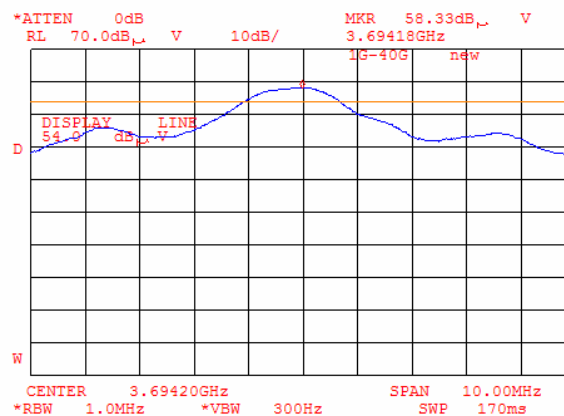
Plot 7.3.87 Radiated emission measurements at the forth harmonic of high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: PSK



Plot 7.3.88 Radiated emission measurements at the forth harmonic of high carrier frequency

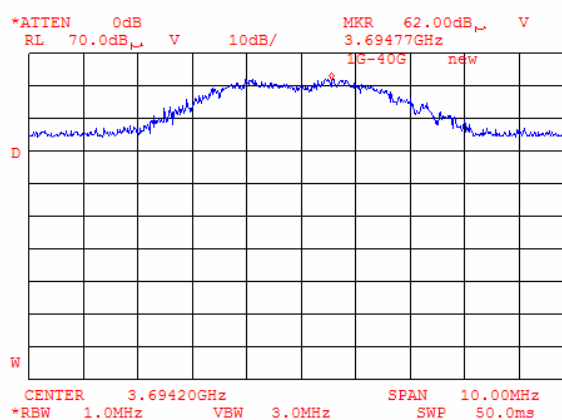
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 Hz
MODULATION: PSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

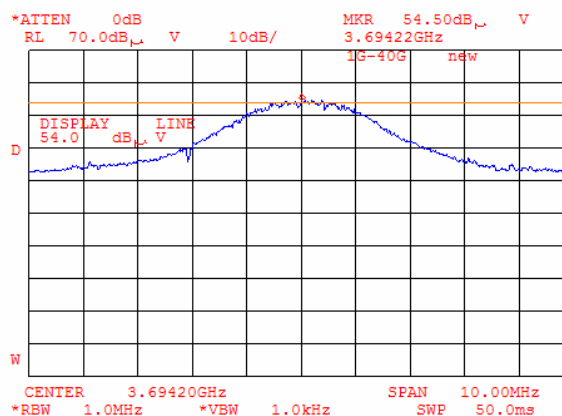
Plot 7.3.89 Radiated emission measurements at the forth harmonic of high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: FSK



Plot 7.3.90 Radiated emission measurements at the forth harmonic of high carrier frequency

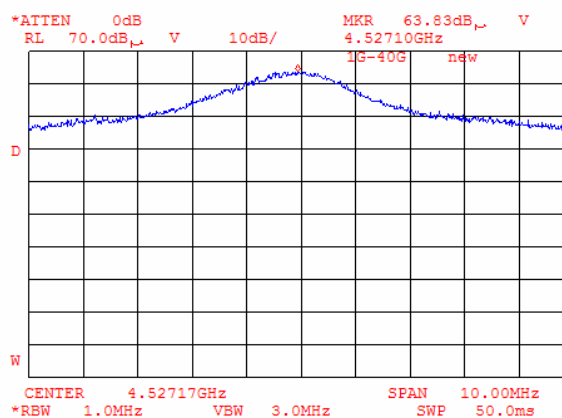
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 1000 Hz
MODULATION: FSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

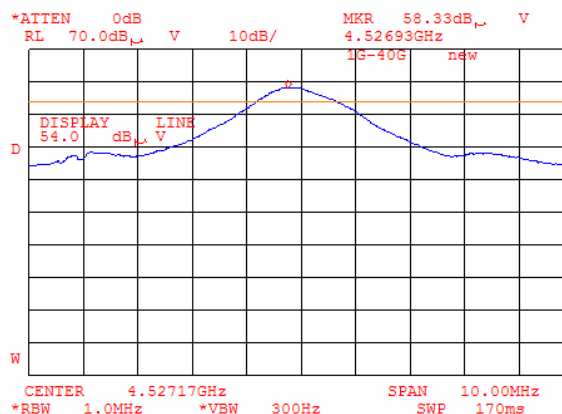
Plot 7.3.91 Radiated emission measurements at the fifth harmonic of low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: PSK



Plot 7.3.92 Radiated emission measurements at the fifth harmonic of low carrier frequency

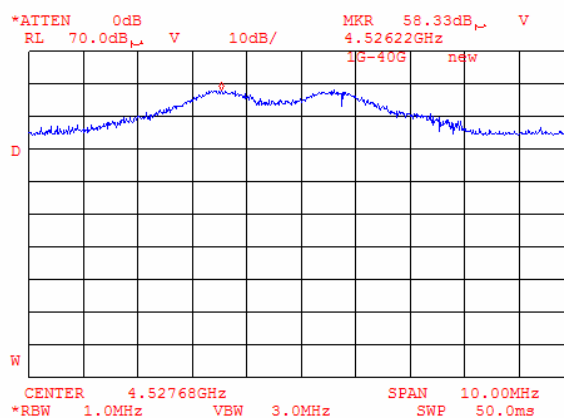
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 Hz
MODULATION: PSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

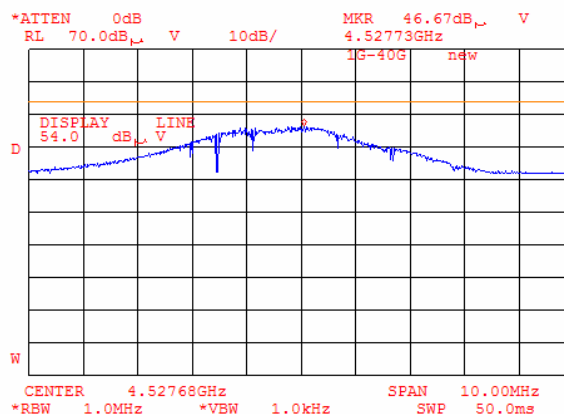
Plot 7.3.93 Radiated emission measurements at the fifth harmonic of low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: FSK



Plot 7.3.94 Radiated emission measurements at the fifth harmonic of low carrier frequency

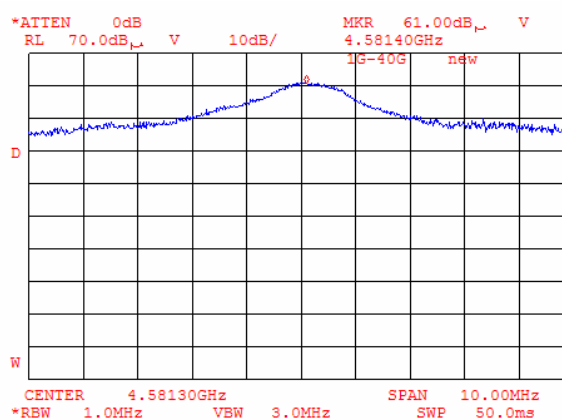
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 1000 Hz
MODULATION: FSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

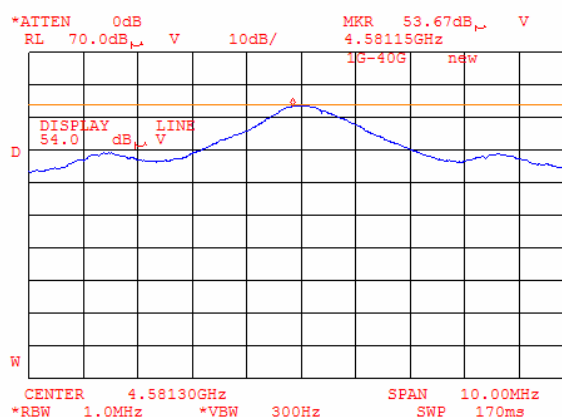
Plot 7.3.95 Radiated emission measurements at the fifth harmonic of mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: PSK



Plot 7.3.96 Radiated emission measurements at the fifth harmonic of mid carrier frequency

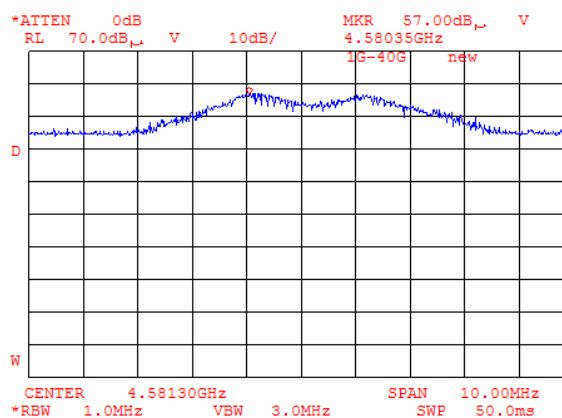
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 Hz
MODULATION: PSK



Test specification:		Section 15.247(d), Radiated spurious emissions	
Test procedure:		FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4	
Test mode:		Compliance	Verdict: PASS
Date & Time:		10/10/2005 12:50:22 PM	
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

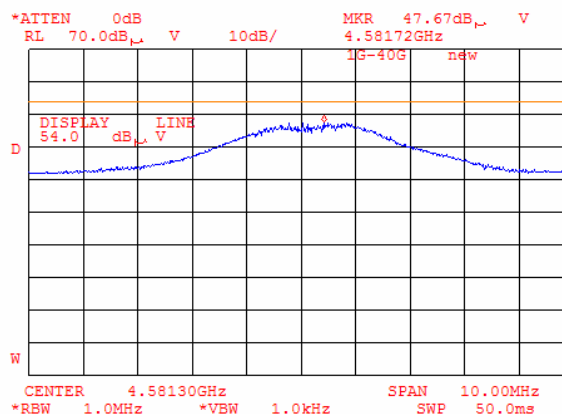
Plot 7.3.97 Radiated emission measurements at the fifth harmonic of mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: FSK



Plot 7.3.98 Radiated emission measurements at the fifth harmonic of mid carrier frequency

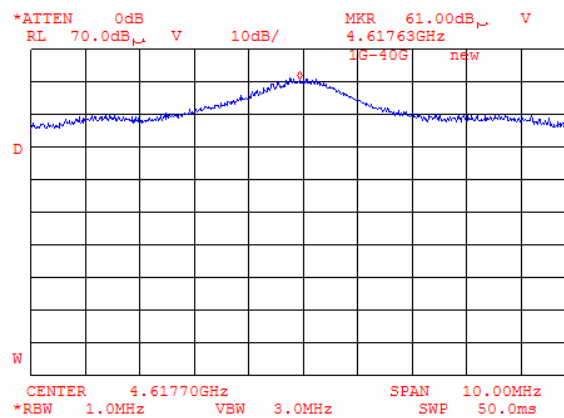
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 1000 Hz
MODULATION: FSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

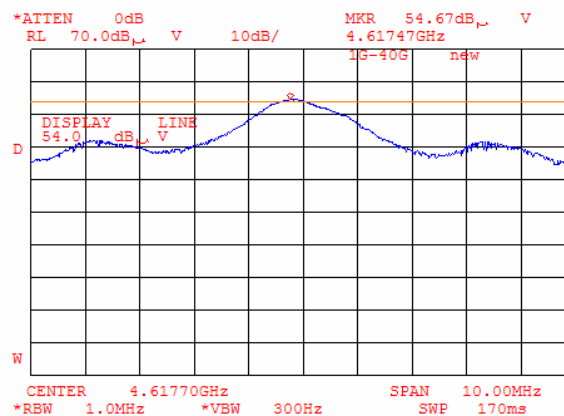
Plot 7.3.99 Radiated emission measurements at the fifth harmonic of high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: PSK



Plot 7.3.100 Radiated emission measurements at the fifth harmonic of high carrier frequency

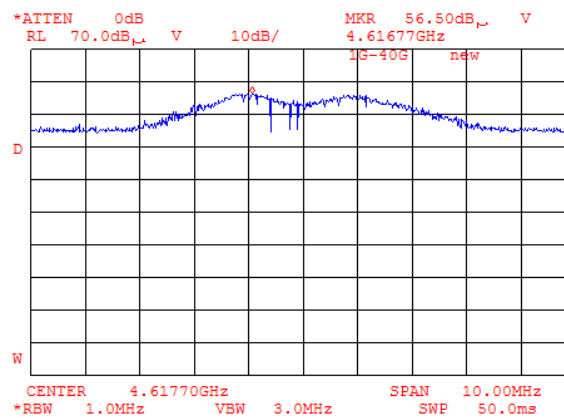
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 Hz
MODULATION: PSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

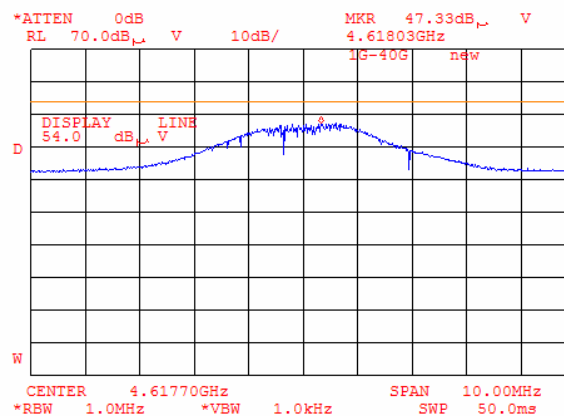
Plot 7.3.101 Radiated emission measurements at the fifth harmonic of high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: FSK



Plot 7.3.102 Radiated emission measurements at the fifth harmonic of high carrier frequency

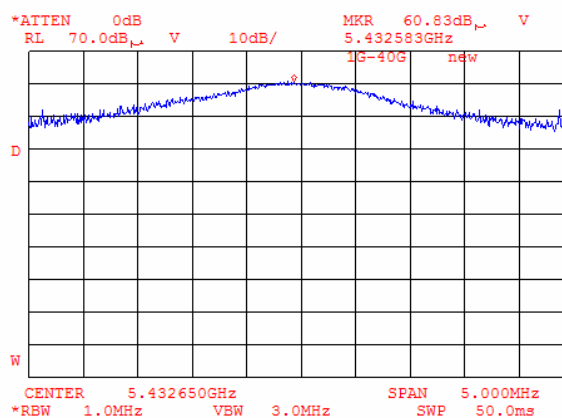
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 1000 Hz
MODULATION: FSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

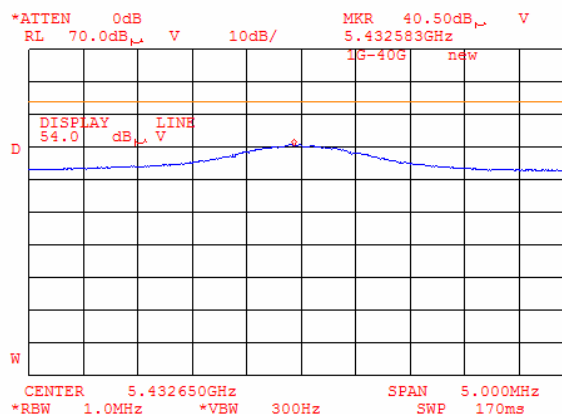
Plot 7.3.103 Radiated emission measurements at the sixth harmonic of low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: PSK



Plot 7.3.104 Radiated emission measurements at the sixth harmonic of low carrier frequency

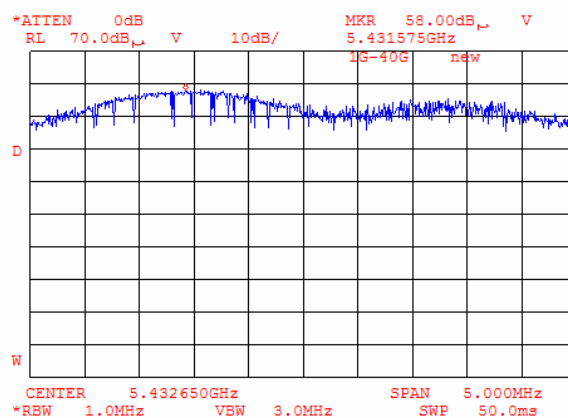
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 Hz
MODULATION: PSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

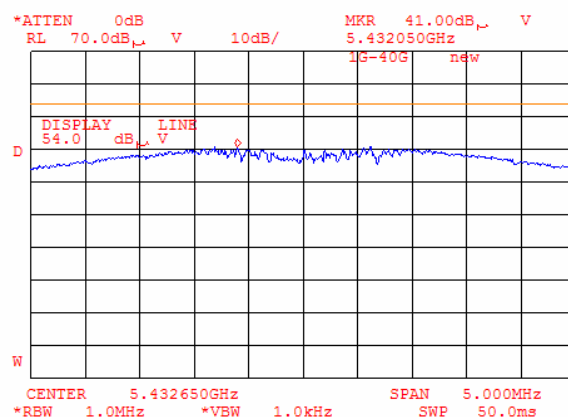
Plot 7.3.105 Radiated emission measurements at the sixth harmonic of low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: FSK



Plot 7.3.106 Radiated emission measurements at the sixth harmonic of low carrier frequency

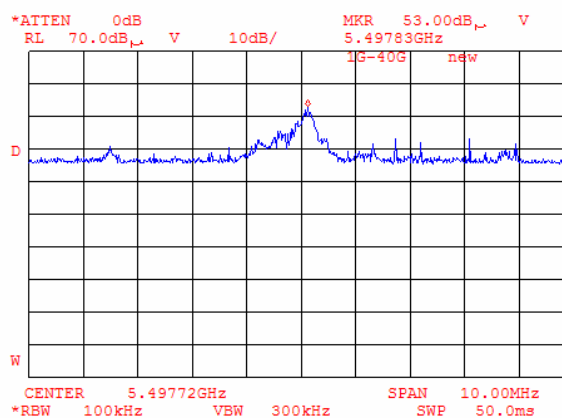
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 1000 Hz
MODULATION: FSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

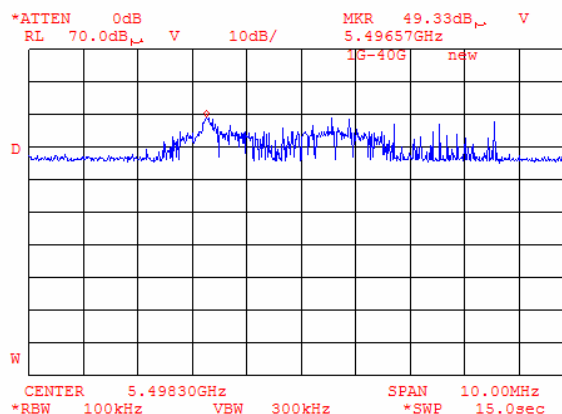
Plot 7.3.107 Radiated emission measurements at the sixth harmonic of mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 kHz
MODULATION: PSK



Plot 7.3.108 Radiated emission measurements at the sixth harmonic of mid carrier frequency

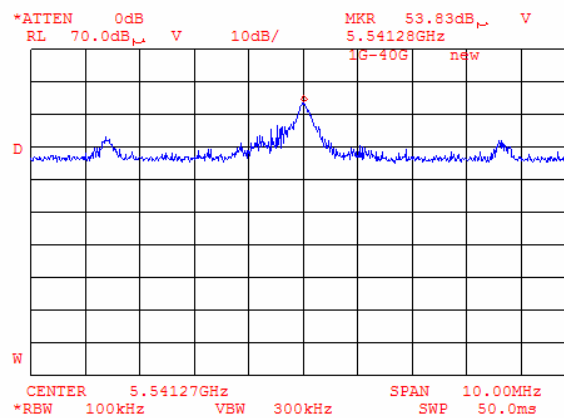
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 kHz
MODULATION: FSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

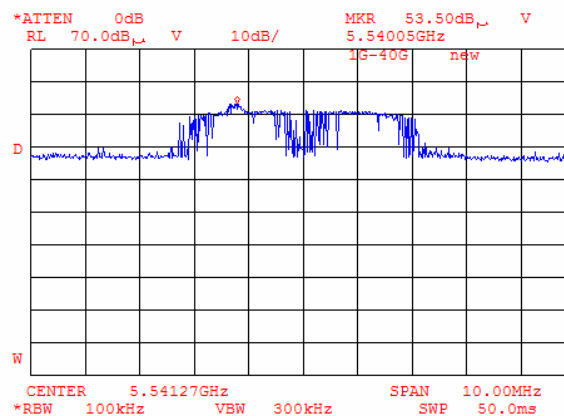
Plot 7.3.109 Radiated emission measurements at the sixth harmonic of high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 kHz
MODULATION: PSK



Plot 7.3.110 Radiated emission measurements at the sixth harmonic of high carrier frequency

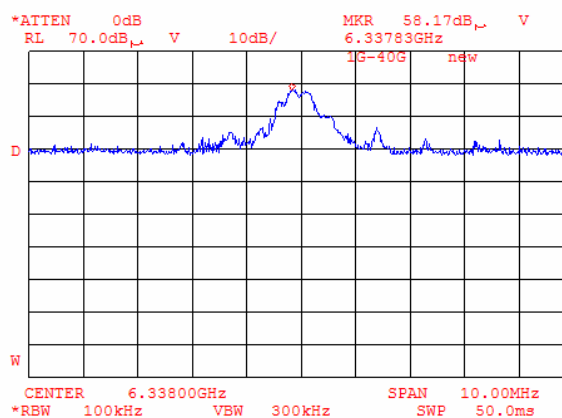
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 kHz
MODULATION: FSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

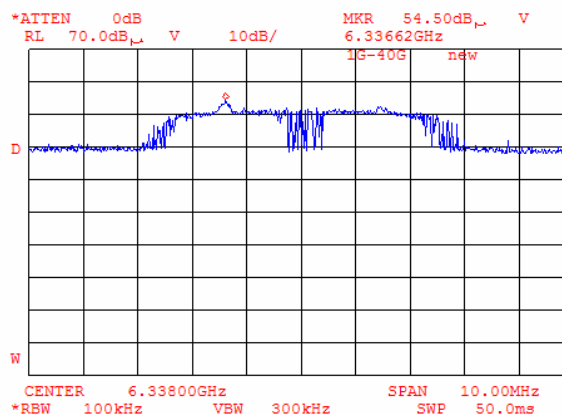
Plot 7.3.111 Radiated emission measurements at the seventh harmonic of low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 kHz
MODULATION: PSK



Plot 7.3.112 Radiated emission measurements at the seventh harmonic of low carrier frequency

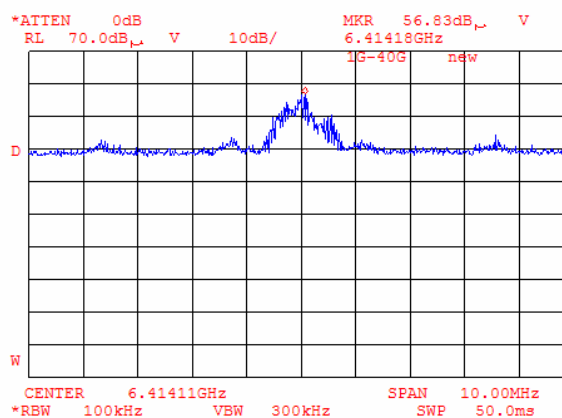
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 kHz
MODULATION: FSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

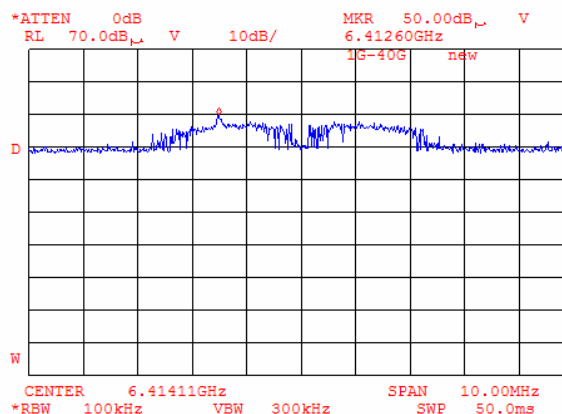
Plot 7.3.113 Radiated emission measurements at the seventh harmonic of mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 kHz
MODULATION: PSK



Plot 7.3.114 Radiated emission measurements at the seventh harmonic of mid carrier frequency

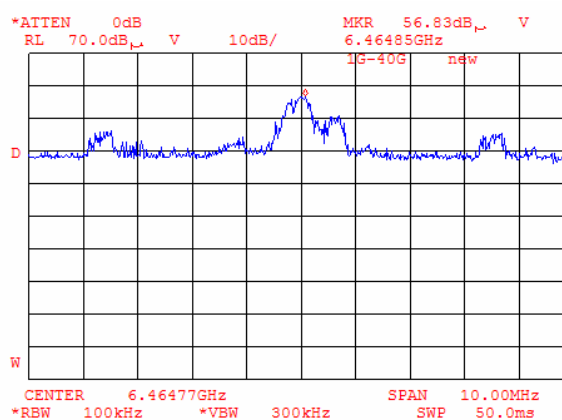
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 kHz
MODULATION: FSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

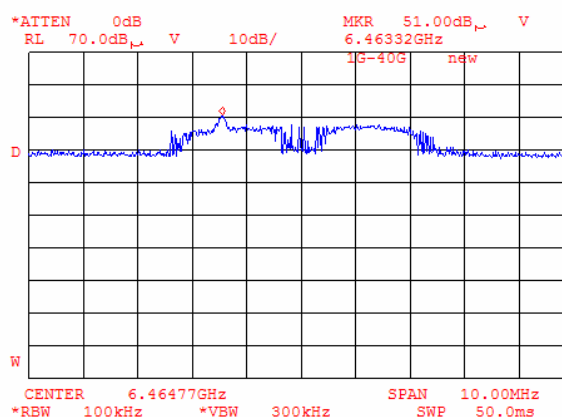
Plot 7.3.115 Radiated emission measurements at the seventh harmonic of high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 kHz
MODULATION: PSK



Plot 7.3.116 Radiated emission measurements at the seventh harmonic of high carrier frequency

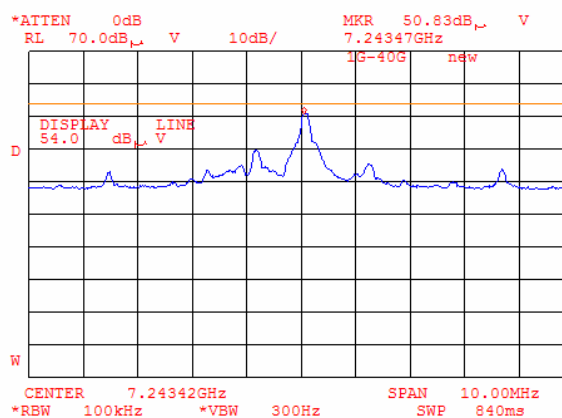
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 kHz
MODULATION: FSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

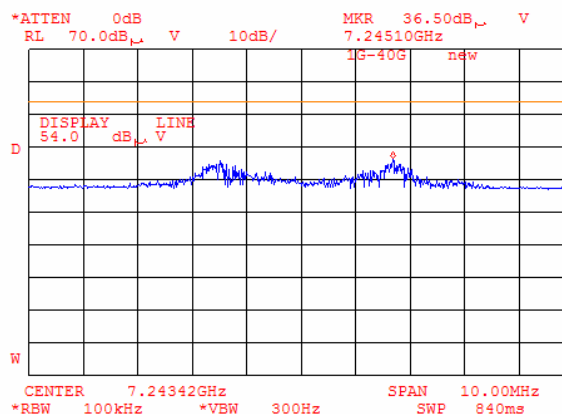
Plot 7.3.117 Radiated emission measurements at the eight harmonic of low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 kHz
MODULATION: PSK



Plot 7.3.118 Radiated emission measurements at the eight harmonic of low carrier frequency

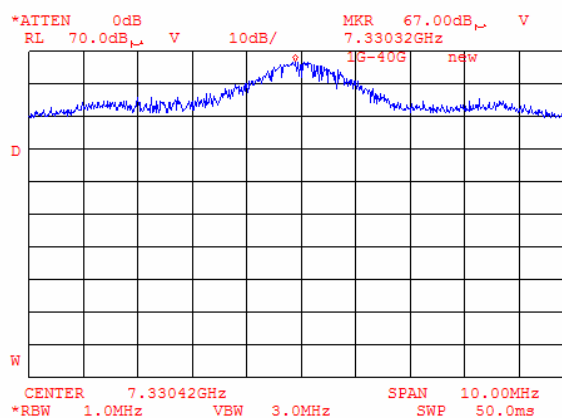
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 kHz
MODULATION: FSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

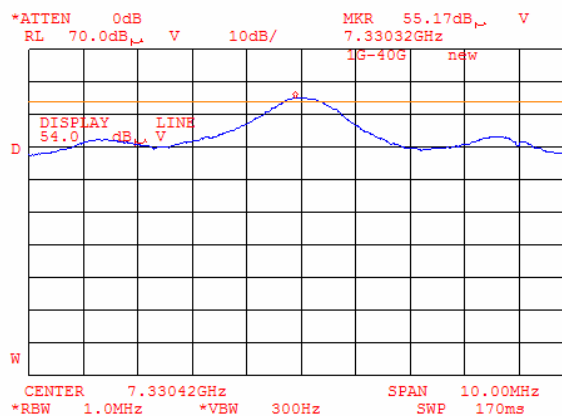
Plot 7.3.119 Radiated emission measurements at the eight harmonic of mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: PSK



Plot 7.3.120 Radiated emission measurements at the eight harmonic of mid carrier frequency

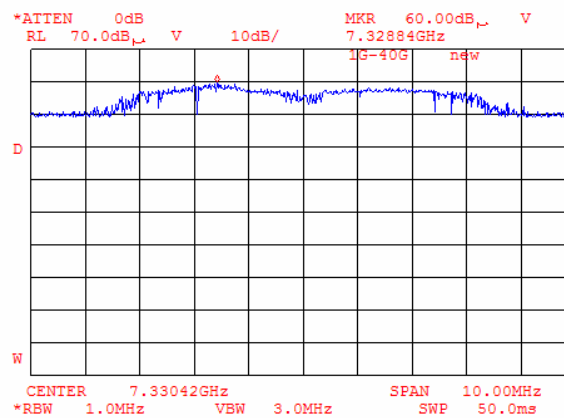
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 Hz
MODULATION: PSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

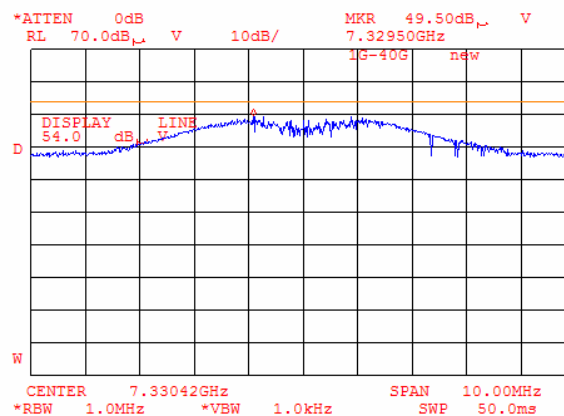
Plot 7.3.121 Radiated emission measurements at the eight harmonic of mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: FSK



Plot 7.3.122 Radiated emission measurements at the eight harmonic of mid carrier frequency

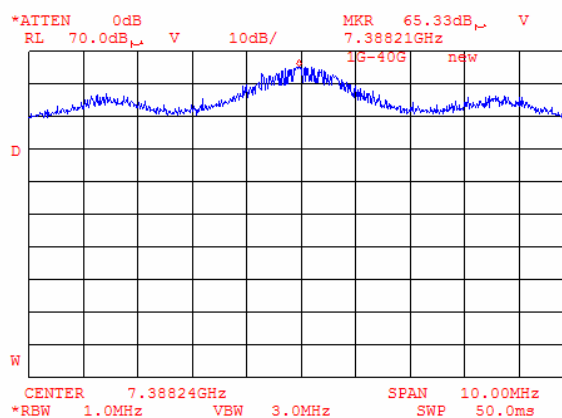
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 1000 Hz
MODULATION: FSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

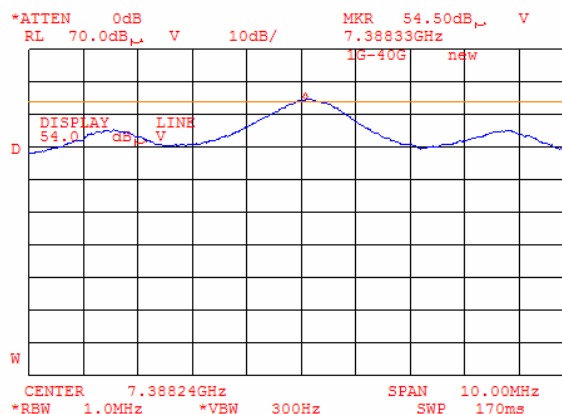
Plot 7.3.123 Radiated emission measurements at the eight harmonic of high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: PSK



Plot 7.3.124 Radiated emission measurements at the eight harmonic of high carrier frequency

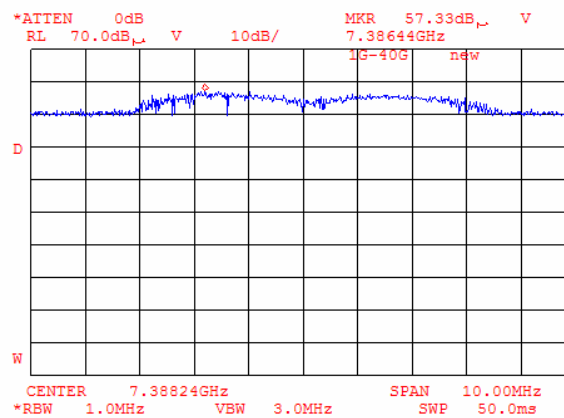
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 Hz
MODULATION: PSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

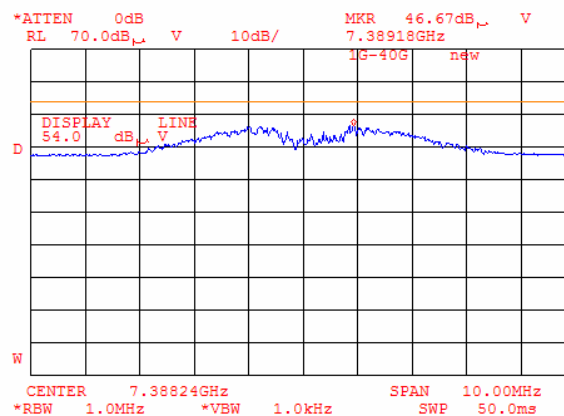
Plot 7.3.125 Radiated emission measurements at the eight harmonic of high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: FSK



Plot 7.3.126 Radiated emission measurements at the eight harmonic of high carrier frequency

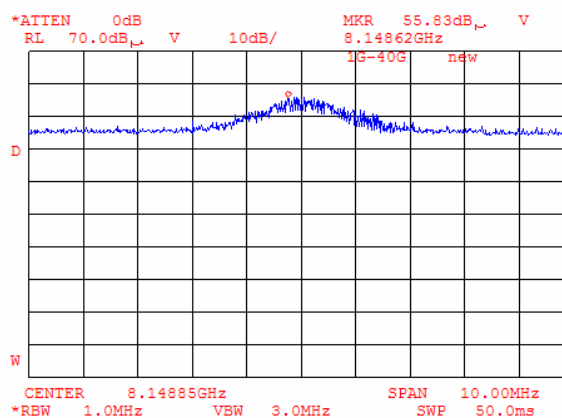
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 1000 Hz
MODULATION: FSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

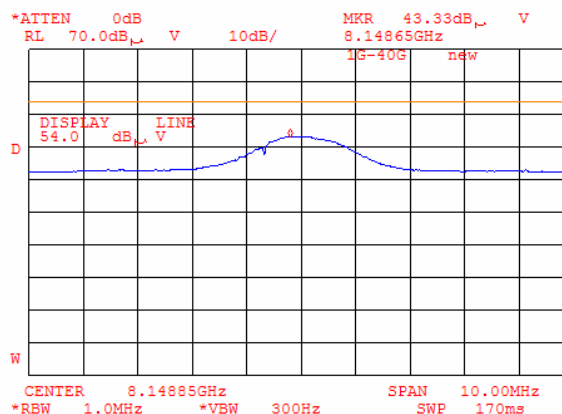
Plot 7.3.127 Radiated emission measurements at the ninth harmonic of low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: PSK



Plot 7.3.128 Radiated emission measurements at the ninth harmonic of low carrier frequency

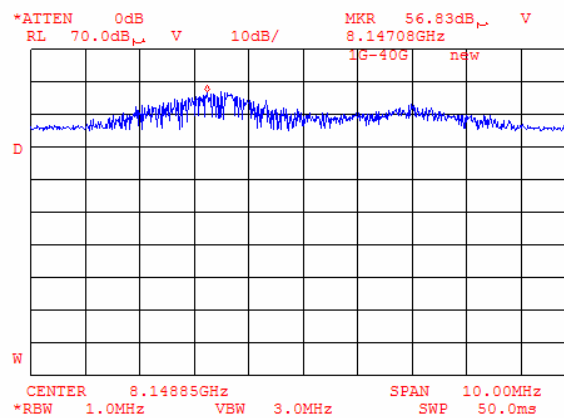
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 Hz
MODULATION: PSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

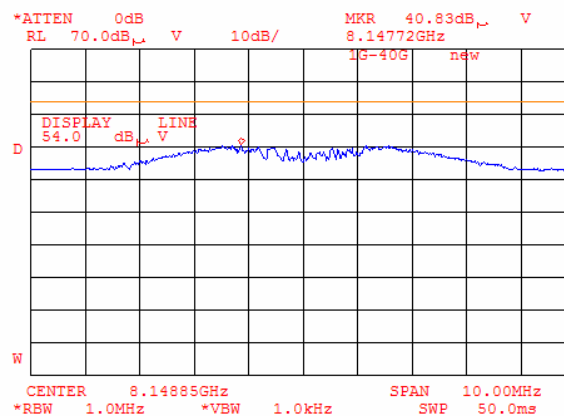
Plot 7.3.129 Radiated emission measurements at the ninth harmonic of low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: FSK



Plot 7.3.130 Radiated emission measurements at the ninth harmonic of low carrier frequency

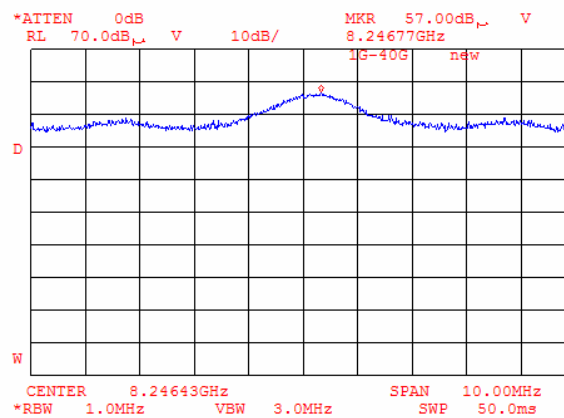
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 1000 Hz
MODULATION: FSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

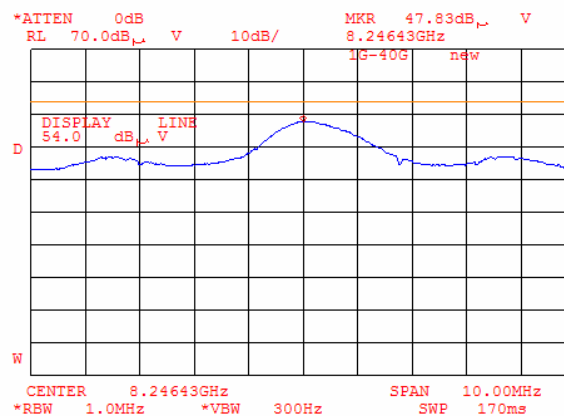
Plot 7.3.131 Radiated emission measurements at the ninth harmonic of mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: PSK



Plot 7.3.132 Radiated emission measurements at the ninth harmonic of mid carrier frequency

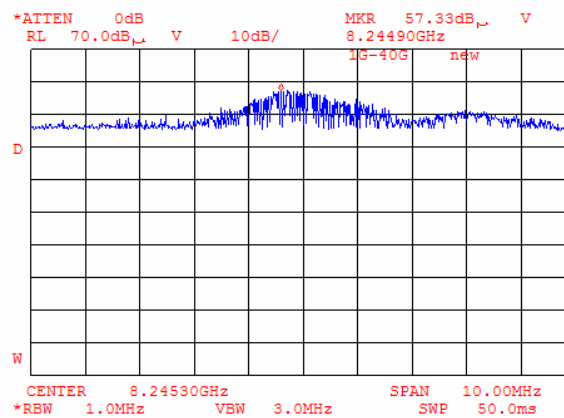
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 Hz
MODULATION: PSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

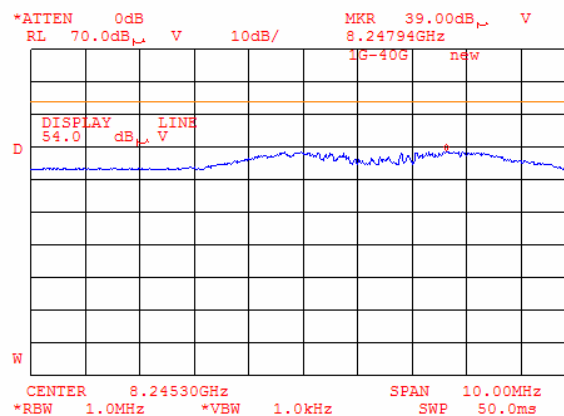
Plot 7.3.133 Radiated emission measurements at the ninth harmonic of mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: FSK



Plot 7.3.134 Radiated emission measurements at the ninth harmonic of mid carrier frequency

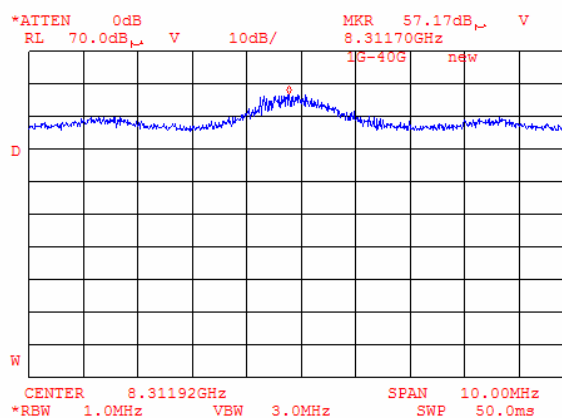
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 1000 Hz
MODULATION: FSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

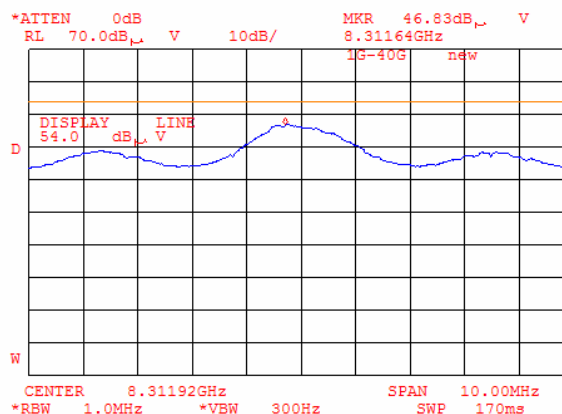
Plot 7.3.135 Radiated emission measurements at the ninth harmonic of high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: PSK



Plot 7.3.136 Radiated emission measurements at the ninth harmonic of high carrier frequency

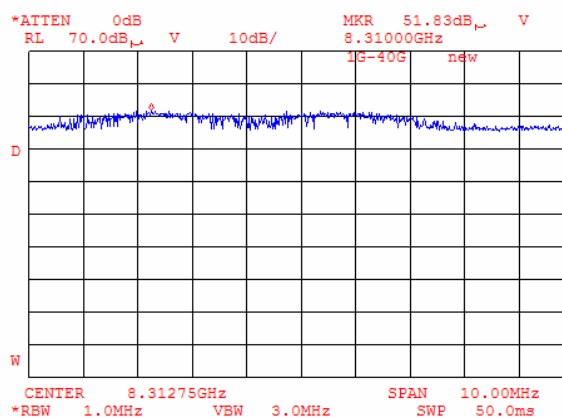
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 Hz
MODULATION: PSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

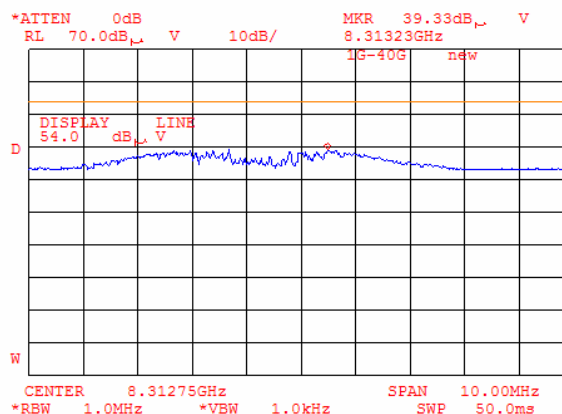
Plot 7.3.137 Radiated emission measurements at the ninth harmonic of high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: FSK



Plot 7.3.138 Radiated emission measurements at the ninth harmonic of high carrier frequency

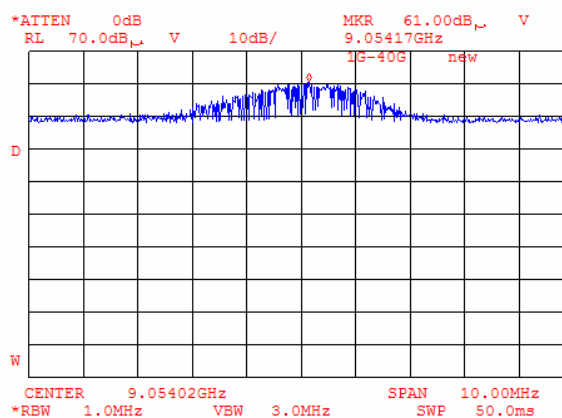
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 1000 Hz
MODULATION: FSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

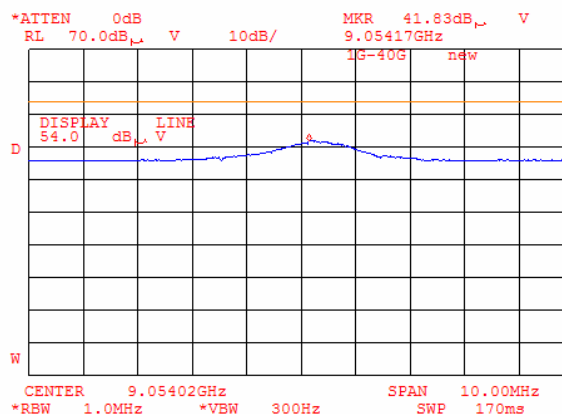
Plot 7.3.139 Radiated emission measurements at the tenth harmonic of low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: PSK



Plot 7.3.140 Radiated emission measurements at the tenth harmonic of low carrier frequency

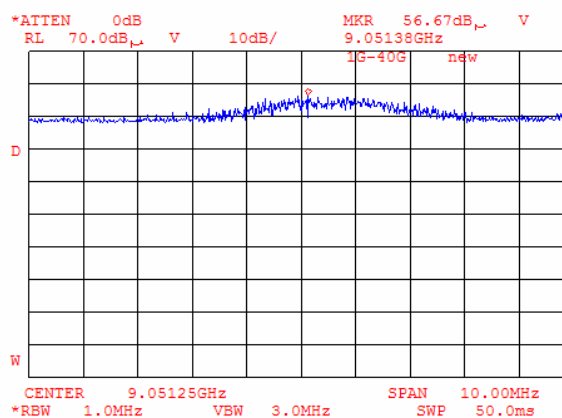
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 Hz
MODULATION: PSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

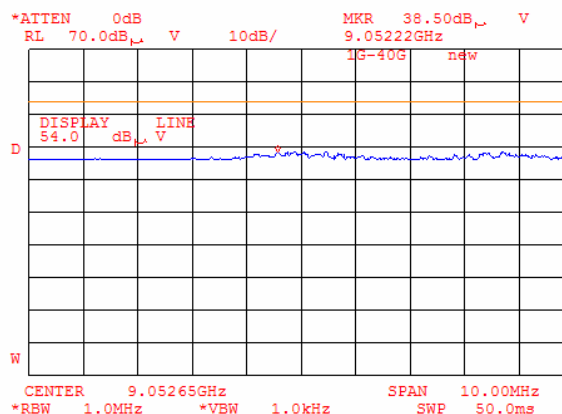
Plot 7.3.141 Radiated emission measurements at the tenth harmonic of low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: FSK



Plot 7.3.142 Radiated emission measurements at the tenth harmonic of low carrier frequency

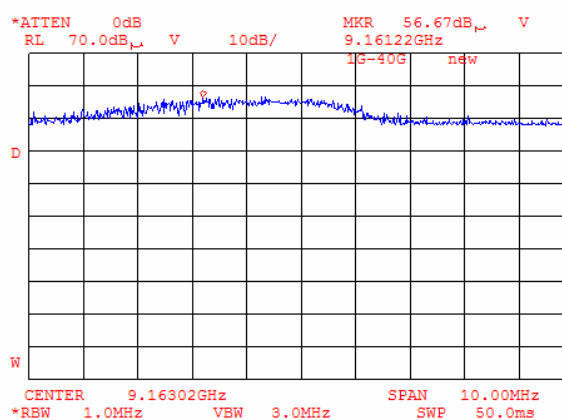
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 1000 Hz
MODULATION: FSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

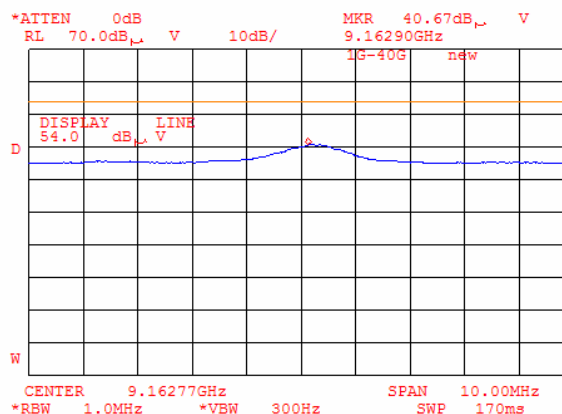
Plot 7.3.143 Radiated emission measurements at the tenth harmonic of mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: PSK



Plot 7.3.144 Radiated emission measurements at the tenth harmonic of mid carrier frequency

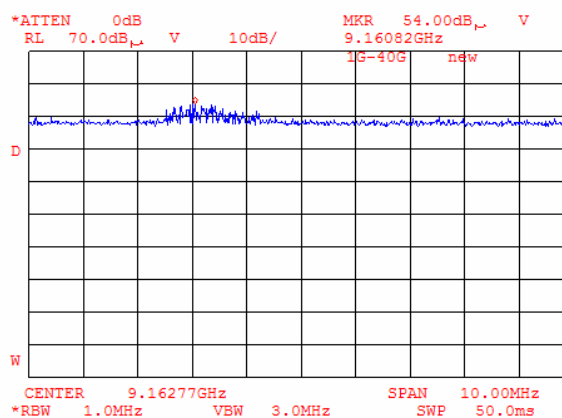
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 Hz
MODULATION: PSK



Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

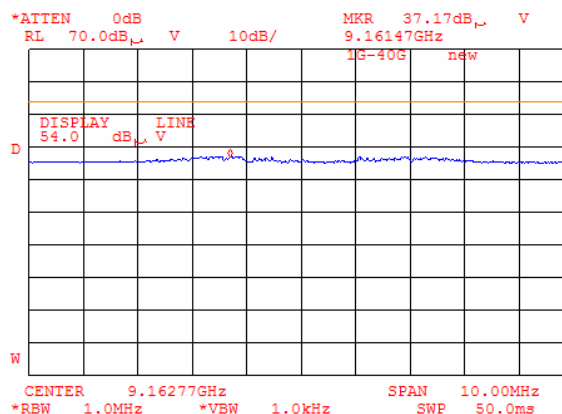
Plot 7.3.145 Radiated emission measurements at the tenth harmonic of mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 3 MHz
MODULATION: FSK



Plot 7.3.146 Radiated emission measurements at the tenth harmonic of mid carrier frequency

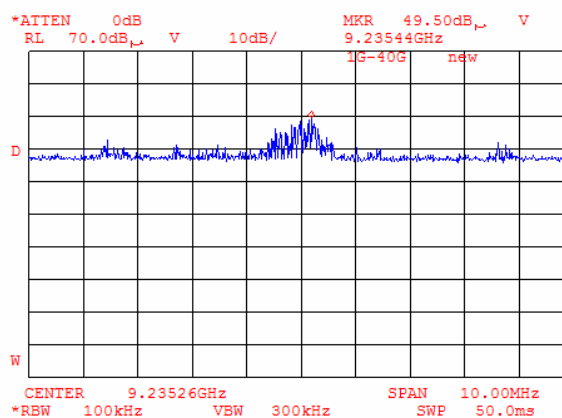
TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 1000 Hz
MODULATION: FSK



Test specification:		Section 15.247(d), Radiated spurious emissions	
Test procedure:		FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4	
Test mode:		Compliance	Verdict: PASS
Date & Time:		10/10/2005 12:50:22 PM	
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

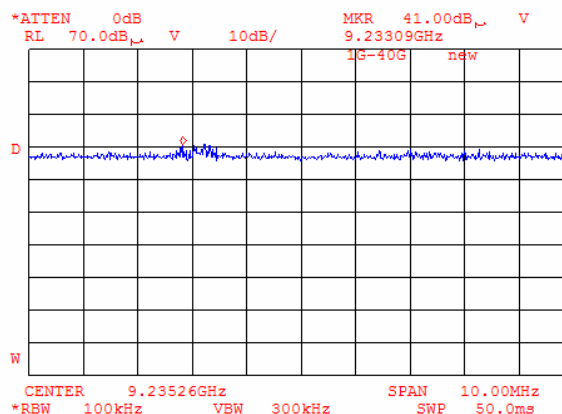
Plot 7.3.147 Radiated emission measurements at the tenth harmonic of high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 kHz
MODULATION: PSK



Plot 7.3.148 Radiated emission measurements at the tenth harmonic of high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
VIDEO BANDWIDTH: 300 kHz
MODULATION: FSK

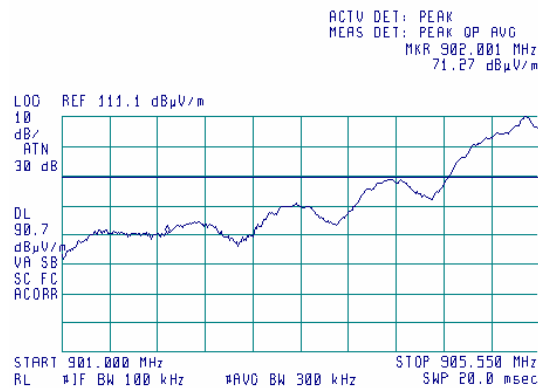


Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.149 Radiated emission measurements from 901 to 905.55 MHz at the low carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: PSK

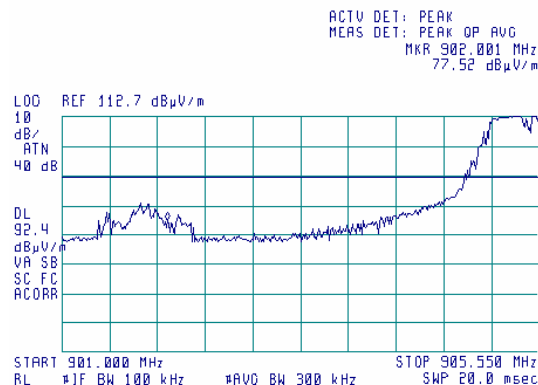
11:40:42 OCT 10, 2005



Plot 7.3.150 Radiated emission measurements from 901 to 905.55 MHz at the low carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: FSK

11:44:01 OCT 10, 2005

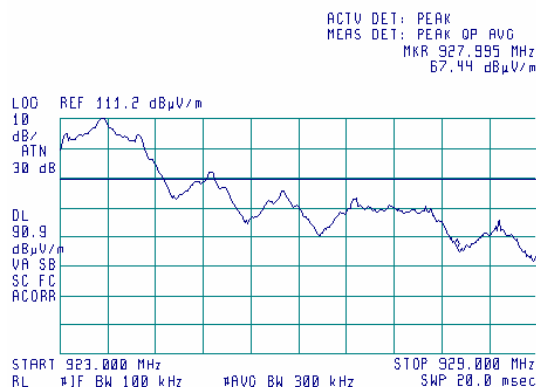


Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.151 Radiated emission measurements from 923 to 929 MHz at the high carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: PSK

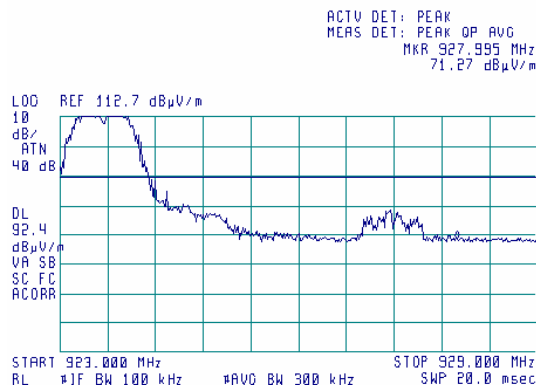
11:55:15 OCT 10, 2005



Plot 7.3.152 Radiated emission measurements from 923 to 929 MHz at the high carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
MODULATION: FSK

11:47:14 OCT 10, 2005

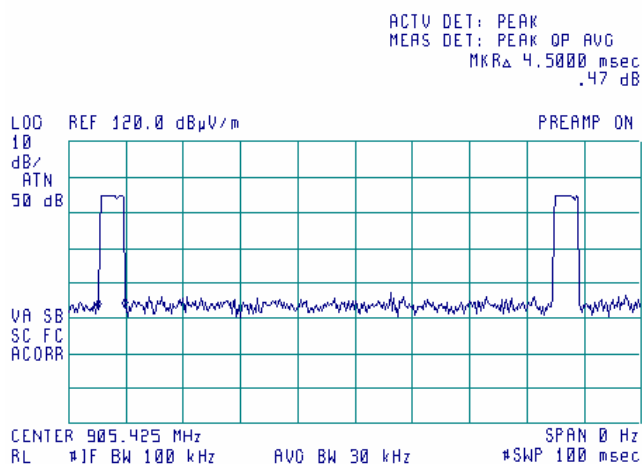


Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.153 Transmission pulse duration

MODULATION: PSK

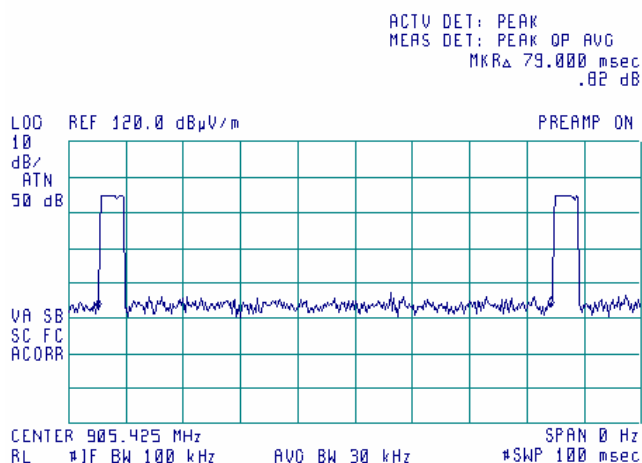
10:24:29 OCT 06, 2005



Plot 7.3.154 Transmission pulse period

MODULATION: PSK

10:25:31 OCT 06, 2005

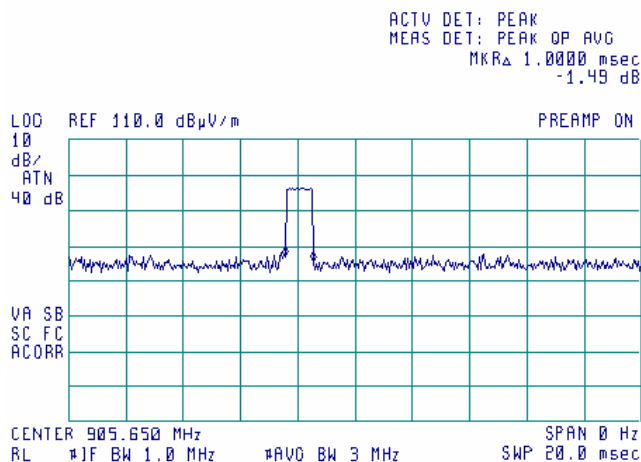


Test specification:	Section 15.247(d), Radiated spurious emissions		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(c) / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/10/2005 12:50:22 PM		
Temperature: 22 °C	Air Pressure: 1013 hPa	Relative Humidity: 44 %	Power Supply: 3.6 V DC
Remarks:			

Plot 7.3.155 Transmission pulse duration

MODULATION: FSK

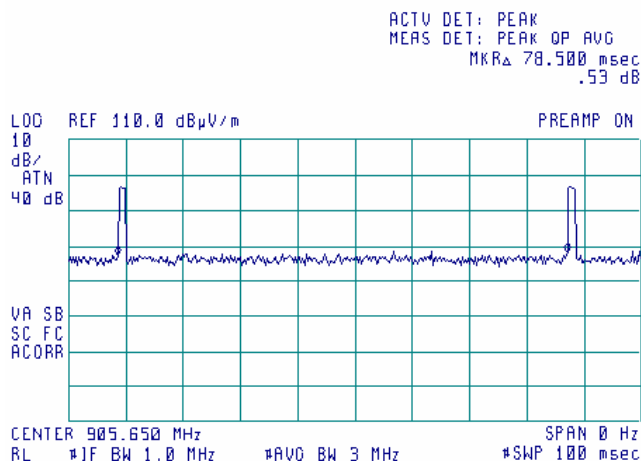
13:26:11 OCT 06, 2005



Plot 7.3.156 Transmission pulse period

MODULATION: FSK

13:24:51 OCT 06, 2005



Test specification:		Section 15.247(e), Peak power density	
Test procedure:		FR Vol. 62, page 26243, Section 15.247(d)	
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/24/2005 12:31:36 PM		
Temperature: 21°C	Air Pressure: 1007 hPa	Relative Humidity: 54%	Power Supply: 3.6 V DC
Remarks:			

7.4 Peak spectral power density

7.4.1 General

This test was performed to measure the peak spectral power density radiated by the transmitter RF antenna. Specification test limits are given in Table 7.4.1.

Table 7.4.1 Peak spectral power density limits

Assigned frequency range, MHz	Measurement bandwidth, kHz	Peak spectral power density, dBm	Equivalent field strength limit @ 3m, dB(μV/m)*
902.0 – 928.0	3.0	8.0	103.2

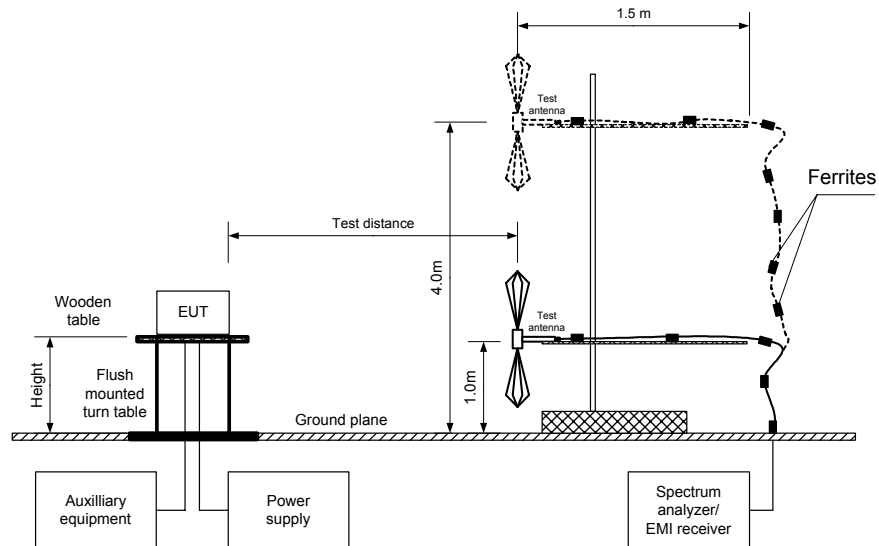
* - Equivalent field strength limit was calculated from the peak spectral power density as follows:
 $E = 8 \text{ dBm} + 95.2 \text{ dB} = 103.2 \text{ dB}(\mu\text{V/m})$.

7.4.2 Test procedure for field strength measurements

- 7.4.2.1** The EUT was set up as shown in Figure 7.4.1, energized and its proper operation was checked.
- 7.4.2.2** The EUT was adjusted to produce maximum available to end user RF output power.
- 7.4.2.3** The field strength of the EUT carrier frequency was measured with antenna connected to spectrum analyzer/ EMI receiver. To find maximum radiation the turntable was rotated 360° and the measuring antenna height was swept in both vertical and horizontal polarizations.
- 7.4.2.4** The frequency span of spectrum analyzer was set to capture the entire 6 dB band of the transmitter, in peak hold mode with resolution bandwidth set to 3.0 kHz, video bandwidth wider than resolution bandwidth, auto sweep time and sufficient number of sweeps was allowed for trace stabilization. The spectrum lines spacing was verified to be wider than 3 kHz. Otherwise the resolution bandwidth was reduced until individual spectrum lines were resolved and the power of individual spectrum lines was integrated over 3 kHz band.
- 7.4.2.5** The peak of emission was zoomed with span set just wide enough to capture the emission peak area and sweep time was set equal to span width divided by resolution bandwidth. Spectrum analyzer was set in peak hold mode, sufficient number of sweeps was allowed for trace stabilization and peak spectral power density was measured as provided in Table 7.4.2 and associated plots.

Test specification: Section 15.247(e), Peak power density			
Test procedure: FR Vol. 62, page 26243, Section 15.247(d)			
Test mode: Compliance		Verdict: PASS	
Date & Time: 10/24/2005 12:31:36 PM			
Temperature: 21°C	Air Pressure: 1007 hPa	Relative Humidity: 54%	Power Supply: 3.6 V DC
Remarks:			

Figure 7.4.1 Setup for carrier field strength measurements



Test specification:		Section 15.247(e), Peak power density	
Test procedure:		FR Vol. 62, page 26243, Section 15.247(d)	
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/24/2005 12:31:36 PM		
Temperature: 21°C	Air Pressure: 1007 hPa	Relative Humidity: 54%	Power Supply: 3.6 V DC
Remarks:			

Table 7.4.2 Field strength measurement of peak spectral power density

ASSIGNED FREQUENCY RANGE: 902 – 928 MHz
TEST DISTANCE: 3 m
TEST SITE: Semi anechoic chamber
EUT HEIGHT: 0.8 m
DETECTOR USED: Peak
RESOLUTION BANDWIDTH: 3 kHz
VIDEO BANDWIDTH: 10 kHz
TEST ANTENNA TYPE: Biconilog (30 MHz – 1000 MHz)
TRANSMITTER OUTPUT POWER SETTINGS: Maximum

MODULATION: PSK
MODULATING SIGNAL: PRBS
BIT RATE: 60 kbps
TRANSMITTER OUTPUT POWER: 20.42 dBm at low carrier frequency
21.02 dBm at mid carrier frequency
21.60 dBm at high carrier frequency

Frequency, MHz	Field strength, dB(μV/m)	EUT antenna gain, dBi	Limit, dB(μV/m)	Margin, dB*	Antenna polarization	Antenna height, m	Turn-table position**, degrees
905.494	106.45	5.0	103.23	-1.78	Vertical	1.0	55
916.246	106.81	5.0	103.23	-1.42	Vertical	1.0	51
923.489	107.41	5.0	103.23	-0.82	Vertical	1.0	52

MODULATION: FSK
MODULATING SIGNAL: PRBS
BIT RATE: 120 kbps
TRANSMITTER OUTPUT POWER: 15.11 dBm at low carrier frequency
15.82 dBm at mid carrier frequency
16.72 dBm at high carrier frequency

Frequency, MHz	Field strength, dB(μV/m)	EUT antenna gain, dBi	Limit, dB(μV/m)	Margin, dB*	Antenna polarization	Antenna height, m	Turn-table position**, degrees
905.243	106.22	5.0	103.23	-2.01	Vertical	1.0	55
916.470	107.91	5.0	103.23	-0.32	Vertical	1.0	51
923.716	107.47	5.0	103.23	-0.76	Vertical	1.0	52

*- Margin = Field strength - EUT antenna gain - calculated field strength limit.

** - EUT front panel refer to 0 degrees position of turntable.

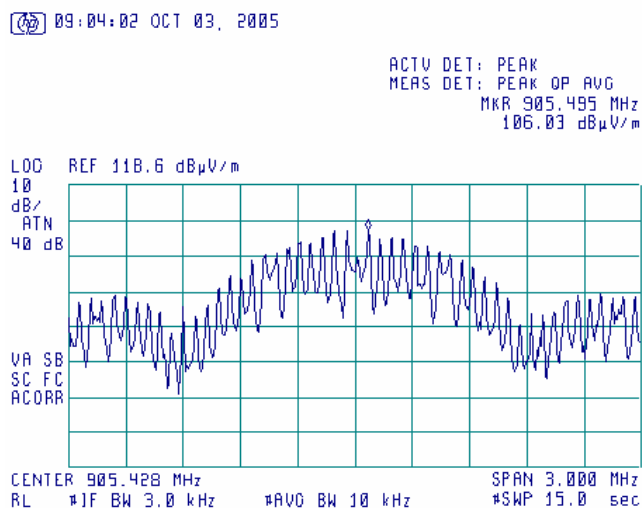
Reference numbers of test equipment used

HL 0521	HL 0589	HL 0604	HL 2009				
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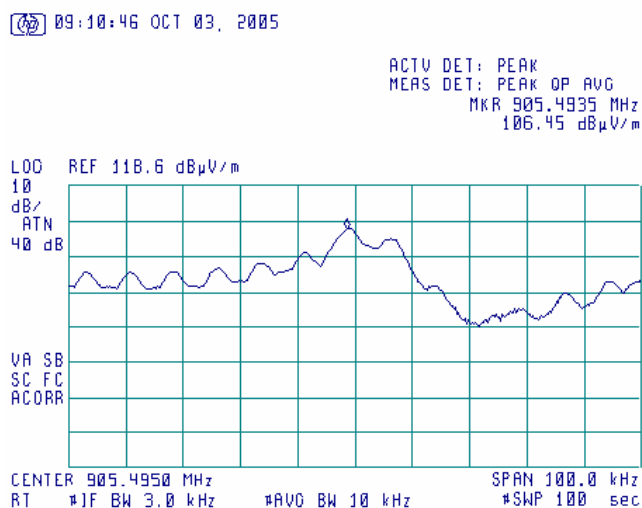
Full description is given in Appendix A.

Test specification:	Section 15.247(e), Peak power density		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(d)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/24/2005 12:31:36 PM		
Temperature: 21°C	Air Pressure: 1007 hPa	Relative Humidity: 54%	Power Supply: 3.6 V DC
Remarks:			

Plot 7.4.1 Peak spectral power density at low frequency within 6 dB band, PSK modulation

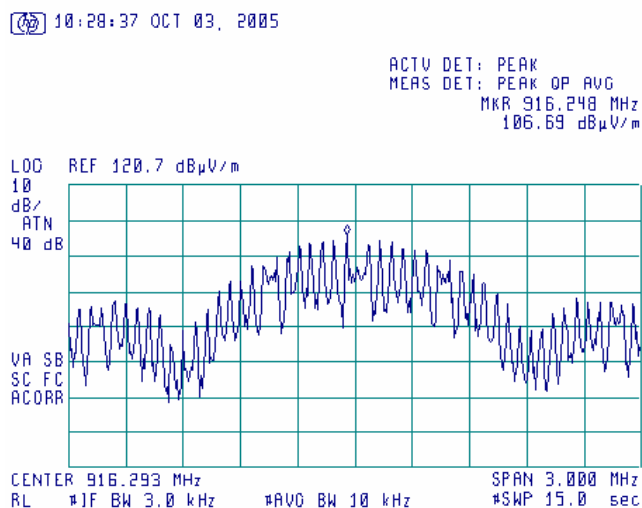


Plot 7.4.2 Peak spectral power density at low frequency zoomed at the peak, PSK modulation

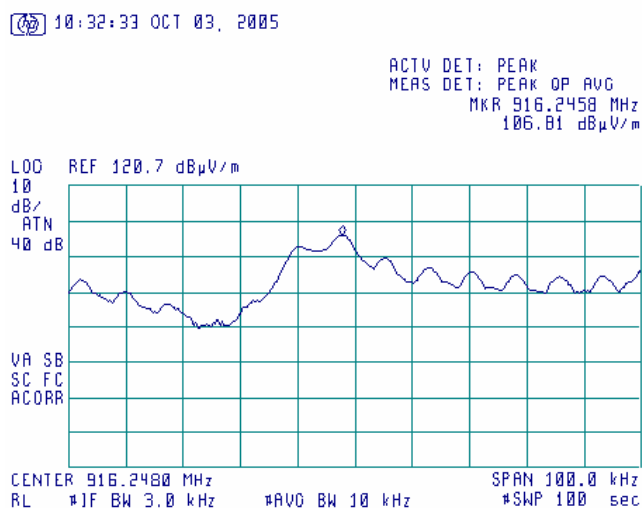


Test specification:	Section 15.247(e), Peak power density		
Test procedure:	FR Vol. 62, page 26243, Section 15.247(d)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/24/2005 12:31:36 PM		
Temperature: 21°C	Air Pressure: 1007 hPa	Relative Humidity: 54%	Power Supply: 3.6 V DC
Remarks:			

Plot 7.4.3 Peak spectral power density at mid frequency within 6 dB band, PSK modulation

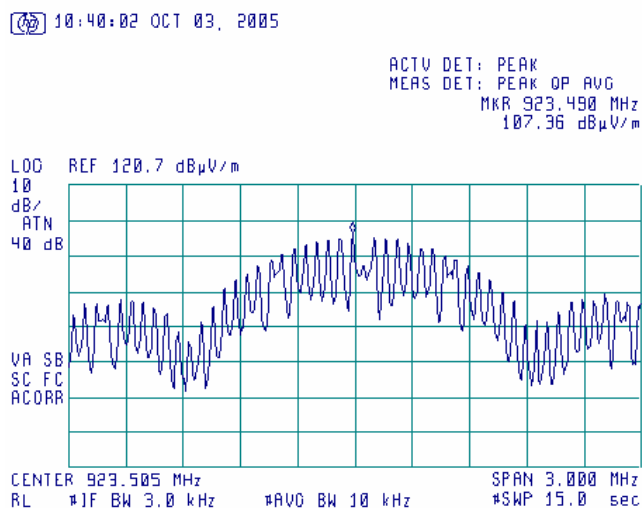


Plot 7.4.4 Peak spectral power density at mid frequency zoomed at the peak, PSK modulation

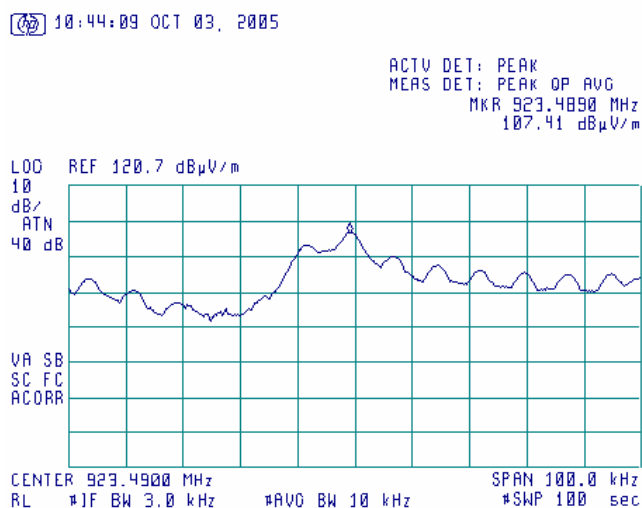


Test specification:		Section 15.247(e), Peak power density	
Test procedure:		FR Vol. 62, page 26243, Section 15.247(d)	
Test mode:	Compliance	Verdict: PASS	
Date & Time:	10/24/2005 12:31:36 PM		
Temperature: 21°C	Air Pressure: 1007 hPa	Relative Humidity: 54%	Power Supply: 3.6 V DC
Remarks:			

Plot 7.4.5 Peak spectral power density at high frequency within 6 dB band, PSK modulation

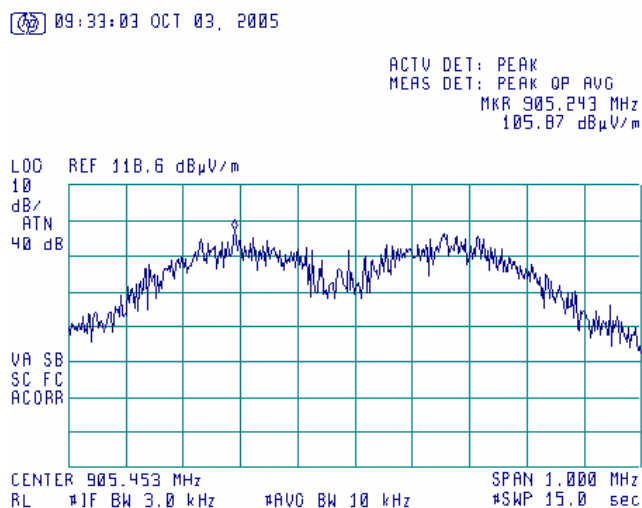


Plot 7.4.6 Peak spectral power density at high frequency zoomed at the peak, PSK modulation

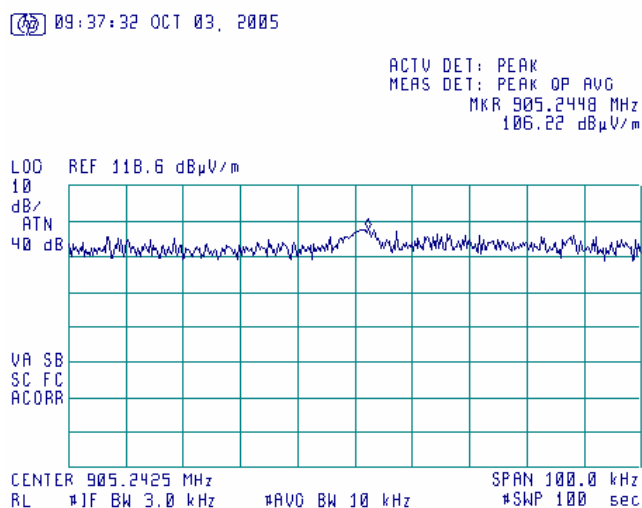


Test specification:		Section 15.247(e), Peak power density	
Test procedure:		FR Vol. 62, page 26243, Section 15.247(d)	
Test mode:		Compliance	Verdict: PASS
Date & Time:		10/24/2005 12:31:36 PM	
Temperature: 21°C	Air Pressure: 1007 hPa	Relative Humidity: 54%	Power Supply: 3.6 V DC
Remarks:			

Plot 7.4.7 Peak spectral power density at low frequency within 6 dB band, FSK modulation

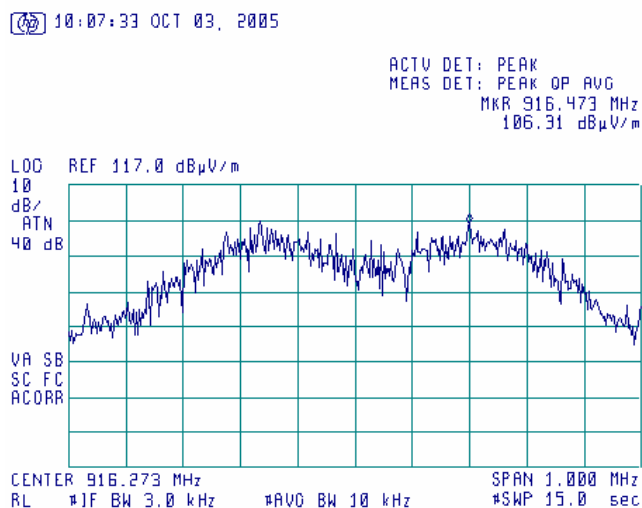


Plot 7.4.8 Peak spectral power density at low frequency zoomed at the peak, FSK modulation

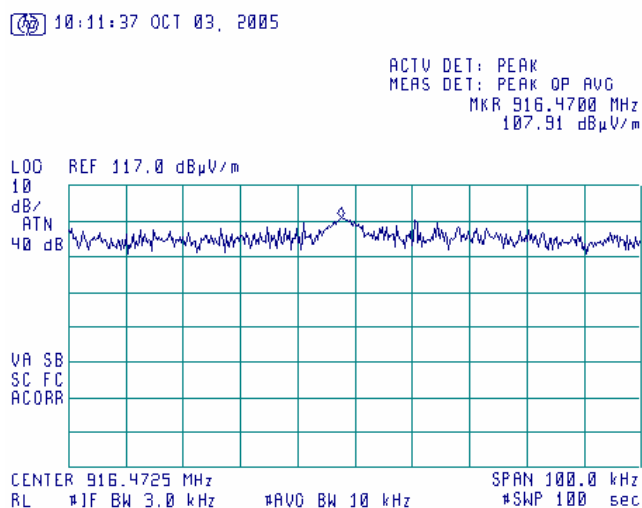


Test specification:		Section 15.247(e), Peak power density	
Test procedure:		FR Vol. 62, page 26243, Section 15.247(d)	
Test mode:		Compliance	Verdict: PASS
Date & Time:		10/24/2005 12:31:36 PM	
Temperature: 21°C	Air Pressure: 1007 hPa	Relative Humidity: 54%	Power Supply: 3.6 V DC
Remarks:			

Plot 7.4.9 Peak spectral power density at mid frequency within 6 dB band, FSK modulation

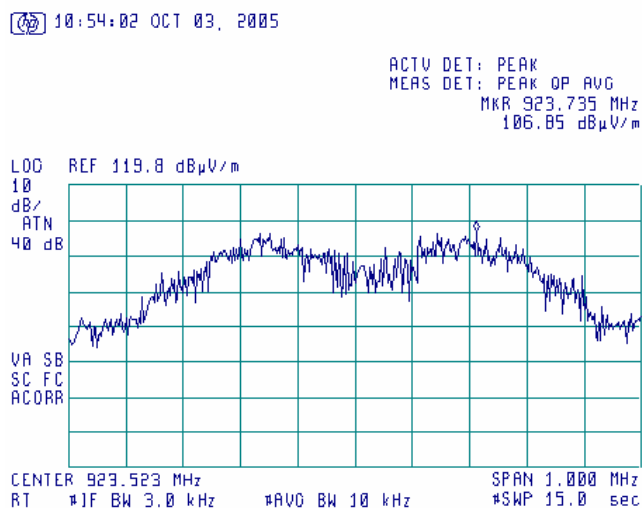


Plot 7.4.10 Peak spectral power density at mid frequency zoomed at the peak, FSK modulation

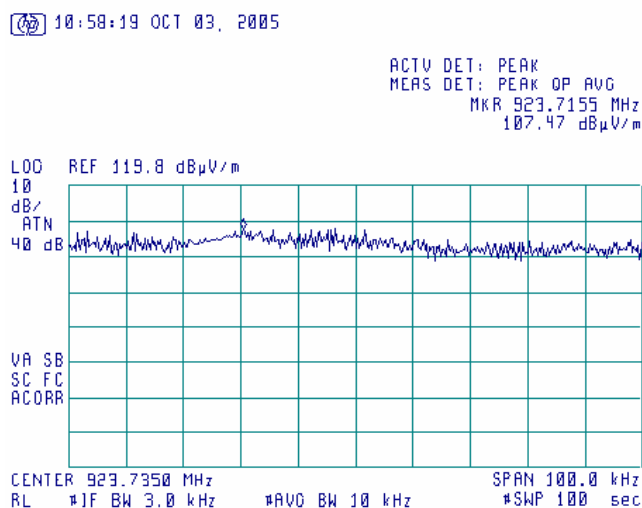


Test specification:		Section 15.247(e), Peak power density	
Test procedure:		FR Vol. 62, page 26243, Section 15.247(d)	
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/24/2005 12:31:36 PM		
Temperature: 21°C	Air Pressure: 1007 hPa	Relative Humidity: 54%	Power Supply: 3.6 V DC
Remarks:			

Plot 7.4.11 Peak spectral power density at high frequency within 6 dB band, FSK modulation



Plot 7.4.12 Peak spectral power density at high frequency zoomed at the peak, FSK modulation



Test specification:		Section 15.109, Radiated emission	
Test procedure:		ANSI C63.4, Sections 11.6 and 12.1.4	
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/24/2005 1:17:10 PM		
Temperature: 21°C	Air Pressure: 1007 hPa	Relative Humidity: 54%	Power Supply: 3.6 V DC
Remarks: Preliminary			

7.5 Radiated emission measurements

7.5.1 General

This test was performed to measure radiated emissions from the EUT enclosure. Specification test limits are given in Table 7.5.1.

Table 7.5.1 Radiated emission test limits

Frequency, MHz	Class B limit, dB(μV/m)		Class A limit, dB(μV/m)	
	10 m distance	3 m distance	10 m distance	3 m distance
30 - 88	29.5*	40.0	39.0	49.5*
88 - 216	33.0*	43.5	43.5	54.0*
216 - 960	35.5*	46.0	46.4	56.9*
Above 960	43.5*	54.0	49.5	60.0*

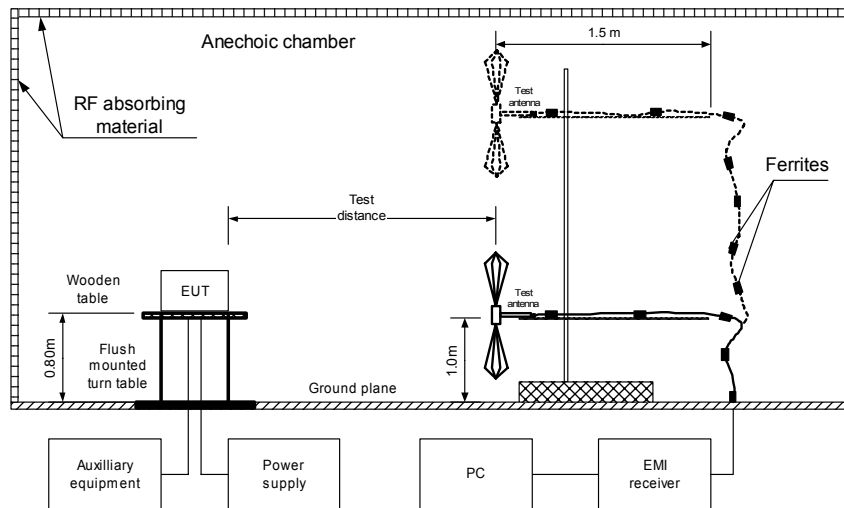
* The limit for test distance other than specified was calculated using the inverse linear distance extrapolation factor as follows: $\text{Lim}_{S_2} = \text{Lim}_{S_1} + 20 \log (S_1/S_2)$, where S_1 and S_2 – standard defined and test distance respectively in meters.

7.5.2 Test procedure for measurements in semi-anechoic chamber

- 7.5.2.1** The EUT was set up as shown in Figure 7.5.1 and associated photograph/s, energized and the performance check was conducted.
- 7.5.2.2** The specified frequency range was investigated with biconilog antenna connected to EMI receiver. To find maximum radiation the turntable was rotated 360°, the measuring antenna height was changed from 1 to 4 m, its polarization was switched from vertical to horizontal and the EUT cables position was varied.
- 7.5.2.3** The worst test results (the lowest margins) were recorded in Table 7.5.2 and shown in the associated plots.

Test specification: Section 15.109, Radiated emission			
Test procedure: ANSI C63.4, Sections 11.6 and 12.1.4			
Test mode: Compliance		Verdict: PASS	
Date & Time: 10/24/2005 1:17:10 PM			
Temperature: 21°C	Air Pressure: 1007 hPa	Relative Humidity: 54%	Power Supply: 3.6 V DC
Remarks: Preliminary			

Figure 7.5.1 Setup for radiated emission measurements in anechoic chamber, table-top equipment



Photograph 7.5.1 Setup for preliminary radiated emission measurements



Test specification:	Section 15.109, Radiated emission			
Test procedure:	ANSI C63.4, Sections 11.6 and 12.1.4			
Test mode:	Compliance	Verdict:		PASS
Date & Time:	10/24/2005 1:17:10 PM			
Temperature: 21°C	Air Pressure: 1007 hPa	Relative Humidity: 54%	Power Supply: 3.6 V DC	
Remarks: Preliminary				

Table 7.5.2 Radiated emission test results

EUT SET UP: TABLE-TOP
LIMIT: Class B
EUT OPERATING MODE: Receive / Stand-by
TEST SITE: SEMI ANECHOIC CHAMBER
TEST DISTANCE: 3 m
DETECTORS USED: PEAK / QUASI-PEAK
FREQUENCY RANGE: 30 MHz – 1000 MHz
RESOLUTION BANDWIDTH: 120 kHz

Resolution Bandwidth: 120 kHz					Antenna polarization	Antenna height, m	Turn-table position**, degrees	Verdict
Frequency, MHz	Peak emission, dB(μV/m)	Quasi-peak						
		Measured emission, dB(μV/m)	Limit, dB(μV/m)	Margin, dB*				
No emissions were found								Pass

TEST SITE: SEMI ANECHOIC CHAMBER
TEST DISTANCE: 3 m
DETECTORS USED: PEAK / AVERAGE
FREQUENCY RANGE: 1000 MHz – 5000 MHz
RESOLUTION BANDWIDTH: 1000 kHz

Frequency, MHz	Peak emission, dB(μV/m)	Average			Antenna polarization	Antenna height, m	Turn-table position**, degrees	Verdict
		Measured emission, dB(μV/m)	Limit, dB(μV/m)	Margin, dB*				
No emissions were found								Pass

*- Margin = Measured emission - specification limit.

** - EUT front panel refer to 0 degrees position of turntable.

Reference numbers of test equipment used

HL 0465	HL 0521	HL 0589	HL 0592	HL 0593	HL 0594	HL 0604	HL 1947
HL 2009	HL 2432						

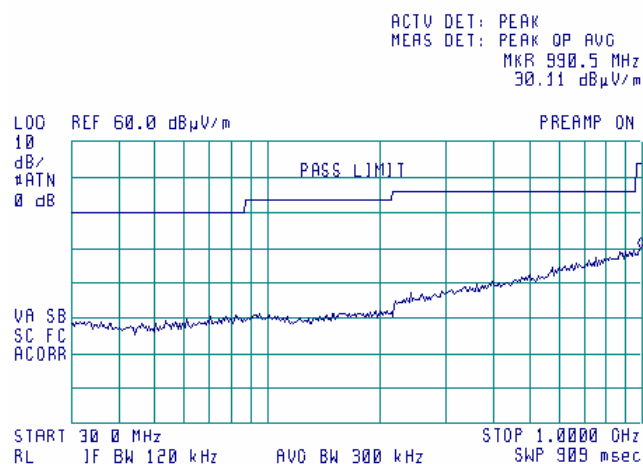
Full description is given in Appendix A.

Test specification:		Section 15.109, Radiated emission	
Test procedure:		ANSI C63.4, Sections 11.6 and 12.1.4	
Test mode:	Compliance	Verdict: PASS	
Date & Time:	10/24/2005 1:17:10 PM		
Temperature: 21°C	Air Pressure: 1007 hPa	Relative Humidity: 54%	Power Supply: 3.6 V DC
Remarks: Preliminary			

Plot 7.5.1 Radiated emission measurements in 30- 1000 MHz range, vertical antenna polarization

TEST SITE: Semi anechoic chamber
LIMIT: Class B
TEST DISTANCE: 3 m
EUT OPERATING MODE: Receive / Stand-by

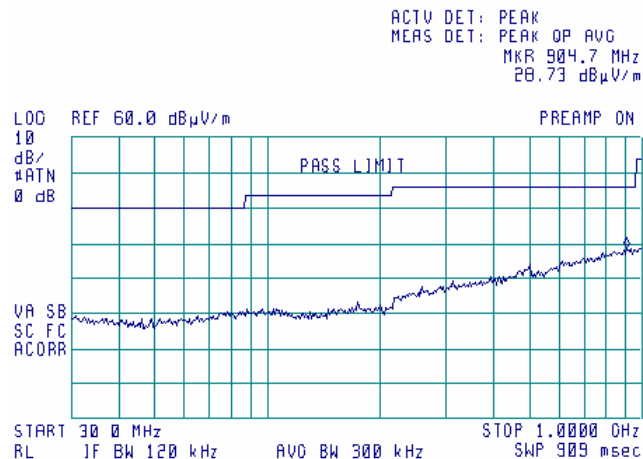
17:05:40 OCT 06, 2005



Plot 7.5.2 Radiated emission measurements in 30- 1000 MHz range, horizontal antenna polarization

TEST SITE: Semi anechoic chamber
LIMIT: Class B
TEST DISTANCE: 3 m
EUT OPERATING MODE: Receive / Stand-by

17:07:05 OCT 06, 2005

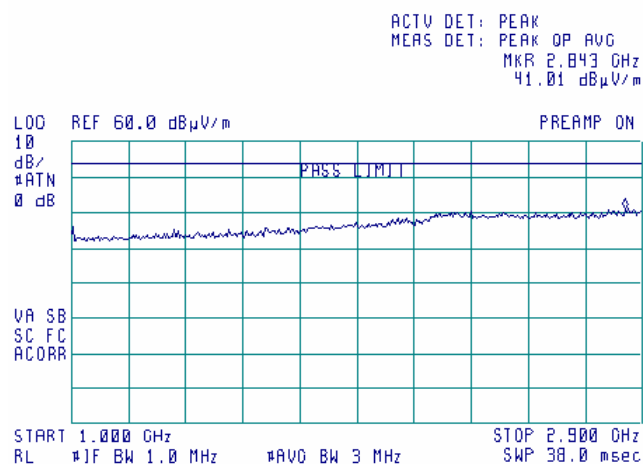


Test specification:		Section 15.109, Radiated emission	
Test procedure:		ANSI C63.4, Sections 11.6 and 12.1.4	
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/24/2005 1:17:10 PM		
Temperature: 21°C	Air Pressure: 1007 hPa	Relative Humidity: 54%	Power Supply: 3.6 V DC
Remarks: Preliminary			

Plot 7.5.3 Radiated emission measurements in 1000- 2900 MHz range, vertical antenna polarization

TEST SITE: Semi anechoic chamber
LIMIT: Class B
TEST DISTANCE: 3 m
EUT OPERATING MODE: Receive / Stand-by

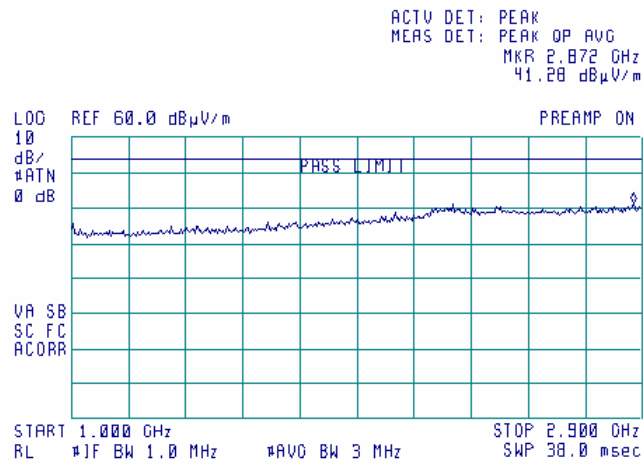
17:08:33 OCT 06, 2005



Plot 7.5.4 Radiated emission measurements in 1000- 2900 MHz range, horizontal antenna polarization

TEST SITE: Semi anechoic chamber
LIMIT: Class B
TEST DISTANCE: 3 m
EUT OPERATING MODE: Receive / Stand-by

17:09:39 OCT 06, 2005

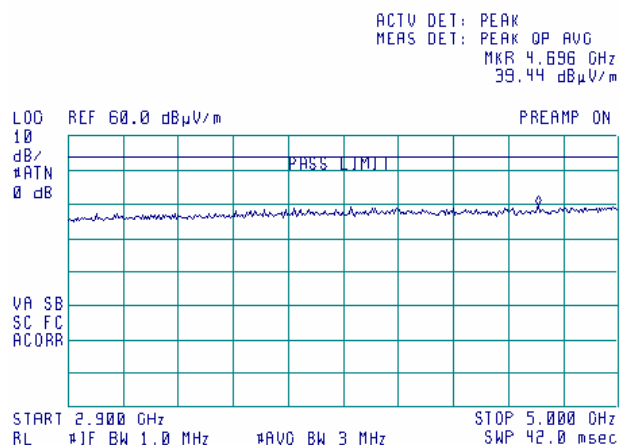


Test specification:		Section 15.109, Radiated emission	
Test procedure:		ANSI C63.4, Sections 11.6 and 12.1.4	
Test mode:	Compliance	Verdict: PASS	
Date & Time:	10/24/2005 1:17:10 PM		
Temperature: 21°C	Air Pressure: 1007 hPa	Relative Humidity: 54%	Power Supply: 3.6 V DC
Remarks: Preliminary			

Plot 7.5.5 Radiated emission measurements in 2900- 5000 MHz range, vertical antenna polarization

TEST SITE: Semi anechoic chamber
LIMIT: Class B
TEST DISTANCE: 3 m
EUT OPERATING MODE: Receive / Stand-by

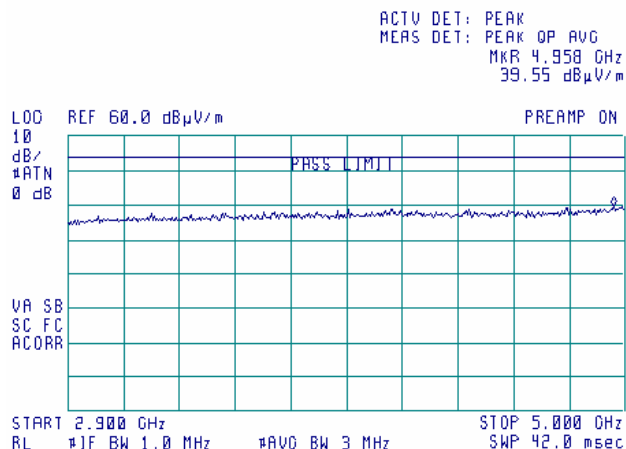
17:14:07 OCT 06, 2005



Plot 7.5.6 Radiated emission measurements in 2900- 5000 MHz range, horizontal antenna polarization

TEST SITE: Semi anechoic chamber
LIMIT: Class B
TEST DISTANCE: 3 m
EUT OPERATING MODE: Receive / Stand-by

17:15:25 OCT 06, 2005



8 APPENDIX A Test equipment and ancillaries used for tests

HL No	Description	Manufacturer	Model	Ser. No.	Last Cal.	Due Cal.
0287	Turntable, Motorized Diameter, 2 m (OATS)	HL	TMD-2	042	11-Nov-04	11-Nov-05
0410	Cable, Coax, Microwave, DC-18 GHz, N-N, 1 m	Gore	PFP01P0 1039.4	9338767	11-Nov-04	11-Nov-05
0446	Antenna, Loop active, 10kHz-30MHz	EMCO	6502	2857	28-Jun-05	28-Jun-06
0465	Anechoic Chamber 9(L) x 6.5(W) x 5.5(H) m	HL	AC - 1	023	10-Oct-05	10-Oct-06
0521	EMI Receiver (Spectrum Analyzer) with RF filter section 9 kHz-6.5 GHz	Hewlett Packard	8546A	3617A 00319, 3448A002 53	10-Oct-05	10-Oct-06
0589	Cable Coaxial, GORE A2P01POL118, 2.3 m	HL	GORE-3	176	10-Oct-05	10-Oct-06
0592	Position Controller	HL	L2-SR3000	100	18-May-05	18-May-06
0593	Antenna Mast, 1-4 m Pneumatic	Madgesh	AM-F1	101	03-Feb-05	03-Feb-06
0594	Turn Table FOR ANECHOIC CHAMBER flush mount d=1.2 m Pneumatic	HL	TT-WDC1	102	27-Jan-05	27-Jan-06
0604	Antenna BiconiLog Log-Periodic/T Bow-TIE 26 - 2000 MHz	EMCO	3141	9611-1011	27-Jan-05	27-Jan-06
0813	Cable Coax, RG-214, 12 m, N-type connectors	HL	C214-12	149	27-Jan-05	27-Jan-06
1004	Cable Coaxial, ANDREW PSWJ4, 6m	HL	ANDREW -6	163	27-Jan-05	27-Jan-06
1200	Quadruplexer 1-12 GHz (1-2 GHz; 2-4GHz;4-8 GHz; 8-12GHz)	Elettronica S.p.A. - Roma	UE 84	D/00240	10-Feb-05	10-Feb-06
1424	Spectrum Analyzer, 30 Hz- 40 GHz	Agilent Technologies (HP)	8564EC	3946A002 19	27-Jan-05	27-Jan-06
1430	EMI Receiver, 9 kHz - 2.9 GHz, System: HL1431, HL1432	Agilent Technologies (HP)	8542E	3807A002 62,3705A0 0217	27-Jan-05	27-Jan-06
1552	Cable RF, 8 m	Alpha Wire	RG-214	1552	27-Jan-05	27-Jan-06
1848	Antenna mast 4m/6m with polarity control (OATS)	Sh. I. Machines	AM-5	1	19-Apr-05	19-Apr-06
1941	Cable 18GHz, 4 m, green	Rhophase Microwave Limited	SPS-1803A-4000-NPS	T4657	19-Apr-05	19-Apr-06
1947	Cable 18GHz, 6.5 m, blue	Rhophase Microwave Limited	NPS-1803A-6500-NPS	T4974	19-Apr-05	19-Apr-06
1984	Antenna, Double-Ridged Waveguide Horn, 1-18 GHz, 300 W, N-type	EMC Test Systems	3115	9911-5964	19-Apr-05	19-Apr-06
2009	Cable RF, 8 m	Alpha Wire	RG-214	C-56	19-Apr-05	19-Apr-06
2254	Cable 40GHz, 0.8 m, blue	Rhophase Microwave Limited	KPS-1503A-800-KPS	W4907	24-Jun-05	24-Jun-06
2259	Amplifier Low Noise 2-20 GHz	Sophia Wireless	LNA0220-C	0223	19-Apr-05	19-Apr-06
2387	Filter Bandpass, 8-14 GHz	HL	FBP8-14	2387	05-Jun-05	05-Jun-06
2432	Antenna, Double-Ridged Waveguide Horn 1-18 GHz	EMC Test Systems	3115	00027177	19-Apr-05	19-Apr-06
2499	Quadruplexer 1-12 GHz (1-2 GHz; 2-4GHz;4-8 GHz; 8-12GHz)	Elettronica S.p.A. - Roma	UE 84	D/00239	19-Apr-05	19-Apr-06

9 APPENDIX B Measurement uncertainties

Expanded uncertainty at 95% confidence in Hermon Labs EMC measurements

Test description	Expanded uncertainty
Conducted carrier power at RF antenna connector	Below 12.4 GHz: ± 1.7 dB 12.4 GHz to 40 GHz: ± 2.3 dB
Conducted emissions at RF antenna connector	9 kHz to 2.9 GHz: ± 2.6 dB 2.9 GHz to 6.46 GHz: ± 3.5 dB 6.46 GHz to 13.2 GHz: ± 4.3 dB 13.2 GHz to 22.0 GHz: ± 5.0 dB 22.0 GHz to 26.8 GHz: ± 5.5 dB 26.8 GHz to 40.0 GHz: ± 4.8 dB
Occupied bandwidth	± 8.0 %
Duty cycle, timing (Tx ON / OFF) and average factor measurements	± 1.0 %
Conducted emissions with LISN	9 kHz to 150 kHz: ± 3.9 dB 150 kHz to 30 MHz: ± 3.8 dB
Radiated emissions at 3 m measuring distance Horizontal polarization Vertical polarization	Biconilog antenna: ± 5.3 dB Biconical antenna: ± 5.0 dB Log periodic antenna: ± 5.3 dB Double ridged horn antenna: ± 5.3 dB Biconilog antenna: ± 6.0 dB Biconical antenna: ± 5.7 dB Log periodic antenna: ± 6.0 dB Double ridged horn antenna: ± 6.0 dB

The test equipment has been calibrated according to its recommended procedures and is within the manufacturer's published limit of error. The standards and instruments used in the calibration system conform to the present requirements of ISO/IEC 17025 (or alternately ANSI/NCSL Z540-1).

The laboratory calibrates its measurement standards by a third party (traceable to NIST, USA) on a regular basis according to equipment manufacturer requirements. The Hermon Labs EMC measurements uncertainty is given in the table above.

10 APPENDIX C Test facility description

Tests were performed at Hermon Laboratories Ltd., which is a fully independent, private, EMC, safety, environmental and telecommunication testing facility. Hermon Laboratories is listed by the Federal Communications Commission (USA) for all parts of Code of Federal Regulations 47 (CFR 47) and by Industry Canada for electromagnetic emissions (file numbers IC 2186-1 for OATS and IC 2186-2 for anechoic chamber), certified by VCCI, Japan (the registration numbers are R-808 for OATS, R-1082 for anechoic chamber, C-845 for conducted emissions site), assessed by TNO Certification EP&S (Netherlands) for a number of EMC, telecommunications, environmental, safety standards, and by AMTAC (UK) for safety of medical devices. The laboratory is accredited by American Association for Laboratory Accreditation (USA) according to ISO/IEC 17025 for electromagnetic compatibility, product safety, telecommunications testing and environmental simulation (for exact scope please refer to Certificate No. 839.01).

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Person for contact: Mr. Alex Usoskin, CEO.

11 APPENDIX D Specification references

47CFR part 15: 2005	Radio Frequency Devices.
FR Vol.62	Federal Register, Volume 62, May 13, 1997
ANSI C63.2: 1996	American National Standard for Instrumentation-Electromagnetic Noise and Field Strength, 10 kHz to 40 GHz-Specifications.
ANSI C63.4: 2003	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.

12 APPENDIX E Abbreviations and acronyms

A	ampere
AC	alternating current
A/m	ampere per meter
AM	amplitude modulation
AVRG	average (detector)
cm	centimeter
dB	decibel
dBm	decibel referred to one milliwatt
dB(μV)	decibel referred to one microvolt
dB(μV/m)	decibel referred to one microvolt per meter
dB(μA)	decibel referred to one microampere
dBΩ	decibel referred to one Ohm
DC	direct current
DTS	digital transmission system
EIRP	equivalent isotropically radiated power
ERP	effective radiated power
EUT	equipment under test
F	frequency
GHz	gigahertz
GND	ground
H	height
HL	Hermon laboratories
Hz	hertz
ITE	information technology equipment
k	kilo
kHz	kilohertz
LISN	line impedance stabilization network
LO	local oscillator
m	meter
MHz	megahertz
min	minute
mm	millimeter
ms	millisecond
μs	microsecond
NA	not applicable
NT	not tested
OATS	open area test site
Ω	Ohm
PCB	printed circuit board
PM	pulse modulation
PS	power supply
ppm	part per million (10 ⁻⁶)
QP	quasi-peak
RE	radiated emission
RF	radio frequency
rms	root mean square
Rx	receive
s	second
T	temperature
Tx	transmit
V	volt
VA	volt-ampere

13 APPENDIX F Test equipment correction factors

Antenna factor

Biconilog antenna EMCO, model 3141, serial number 1011, HL 0604

Frequency, MHz	Antenna factor, dB(1/m)	Frequency, MHz	Antenna factor, dB(1/m)	Frequency, MHz	Antenna factor, dB(1/m)
26	7.8	560	19.8	1300	27.0
28	7.8	580	20.6	1320	27.8
30	7.8	600	21.3	1340	28.3
40	7.2	620	21.5	1360	28.2
60	7.1	640	21.2	1380	27.9
70	8.5	660	21.4	1400	27.9
80	9.4	680	21.9	1420	27.9
90	9.8	700	22.2	1440	27.8
100	9.7	720	22.2	1460	27.8
110	9.3	740	22.1	1480	28.0
120	8.8	760	22.3	1500	28.5
130	8.7	780	22.6	1520	28.9
140	9.2	800	22.7	1540	29.6
150	9.8	820	22.9	1560	29.8
160	10.2	840	23.1	1580	29.6
170	10.4	860	23.4	1600	29.5
180	10.4	880	23.8	1620	29.3
190	10.3	900	24.1	1640	29.2
200	10.6	920	24.1	1660	29.4
220	11.6	940	24.0	1680	29.6
240	12.4	960	24.1	1700	29.8
260	12.8	980	24.5	1720	30.3
280	13.7	1000	24.9	1740	30.8
300	14.7	1020	25.0	1760	31.1
320	15.2	1040	25.2	1780	31.0
340	15.4	1060	25.4	1800	30.9
360	16.1	1080	25.6	1820	30.7
380	16.4	1100	25.7	1840	30.6
400	16.6	1120	26.0	1860	30.6
420	16.7	1140	26.4	1880	30.6
440	17.0	1160	27.0	1900	30.6
460	17.7	1180	27.0	1920	30.7
480	18.1	1200	26.7	1940	30.9
500	18.5	1220	26.5	1960	31.2
520	19.1	1240	26.5	1980	31.6
540	19.5	1260	26.5	2000	32.0
		1280	26.6		

Antenna factor in dB(1/m) is to be added to receiver meter reading in dB(μ V) to convert it into field intensity in dB(μ V/m).

**Antenna factor
Double-ridged wave guide horn antenna
Model 3115, S/N 9911-5964, HL1984**

Frequency, MHz	Antenna factor, dB(1/m)
1000.0	24.7
1500.0	25.7
2000.0	27.6
2500.0	28.9
3000.0	31.2
3500.0	32.0
4000.0	32.5
4500.0	32.7
5000.0	33.6
5500.0	35.1
6000.0	35.4
6500.0	34.9
7000.0	36.1
7500.0	37.8
8000.0	38.0
8500.0	38.1
9000.0	39.1
9500.0	38.3
10000.0	38.6
10500.0	38.2
11000.0	38.7
11500.0	39.5
12000.0	40.0
12500.0	40.4
13000.0	40.5
13500.0	41.1
14000.0	41.6
14500.0	41.7
15000.0	38.7
15500.0	38.2
16000.0	38.8
16500.0	40.5
17000.0	42.5
17500.0	45.9
18000.0	49.4

Antenna factor in dB(1/m) is to be added to receiver meter reading in dB(μ V) to convert it into field intensity in dB(μ V/m).

Antenna factor
Double-ridged guide horn antenna
Model 3115, serial number: 00027177, HL2432

Frequency, MHz	Antenna factor. dB(1/m)
1000.0	24.7
1500.0	25.7
2000.0	27.8
2500.0	28.9
3000.0	30.7
3500.0	31.8
4000.0	33.0
4500.0	32.8
5000.0	34.2
5500.0	34.9
6000.0	35.2
6500.0	35.4
7000.0	36.3
7500.0	37.3
8000.0	37.5
8500.0	38.0
9000.0	38.3
9500.0	38.3
10000.0	38.7
10500.0	38.7
11000.0	38.9
11500.0	39.5
12000.0	39.5
12500.0	39.4
13000.0	40.5
13500.0	40.8
14000.0	41.5
14500.0	41.3
15000.0	40.2
15500.0	38.7
16000.0	38.5
16500.0	39.8
17000.0	41.9
17500.0	45.8
18000.0	49.1

Antenna factor in dB(1/m) is to be added to receiver meter reading in dB(μ V) to convert it into field intensity in dB(μ V/m).

Antenna Factor
Active Loop Antenna
EMC Test Systems, model 6502, serial number 2857, HL 0446

Frequency, MHz	Magnetic Antenna Factor, dB(S/m)	Electric Antenna Factor, dB(1/m)
0.009	-32.8	18.7
0.010	-33.8	17.7
0.020	-38.3	13.2
0.050	-41.1	10.4
0.075	-41.3	10.2
0.100	-41.6	9.9
0.150	-41.7	9.8
0.250	-41.6	9.9
0.500	-41.8	9.7
0.750	-41.9	9.6
1.000	-41.4	10.1
2.000	-41.5	10.0
3.000	-41.4	10.1
4.000	-41.4	10.1
5.000	-41.5	10.0
10.000	-41.9	9.6
15.000	-41.9	9.6
20.000	-42.2	9.3
25.000	-42.8	8.7
30.000	-44.0	7.5

Antenna factor in dB(S/m) is to be added to receiver meter reading in dB(μ V) to convert it into field intensity in dB(μ A/m).
Antenna factor in dB(1/m) is to be added to receiver meter reading in dB(μ V) to convert it into field intensity in dB(μ V/m).

Cable loss
Cable GORE, HL 0410

No.	Frequency, GHz	Cable loss, dB
1	0.5	0.16
2	1	0.28
3	2	0.38
4	4	0.55
5	6	0.85
6	8	0.90
7	10	1.07
8	12	1.11
9	14	1.29
10	16	1.41
11	18	1.73

Cable loss
Cable RG-214, HL 0813

No.	Frequency, MHz	Cable loss, dB
1	10	0.15
2	20	0.40
3	30	0.51
4	40	0.61
5	50	0.68
6	60	0.76
7	70	0.80
8	80	0.92
9	90	0.96
10	100	0.99
11	200	1.60
12	300	1.85
13	400	2.25
14	500	2.43
15	600	2.80
16	700	3.14
17	800	3.34
18	900	3.75
19	1000	4.05
20	1200	4.41
21	1400	4.81
22	1600	5.18
23	1800	5.58
24	2000	6.09
25	2500	7.27
26	2900	8.01

Cable loss
Cable Coaxial, GORE A2P01POL118, 2.3 m, model:GORE-3, HL 0589
+ Cable Coaxial, ANDREW PSWJ4, 6m, model: ANDREW-6, HL 1004

No.	Frequency, MHz	Cable loss, dB	Tolerance (Specification), dB	Measurement uncertainty, dB
1	30	0.33	≤ 6.5	±0.12
2	50	0.40		
3	100	0.57		
4	300	0.97		
5	500	1.25		
6	800	1.59		
7	1000	1.81		
8	1200	1.97		
9	1400	2.15		
10	1600	2.28		
11	1800	2.43		
12	2000	2.61		
13	2200	2.75		
14	2400	2.89		
15	2600	2.97		
16	2800	3.21	≤ 6.5	±0.12
17	3000	3.32		±0.17
18	3300	3.47		
19	3600	3.62		
20	3900	3.84		
21	4200	3.92		
22	4500	4.07		
23	4800	4.36		
24	5100	4.62		
25	5400	4.78		
26	5700	5.16		
27	6000	5.67		
28	6500	5.99		

Cable loss
RF cable 8 m, model RG-214-8m, HL 1552

No.	Frequency, MHz	Cable loss, dB	Measurement uncertainty, dB	Notes
1	0.010	0.01	±0.05	
2	0.1	0.01		
3	1	0.03		
4	10	0.12		
5	20	0.23		
6	30	0.30		
7	40	0.32		
8	50	0.34		
9	60	0.39		
10	70	0.43		
11	80	0.48		
12	90	0.50		
13	100	0.55		
14	200	0.78		
15	300	1.04		
16	400	1.16		
17	500	1.33		
18	600	1.51		
19	700	1.65		
20	800	1.77		
21	900	1.92		
22	1000	2.04		
23	1200	2.26		
24	1400	2.49		
25	1600	2.74		
26	1800	2.94		
27	2000	3.18		
28	2500	3.65		
29	2900	4.08		

Cable loss
Cable 18 GHz, 4 m, green, model: SPS-1803A-4000-NPS, S/N T4657, HL 1941

Frequency, GHz	Cable loss, dB
0.03	0.39
0.05	0.49
0.1	0.68
0.2	0.95
0.3	1.30
0.5	1.58
0.7	1.84
0.9	2.08
1.1	2.28
1.3	2.56
1.5	2.91
1.7	2.95
1.9	3.17
2.1	3.22
2.3	3.25
2.5	3.39
2.7	3.51
2.9	3.67
3.1	3.81
3.3	3.92
3.5	4.05
3.7	4.14
3.9	4.30
4.1	4.44
4.3	4.55
4.5	4.68
4.7	4.75
4.9	4.84
5.1	4.86
5.3	4.89
5.5	5.00
5.7	5.05
5.9	5.19
6.1	5.28
7.7	5.58

Frequency, GHz	Cable loss, dB
7.9	5.63
8.1	5.67
8.3	5.70
8.5	5.74
8.7	5.78
8.9	5.84
9.1	5.89
9.3	5.94
9.5	6.02
9.7	6.10
9.9	6.12
10.1	6.09
10.3	6.03
10.5	6.01
10.7	6.05
10.9	6.08
11.1	6.10
11.3	6.18
11.5	6.23
11.7	6.20
11.9	6.16
12.1	6.18
12.4	6.33
13.0	6.51
13.5	6.51
14.0	6.75
14.5	6.82
15.0	6.93
15.5	7.16
16.0	7.10
16.5	7.18
17.0	7.67
17.5	7.71
18.0	7.61

Cable loss
Cable 18 GHz, 6.5 m, blue, model: NPS-1803A-6500-NPS, S/N T4974, HL 1947

Frequency, GHz	Cable loss, dB
0.03	0.30
0.05	0.38
0.10	0.53
0.20	0.74
0.30	0.91
0.40	1.05
0.50	1.18
0.60	1.29
0.70	1.40
0.80	1.50
0.90	1.59
1.00	1.68
1.10	1.77
1.20	1.86
1.30	1.94
1.40	2.01
1.50	2.08
1.60	2.16
1.70	2.22
1.80	2.29
1.90	2.36
2.00	2.42
2.10	2.48
2.20	2.54
2.30	2.60
2.40	2.66
2.50	2.71
2.60	2.77
2.70	2.83
2.80	2.89
2.90	2.95
3.10	3.06
3.30	3.17
3.50	3.28
3.70	3.39
3.90	3.51
4.10	3.62
4.30	3.76
4.50	3.87
4.70	4.01
4.90	4.10
5.10	4.21
5.30	4.31
5.50	4.43
5.70	4.56
5.90	4.71

Frequency, GHz	Cable loss, dB
6.10	4.87
6.30	4.95
6.50	4.94
6.70	4.88
6.90	4.87
7.10	4.83
7.30	4.85
7.50	4.86
7.70	4.91
7.90	4.96
8.10	5.03
8.30	5.08
8.50	5.13
8.70	5.21
8.90	5.22
9.10	5.34
9.30	5.35
9.50	5.52
9.70	5.51
9.90	5.66
10.10	5.70
10.30	5.78
10.50	5.79
10.70	5.82
10.90	5.86
11.10	5.94
11.30	6.06
11.50	6.21
11.70	6.44
11.90	6.61
12.10	6.76
12.40	6.68
13.00	6.66
13.50	6.81
14.00	6.90
14.50	6.90
15.00	6.97
15.50	7.17
16.00	7.28
16.50	7.27
17.00	7.38
17.50	7.68
18.00	7.92

Cable loss
RF cable 8 m, model RG-214, HL 2009

No.	Frequency, MHz	Cable loss, dB	Tolerance (Specification), dB	Measurement uncertainty, dB
1	1	0.10	NA	±0.12
2	10	0.14		
3	30	0.25		
4	50	0.34		
5	100	0.53		
6	300	0.99		
7	500	1.31		
8	800	1.73		
9	1000	1.98		
10	1100	2.11		
11	1200	2.21		
12	1300	2.35		
13	1400	2.46		
14	1500	2.55		
15	1600	2.68		
16	1700	2.78		
17	1800	2.88		
18	1900	2.98		
19	2000	3.09		