FCC 47 CFR PART 22H and 24E

Product Type	:	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module
Applicant	:	Telit Communications S.p.A
Address		Viale Stazione di Prosecco, 5/B 34010 Trieste, Italy
Trade name	:	Telit
Model No.	:	UC864-G
FCC ID	:	RI7UC864G
IC ID	:	5131A-UC864G
Application Purpose	:	Class II Permissive Change
Test Specification	:	FCC 47 CFR PART 22H: Oct. 2008 FCC 47 CFR PART 24E: Oct. 2008 RSS-132 Issue 2: Sep. 2005 RSS-133 Issue 4: Feb. 2008 ANSI/TIA-603-2007
Issue Date	:	Feb. 24, 2010

Issue by

A Test Lab Techno Corp.
No. 140-1, Changan Street, Bade City,
Taoyuan Country 334, Taiwan R.O.C.
Tel：+86-3-2710188 / Fax：+86-3-2710190

Taiwan Accreditation Foundation accreditation number: 1330

Revision History

Rev.	Issue Date	Revisions	Revised By
00	Feb. 09, 2010	Initial Issue	
01	Feb. 10, 2010	Revised product type	Joyce Liao
02	Feb. 24, 2010	Revised applicant and retest RF output power	Joyce Liao

Test Report Verification

Issued Date: 2010/02/24

Product Type	:	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module
Applicant	:	Telit Communications S.p.A
Address	:	Viale Stazione di Prosecco, 5/B 34010 Trieste, Italy
Trade Name	:	Telit
Model No.	:	UC864-G
FCC ID	:	RI7UC864G
IC ID	:	5131A-UC864G
Application Purpose	:	Class II Permissive Change
EUT Rated Voltage	:	AC 100-240V, 50-60Hz, 0.1A
Test Voltage	:	120 Vac / 60 Hz
Applicable Standard	:	FCC 47 CFR PART 22H: Oct. 2008 FCC 47 CFR PART 24E: Oct. 2008 RSS-132 Issue 2: Sep. 2005 RSS-133 Issue 4: Feb. 2008 ANSI/TIA-603-2007
Test Result	:	Complied
Performed Lab.	:	A Test Lab Techno Corp. No. 140-1, Changan Street, Bade City Taoyuan Country 334, Taiwan R.O.C. Tel：+86-3-2710188 / Fax：+86-3-2710190 Taiwan Accreditation Foundation accreditation number: 1330 http://www.atl-lab.com.tw/e-index.htm

The above equipment has been tested by A Test Lab Techno Corp., and found compliance with the requirements set forth in the Electromagnetic Compatibility Directive 2004/108/EC and technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Approved By	:	Reviewed By	:	
(Manager)	(Miller Lee)	(Testing Engineer)		(John Cheng)

TABLE OF CONTENTS

1 General Information

1.1. EUT Description

Applicant		Telit Communications S.p.A			
Applicant Address		Viale Stazione di Prosecco, 5/B 34010 Trieste, Italy			
Manufacturer		Telit Communications S.p.A.			
Manufacturer Address		Via Stazione di Prosecco, 5/B 34010 Sgonico (TS) - Italy			
Product Type		GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module			
Trade Name		Telit			
Model Number		UC864-G			
FCC ID		RI7UC864G			
IC ID		5131A-UC864G			
Mode	GSM/GPRS/ EDGE	Band	UL Frequency (MHz)	DL Frequency (MHz)	Modulation
		850	824.2 ~ 848.8	869.2 ~ 893.8	GMSK/8PSK
		1900	1850.2 ~ 1909.8	1930.2 ~ 1989.8	GMSK/8PSK
	WCDMA/ HSDPA	Band	UL Frequency (MHz)	DL Frequency (MHz)	Modulation
		II	1852.4 ~ 1907.6	1932.4 ~ 1987.6	QPSK
		V	826.4 ~ 846.6	871.4 ~ 891.6	QPSK
Channel Control		Auto			
Type of Antenna		Dipole Type			
Peak Antenna Gain		GSM 850: 0.9 dBi (CHLow: -0.6 dBi, Middle: -0.6 dBi, High: -0.6 dBi) GSM 1900: 4.2 dBi (CHLow: 4.0 dBi, Middle: 4.1 dBi, High: 4.2 dBi) WCDMA Band II: 4.2 dBi (CHLow: 4.0 dBi, Middle: 4.1 dBi, High: 4.2 dBi) WCDMA Band V: 0.9 dBi (CHLow: -0.6 dBi, Middle: -0.6 dBi, High: -0.6 dBi)			
Hardware version		1.1.0(1H10)			
Software version		08.01.126-B024			
Max. RF Output power		GSM 850: 1.738 W / 32.40 dBm, EDGE 850: 0. 490 W / 26.90 dBm GSM 1900: 0.851 W / 29.30 dBm, EDGE 1900: 0.389 W / 25.90 dBm WCDMA Band II: 0.195 W / 22.90 dBm WCDMA Band V: 0.210 W / 23.22 dBm			
Max. ERP/EIRP		GSM 850: 0.946 W / 29.76 dBm, EDGE 850: 0.240 W / 23.81 dBm (ERP) GSM 1900: 1.910 W / 32.81 dBm, EDGE 1900: 0.920 W / 29.64 dBm (EIRP) WCDMA Band II: 0.486 W / 26.87 dBm (EIRP) WCDMA Band V: 0.108 W / 20.32 dBm (ERP)			
Emission Designator		GSM 850: 243KGXW, EDGE 850: 242KG7W GSM 1900: 251KGXW, EDGE 1900: 245KG7W WCDMA Band II: 4M16F9W WCDMA Band V: 4M16 F9W			

1.2. Mode of Operation

ATL has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Test Mode
Mode 1: GSM850 Link
Mode 2: GSM1900 Link
Mode 3: EDGE850 Link
Mode 4: EDGE1900 Link
Mode 5: WCDMA Band II Link
Mode 6: WCDMA Band V Link

Note: Regards to the frequency band operation: the lowest, middle and highest frequency of channel were selected to perform the test, then shown on this report.

Tested System Details

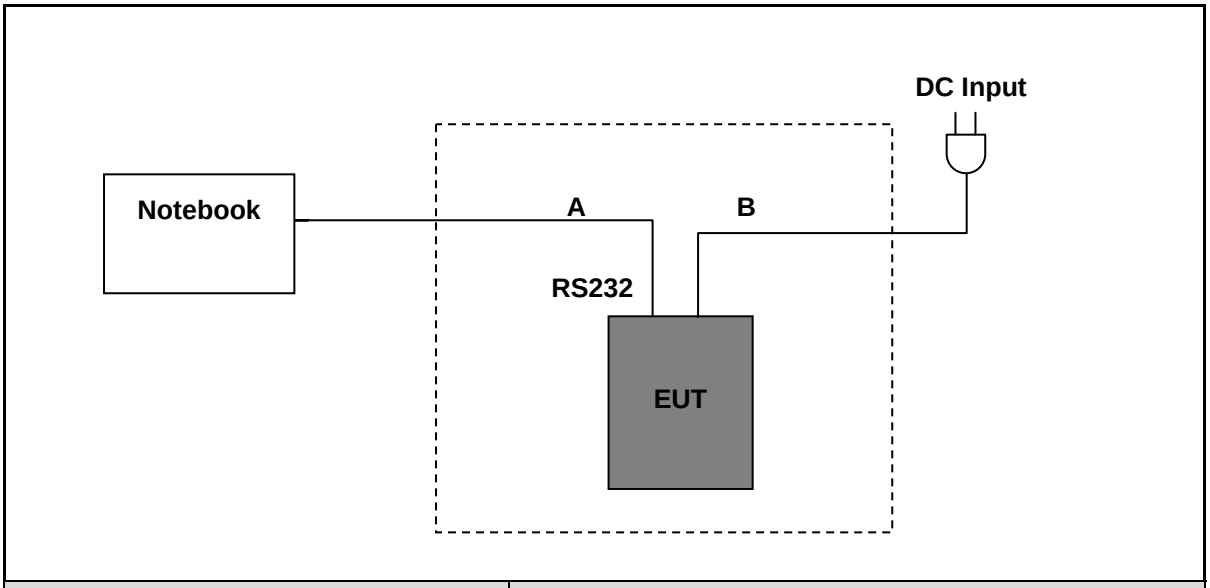
The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	Power Cord
1.	Universal Radio Communication Tester	R&S	CMU200	109369	N/A

1.3. EUT Exercise Software

1.	Setup the EUT and Base Station (CMU200) as shown on 3.3.
2.	Turn on the power of all equipment.

1.4. Configuration of Test System Details



Signal Cable Type		Signal Cable Description
A	RS232 Cable	Shielded, 10m
B	DC Power Cable	Non-Shielded, 1.8m

Devices Description					
Product		Manufacturer	Model No.	Serial No.	Power Cord
1.	DC Power Supply	GW	GPR-6030D	120281	Non-Shielded, 1.8m

1.5. Test Site Environment

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	25
Humidity (%RH)	25-75	50
Barometric pressure (mbar)	860-1060	950-1000

1.6. Summary of Test Result

Description	FCC Rule	IC Rule	Limit	Result
Conducted Output Power	§2.1046	N/A	N/A	Pass
Effective Radiated Power	§22.913(a)(2)	RSS-132(4.4) SRSP-503(5.1.3)	< 7 Watts for FCC (<6.3 Watts for IC)	Pass
Equivalent Isotropic Radiated Power	§24.232(c)	RSS-133 (6.4) SRSP-510(5.1.2)	< 2 Watts	Pass
Occupied Bandwidth	§2.1049 §22.917(a) §24.238(a)	N/A	N/A	Pass
Band Edge Measurement	§2.1051 §22.917(a) §24.238(a)	RSS-132 (4.5.1)RSS-133 (6.5.1)	< $43+10\log_{10}$(P[Watts])	Pass
Conducted Emission	§2.1051 §22.917(a) §24.238(a)	RSS-132 (4.5.1) RSS-133 (6.5.1)	< $43+10\log_{10}$(P[Watts])	Pass
Field Strength of Spurious Radiation	§2.1053 §22.917(a) §24.238(a)	RSS-132 (4.5.1) RSS-133 (6.5.1)	< $43+10\log_{10}$(P[Watts])	Pass
Frequency Stability for Temperature & Voltage	§2.1055 §22.355 §24.235	RSS-132(4.3) RSS-133(6.3)	< 2.5 ppm	Pass
AC Power Conducted Emissions	§15.207	RSS-132 (4.5.1) RSS-133 (6.5.1)	See section 9.1	Pass

2 RF Output Power Test

2.1. Limit

N/A

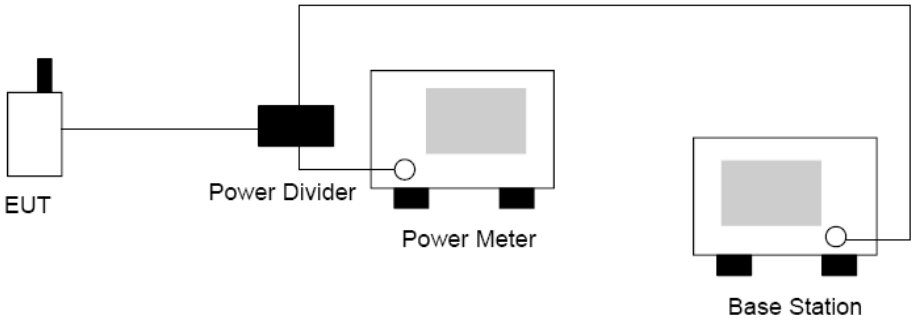
2.2. Test Instruments

Describe	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Universal Radio Communication Tester	ROHDE & SCHWARZ	CMU200	109369	07/29/2009	(2)
WIDE BAND SENSOR	ROHDE & SCHWARZ	NRP-Z81	100017	05/17/2009	(1)
Test Site	ATL	TE02	TE02	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

2.3. Test Setup



2.4. Test Procedure

The measurement is made according to ANSI/TIA-603-C-2004 as follows:

1. The transmitter output was connected to power meter and base station through power divider.
2. Set base station for EUT at GSM 850: PCL=5 and PCS 1900: PCL=0.
3. Set base station for EUT at WCDMA Band V and WCDMA Band II, power level was set to maximum.
4. Select lowest, middle, and highest channels for each band.

2.5. Uncertainty

The measurement uncertainty is defined as for RF output power measurement is 1.2 dB.

2.6. Test Result

Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	RF Output Power		
Date of Test	02/23/2010	Test Site	TE02

Bands	Data Rate	Frequency (MHz)	Conducted Power		Worst Case
			(dBm)	(W)	
GSM 850	-----	824.2	32.00	1.585	☐
		836.4	32.30	1.698	☐
		848.8	32.40	1.738	■
GPRS 850	4Down1Up	824.2	32.00	1.585	☐
		836.4	32.20	1.660	☐
		848.8	32.30	1.698	☐
	3Down2Up	824.2	31.10	1.288	☐
		836.4	31.12	1.294	☐
		848.8	31.03	1.268	☐
EDGE 850	4Down1Up	824.2	26.80	0.479	☐
		836.4	26.70	0.468	☐
		848.8	26.90	0.490	☐
	3Down2Up	824.2	26.60	0.457	☐
		836.4	26.60	0.457	☐
		848.8	26.80	0.479	☐

Bands	Data Rate	Frequency (MHz)	Conducted Power		Result
			(dBm)	(W)	
GSM 1900	-----	1850.20	28.90	0.776	☐
		1880.00	29.20	0.832	☐
		1909.80	29.30	0.851	■
GPRS 1900	4Down1Up	1850.20	28.90	0.776	☐
		1880.00	29.00	0.794	☐
		1909.80	29.20	0.832	☐
	3Down2Up	1850.20	28.78	0.755	☐
		1880.00	28.96	0.787	☐
		1909.80	28.78	0.755	☐
EDGE 1900	4Down1Up	1850.20	25.60	0.363	☐
		1880.00	25.70	0.372	☐
		1909.80	25.90	0.389	☐
	3Down2Up	1850.20	25.50	0.355	☐
		1880.00	25.60	0.363	☐
		1909.80	25.80	0.380	☐

Note: The testing result was used peak detector.

Bands	Sub-test	Frequency (MHz)	Conducted Power		Result
			(dBm)	(W)	
WCDMA Band II	-----	1852.4	22.90	0.195	----
		1880.0	22.65	0.184	----
		1907.6	22.83	0.192	----
HSDPA Band II	1	1852.4	22.87	0.194	----
		1880.0	22.62	0.183	----
		1907.6	22.78	0.190	----
	2	1852.4	22.86	0.193	----
		1880.0	22.62	0.183	----
		1907.6	22.73	0.187	----
	3	1852.4	22.43	0.175	----
		1880.0	22.26	0.168	----
		1907.6	22.43	0.175	----
	4	1852.4	22.46	0.176	----
		1880.0	22.20	0.166	----
		1907.6	22.40	0.174	----

Bands	Sub-test	Frequency (MHz)	Conducted Power		Result
			(dBm)	(W)	
WCDMA Band V	-----	826.4	23.22	0.210	----
		836.4	23.13	0.206	----
		846.4	23.11	0.205	----
HSDPA Band V	1	826.4	23.15	0.207	----
		836.4	23.11	0.205	----
		846.4	23.12	0.205	----
	2	826.4	23.02	0.200	----
		836.4	22.92	0.196	----
		846.4	23.05	0.202	----
	3	826.4	22.54	0.179	----
		836.4	22.52	0.179	----
		846.4	22.62	0.183	----
	4	826.4	22.54	0.179	----
		836.4	22.49	0.177	----
		846.4	22.62	0.183	----

Note: The testing result was used peak detector.

3 Effective Radiated Power / Equivalent Isotropic Radiated Power Test

3.1. Limit

For FCC Part 22.913(a)(2): The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

For FCC Part 24.232(b): The EIRP of mobile transmitters and auxiliary test transmitters must not exceed 2 Watts.

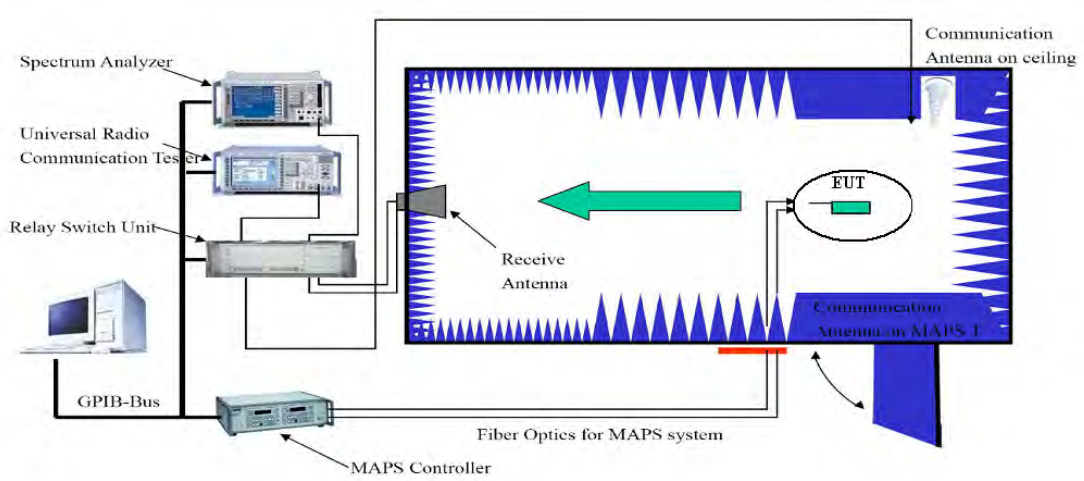
3.2. Test Instruments

Describe	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Universal Radio Communication Tester	ROHDE & SCHWARZ	CMU200	109369	07/29/2009	(2)
Spectrum Analyzer	Agilent	E4445A	MY45300744	12/22/2008	(2)
Loop Dipole	ETS-Lindgren	3127-1880	00064239	02/05/2009	(2)
Loop Dipole	ETS-Lindgren	3127-836	00064352	02/19/2009	(2)
Sleeve Dipole	ETS-Lindgren	3126-1845	00083335	03/18/2009	(2)
Sleeve Dipole	ETS-Lindgren	3126-880	00052705	11/05/2009	(2)
Circularly Polarized Communication Antennas	EMCO	3102	00051714	NCR	-----
Antenna Positioner Controller	EMCO	2090	00052447	NCR	-----
MAPS Positioner	EMCO	2010/2015	NA	NCR	-----
Pattern Measurement Software	ETS-Lindgren	EMQuest™ EMQ-100	NA	NCR	-----
Desktop Computer with Windows XP	DELL	Dell Computers	NA	NCR	-----
Anechoic Chamber	ETS-Lindgren	AMS 8500	102165	NCR	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

3.3. Test Setup



3.4. Test Procedure

The phone was tested in an anechoic chamber with a 3-axis position system that permits taking complete spherical scans of the EUT's 3-axis radiation patterns. For all tests, the phone was supported in a free space type environment, vertically oriented in the chamber. Tests were done for GSM 850 three frequencies (824.2, 836.6 and 848.8 MHz) and GSM 1900 three frequencies (1850.2, 1880.00, and 1909.80 MHz).

GSM measurements were made with the phone placed in a call using the CMU200 mobile station test set. The phone was weakly coupled to the test set and configured to transmit in full data rate mode.

The radiated power was measured using ETS-LINDGREN OTA Chamber in "Peak" mode. From these measurements, the software calculates the angle at which maximum radiated power occurs for each case, and the radiated power at this angle was extracted from the data.

Each individual data point in a radiated power or sensitivity measurement is referred to as the effective isotropic radiated power or effective isotropic sensitivity. That is, the desired information is how the measured quantity relates to the same quantity from an isotropic radiator. Thus, the reference measurement must relate the power received or transmitted at the EUT test equipment (spectrum analyzer or communication tester) back to the power transmitted or received at a theoretical isotropic radiator. The total path loss then, is just the difference in dB between the power transmitted or received at the isotropic radiator and that seen at the test equipment (see follow Figure 1).

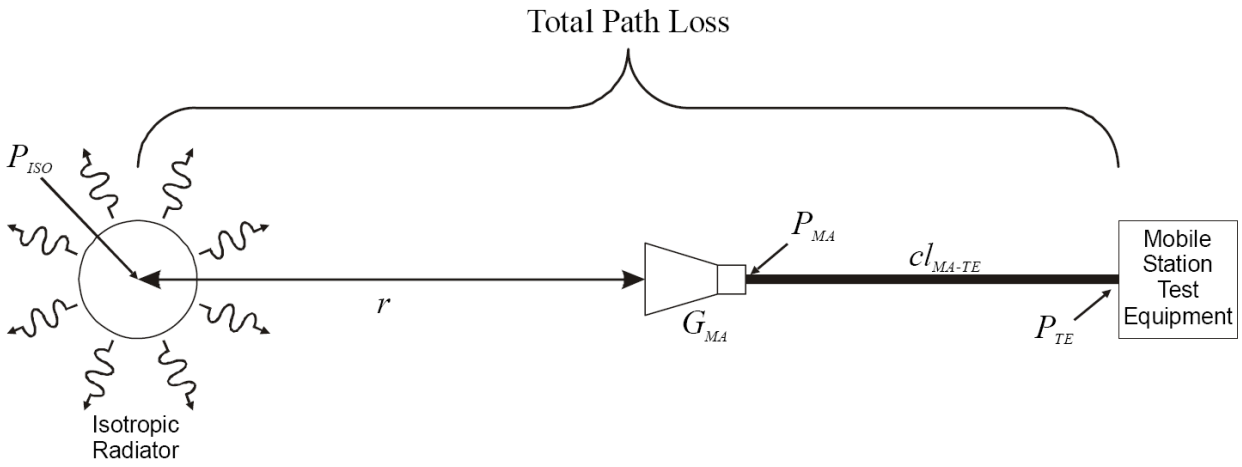


Figure 1. THEORETICAL CASE FOR DETERMINING PATH LOSS

In equation form, this becomes:

Equation 1

$$PL = P_{ISO} - P_{TE},$$

where PL is the total path loss, P_{ISO} is the power radiated by the theoretical isotropic radiator, and P_{TE} is the power received at the test equipment port. As can be seen in Figure 1, this quantity includes the range path loss due to the range length r, the gain of the measurement antenna, and any loss terms associated with the cabling, connections, amplifiers, splitters, etc. between the measurement antenna and the test equipment port.

Figure 2 shows a typical real world configuration for measuring the path loss. In this case, a reference antenna with known gain is used in place of the theoretical isotropic source. The path loss may then be determined from the power into the reference antenna by adding the gain of the reference antenna. That is:

Equation 2

$$P_{ISO} = P_{RA} + G_{RA},$$

where P_{RA} is the power radiated by reference antenna, and G_{RA} is the gain of the reference antenna, so that:

Equation 3

$$PL = P_{RA} + G_{RA} - P_{TE},$$

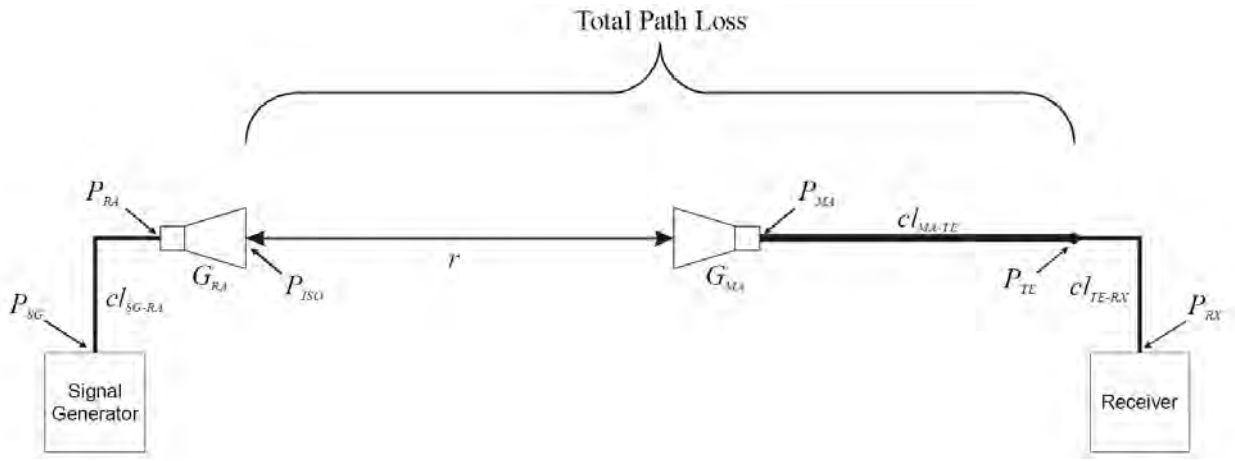


Figure 2. TYPICAL CONFIGURATION FOR MEASURING PATH LOSS

In order to determine P_{RA}, it is necessary to perform a cable reference measurement to remove the effects of the cable loss between signal generator and reference antenna, and between the test equipment port and the receiver. This establishes a reference point at the input to the reference antenna. Figure 3 illustrates the cable reference measurement configuration. Assuming the power level at the signal generator is fixed, it is easy to show that the difference between P_{RA} and P_{TE} in Figure 2 is given by:

Equation 4

$$P_{RA} - P_{TE} = P_{RX}' - P_{RX},$$

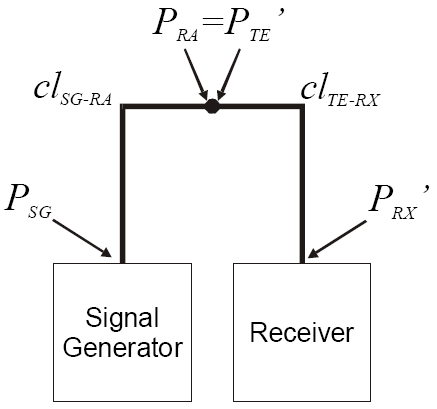


Figure 3. CABLE REFERENCE CALIBRATION CONFIGURATION

Where $P_{RX'}$ is the power measured at the receiver during the cable reference test, and P_{RX} is the power measured at the receiver during the range path loss measurement in Figure 2. Thus, the path loss is then just given by:

Equation 5

$$PL = G_{RA} + P_{RX}\text{'} - P_{RX'}$$

$$EIRP = P_t + P_L$$

P_t = Often referred to as antenna output power

3.5. Uncertainty

The measurement uncertainty is defined as for Radiated Power measurement list below:

Band	Uncertainty
Cell	1.08 dB
PCS	1.42 dB
GPRS	1.44 dB

3.6. Test Result

Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	ERP/EIRP		
Date of Test	02/04/2010, 02/23/2010	Test Site	TC03

Bands	Frequency (MHz)	Read Level (dBm)	Correction factor (dBm)	ERP		Result
				(dBm)	(W)	
GSM 850	824.2	79.26	-49.50	29.76	0.946	Pass
	836.4	79.27	-49.70	29.57	0.906	Pass
	848.8	79.23	-49.70	29.53	0.897	Pass

Bands	Frequency (MHz)	Read Level (dBm)	Correction factor (dBm)	ERP		Result
				(dBm)	(W)	
EDGE 850 4Doen1Up	824.2	73.22	-49.50	23.72	0.236	Pass
	836.4	73.44	-49.70	23.74	0.237	Pass
	848.8	73.51	-49.70	23.81	0.240	Pass

Bands	Frequency (MHz)	Read Level (dBm)	Correction factor (dBm)	EIRP		Result
				(dBm)	(W)	
GSM 1900	1850.20	88.05	-55.40	32.65	1.841	Pass
	1880.00	88.41	-55.60	32.81	1.910	Pass
	1909.80	88.39	-55.70	32.69	1.858	Pass

Bands	Frequency (MHz)	Read Level (dBm)	Correction factor (dBm)	EIRP		Result
				(dBm)	(W)	
EDGE 1900 4Doen1Up	1850.20	84.66	-55.40	29.26	0.843	Pass
	1880.00	85.11	-55.60	29.51	0.893	Pass
	1909.80	85.34	-55.70	29.64	0.920	Pass

Bands	Frequency (MHz)	Read Level (dBm)	Correction factor (dBm)	EIRP		Result
				(dBm)	(W)	
WCDMA Band II	1852.4	82.21	-55.40	26.81	0.480	Pass
	1880.0	82.18	-55.60	26.58	0.455	Pass
	1907.6	82.57	-55.70	26.87	0.486	Pass

Bands	Frequency (MHz)	Read Level (dBm)	Correction factor (dBm)	ERP		Result
				(dBm)	(W)	
WCDMA Band V	826.4	69.82	-49.50	20.32	0.108	Pass
	836.4	69.86	-49.70	20.16	0.104	Pass
	846.4	69.79	-49.70	20.09	0.102	Pass

Note: 1. ERP/EIRP = Read Level + Correction factor.

2. For WCDMA signals, a peak detector is used with RBW = VBW = 5MHz.

3. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW= 1 MHz.

4 Occupied Bandwidth Test

4.1. Limit

The Occupied Bandwidth Limit: N/A.

The Band Edge Limit:

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10log(P) dB.

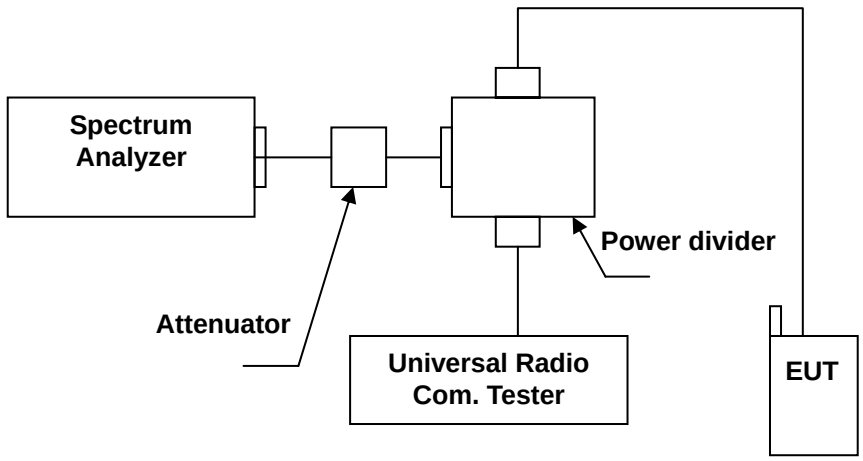
4.2. Test Instruments

Describe	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY46181986	05/14/2009	(2)
Universal Radio Communication Tester	ROHDE & SCHWARZ	CMU200	109369	07/29/2009	(2)
Attenuator	RADIALL	R41572000	0603033073	N.C.R.	-----
Power divider	Agilent	87302C	3239A00760	N.C.R.	-----
Test Site	ATL	TE02	TE02	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

4.3. Setup



4.4. Test Procedure

The measurement is made according to FCC rules part 22 and 24:

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The occupied bandwidth of middle channel for the highest and lowest RF powers was measured.
3. The band edge of low and high channels for the highest RF powers within the transmitting frequency band were measured. Setting RBW as roughly BW/100.
4. The band edge setting:
   a. RB=3 kHz; VB=3 kHz for GSM 850 and PCS 1900.
   b. RB=51 kHz; VB=160 kHz for WCDMA Band V and WCDMA Band II.

4.5. Uncertainty

The measurement uncertainty is defined as ± 10Hz

4.6. Test Result

99% Occupied Bandwidth

Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: GSM850 Link		
Date of Test	01/29/2010	Test Site	TE02

Channel No.	Frequency (MHz)	99% Bandwidth (kHz)	Note
128	824.2	243.9632	RBW:3KHz , VBW:10KHz
190	836.4	239.5402	RBW:3KHz , VBW:10KHz
251	848.8	241.4371	RBW:3KHz , VBW:10KHz

Figure Channel 128

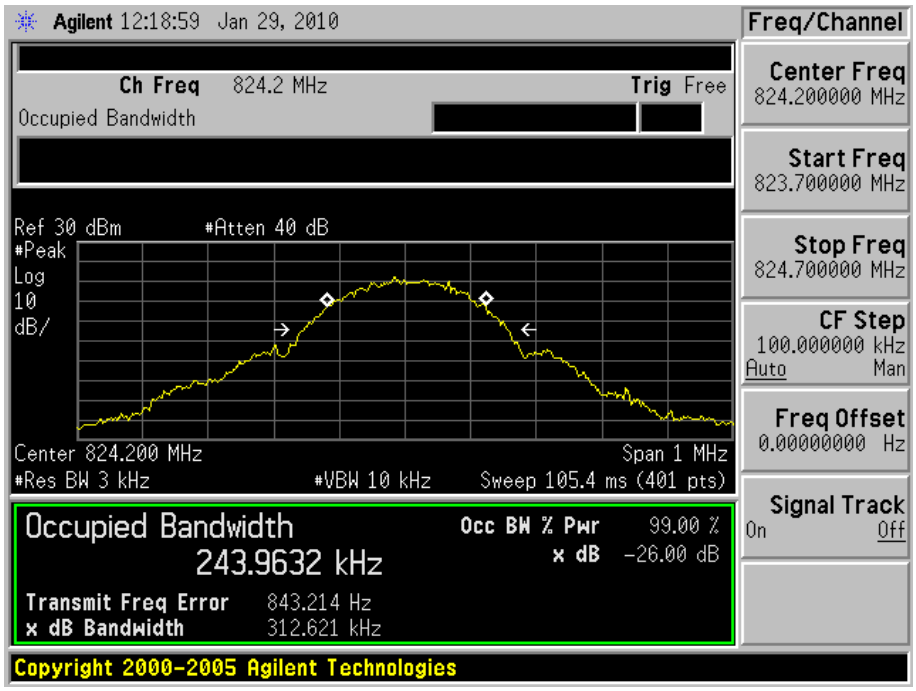


Figure Channel 190

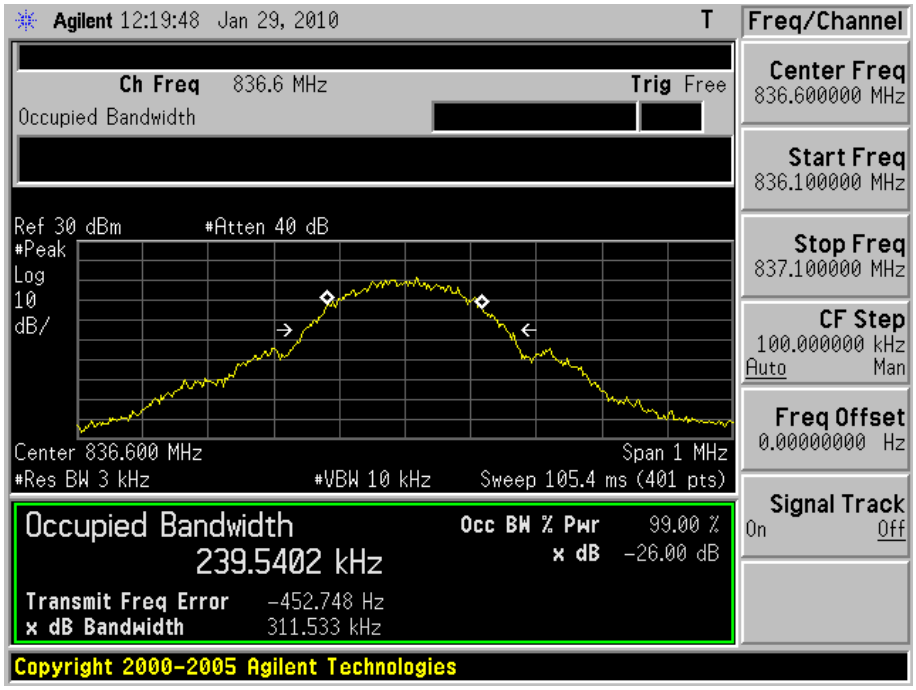
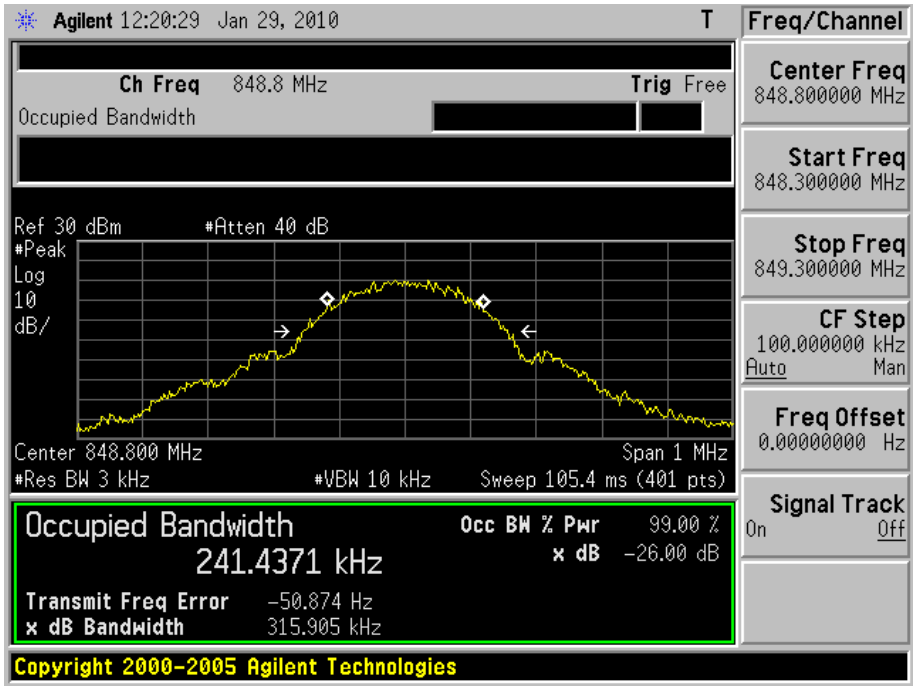


Figure Channel 251



Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 2: GSM1900 Link		
Date of Test	01/29/2010	Test Site	TE02

Channel No.	Frequency (MHz)	99% Bandwidth (kHz)	Note
512	1850.20	251.2015	RBW:3KHz , VBW:10KHz
661	1880.00	244.7015	RBW:3KHz , VBW:10KHz
810	1909.80	240.8456	RBW:3KHz , VBW:10KHz

Figure Channel 512

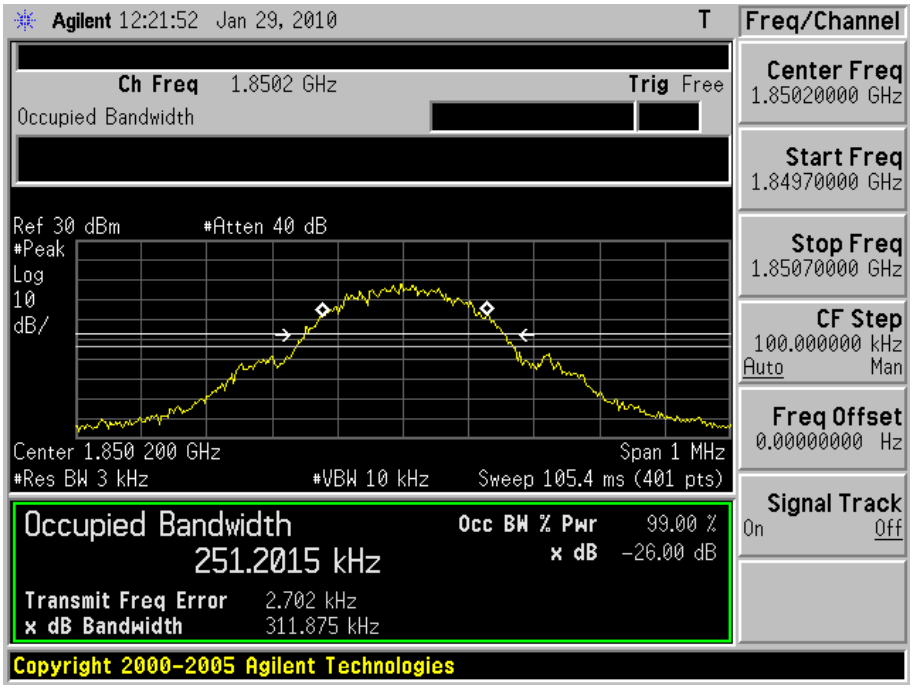


Figure Channel 661

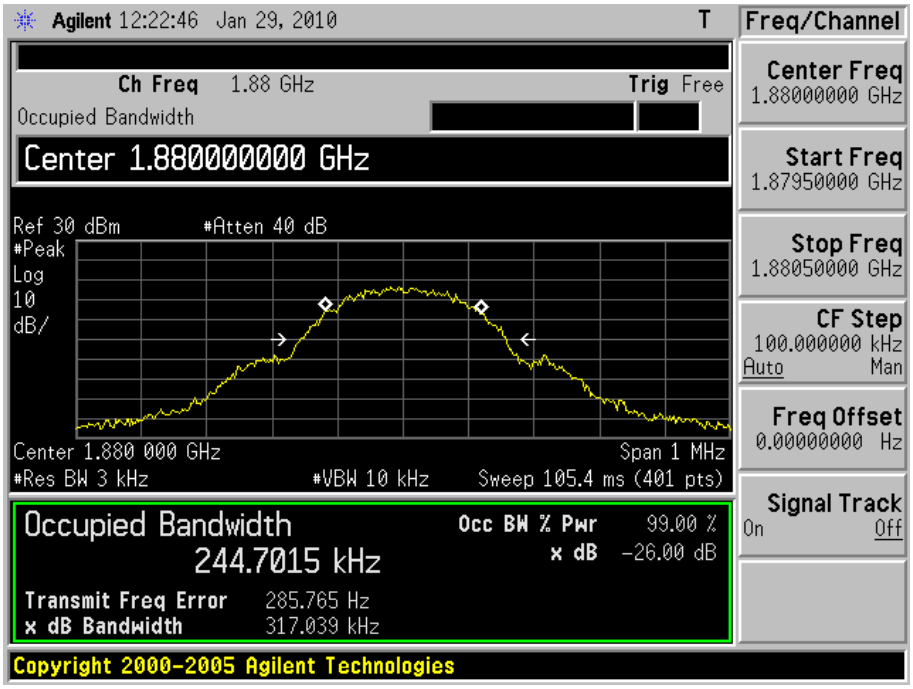
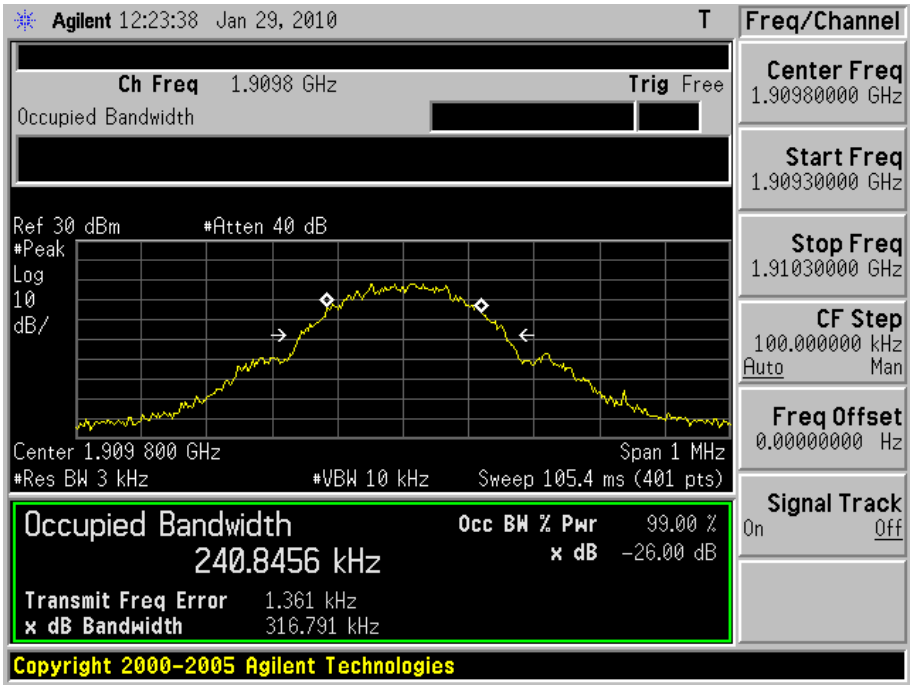


Figure Channel 810



Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 3: EDGE850 Link		
Date of Test	01/29/2010	Test Site	TE02

Channel No.	Frequency (MHz)	99% Bandwidth (kHz)	Note
128	824.2	241.1080	RBW:3KHz , VBW:10KHz
190	836.4	242.0223	RBW:3KHz , VBW:10KHz
251	848.8	241.3632	RBW:3KHz , VBW:10KHz

Figure Channel 128

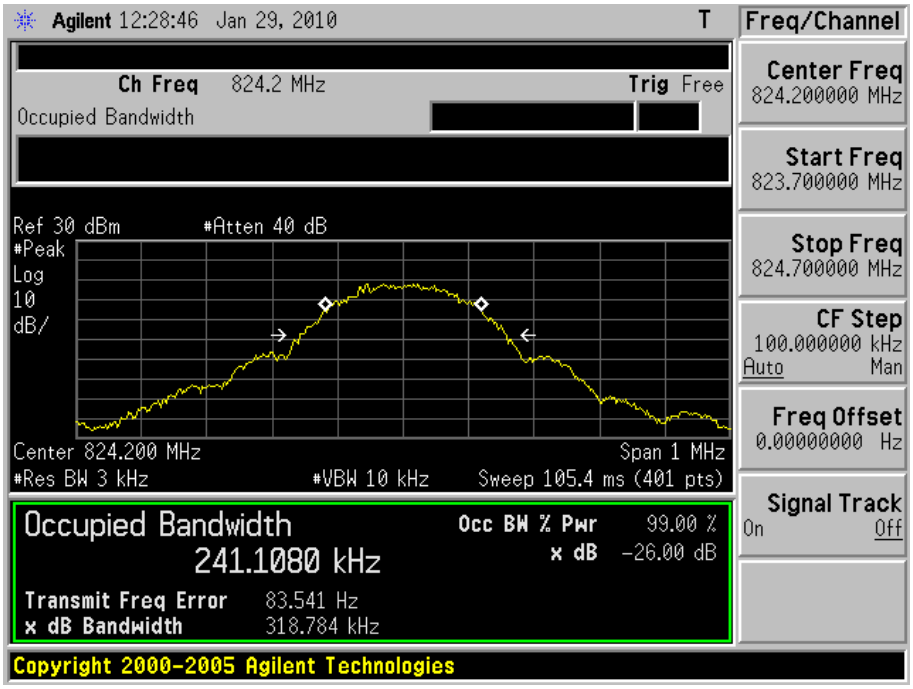


Figure Channel 190

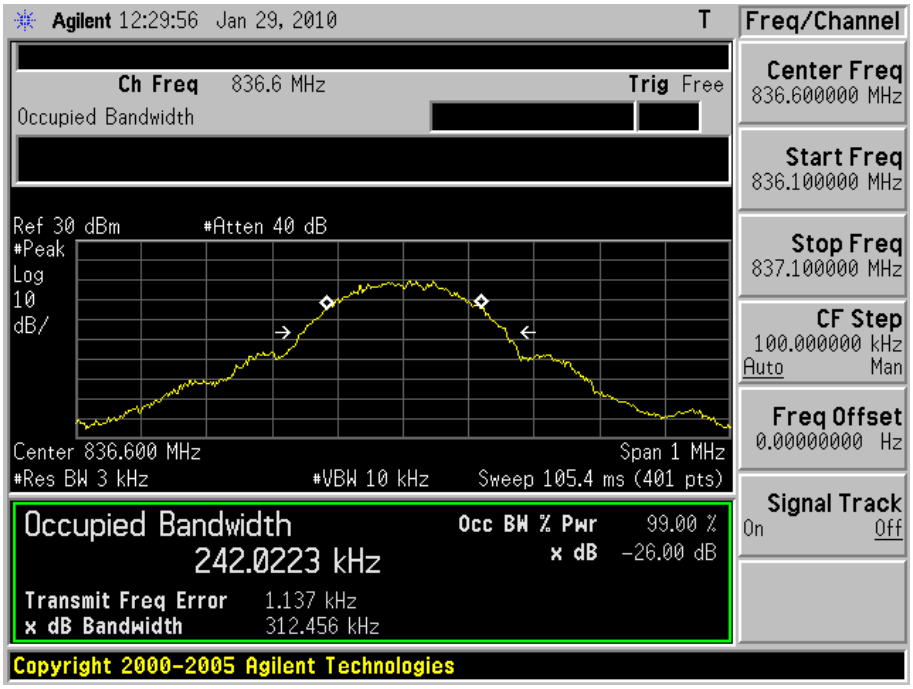
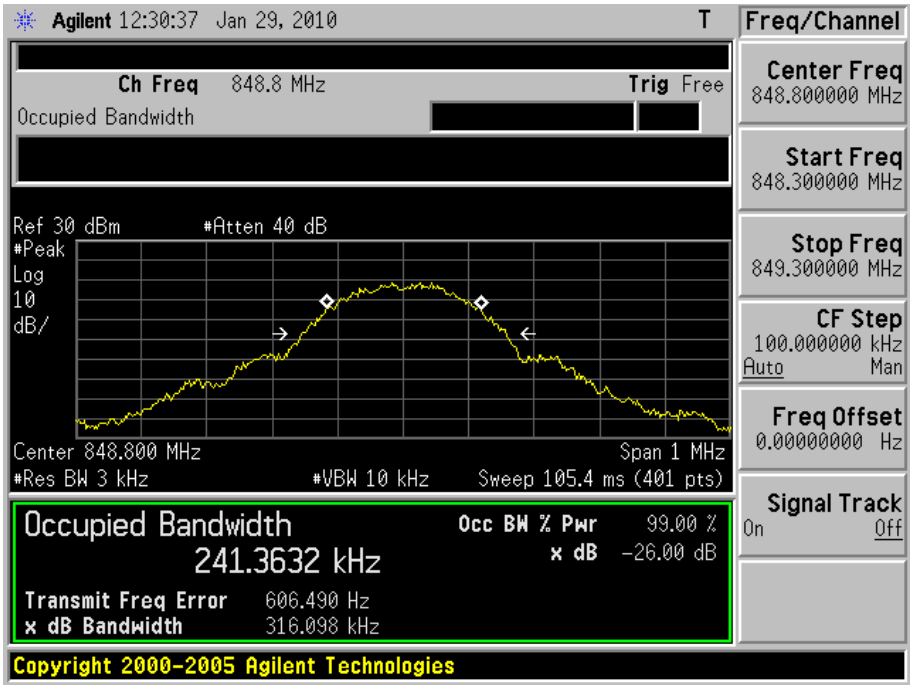


Figure Channel 251



Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 4: EDGE1900 Link		
Date of Test	01/29/2010	Test Site	TE02

Channel No.	Frequency (MHz)	99% Bandwidth (kHz)	Note
512	1850.20	245.8260	RBW:3KHz , VBW:10KHz
661	1880.00	241.9837	RBW:3KHz , VBW:10KHz
810	1909.80	244.8682	RBW:3KHz , VBW:10KHz

Figure Channel 512

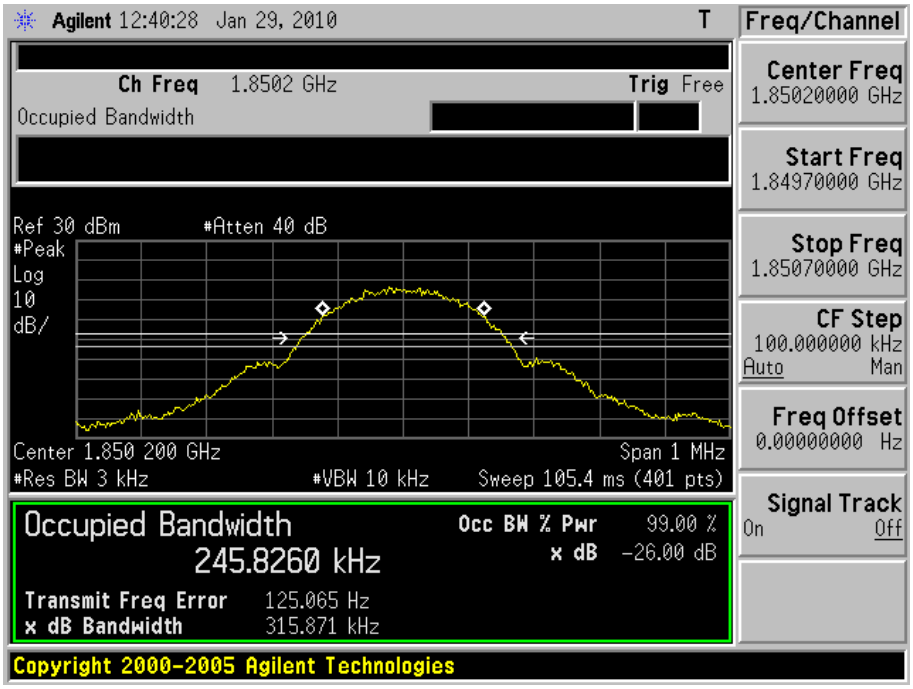


Figure Channel 661

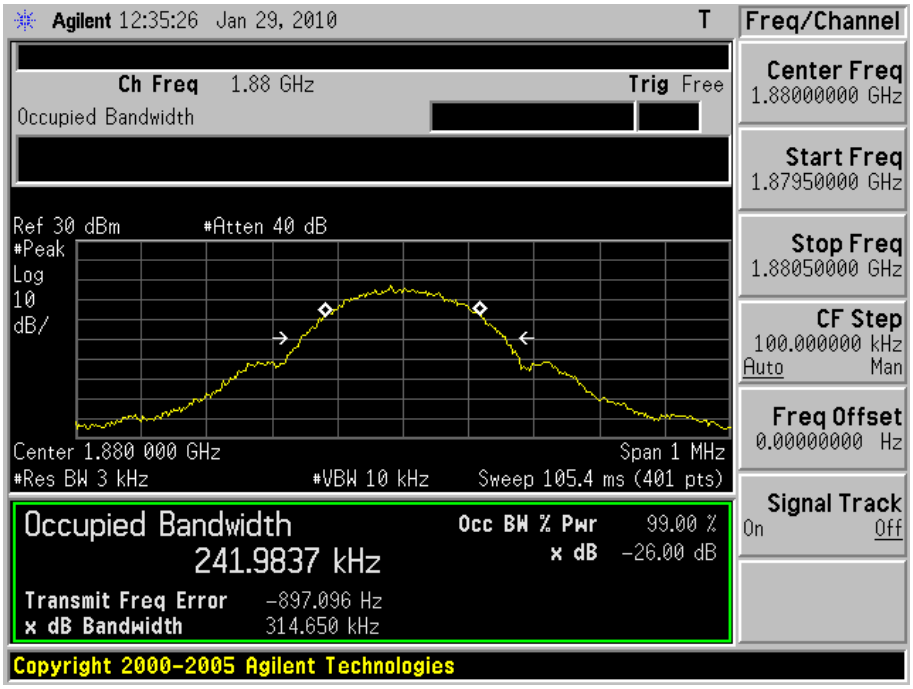
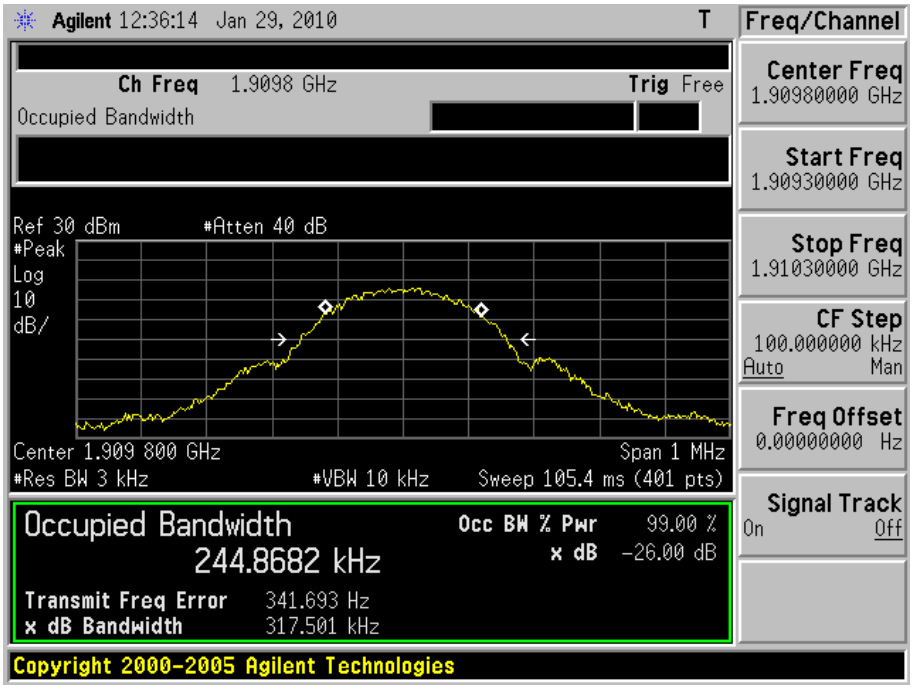


Figure Channel 810



Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 5: WCDMA Band II Link		
Date of Test	01/29/2010	Test Site	TE02

Channel No.	Frequency (MHz)	99% Bandwidth (MHz)	Note
9262	1852.4	4.1641	RBW:51KHz , VBW:160KHz
9400	1880.0	4.1665	RBW:51KHz , VBW:160KHz
9538	1907.6	4.1679	RBW:51KHz , VBW:160KHz

Figure Channel 9262

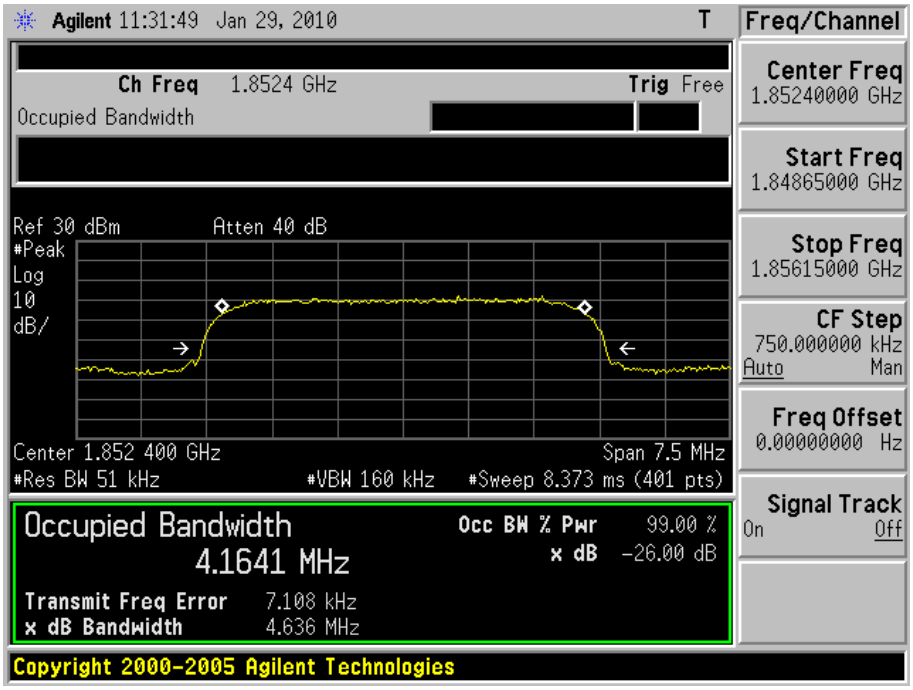


Figure Channel 9400

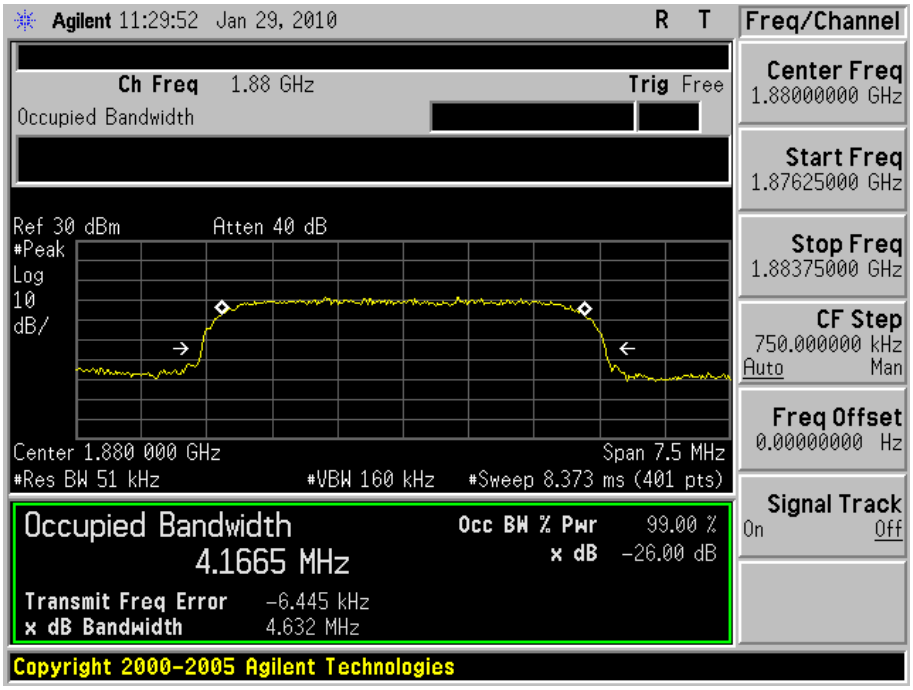
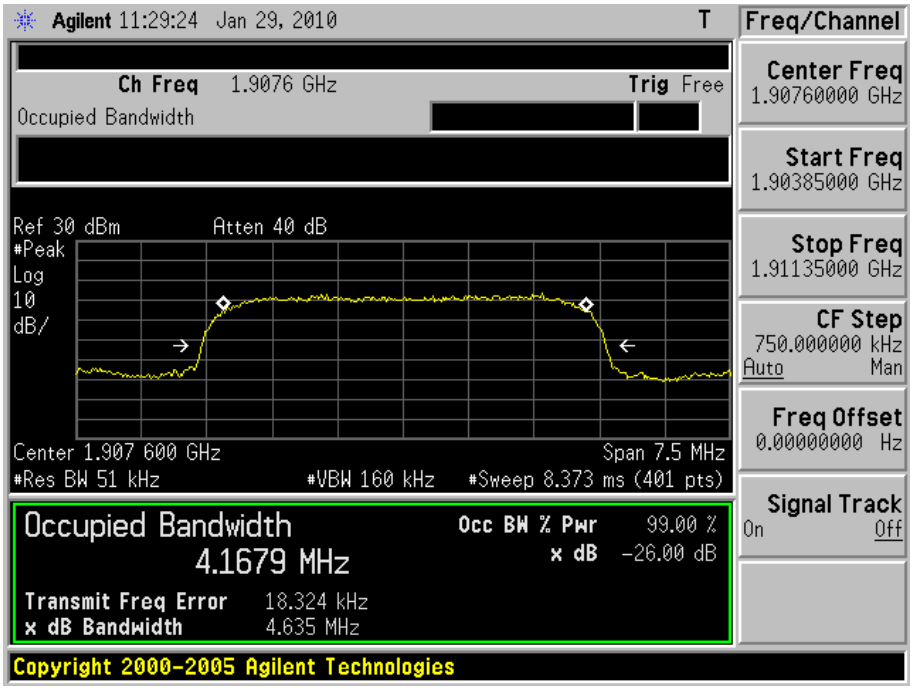


Figure Channel 9538



Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 6: WCDMA Band V Link		
Date of Test	01/29/2010	Test Site	TE02

Channel No.	Frequency (MHz)	99% Bandwidth (MHz)	Note
4132	826.4	4.1443	RBW:51KHz , VBW:160KHz
4182	836.4	4.1642	RBW:51KHz , VBW:160KHz
4233	846.4	4.1467	RBW:51KHz , VBW:160KHz

Figure Channel 4132

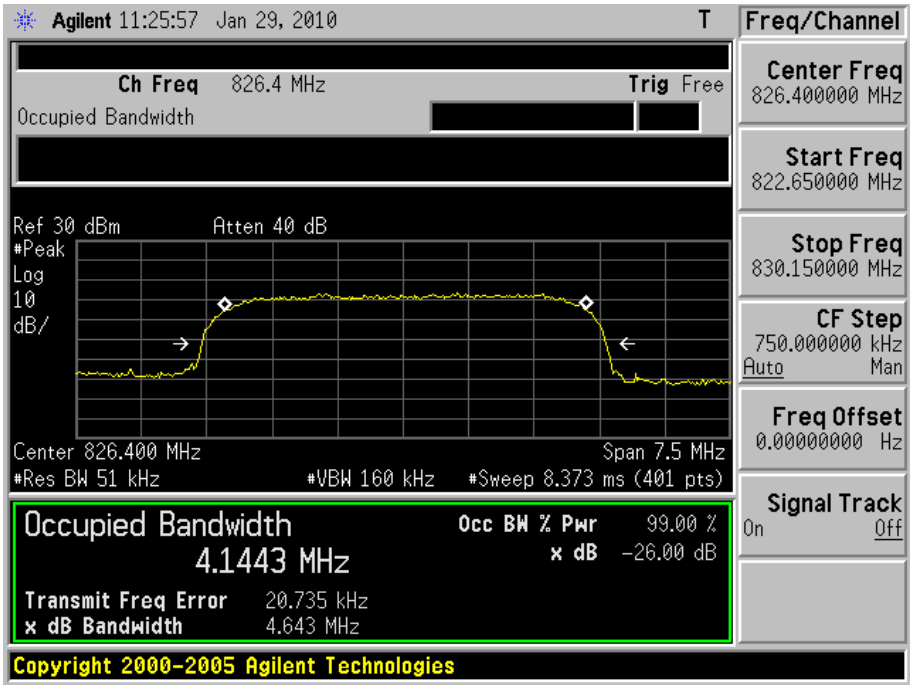


Figure Channel 4182

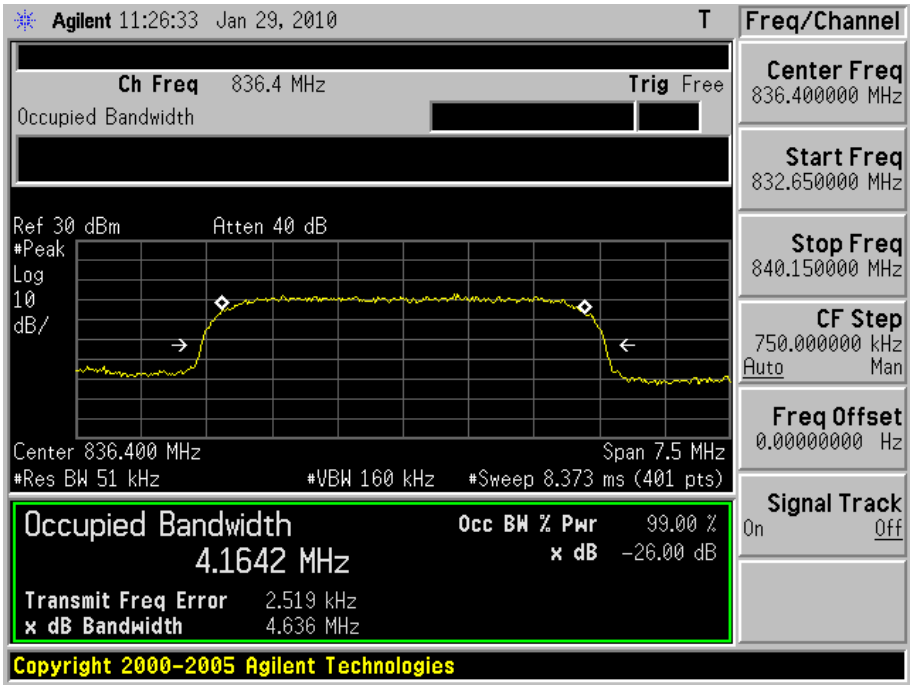
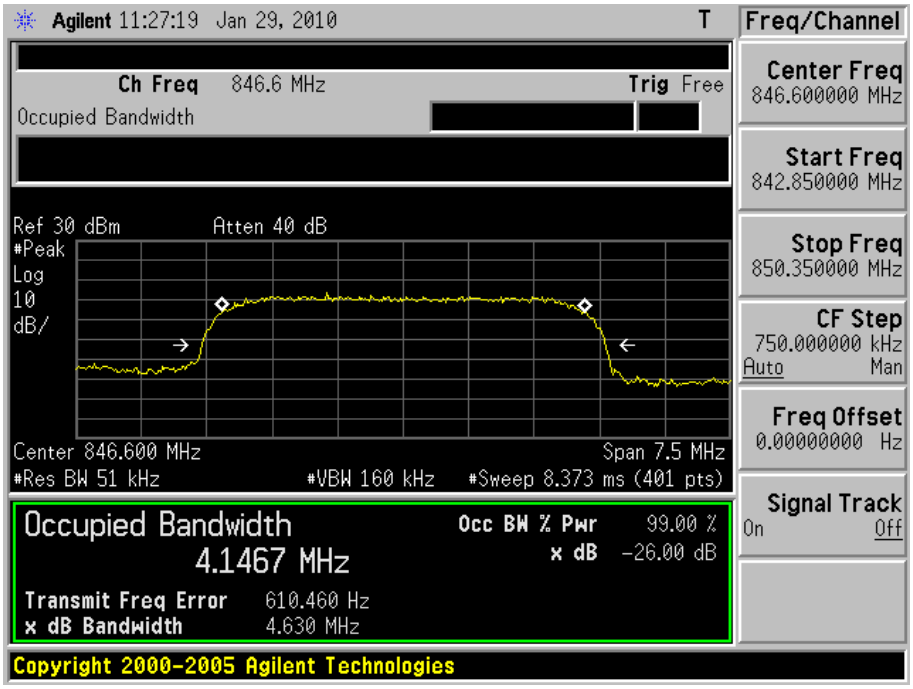


Figure Channel 4233

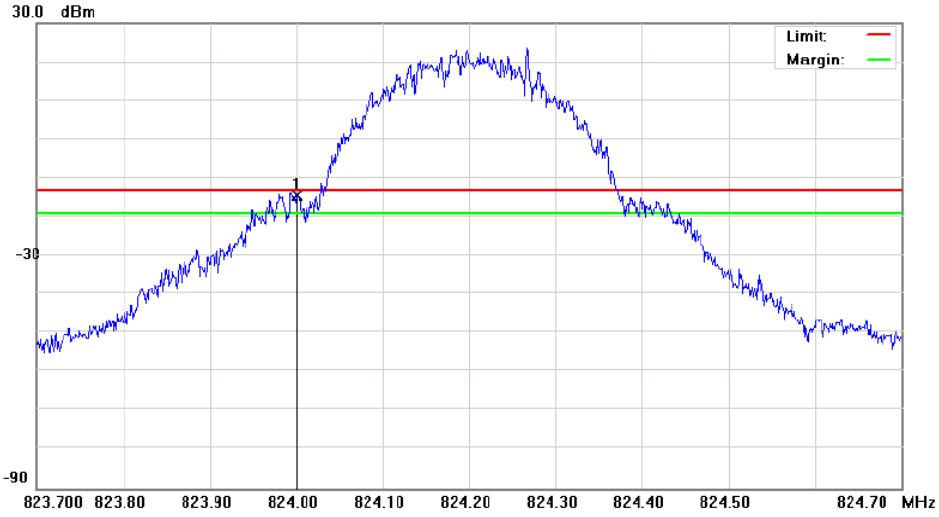


Band Edge

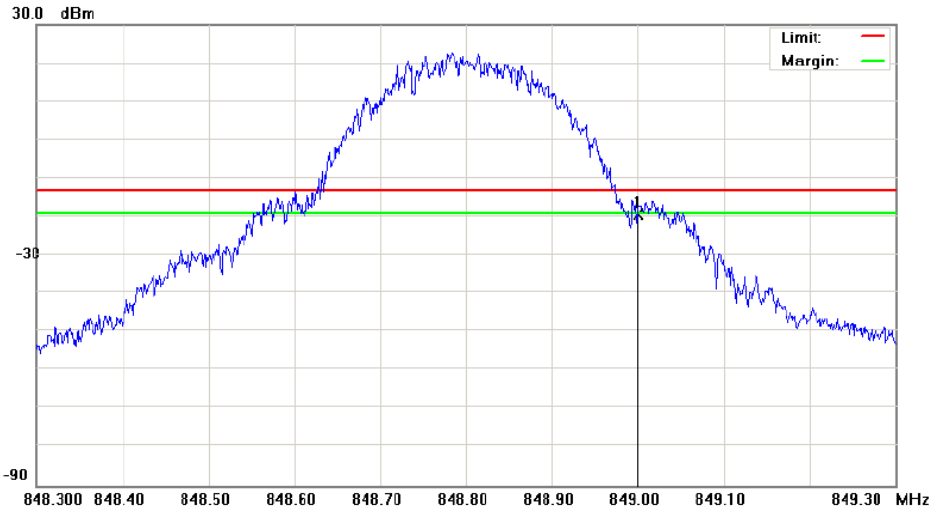
Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Band Edge		
Test Mode	Mode 1: GSM850 Link		
Date of Test	01/29/2010	Test Site	TE02

Band	Channel	Frequency (MHz)	Bandwidth (dBm)	Limit (dBm)	Result
Lower	128	824.0000	-14.55	-13	Pass
Higher	251	849.0000	-19.41	-13	Pass

Lower Band



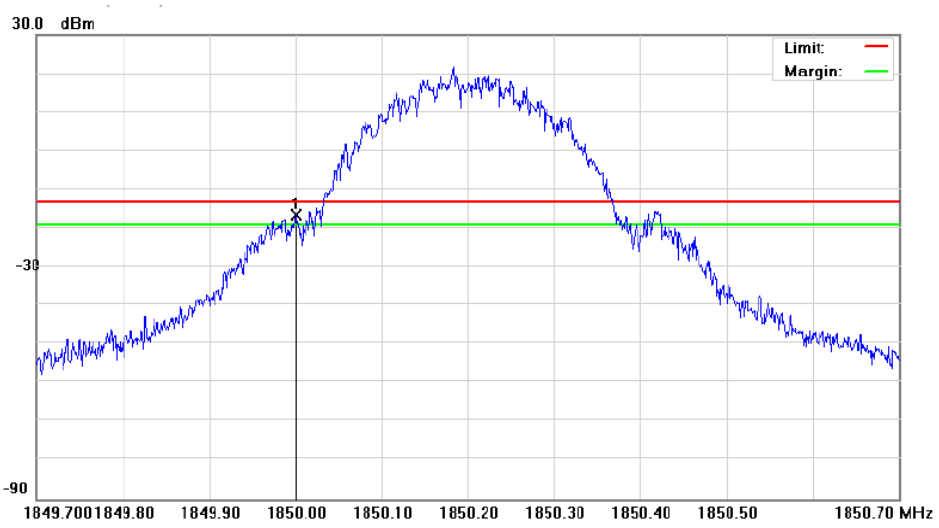
Higher Band



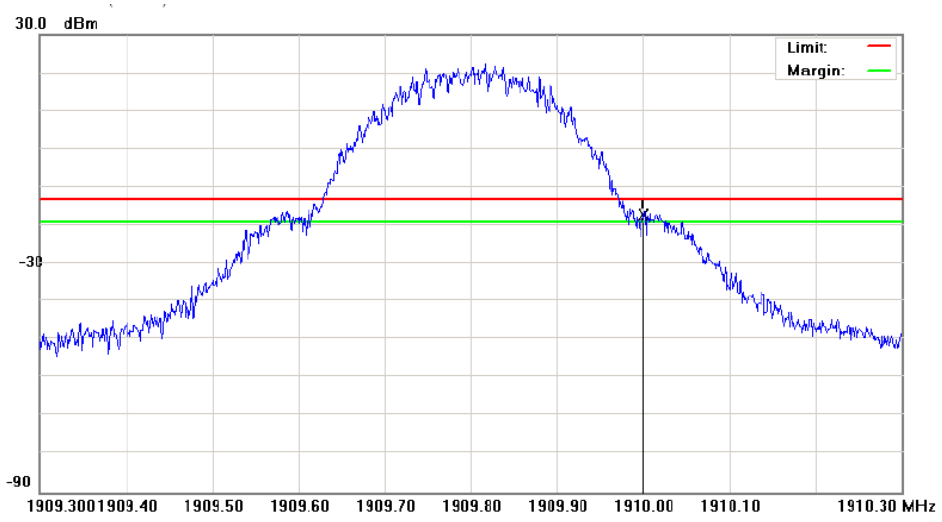
Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Band Edge		
Test Mode	Mode 2: GSM1900 Link		
Date of Test	01/29/2010	Test Site	TE02

Band	Channel	Frequency (MHz)	Bandwidth (dBm)	Limit (dBm)	Result
Lower	512	1850.000	-16.76	-13	Pass
Higher	810	1910.000	-17.20	-13	Pass

Lower Band



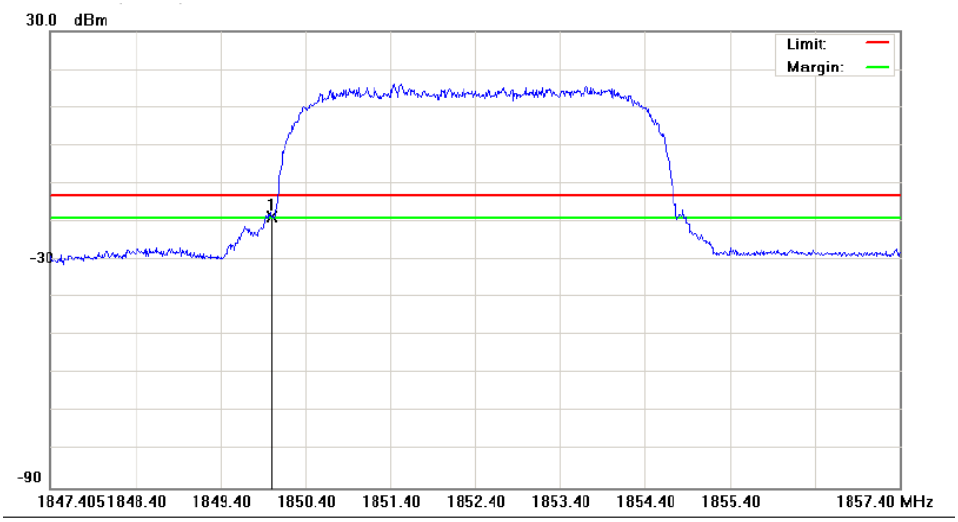
Higher Band



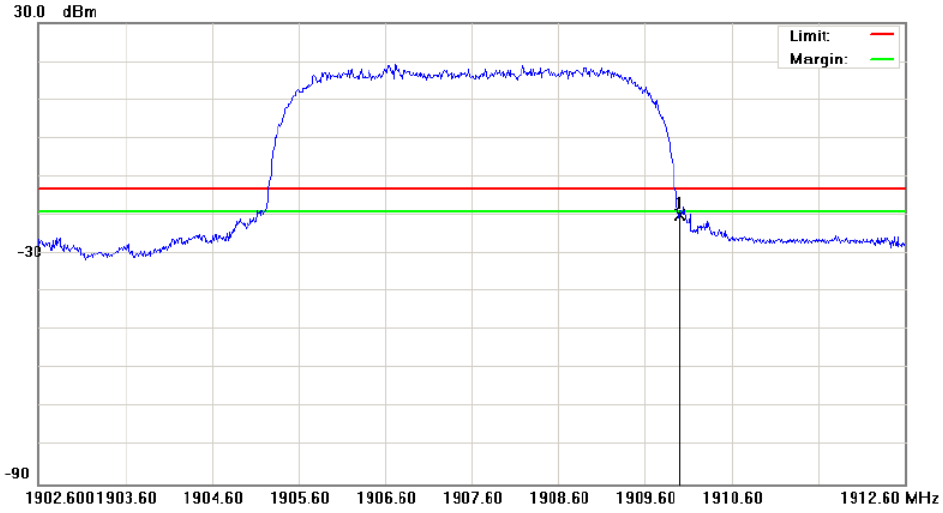
Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Band Edge		
Test Mode	Mode 5: WCDMA Band II Link		
Date of Test	01/29/2010	Test Site	TE02

Band	Channel	Frequency (MHz)	Bandwidth (dBm)	Limit (dBm)	Result
Lower	9262	1850.000	-18.74	-13	Pass
Higher	9538	1910.000	-20.08	-13	Pass

Lower Band



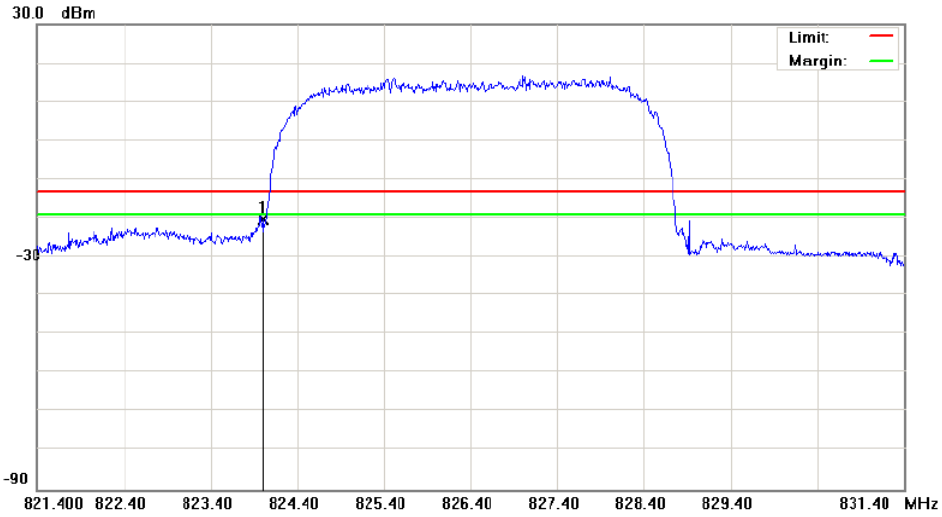
Higher Band



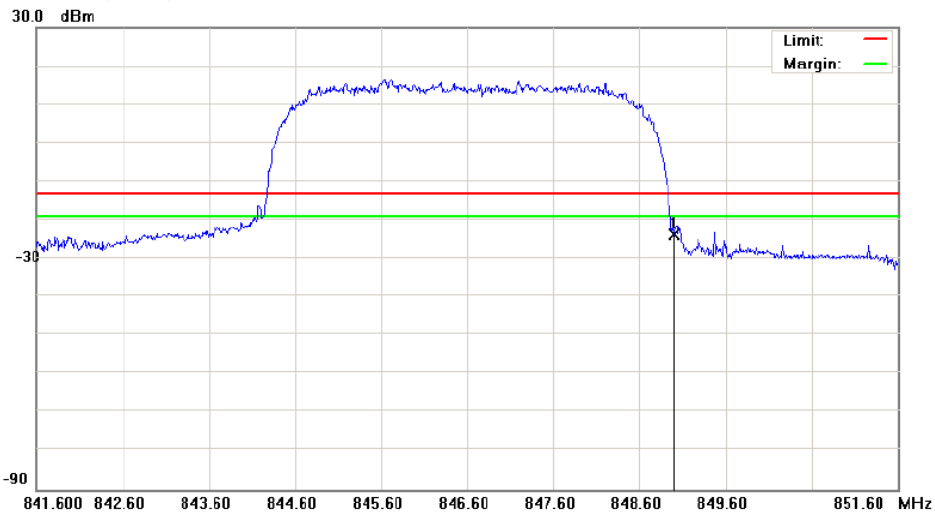
Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Band Edge		
Test Mode	Mode 6: WCDMA Band V Link		
Date of Test	01/29/2010	Test Site	TE02

Band	Channel	Frequency (MHz)	Bandwidth (dBm)	Limit (dBm)	Result
Lower	4132	824.0000	-20.34	-13	Pass
Higher	4233	849.0000	-23.92	-13	Pass

Lower Band



Higher Band



5 Conducted Emission Test

5.1. Limit

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10log(P) dB.

5.2. Test Instruments

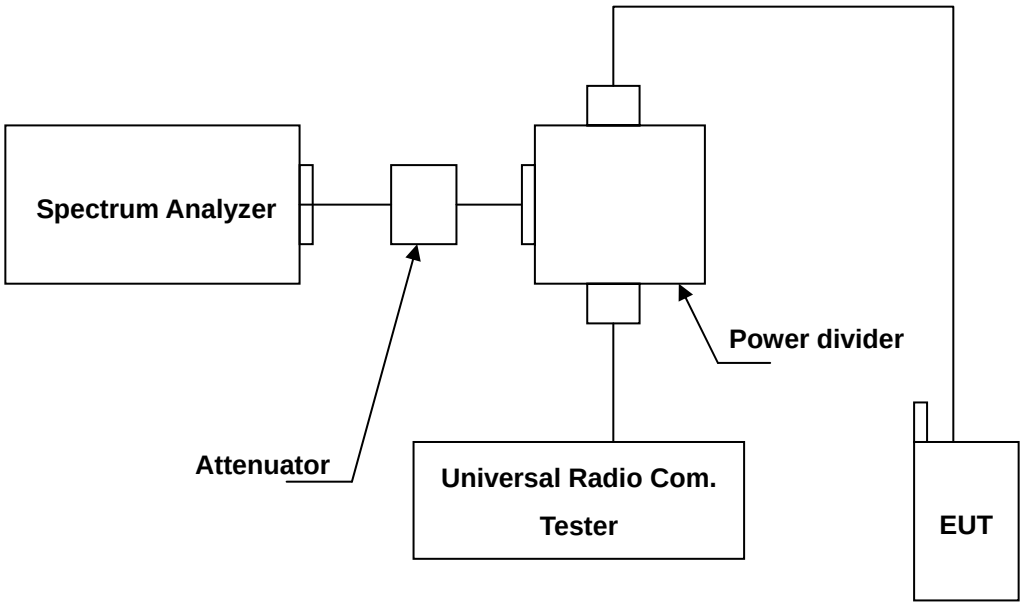
Describe	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY46181986	05/14/2009	(2)
Universal Radio Communication Tester	ROHDE & SCHWARZ	CMU200	109369	07/29/2009	(2)
Attenuator	RADIALL	R41572000	0603033073	N.C.R.	-----
Power divider	Agilent	87302C	3239A00760	N.C.R.	-----
Test Site	ATL	TE02	TE02	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

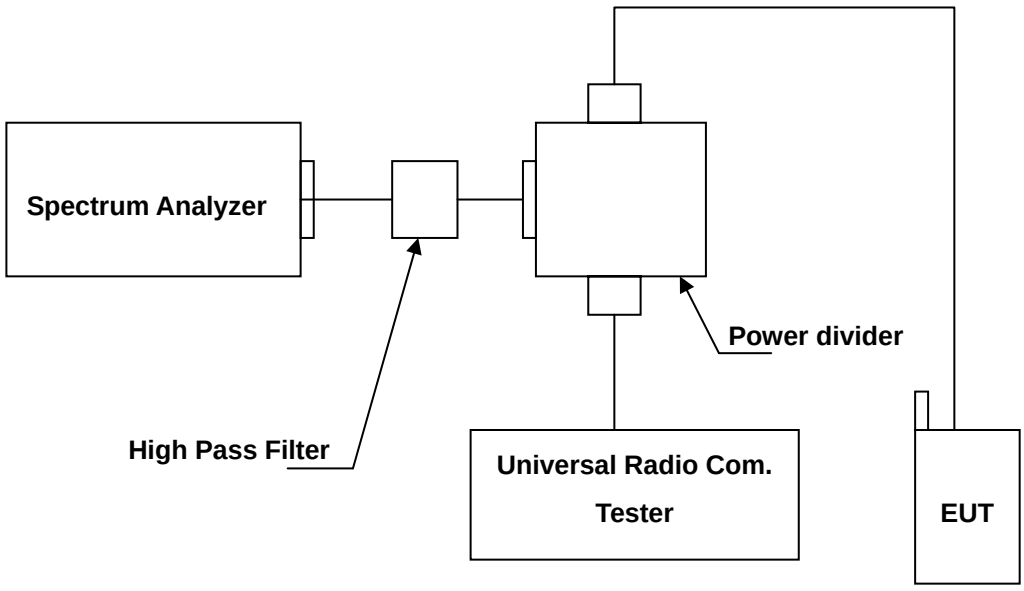
NOTE: N.C.R. = No Calibration Request.

5.3. Setup

Below 2.8GHz



Above 2.8GHz



5.4. Test Procedure

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The middle channel for the highest RF power within the transmitting frequency was measured.
3. The conducted spurious emission for the whole frequency range was taken.
4. Test setting at GSM 850 RB>100 kHz, VB>100 kHz; PCS 1900 RB>1MHz, VB>1MHz.

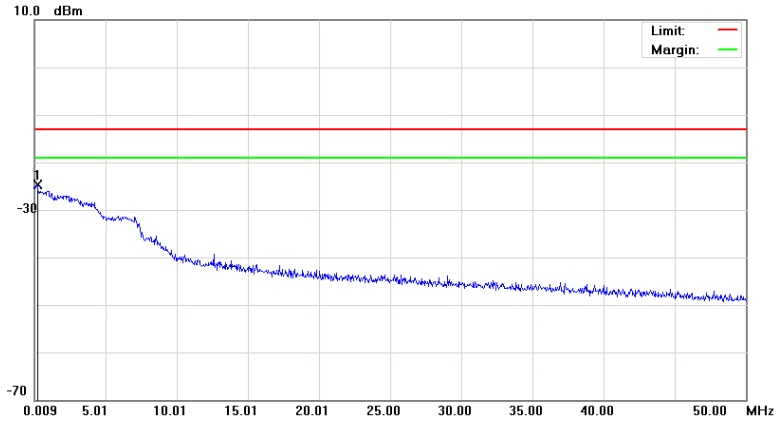
5.5. Uncertainty

The measurement uncertainty is evaluated as ± 2.24 dB.

5.6. Test Result

Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Conducted Emission		
Mode	Mode 1: GSM850 Link Mode 2: GSM1900 Link Mode 5: WCDMA Band II Link Mode 6: WCDMA Band V Link		
Date of Test	01/29/2010	Test Site	TE02

File :1 Data :#1 Date:2010/1/29 Time: PM 05:43:35



Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #1
Note: CH128(824.2MHz)

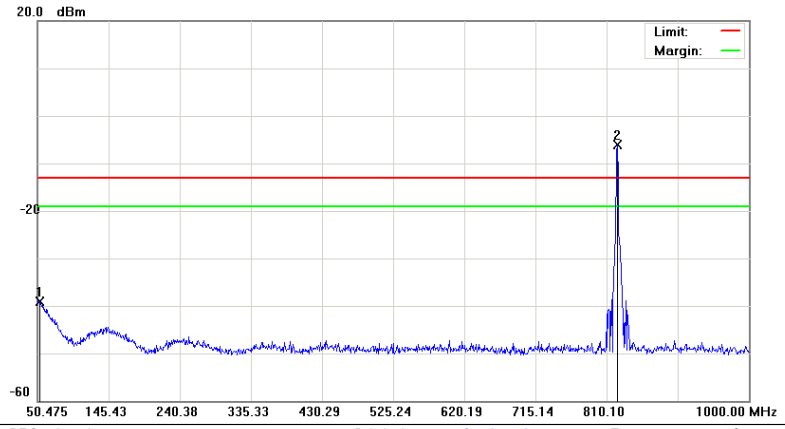
Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.2090	-55.67	30.99	-24.68	-13.00	-11.68	peak			

*:Maximum data x:Over limit !:over margin

File :1 Data :#2 Date:2010/1/29 Time: PM 05:44:00



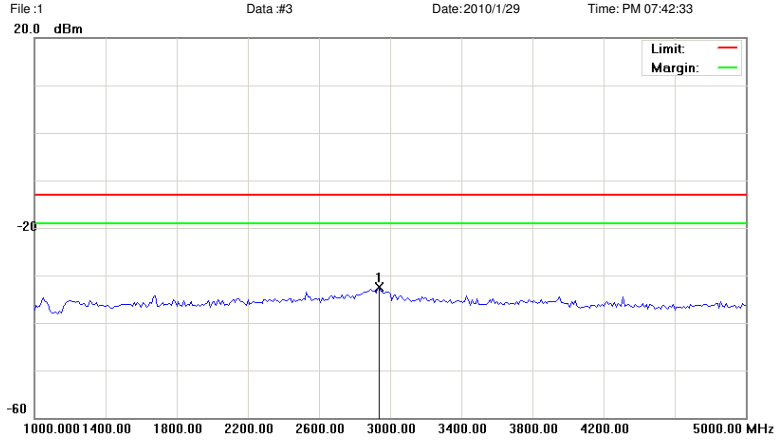
Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #1
Note: CH128(824.2MHz)

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1		52.8500	-53.31	14.19	-39.12	-13.00	-26.12	peak			
2	*	824.2500	-9.93	3.84	-6.09	-13.00	6.91	peak			TX

*:Maximum data x:Over limit !:over margin



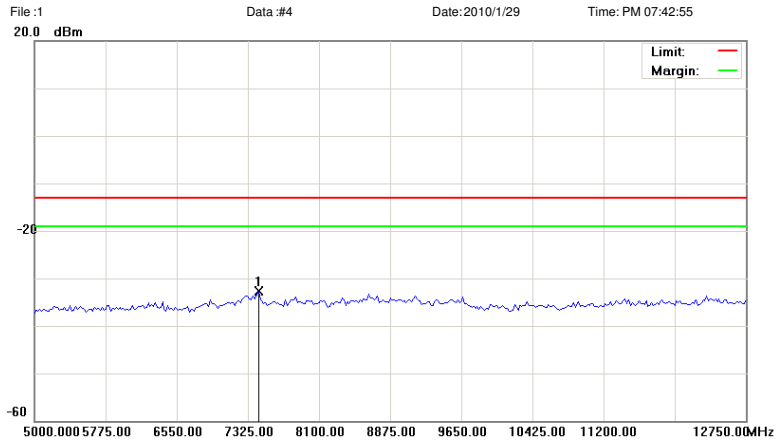
Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #1
Note: CH128(824.2MHz)

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2940.000	-37.18	4.62	-32.56	-13.00	-19.56	peak			

*:Maximum data x:Over limit !:over margin



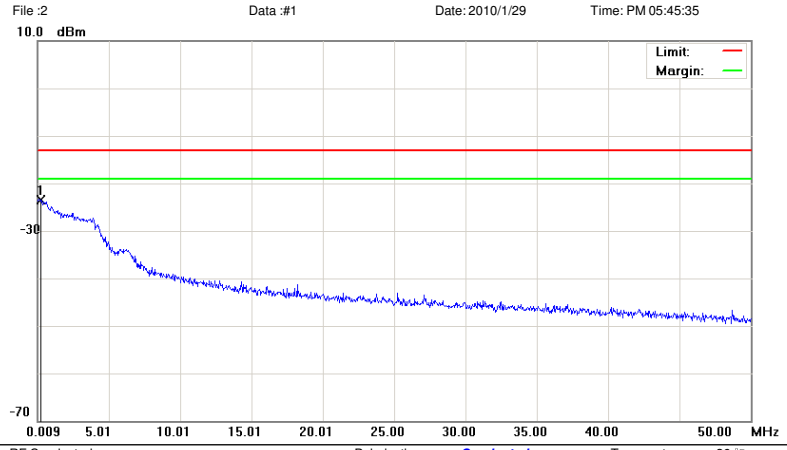
Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #1
Note: CH128(824.2MHz)

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	7441.250	-37.91	5.22	-32.69	-13.00	-19.69	peak			

*:Maximum data x:Over limit !:over margin



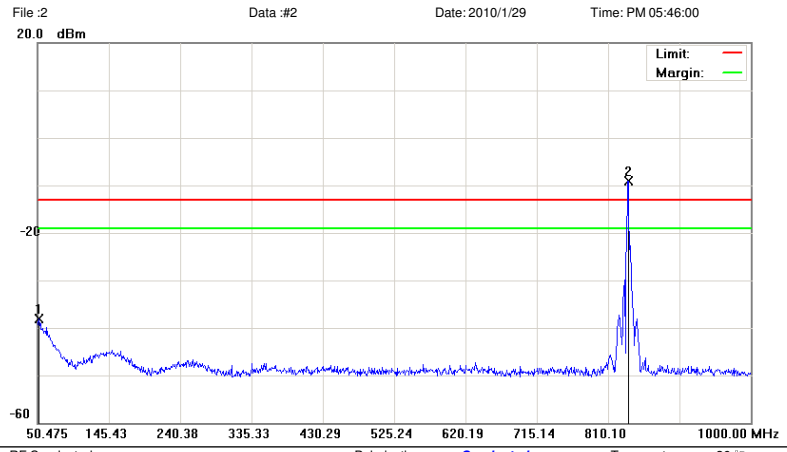
Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #1
Note: CH190(836.6MHz)

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.2590	-54.91	31.40	-23.51	-13.00	-10.51	peak			

*:Maximum data x:Over limit !:over margin



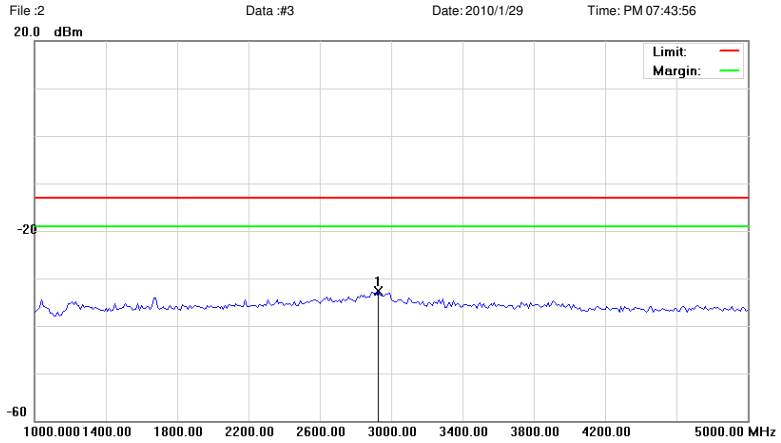
Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #1
Note: CH190(836.6MHz)

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1		51.9000	-52.46	14.36	-38.10	-13.00	-25.10	peak			
2	*	836.6000	-12.97	3.96	-9.01	-13.00	3.99	peak			TX

*:Maximum data x:Over limit !:over margin



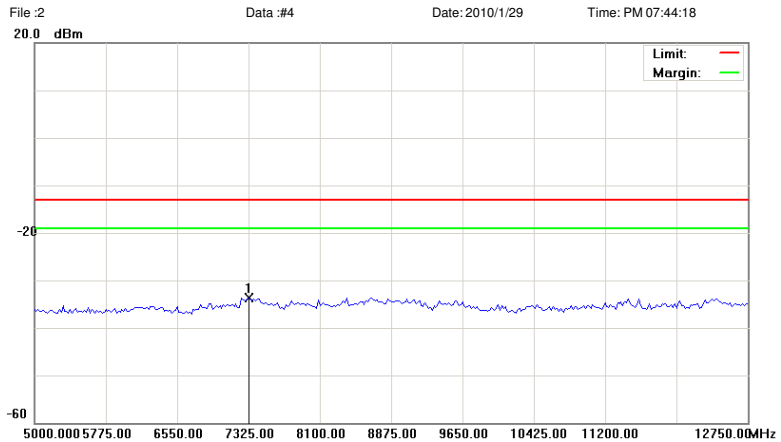
Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #1
Note: CH190(836.6MHz)

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2930.000	-37.43	4.65	-32.78	-13.00	-19.78	peak			

*:Maximum data x:Over limit !:over margin



Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #1
Note: CH190(836.6MHz)

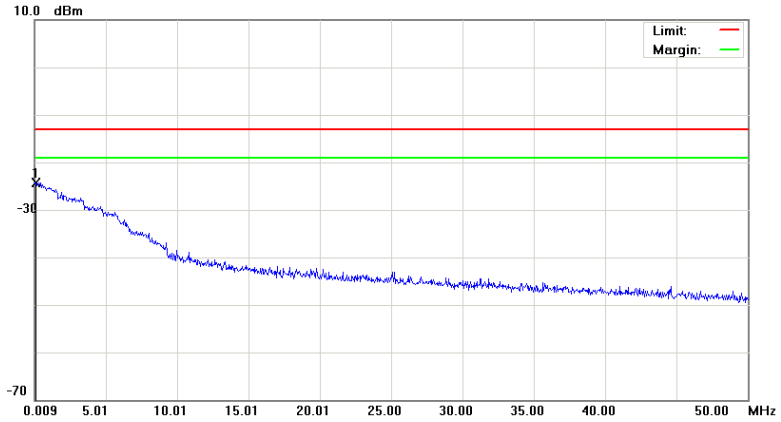
Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	7325.000	-38.74	5.10	-33.64	-13.00	-20.64	peak			

*:Maximum data x:Over limit !:over margin

File :3 Data :#1 Date: 2010/1/29 Time: PM 05:47:22



Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #1
Note: CH251(848.8MHz)

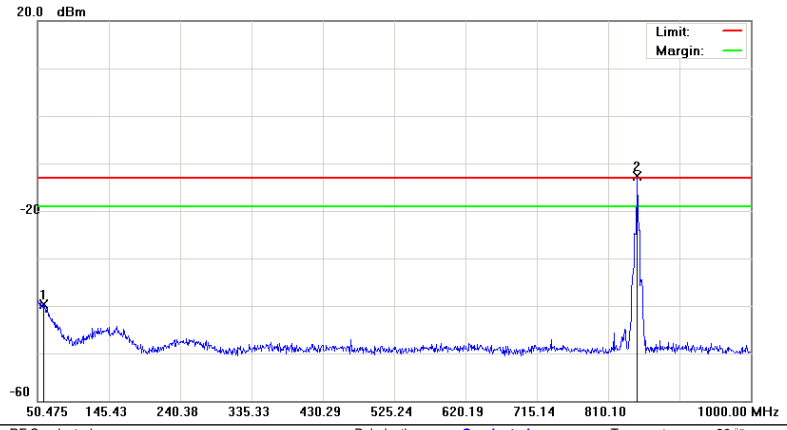
Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.1090	-54.43	30.17	-24.26	-13.00	-11.26	peak			

*:Maximum data x:Over limit !:over margin

File :3 Data :#2 Date: 2010/1/29 Time: PM 05:47:47



Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #1
Note: CH251(848.8MHz)

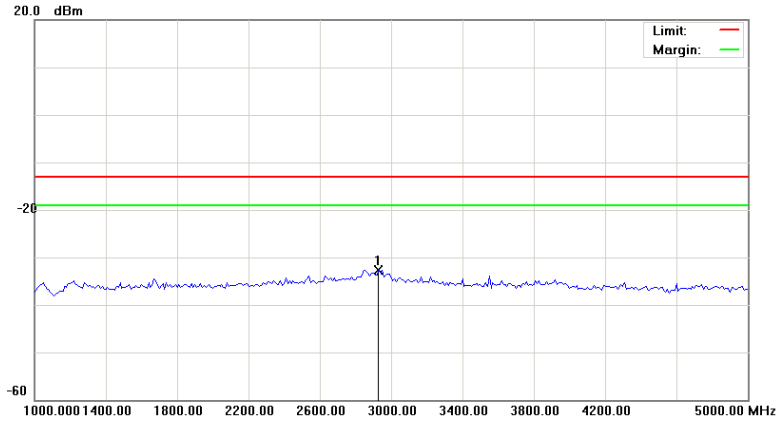
Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1		58.0750	-52.99	13.24	-39.75	-13.00	-26.75	peak			
2	*	848.9500	-16.77	3.98	-12.79	-13.00	0.21	peak			TX

*:Maximum data x:Over limit !:over margin

File :3 Data :#3 Date: 2010/1/29 Time: PM 07:45:10



Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #1
Note: CH251(848.8MHz)

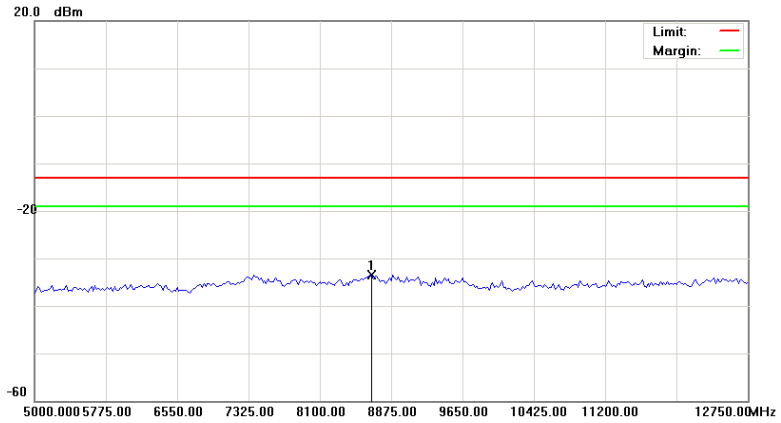
Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2930.000	-37.32	4.65	-32.67	-13.00	-19.67	peak			

*:Maximum data x:Over limit !:over margin

File :3 Data :#4 Date: 2010/1/29 Time: PM 07:45:32



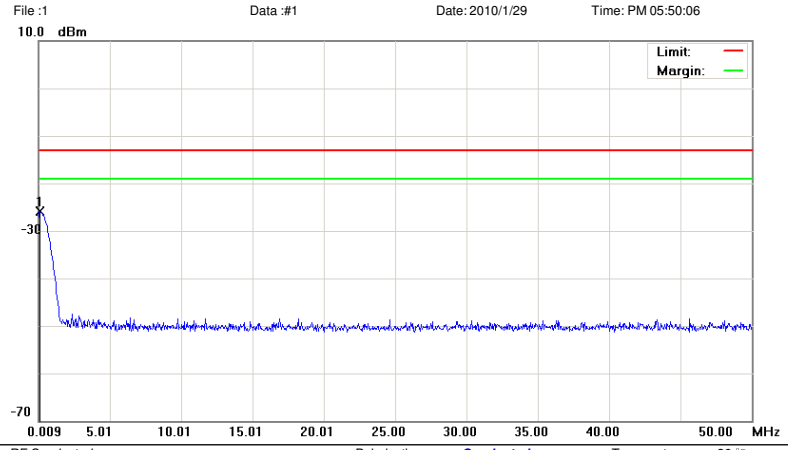
Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #1
Note: CH251(848.8MHz)

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	8661.875	-39.25	5.80	-33.45	-13.00	-20.45	peak			

*:Maximum data x:Over limit !:over margin



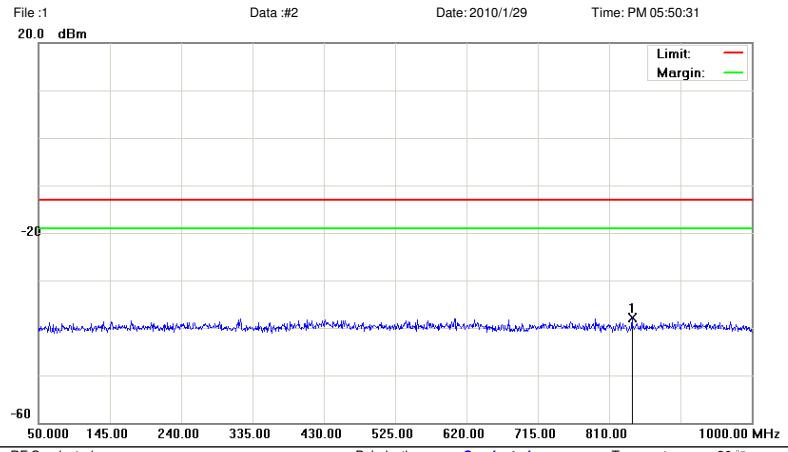
Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #2
Note: CH512(1850.2MHz)

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.1090	-38.42	12.49	-25.93	-13.00	-12.93	peak			

*:Maximum data x:Over limit !:over margin



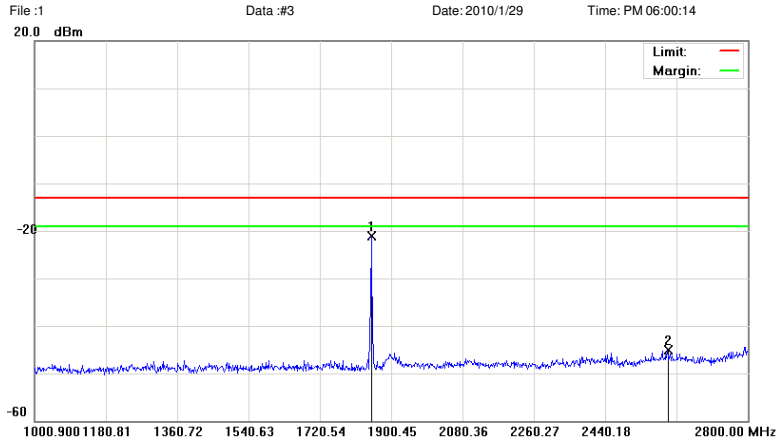
Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #2
Note: CH512(1850.2MHz)

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	840.4000	-51.02	13.22	-37.80	-13.00	-24.80	peak			

*:Maximum data x:Over limit !:over margin



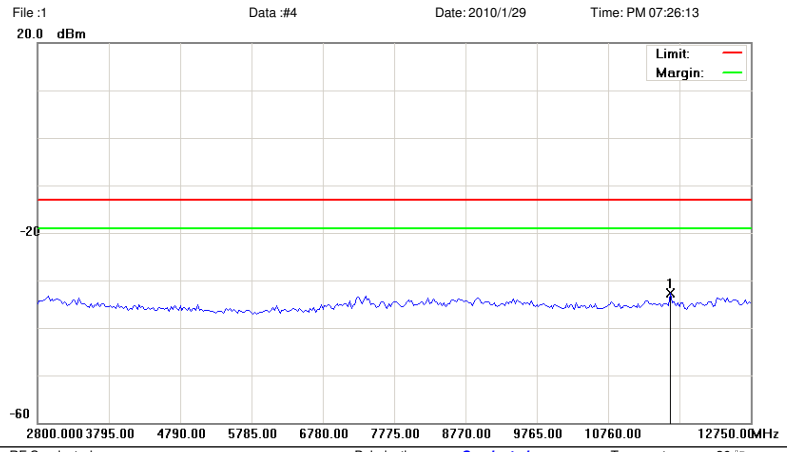
Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #2
Note: CH512(1850.2MHz)

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	1850.500	-25.34	4.26	-21.08	-13.00	-8.08	peak			TX
2		2597.500	-50.47	5.44	-45.03	-13.00	-32.03	peak			

*:Maximum data x:Over limit !:over margin



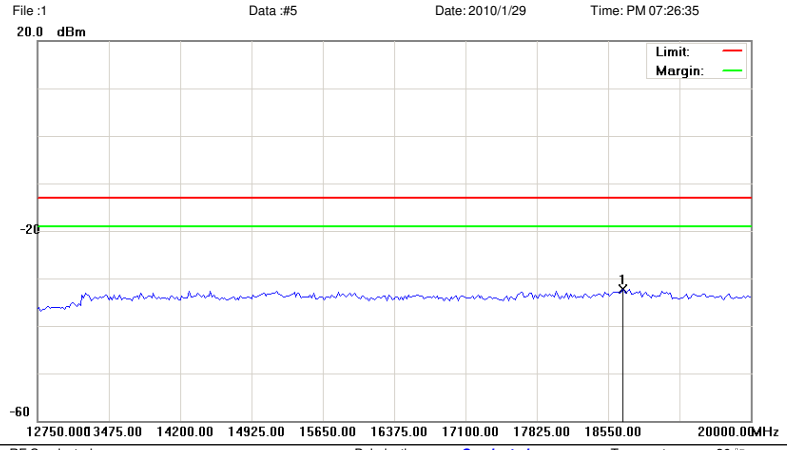
Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #2
Note: CH512(1850.2MHz)

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	11630.625	-38.13	5.35	-32.78	-13.00	-19.78	peak			

*:Maximum data x:Over limit !:over margin



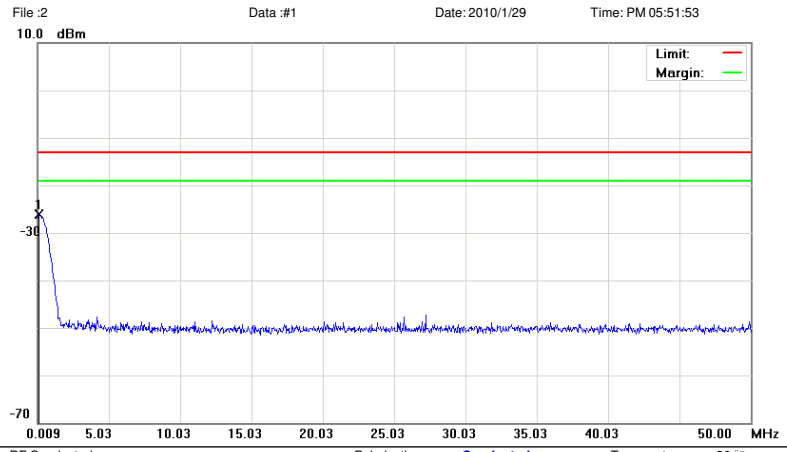
Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #2
Note: CH512(1850.2MHz)

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	18695.000	-39.30	7.07	-32.23	-13.00	-19.23	peak			

*:Maximum data x:Over limit !:over margin



Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #2
Note: CH661(1880MHz)

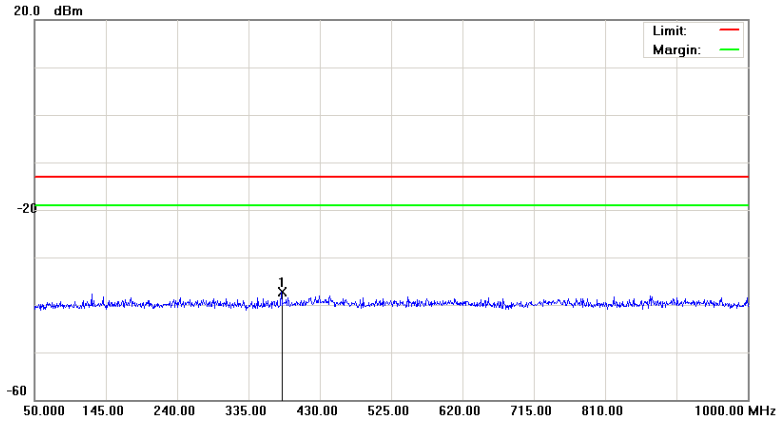
Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.1090	-38.59	12.49	-26.10	-13.00	-13.10	peak			

*:Maximum data x:Over limit !:over margin

File :2 Data :#2 Date: 2010/1/29 Time: PM 05:52:18



Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #2
Note: CH661(1880MHz)

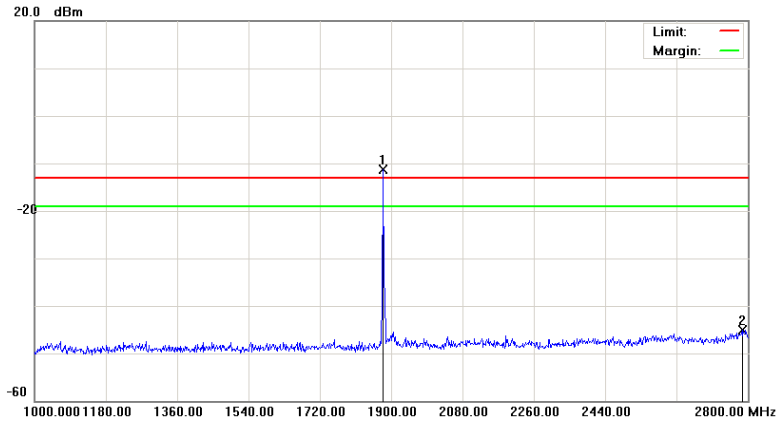
Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	379.1750	-50.59	13.23	-37.36	-13.00	-24.36	peak			

*:Maximum data x:Over limit !:over margin

File :2 Data :#3 Date: 2010/1/29 Time: PM 06:01:29



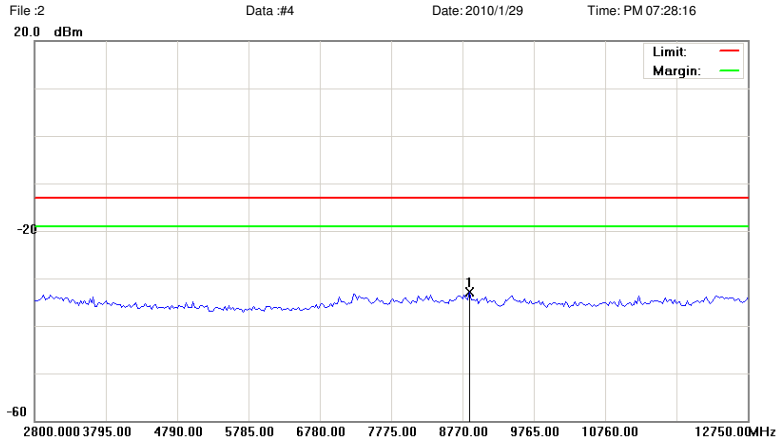
Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #2
Note: CH661(1880MHz)

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	1880.200	-15.99	4.65	-11.34	-13.00	1.66	peak			TX
2		2785.600	-51.00	5.89	-45.11	-13.00	-32.11	peak			

*:Maximum data x:Over limit !:over margin



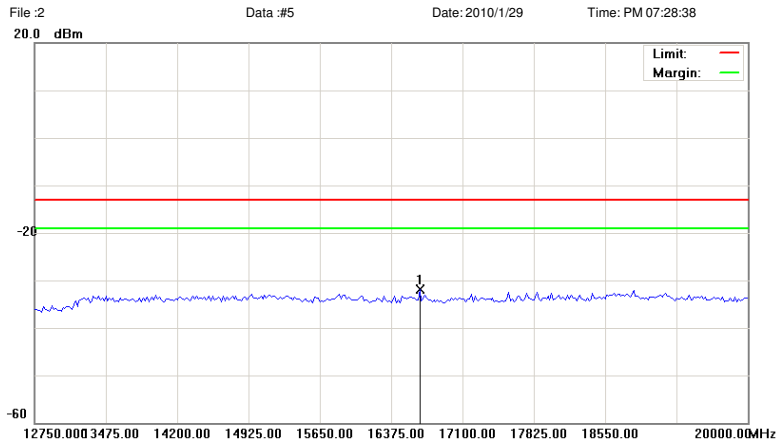
Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #2
Note: CH661(1880MHz)

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	8869.500	-38.30	5.35	-32.95	-13.00	-19.95	peak			

*:Maximum data x:Over limit !:over margin



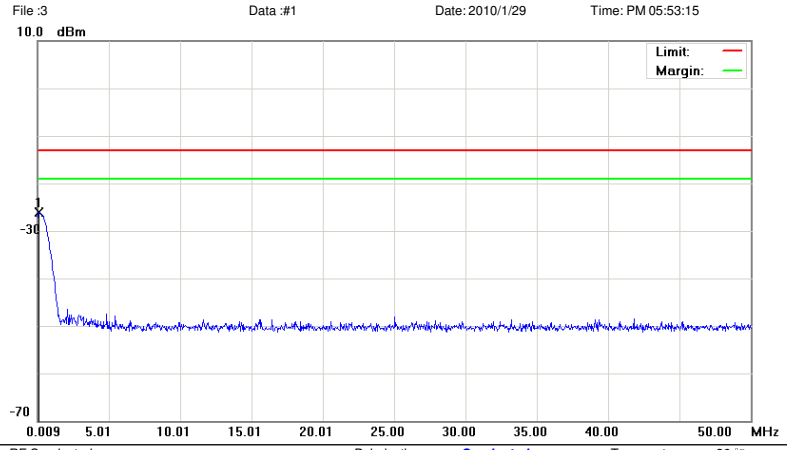
Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #2
Note: CH661(1880MHz)

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	16665.000	-38.44	6.49	-31.95	-13.00	-18.95	peak			

*:Maximum data x:Over limit !:over margin



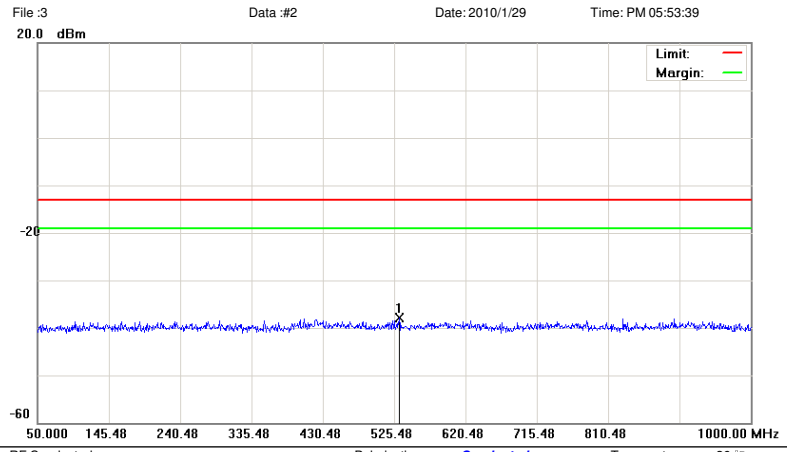
Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #2
Note: CH810(1909.8MHz)

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.1090	-38.52	12.49	-26.03	-13.00	-13.03	peak			

*:Maximum data x:Over limit !:over margin



Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #2
Note: CH810(1909.8MHz)

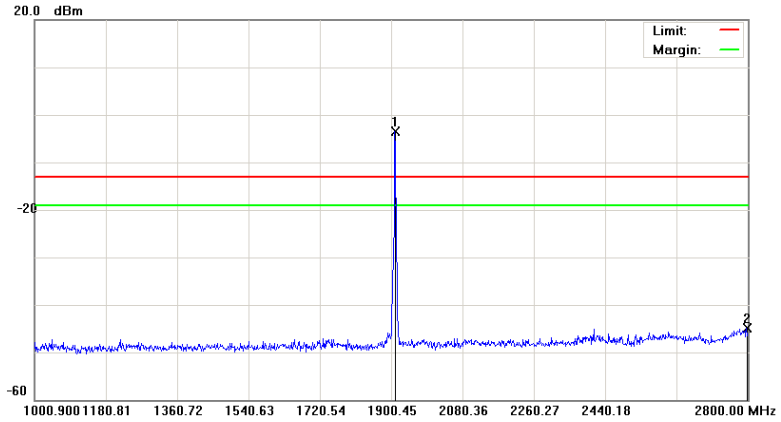
Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	531.6500	-51.01	13.14	-37.87	-13.00	-24.87	peak			

*:Maximum data x:Over limit !:over margin

File :3 Data :#3 Date: 2010/1/29 Time: PM 05:55:41



Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #2
Note: CH810(1909.8MHz)

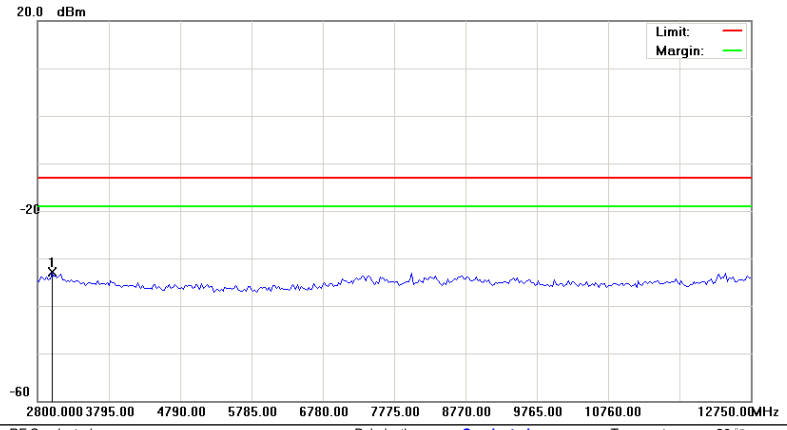
Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	1909.900	-9.30	5.71	-3.59	-13.00	9.41	peak			TX
2		2797.300	-50.80	5.91	-44.89	-13.00	-31.89	peak			

*:Maximum data x:Over limit !:over margin

File :3 Data :#4 Date: 2010/1/29 Time: PM 07:30:45



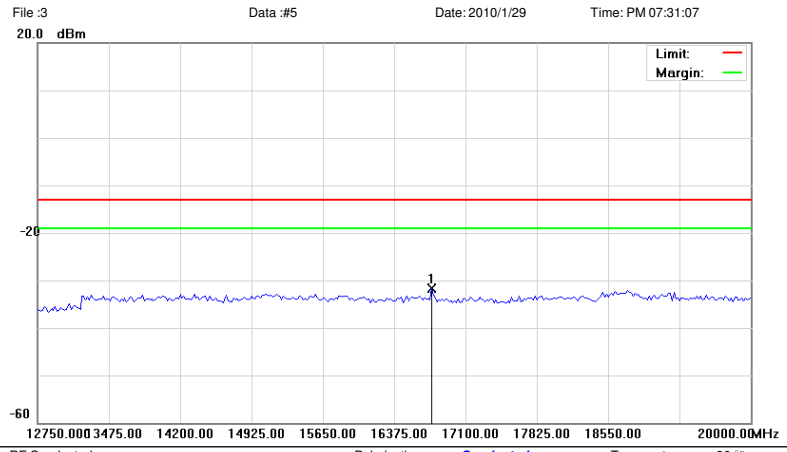
Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #2
Note: CH810(1909.8MHz)

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2999.000	-38.28	5.48	-32.80	-13.00	-19.80	peak			

*:Maximum data x:Over limit !:over margin



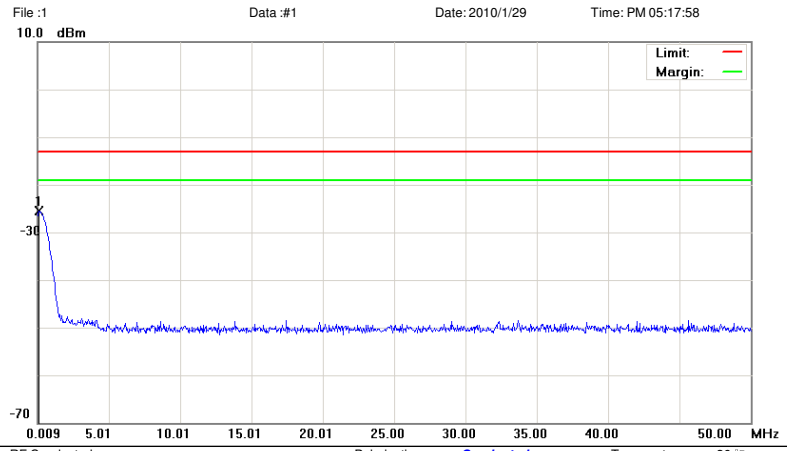
Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #2
Note: CH810(1909.8MHz)

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	16755.625	-38.18	6.51	-31.67	-13.00	-18.67	peak			

*:Maximum data x:Over limit !:over margin



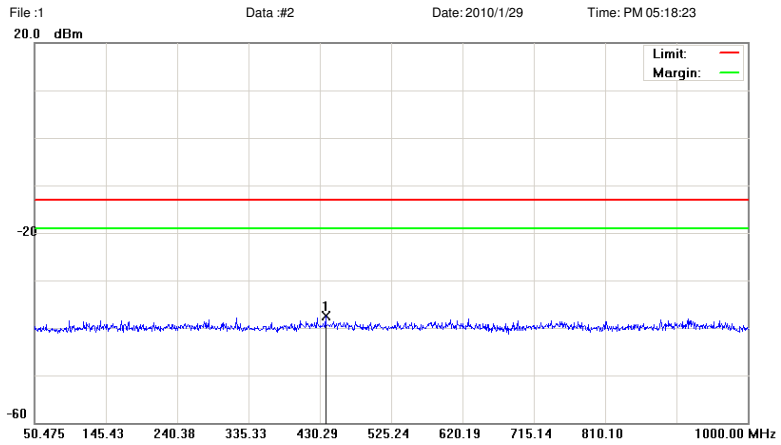
Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #5
Note: CH9262

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.1090	-38.02	12.49	-25.53	-13.00	-12.53	peak			

*:Maximum data x:Over limit !:over margin



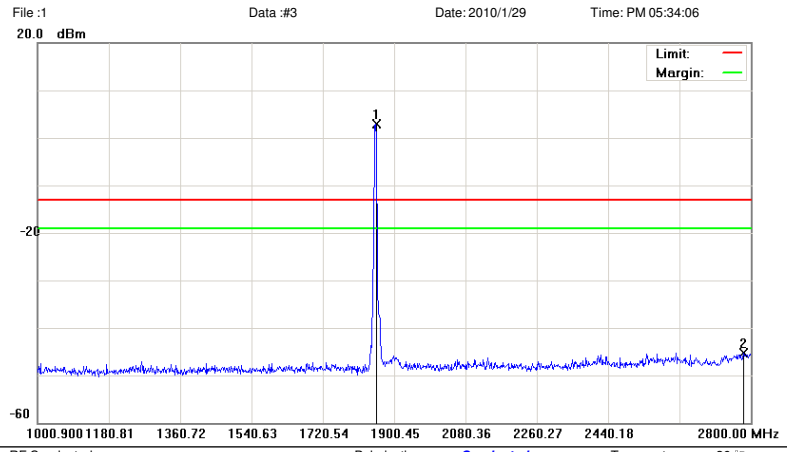
Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #5
Note: CH9262

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	438.0750	-50.70	13.22	-37.48	-13.00	-24.48	peak			

*:Maximum data x:Over limit !:over margin



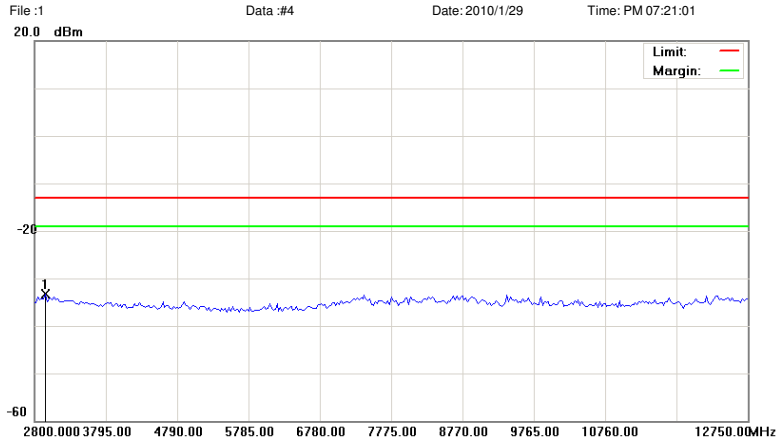
Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #5
Note: CH9262

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	1854.100	-1.33	4.28	2.95	-13.00	15.95	peak			TX
2		2782.000	-51.19	5.88	-45.31	-13.00	-32.31	peak			

*:Maximum data x:Over limit !:over margin



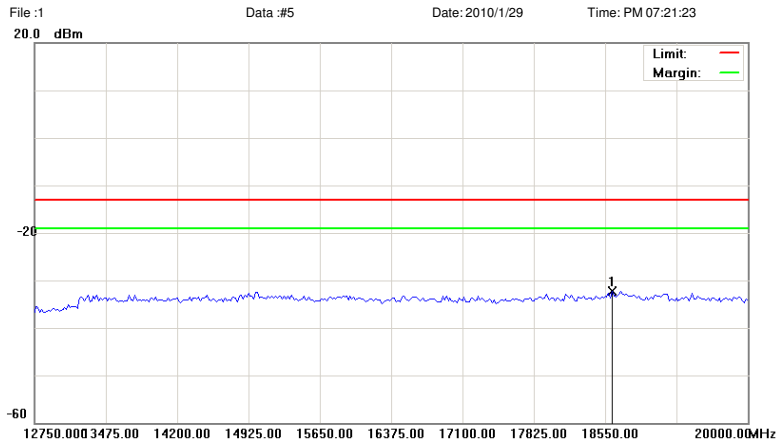
Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #5
Note: CH9262

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2949.250	-38.91	5.64	-33.27	-13.00	-20.27	peak			

*:Maximum data x:Over limit !:over margin



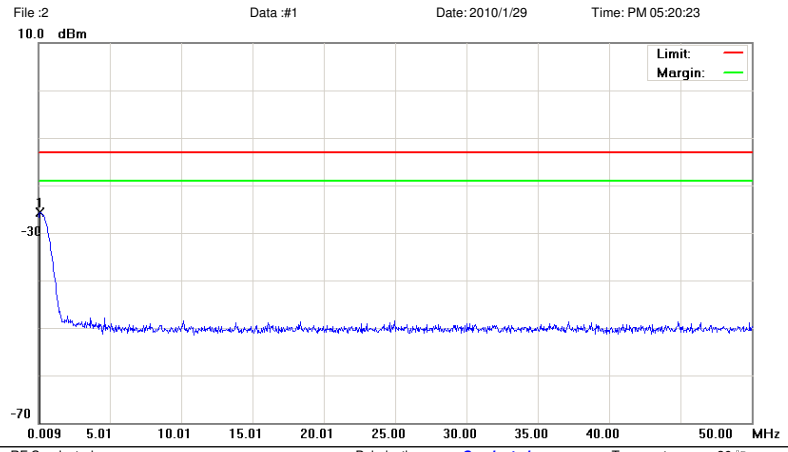
Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #5
Note: CH9262

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	18622.500	-39.26	7.05	-32.21	-13.00	-19.21	peak			

*:Maximum data x:Over limit !:over margin



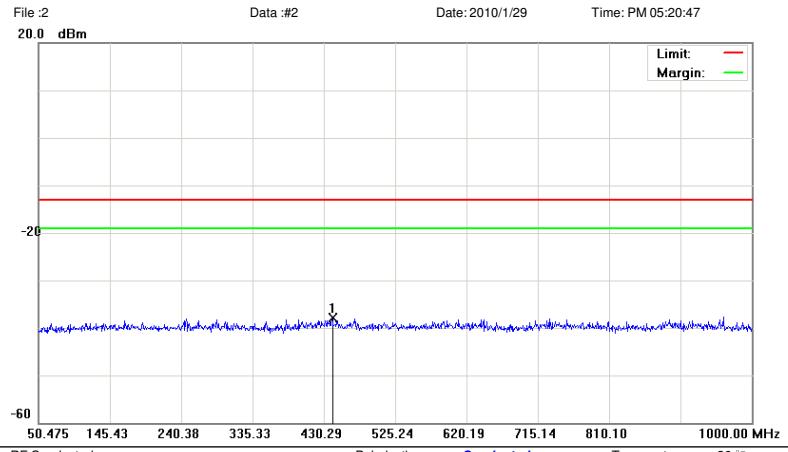
Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #5
Note: CH9400

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.1090	-38.17	12.49	-25.68	-13.00	-12.68	peak			

*:Maximum data x:Over limit !:over margin



Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #5
Note: CH9400

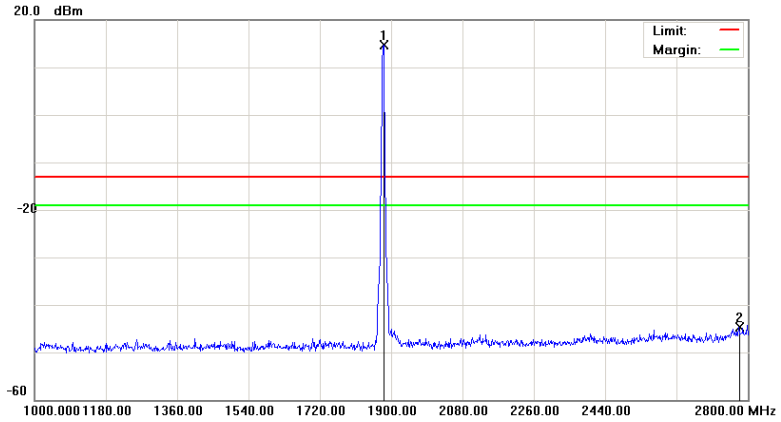
Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	440.9250	-51.06	13.20	-37.86	-13.00	-24.86	peak			

*:Maximum data x:Over limit !:over margin

File :2 Data :#3 Date: 2010/1/29 Time: PM 05:30:55



Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #5
Note: CH9400

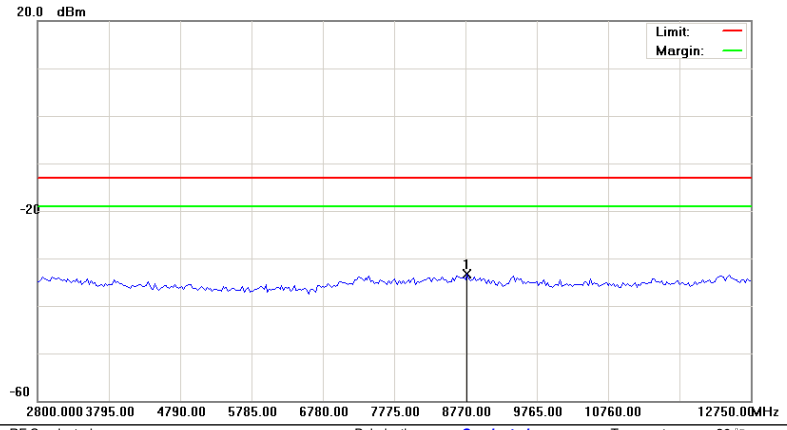
Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	1882.000	9.81	4.83	14.64	-13.00	27.64	peak			TX
2		2777.500	-50.51	5.85	-44.66	-13.00	-31.66	peak			

*:Maximum data x:Over limit !:over margin

File :2 Data :#4 Date: 2010/1/29 Time: PM 07:22:27



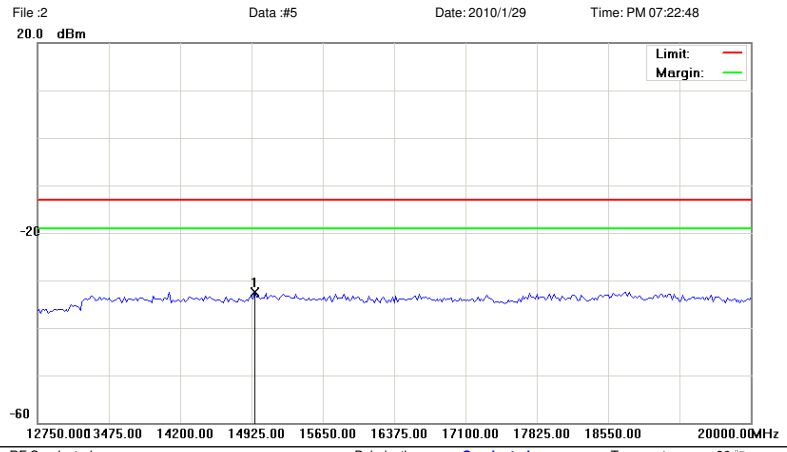
Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #5
Note: CH9400

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	8794.875	-39.06	5.74	-33.32	-13.00	-20.32	peak			

*:Maximum data x:Over limit !:over margin



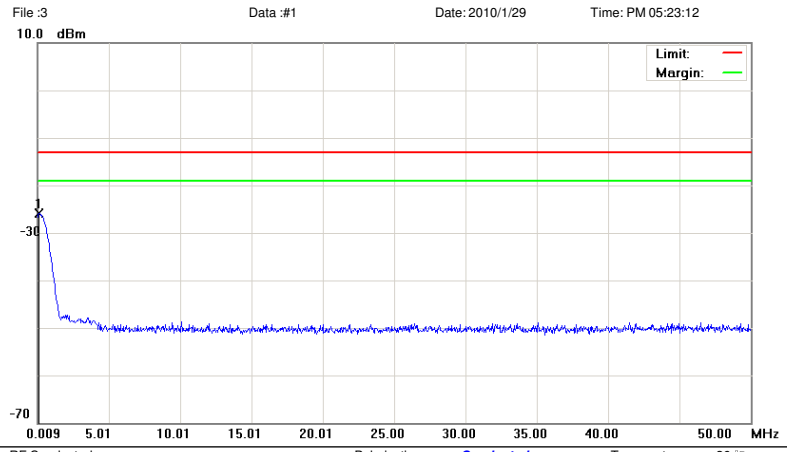
Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #5
Note: CH9400

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	14961.250	-38.45	6.00	-32.45	-13.00	-19.45	peak			

*:Maximum data x:Over limit !:over margin



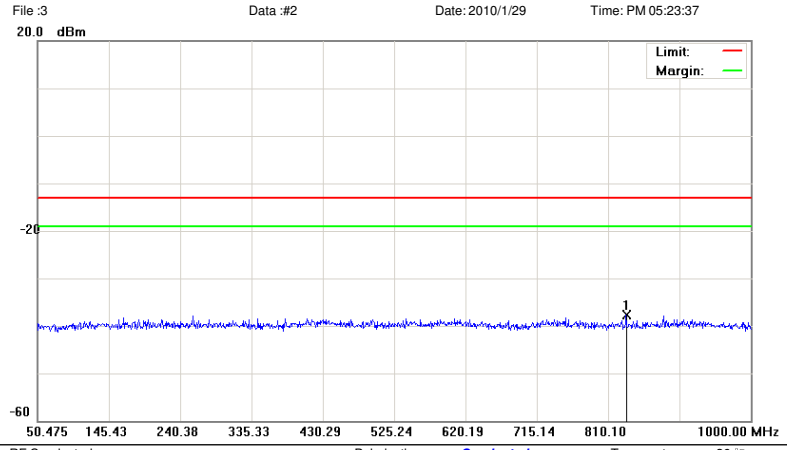
Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #5
Note: CH9538

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.1090	-38.38	12.49	-25.89	-13.00	-12.89	peak			

*:Maximum data x:Over limit !:over margin



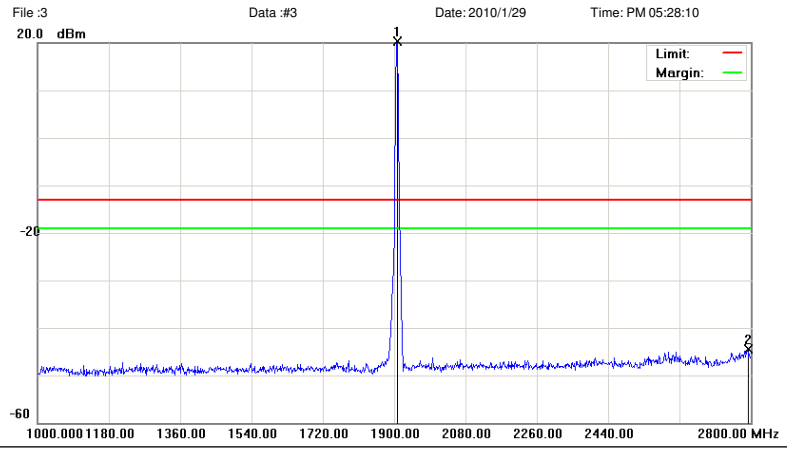
Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #5
Note: CH9538

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	834.2250	-50.96	13.17	-37.79	-13.00	-24.79	peak			

*:Maximum data x:Over limit !:over margin



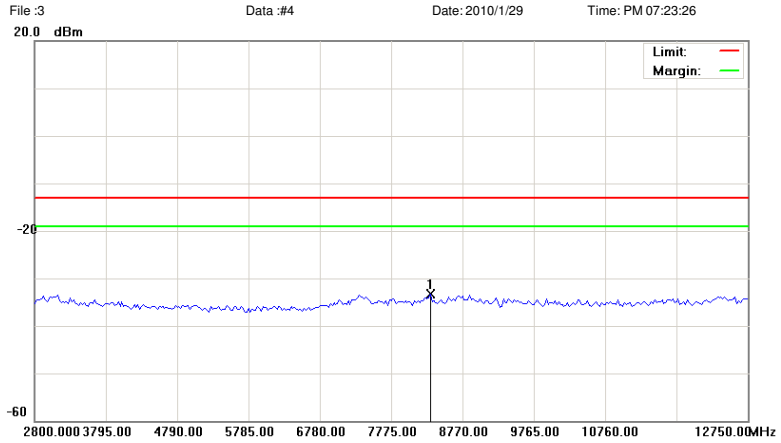
Site:
Limit: : RF Conducted
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #5
Note: CH9538

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
1	*	1900.000	-50.80	5.80	-45.00	-13.00	-32.00	peak	cm	degree	Comment
2		2791.900	-50.45	5.90	-44.55	-13.00	-31.55	peak			

*:Maximum data x:Over limit !:over margin



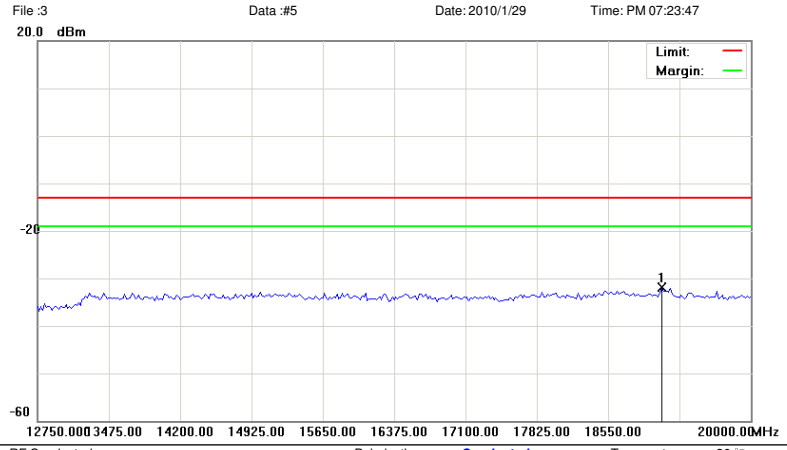
Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #5
Note: CH9538

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	8322.250	-39.17	5.80	-33.37	-13.00	-20.37	peak			

*:Maximum data x:Over limit !:over margin



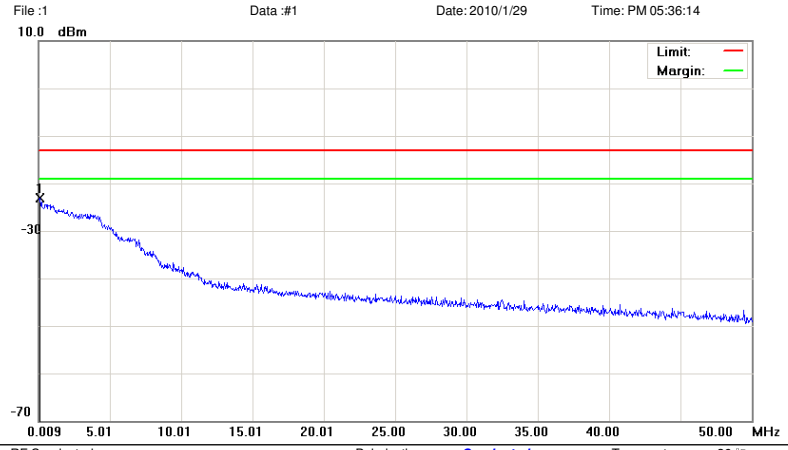
Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #5
Note: CH9538

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	19093.750	-39.11	7.18	-31.93	-13.00	-18.93	peak			

*:Maximum data x:Over limit !:over margin



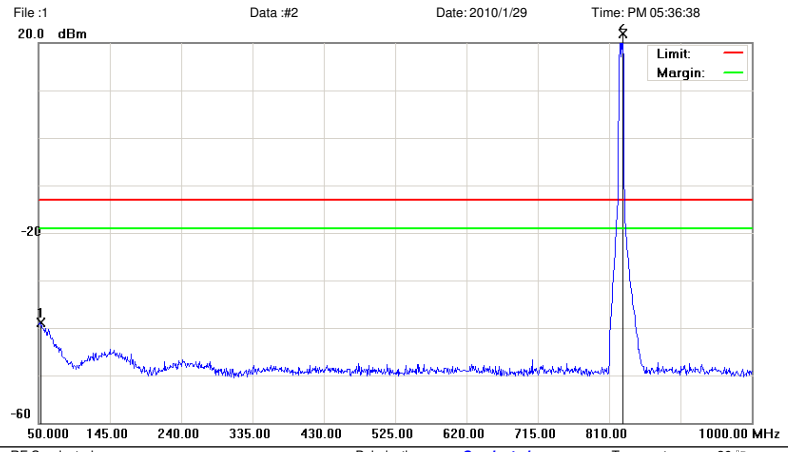
Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #6
Note: CH4132

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.1090	-53.19	30.17	-23.02	-13.00	-10.02	peak			

*:Maximum data x:Over limit !:over margin



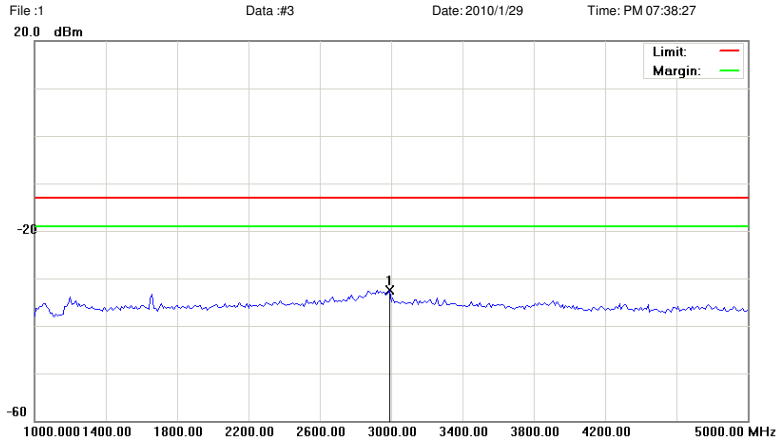
Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #6
Note: CH4132

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1		52.3750	-53.20	14.27	-38.93	-13.00	-25.93	peak			
2	*	827.5750	18.04	3.87	21.91	-13.00	34.91	peak			TX

*:Maximum data x:Over limit !:over margin



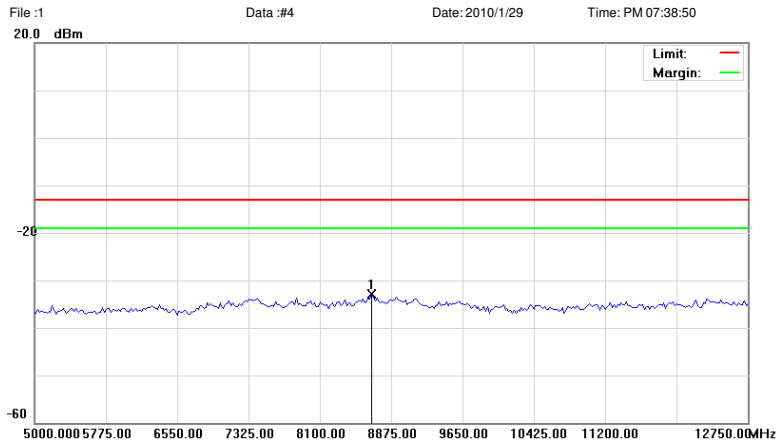
Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #6
Note: CH4132

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2990.000	-36.96	4.53	-32.43	-13.00	-19.43	peak			

*:Maximum data x:Over limit !:over margin



Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #6
Note: CH4132

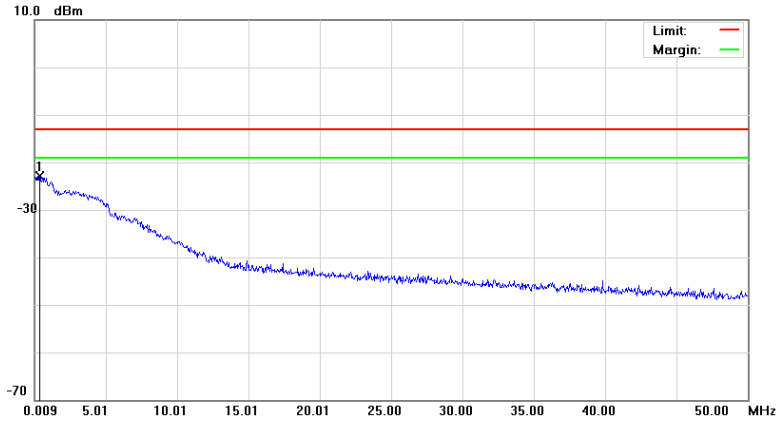
Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	8661.875	-38.72	5.80	-32.92	-13.00	-19.92	peak			

*:Maximum data x:Over limit !:over margin

File :2 Data :#1 Date: 2010/1/29 Time: PM 05:37:49



Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #6
Note: CH4182

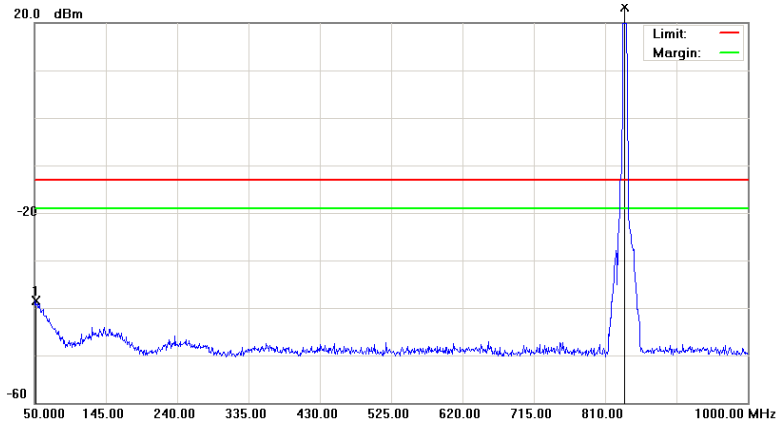
Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.3588	-54.66	31.86	-22.80	-13.00	-9.80	peak			

*:Maximum data x:Over limit !:over margin

File :2 Data :#2 Date: 2010/1/29 Time: PM 05:38:14



Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #6
Note: CH4182

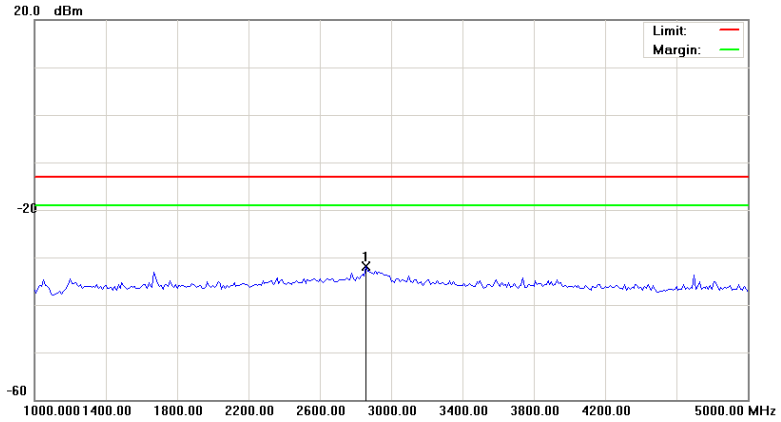
Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1		51.4250	-52.86	14.44	-38.42	-13.00	-25.42	peak			
2	*	835.1750	19.59	3.95	23.54	-13.00	36.54	peak			TX

*:Maximum data x:Over limit !:over margin

File :2 Data :#3 Date: 2010/1/29 Time: PM 07:39:59



Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #6
Note: CH4182

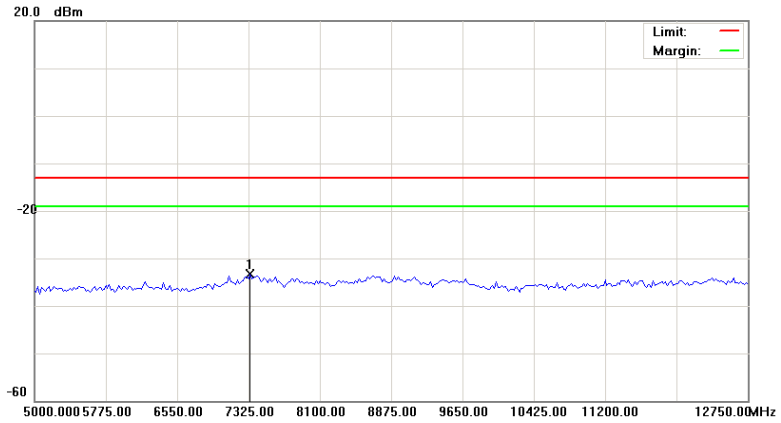
Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2860.000	-36.42	4.55	-31.87	-13.00	-18.87	peak			

*:Maximum data x:Over limit !:over margin

File :2 Data :#4 Date: 2010/1/29 Time: PM 07:40:21



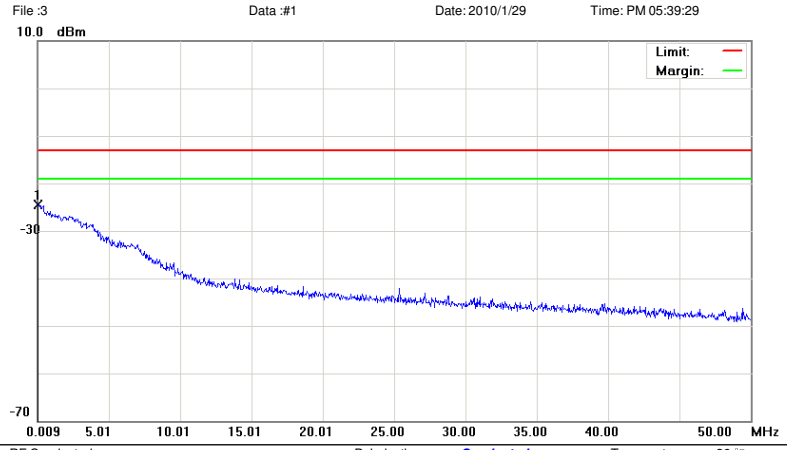
Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #6
Note: CH4182

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	7344.375	-38.25	5.04	-33.21	-13.00	-20.21	peak			

*:Maximum data x:Over limit !:over margin



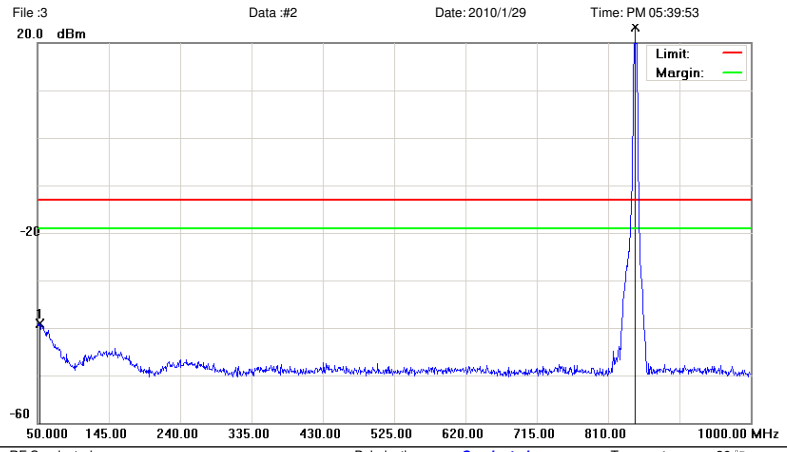
Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #6
Note: CH4233

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.0090	-55.02	30.58	-24.44	-13.00	-11.44	peak			

*:Maximum data x:Over limit !:over margin



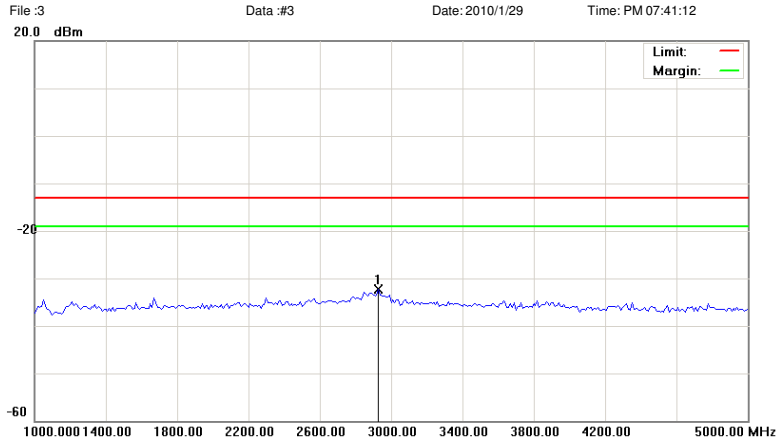
Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #6
Note: CH4233

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1		52.8500	-53.34	14.19	-39.15	-13.00	-26.15	peak			
2	*	845.6250	19.57	3.99	23.56	-13.00	36.56	peak			TX

*:Maximum data x:Over limit !:over margin



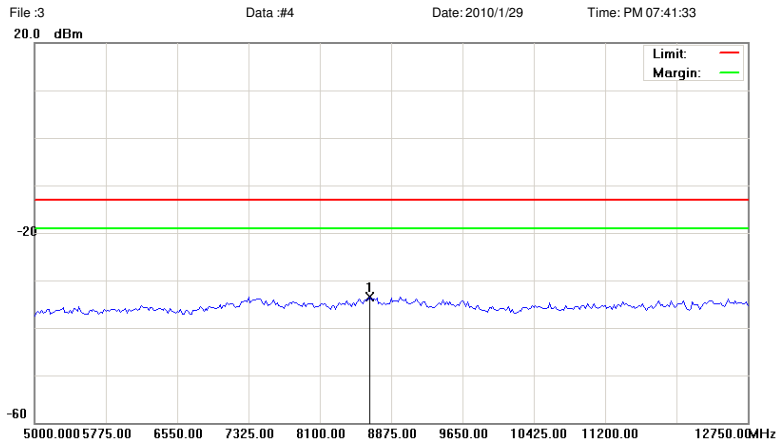
Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #6
Note: CH4233

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2930.000	-37.03	4.65	-32.38	-13.00	-19.38	peak			

*:Maximum data x:Over limit !:over margin



Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: UMTS/HSDPA Tri-band module
M/N: UC864-G
Mode: #6
Note: CH4233

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	8642.500	-39.42	5.94	-33.48	-13.00	-20.48	peak			

*:Maximum data x:Over limit !:over margin

6 Field Strength of Spurious Radiation Test

6.1. Limit

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10log(P) dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

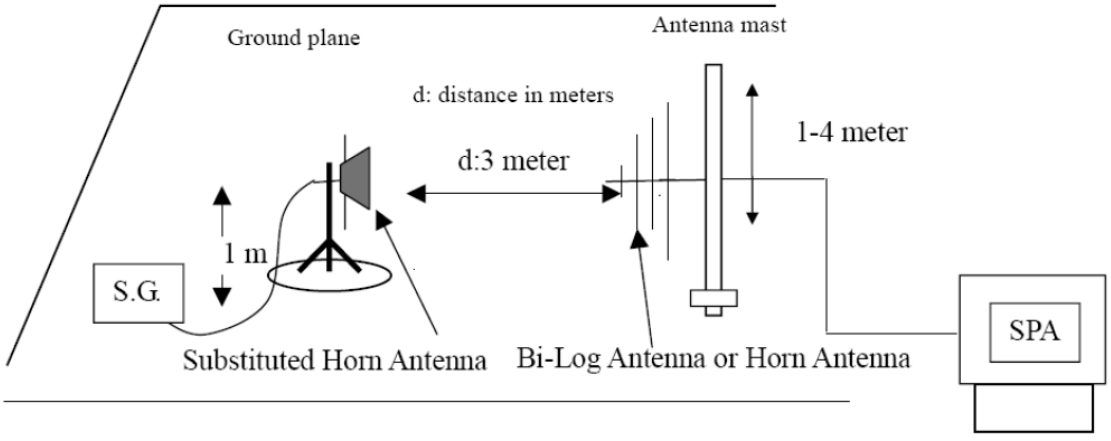
6.2. Test Instruments

3 Meter Chamber					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Date**	**Remark**
RF Pre-selector	Agilent	N9039A	MY46520256	01/27/2009	(2)
Spectrum Analyzer	Agilent	E4446A	MY46180578	01/20/2009	(2)
Pre Amplifier	Agilent	8449B	3008A02237	07/01/2009	(1)
Pre Amplifier	Agilent	8447D	2944A10961	06/30/2009	(1)
Broadband Antenna (30MHz~1GHz)	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	9163-270	06/23/2009	(2)
Horn Antenna (1~18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	07/01/2009	(2)
Horn Antenna (18~40GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9170	9170-320	06/30/2009	(2)
Test Site	ATL	TE01	TE01	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

6.3. Setup



6.4. Test Procedure

The measurement is made according to ANSI/TIA-603-C-2004 as follows:

The equipment under test is placed inside the semi-anechoic chamber on a wooden table at the turntable center. For each spurious frequency, the antenna mast is raised and lowered from 1 to 4 meters and the turntable is rotated 360 degrees to obtain a maximum reading on the spectrum analyzer. This is repeated for both horizontal and vertical polarizations of the receive antenna.

The equipment under test is then replaced with a substitution antenna fed by a signal generator. With the signal generator tuned to a particular spurious frequency, the antenna mast is raised and lowered from 1 to 4 meters to obtain a maximum reading at the spectrum analyzer. The output of the signal generator is then adjusted until a reading identical to that obtained with the actual transmitter is achieved.

The power in dBm of each spurious emission is calculated by correcting the signal generator level for cable loss and gain of the substitution antenna referenced to a dipole. A fully charged battery was used for the supply voltage.

The settings of the receiver were as follows:

Units	dBm
Resolution Bandwidth	1 MHz
Video Bandwidth	Auto
Sweep Time	Auto

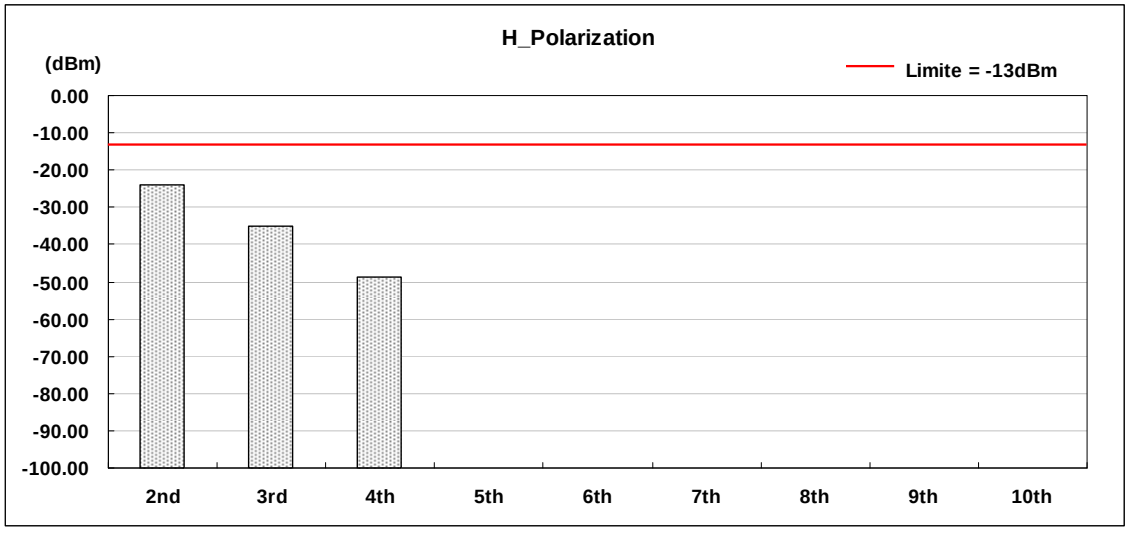
6.5. Uncertainty

The measurement uncertainty is defined as for Field Strength of Spurious Radiation measurement is ± 3.072 dB.

6.6. Test Result

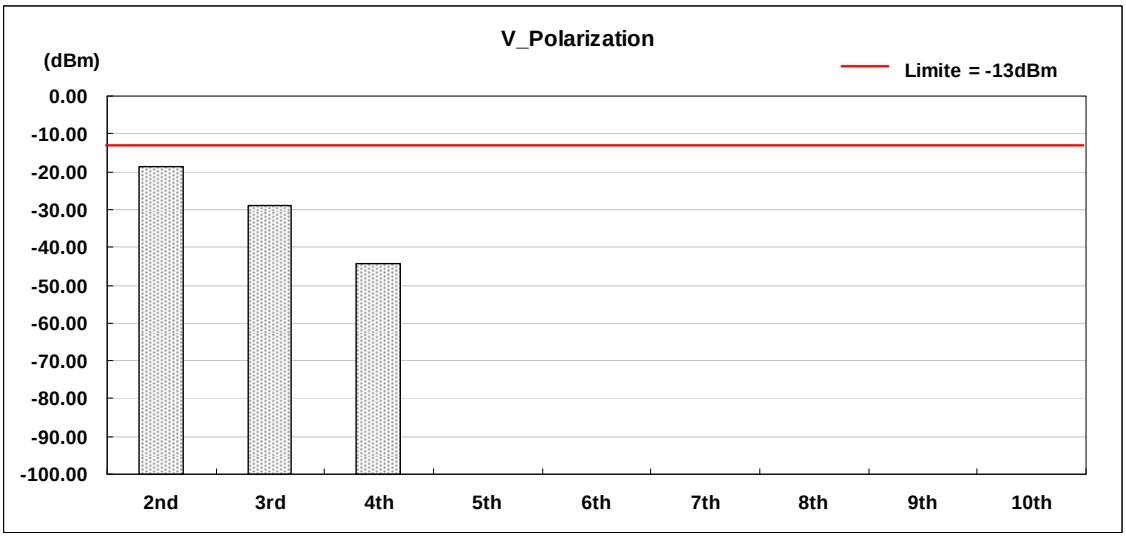
Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Field Strength of Spurious Radiation		
Test Mode	Mode 1: GSM850 Link / CH128	Polarization	Horizontal
Date of Test	02/04/2010	Test Site	TE01

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit (dBm)	S.G Power (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dBm)	Peak Output Power (dBm)
2nd	1648.8	H	-13	-28.42	10.72	0.56	-18.26
3rd	2473.2	H	-13	-35.69	10.66	0.62	-25.65
4th	3297.6	H	-13	-52.88	10.78	0.74	-42.84
5th	4122.0	H	-13	*	*	*	*
6th	4946.4	H	-13	*	*	*	*
7th	5770.8	H	-13	*	*	*	*
8th	6595.2	H	-13	*	*	*	*
9th	7419.6	H	-13	*	*	*	*
10th	8244.0	H	-13	*	*	*	*



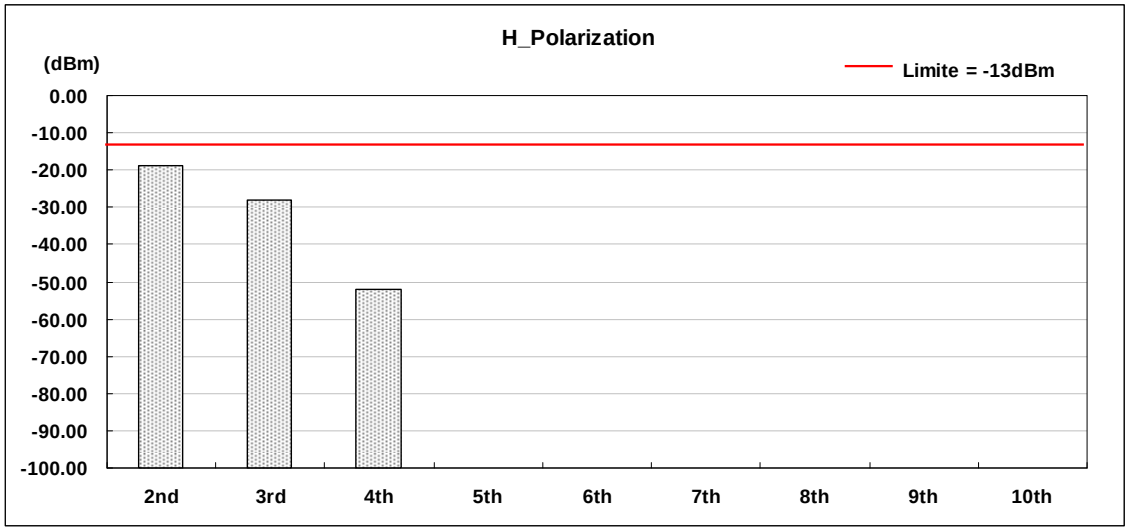
Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Field Strength of Spurious Radiation		
Test Mode	Mode 1: GSM850 Link / CH128	Polarization	Vertical
Date of Test	02/04/2010	Test Site	TE01

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit (dBm)	S.G Power (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dBm)	Peak Output Power (dBm)
2nd	1648.8	V	-13	-28.78	10.72	0.56	-18.62
3rd	2473.2	V	-13	-39.15	10.66	0.62	-29.11
4th	3297.6	V	-13	-54.34	10.78	0.74	-44.30
5th	4122.0	V	-13	*	*	*	*
6th	4946.4	V	-13	*	*	*	*
7th	5770.8	V	-13	*	*	*	*
8th	6595.2	V	-13	*	*	*	*
9th	7419.6	V	-13	*	*	*	*
10th	8244.0	V	-13	*	*	*	*



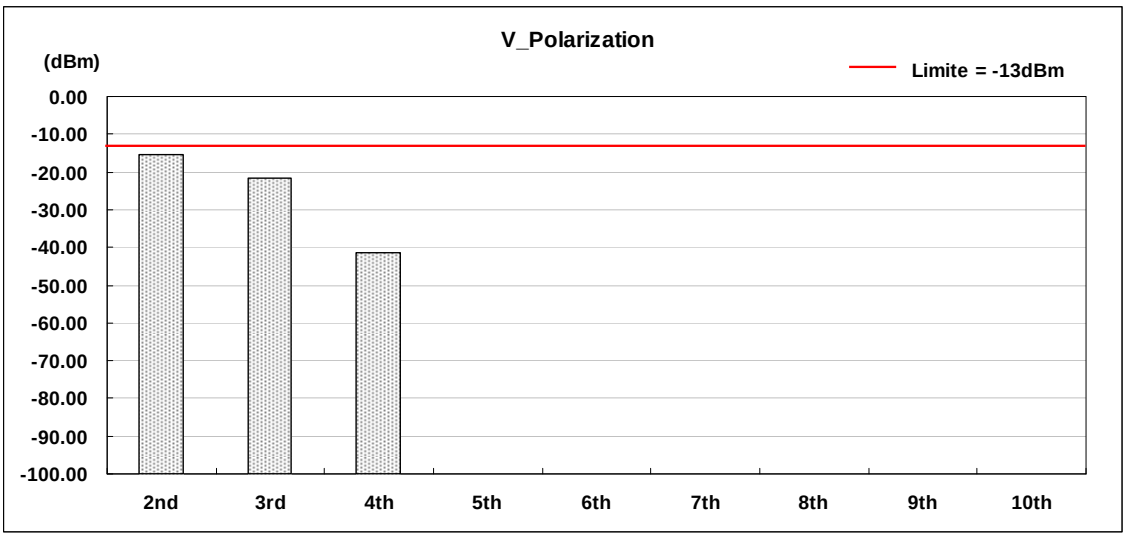
Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Field Strength of Spurious Radiation		
Test Mode	Mode 1: GSM850 Link / CH190	Polarization	Horizontal
Date of Test	02/04/2010	Test Site	TE01

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit (dBm)	S.G Power (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dBm)	Peak Output Power (dBm)
2nd	1673.2	H	-13	-29.11	10.72	0.56	-18.95
3rd	2509.8	H	-13	-38.04	10.66	0.62	-28.00
4th	3346.4	H	-13	-61.99	10.78	0.74	-51.95
5th	4183.0	H	-13	*	*	*	*
6th	5019.6	H	-13	*	*	*	*
7th	5856.2	H	-13	*	*	*	*
8th	6692.8	H	-13	*	*	*	*
9th	7529.4	H	-13	*	*	*	*
10th	8366.0	H	-13	*	*	*	*



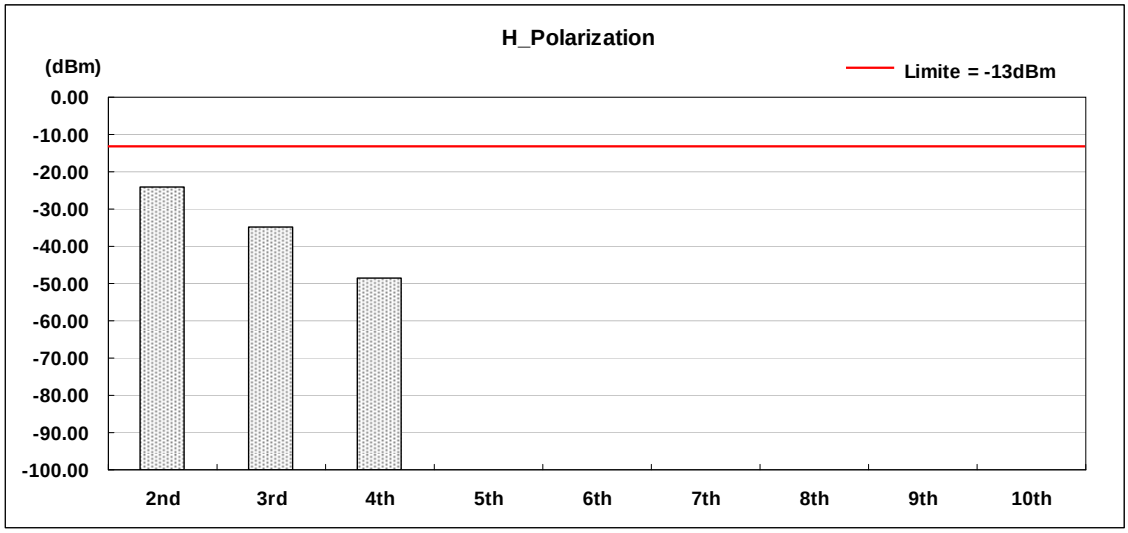
Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Field Strength of Spurious Radiation		
Test Mode	Mode 1: GSM850 Link / CH190	Polarization	Vertical
Date of Test	02/04/2010	Test Site	TE01

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit (dBm)	S.G Power (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dBm)	Peak Output Power (dBm)
2nd	1673.2	V	-13	-25.71	10.72	0.56	-15.55
3rd	2509.8	V	-13	-31.81	10.66	0.62	-21.77
4th	3346.4	V	-13	-51.56	10.78	0.74	-41.52
5th	4183.0	V	-13	*	*	*	*
6th	5019.6	V	-13	*	*	*	*
7th	5856.2	V	-13	*	*	*	*
8th	6692.8	V	-13	*	*	*	*
9th	7529.4	V	-13	*	*	*	*
10th	8366.0	V	-13	*	*	*	*



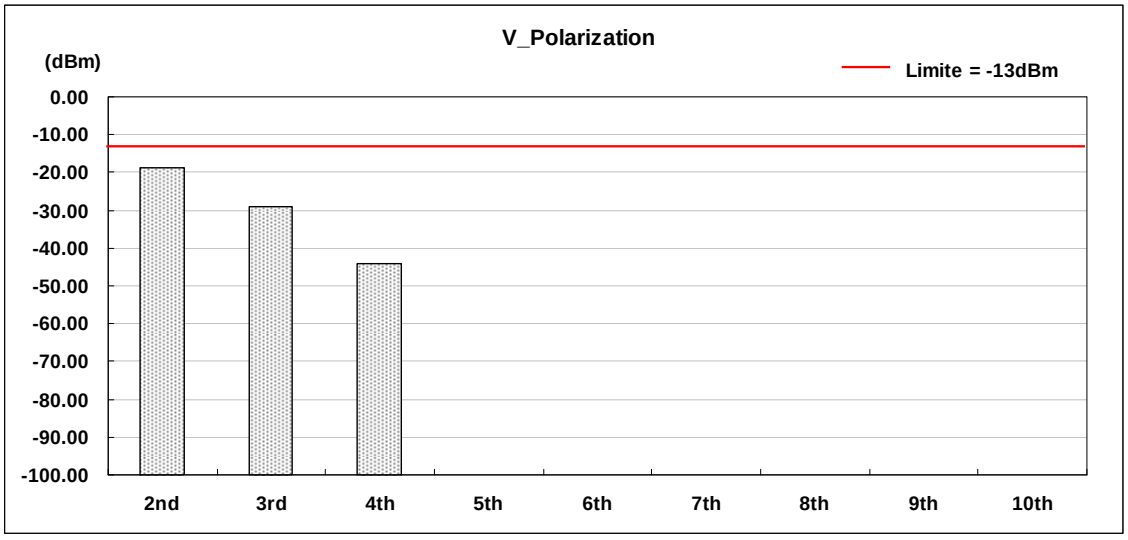
Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Field Strength of Spurious Radiation		
Test Mode	Mode 1: GSM850 Link / CH251	Polarization	Horizontal
Date of Test	02/04/2010	Test Site	TE01

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit (dBm)	S.G Power (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dBm)	Peak Output Power (dBm)
2nd	1697.6	H	-13	-34.31	10.72	0.56	-24.15
3rd	2546.4	H	-13	-44.94	10.66	0.62	-34.90
4th	3395.2	H	-13	-58.72	10.78	0.74	-48.68
5th	4244.0	H	-13	*	*	*	*
6th	5092.8	H	-13	*	*	*	*
7th	5941.6	H	-13	*	*	*	*
8th	6790.4	H	-13	*	*	*	*
9th	7639.2	H	-13	*	*	*	*
10th	8488.0	H	-13	*	*	*	*



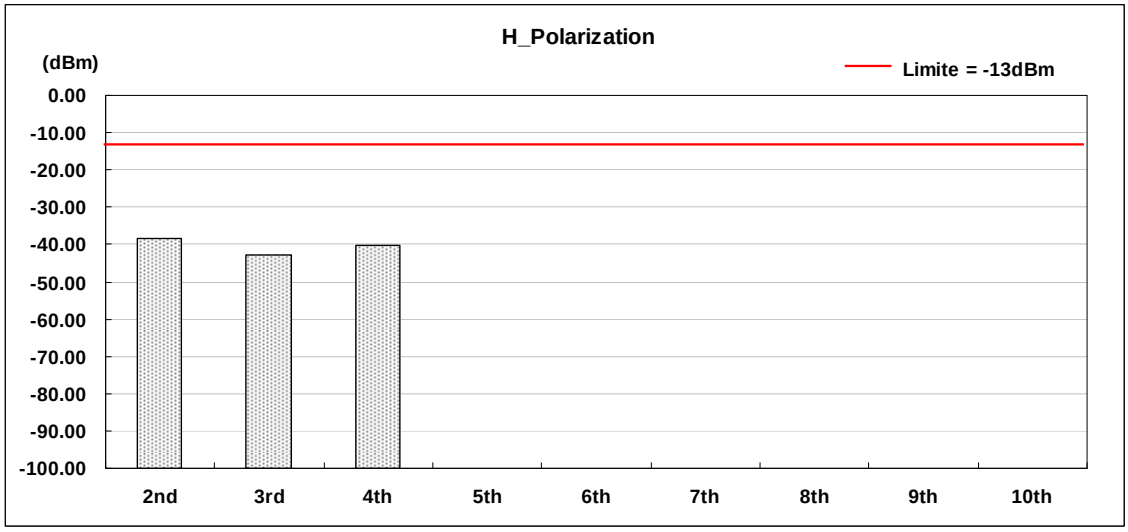
Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Field Strength of Spurious Radiation		
Test Mode	Mode 1: GSM850 Link / CH251	Polarization	Vertical
Date of Test	02/04/2010	Test Site	TE01

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit (dBm)	S.G Power (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dBm)	Peak Output Power (dBm)
2nd	1697.6	V	-13	-28.78	10.72	0.56	-18.62
3rd	2546.4	V	-13	-39.15	10.66	0.62	-29.11
4th	3395.2	V	-13	-54.34	10.78	0.74	-44.30
5th	4244.0	V	-13	*	*	*	*
6th	5092.8	V	-13	*	*	*	*
7th	5941.6	V	-13	*	*	*	*
8th	6790.4	V	-13	*	*	*	*
9th	7639.2	V	-13	*	*	*	*
10th	8488.0	V	-13	*	*	*	*



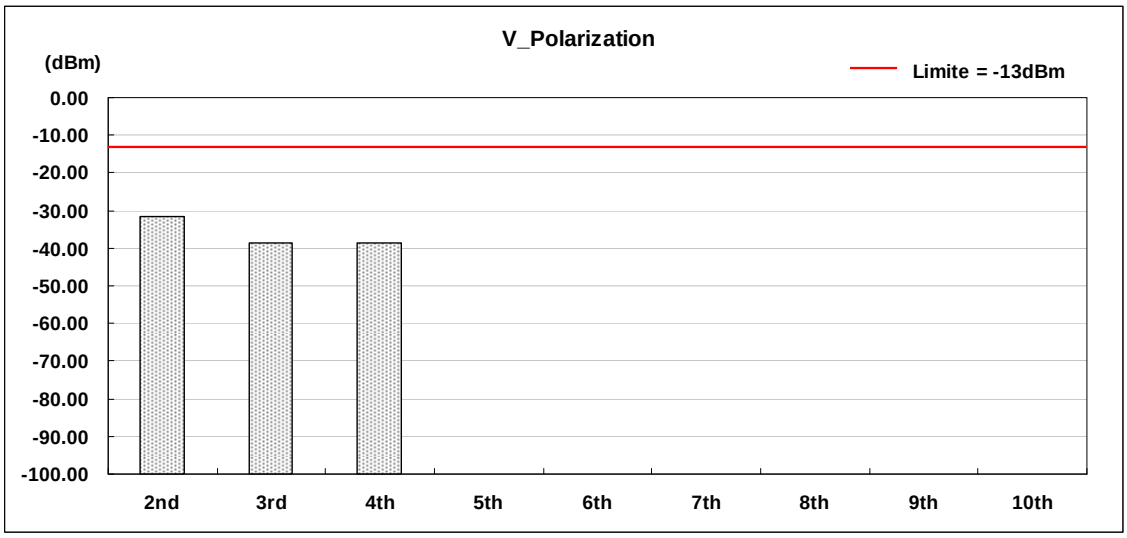
Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Field Strength of Spurious Radiation		
Test Mode	Mode 2: GSM1900 Link / CH512	Polarization	Horizontal
Date of Test	02/04/2010	Test Site	TE01

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit (dBm)	S.G Power (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dBm)	Peak Output Power (dBm)
2nd	3700.4	H	-13	-48.70	10.72	0.56	-38.54
3rd	5550.6	H	-13	-52.72	10.66	0.62	-42.68
4th	7400.8	H	-13	-50.20	10.78	0.74	-40.16
5th	9251.0	H	-13	*	*	*	*
6th	11101.2	H	-13	*	*	*	*
7th	12951.4	H	-13	*	*	*	*
8th	14801.6	H	-13	*	*	*	*
9th	16651.8	H	-13	*	*	*	*
10th	18502.0	H	-13	*	*	*	*



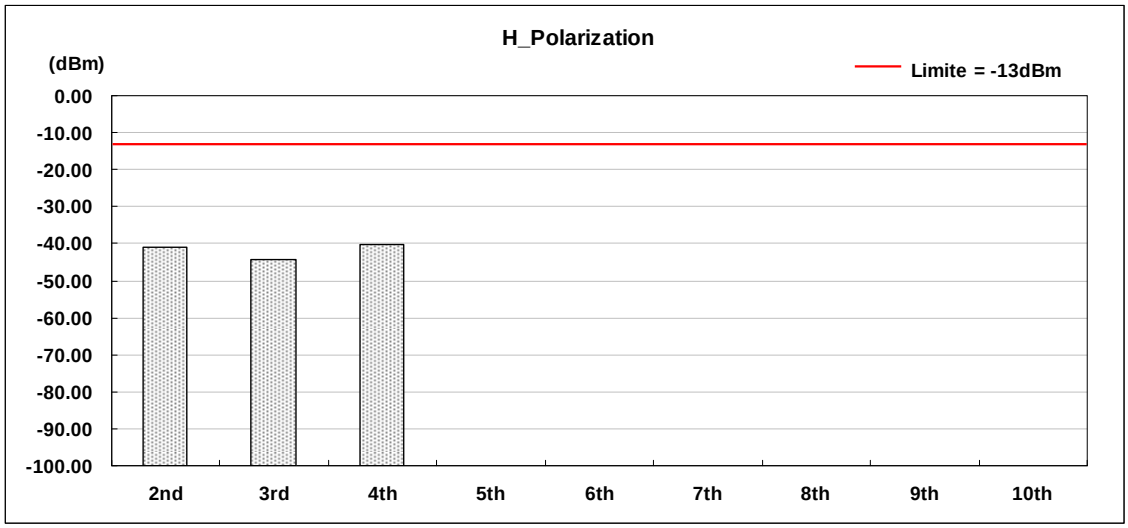
Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Field Strength of Spurious Radiation		
Test Mode	Mode 2: GSM1900 Link / CH512	Polarization	Vertical
Date of Test	02/04/2010	Test Site	TE01

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit (dBm)	S.G Power (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dBm)	Peak Output Power (dBm)
2nd	3700.4	V	-13	-41.62	10.72	0.56	-31.46
3rd	5550.6	V	-13	-48.64	10.66	0.62	-38.60
4th	7400.8	V	-13	-48.54	10.78	0.74	-38.50
5th	9251.0	V	-13	*	*	*	*
6th	11101.2	V	-13	*	*	*	*
7th	12951.4	V	-13	*	*	*	*
8th	14801.6	V	-13	*	*	*	*
9th	16651.8	V	-13	*	*	*	*
10th	18502.0	V	-13	*	*	*	*



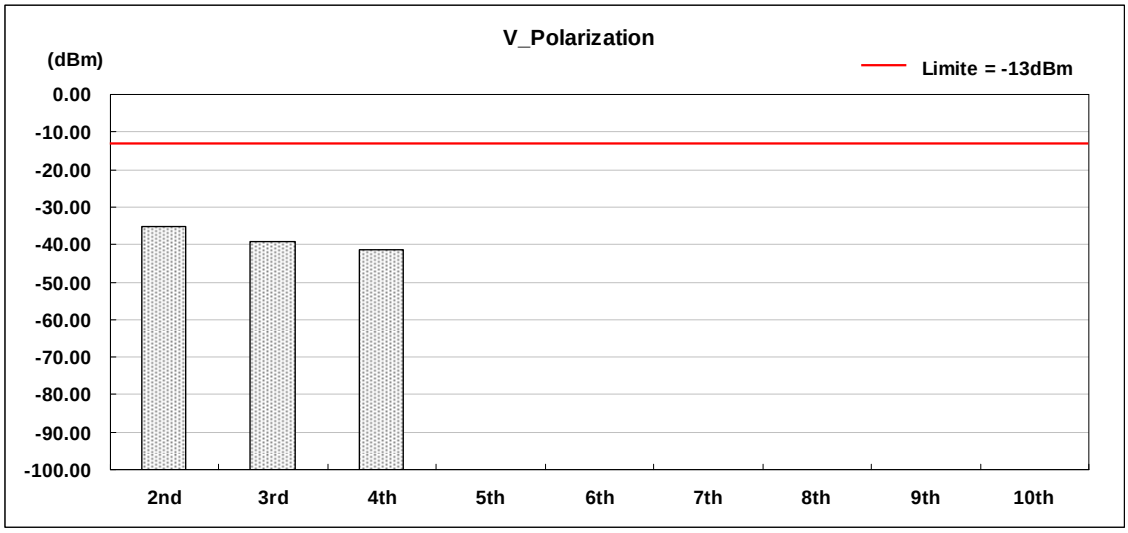
Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Field Strength of Spurious Radiation		
Test Mode	Mode 2: GSM1900 Link / CH661	Polarization	Horizontal
Date of Test	02/04/2010	Test Site	TE01

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit (dBm)	S.G Power (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dBm)	Peak Output Power (dBm)
2nd	3760.0	H	-13	-51.08	10.72	0.56	-40.92
3rd	5640.0	H	-13	-54.18	10.66	0.62	-44.14
4th	7520.0	H	-13	-50.18	10.78	0.74	-40.14
5th	9400.0	H	-13	*	*	*	*
6th	11280.0	H	-13	*	*	*	*
7th	13160.0	H	-13	*	*	*	*
8th	15040.0	H	-13	*	*	*	*
9th	16920.0	H	-13	*	*	*	*
10th	18800.0	H	-13	*	*	*	*



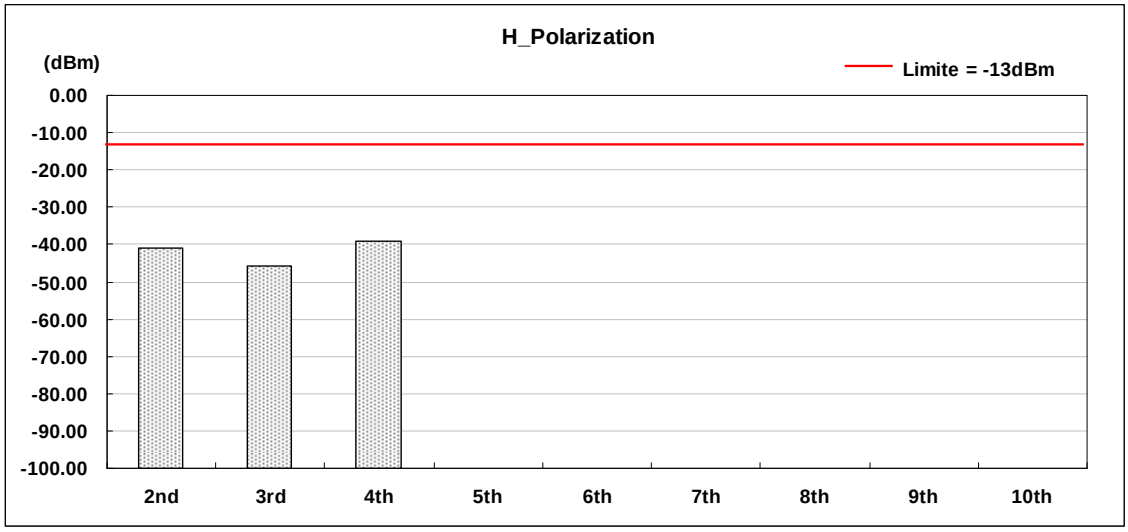
Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Field Strength of Spurious Radiation		
Test Mode	Mode 2: GSM1900 Link / CH661	Polarization	Vertical
Date of Test	02/04/2010	Test Site	TE01

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit (dBm)	S.G Power (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dBm)	Peak Output Power (dBm)
2nd	3760.0	V	-13	-45.32	10.72	0.56	-35.16
3rd	5640.0	V	-13	-49.23	10.66	0.62	-39.19
4th	7520.0	V	-13	-51.30	10.78	0.74	-41.26
5th	9400.0	V	-13	*	*	*	*
6th	11280.0	V	-13	*	*	*	*
7th	13160.0	V	-13	*	*	*	*
8th	15040.0	V	-13	*	*	*	*
9th	16920.0	V	-13	*	*	*	*
10th	18800.0	V	-13	*	*	*	*



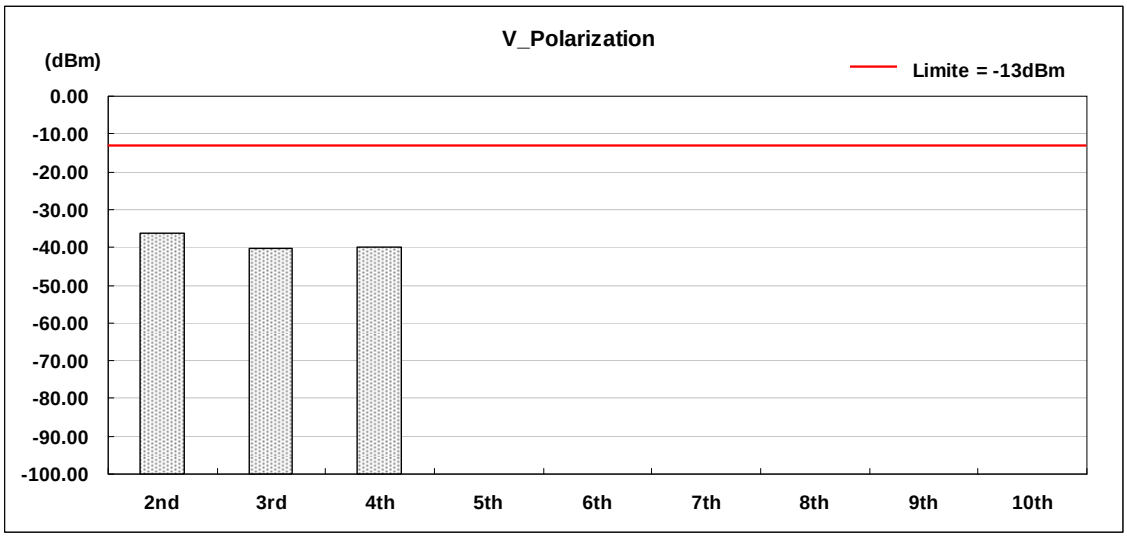
Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Field Strength of Spurious Radiation		
Test Mode	Mode 2: GSM1900 Link / CH810	Polarization	Horizontal
Date of Test	02/04/2010	Test Site	TE01

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit (dBm)	S.G Power (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dBm)	Peak Output Power (dBm)
2nd	3819.6	H	-13	-51.29	10.72	0.56	-41.13
3rd	5729.4	H	-13	-55.97	10.66	0.62	-45.93
4th	7639.2	H	-13	-49.31	10.78	0.74	-39.27
5th	9549.0	H	-13	*	*	*	*
6th	11458.8	H	-13	*	*	*	*
7th	13368.6	H	-13	*	*	*	*
8th	15278.4	H	-13	*	*	*	*
9th	17188.2	H	-13	*	*	*	*
10th	19098.0	H	-13	*	*	*	*



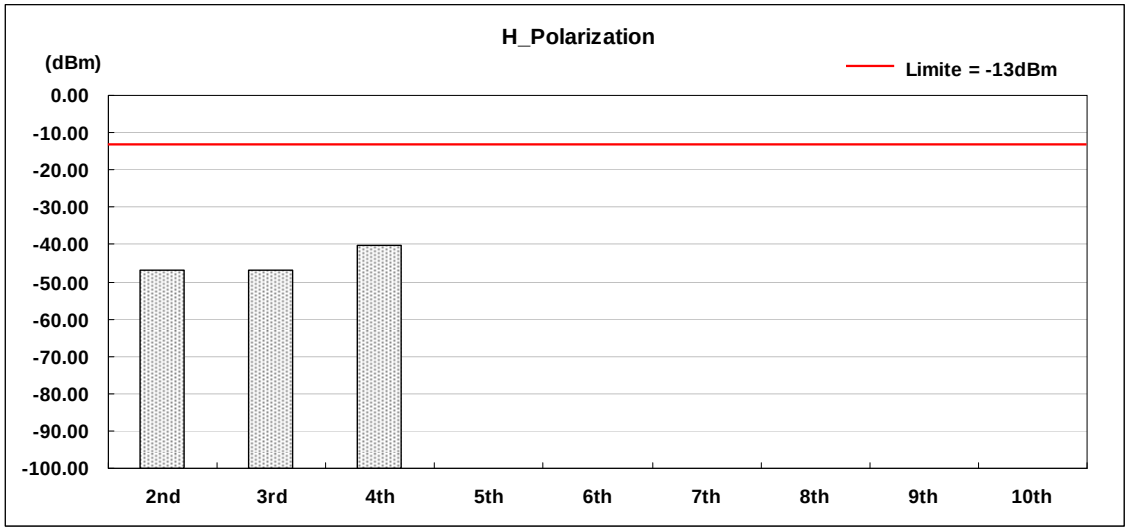
Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Field Strength of Spurious Radiation		
Test Mode	Mode 2: GSM1900 Link / CH810	Polarization	Vertical
Date of Test	02/04/2010	Test Site	TE01

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit (dBm)	S.G Power (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dBm)	Peak Output Power (dBm)
2nd	3819.6	V	-13	-46.45	10.72	0.56	-36.29
3rd	5729.4	V	-13	-50.44	10.66	0.62	-40.40
4th	7639.2	V	-13	-49.83	10.78	0.74	-39.79
5th	9549.0	V	-13	*	*	*	*
6th	11458.8	V	-13	*	*	*	*
7th	13368.6	V	-13	*	*	*	*
8th	15278.4	V	-13	*	*	*	*
9th	17188.2	V	-13	*	*	*	*
10th	19098.0	V	-13	*	*	*	*



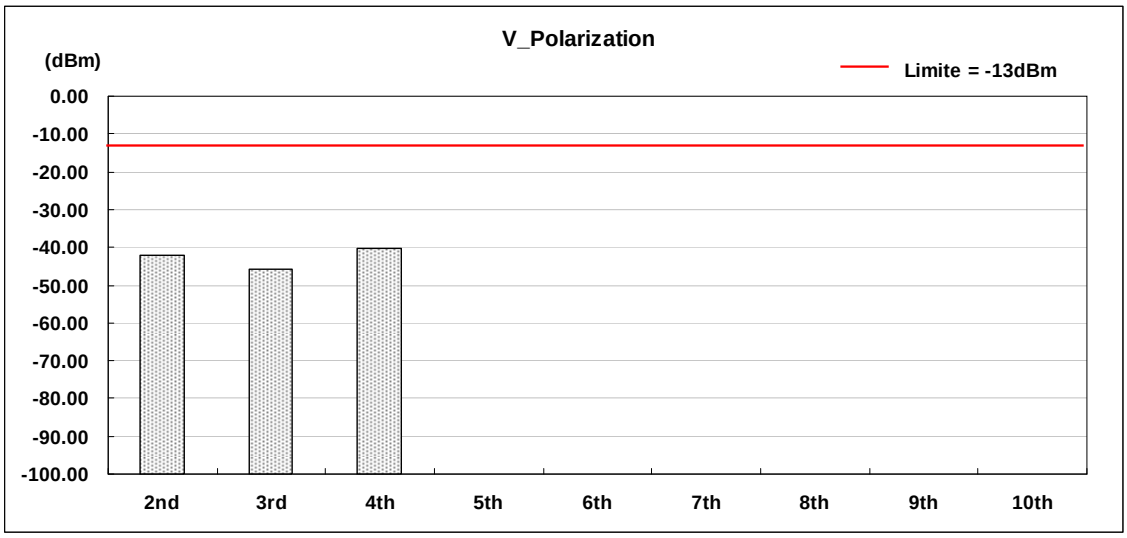
Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Field Strength of Spurious Radiation		
Test Mode	Mode 5: WCDMA Band II Link / CH9262	Polarization	Horizontal
Date of Test	02/04/2010	Test Site	TE01

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit (dBm)	S.G Power (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dBm)	Peak Output Power (dBm)
2nd	3704.8	H	-13	-56.93	10.79	0.58	-46.72
3rd	5557.2	H	-13	-56.87	10.71	0.63	-46.79
4th	7409.6	H	-13	-50.38	10.81	0.78	-40.35
5th	9262.0	H	-13	*	*	*	*
6th	11114.4	H	-13	*	*	*	*
7th	12966.8	H	-13	*	*	*	*
8th	14819.2	H	-13	*	*	*	*
9th	16671.6	H	-13	*	*	*	*
10th	18524.0	H	-13	*	*	*	*



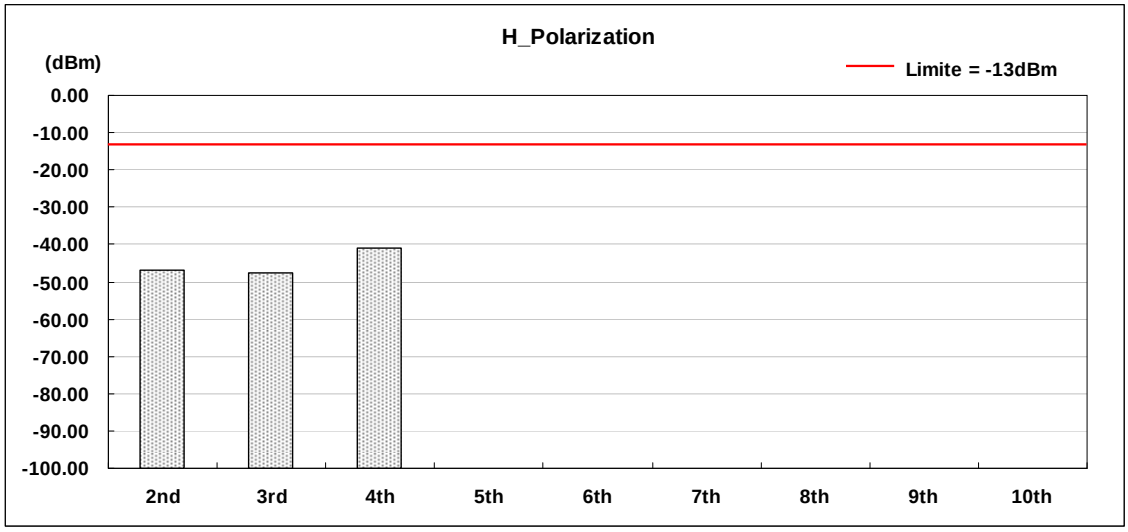
Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Field Strength of Spurious Radiation		
Test Mode	Mode 5: WCDMA Band II Link / CH9262	Polarization	Vertical
Date of Test	02/04/2010	Test Site	TE01

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit (dBm)	S.G Power (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dBm)	Peak Output Power (dBm)
2nd	3704.8	V	-13	-52.31	10.79	0.58	-42.10
3rd	5557.2	V	-13	-55.85	10.71	0.63	-45.77
4th	7409.6	V	-13	-50.23	10.81	0.78	-40.20
5th	9262.0	V	-13	*	*	*	*
6th	11114.4	V	-13	*	*	*	*
7th	12966.8	V	-13	*	*	*	*
8th	14819.2	V	-13	*	*	*	*
9th	16671.6	V	-13	*	*	*	*
10th	18524.0	V	-13	*	*	*	*



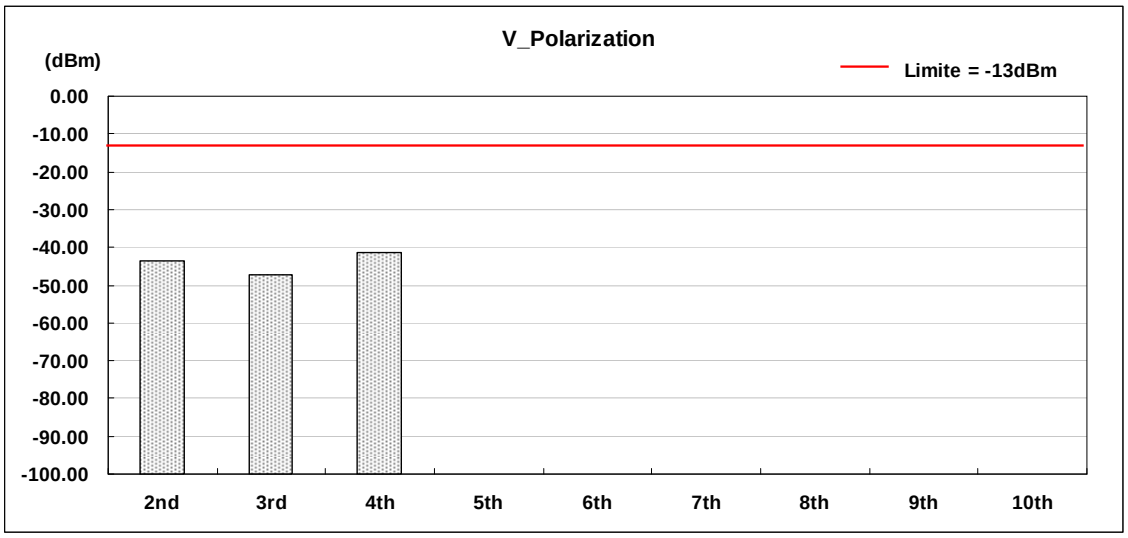
Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Field Strength of Spurious Radiation		
Test Mode	Mode 5: WCDMA Band II Link / CH9400	Polarization	Horizontal
Date of Test	02/04/2010	Test Site	TE01

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit (dBm)	S.G Power (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dBm)	Peak Output Power (dBm)
2nd	3760.0	H	-13	-57.25	10.79	0.58	-47.04
3rd	5640.0	H	-13	-57.51	10.71	0.63	-47.43
4th	7520.0	H	-13	-51.08	10.81	0.78	-41.05
5th	9400.0	H	-13	*	*	*	*
6th	11280.0	H	-13	*	*	*	*
7th	13160.0	H	-13	*	*	*	*
8th	15040.0	H	-13	*	*	*	*
9th	16920.0	H	-13	*	*	*	*
10th	18800.0	H	-13	*	*	*	*



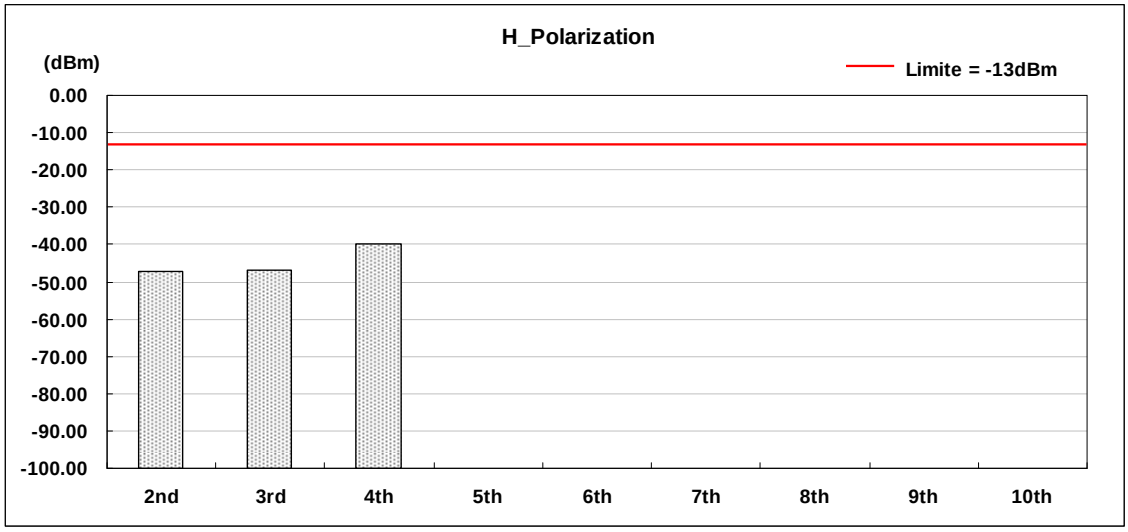
Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Field Strength of Spurious Radiation		
Test Mode	Mode 5: WCDMA Band II Link / CH9400	Polarization	Vertical
Date of Test	02/04/2010	Test Site	TE01

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit (dBm)	S.G Power (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dBm)	Peak Output Power (dBm)
2nd	3760.0	V	-13	-53.90	10.79	0.58	-43.69
3rd	5640.0	V	-13	-57.19	10.71	0.63	-47.11
4th	7520.0	V	-13	-51.45	10.81	0.78	-41.42
5th	9400.0	V	-13	*	*	*	*
6th	11280.0	V	-13	*	*	*	*
7th	13160.0	V	-13	*	*	*	*
8th	15040.0	V	-13	*	*	*	*
9th	16920.0	V	-13	*	*	*	*
10th	18800.0	V	-13	*	*	*	*



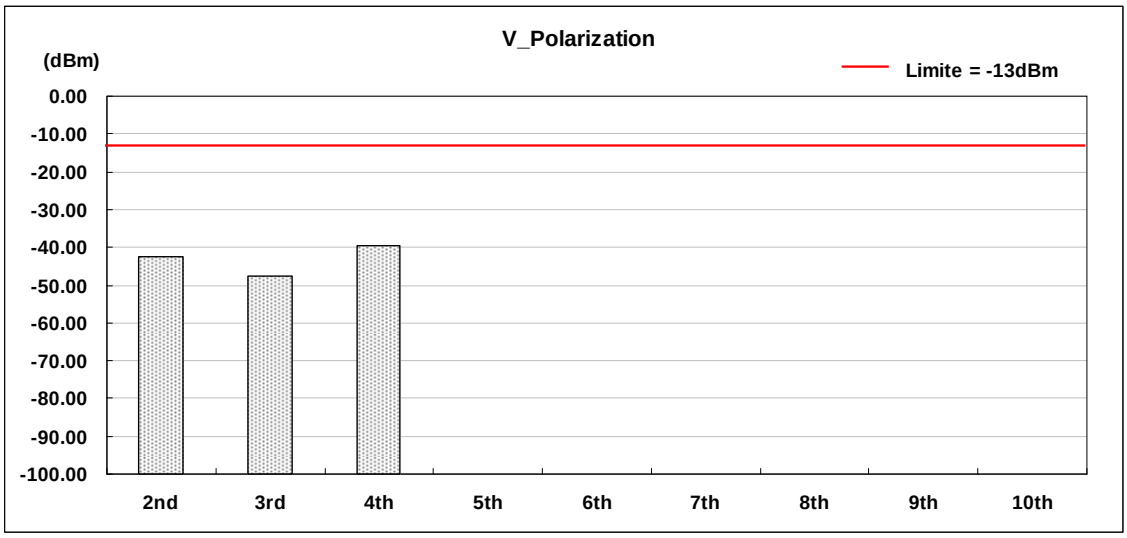
Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Field Strength of Spurious Radiation		
Test Mode	Mode 5: WCDMA Band II Link / CH9538	Polarization	Horizontal
Date of Test	02/04/2010	Test Site	TE01

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit (dBm)	S.G Power (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dBm)	Peak Output Power (dBm)
2nd	3815.2	H	-13	-57.57	10.79	0.58	-47.36
3rd	5722.8	H	-13	-56.94	10.71	0.63	-46.86
4th	7630.4	H	-13	-49.87	10.81	0.78	-39.84
5th	9538.0	H	-13	*	*	*	*
6th	11445.6	H	-13	*	*	*	*
7th	13353.2	H	-13	*	*	*	*
8th	15260.8	H	-13	*	*	*	*
9th	17168.4	H	-13	*	*	*	*
10th	19076.0	H	-13	*	*	*	*



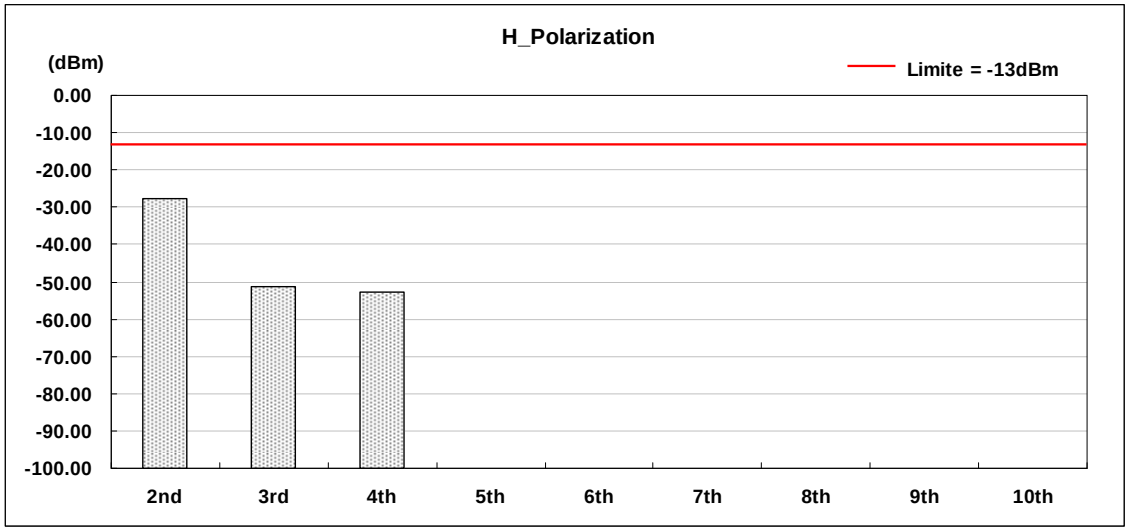
Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Field Strength of Spurious Radiation		
Test Mode	Mode 5: WCDMA Band II Link / CH9538	Polarization	Vertical
Date of Test	02/04/2010	Test Site	TE01

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit (dBm)	S.G Power (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dBm)	Peak Output Power (dBm)
2nd	3815.2	V	-13	-52.67	10.79	0.58	-42.46
3rd	5722.8	V	-13	-57.60	10.71	0.63	-47.52
4th	7630.4	V	-13	-49.76	10.81	0.78	-39.73
5th	9538.0	V	-13	*	*	*	*
6th	11445.6	V	-13	*	*	*	*
7th	13353.2	V	-13	*	*	*	*
8th	15260.8	V	-13	*	*	*	*
9th	17168.4	V	-13	*	*	*	*
10th	19076.0	V	-13	*	*	*	*



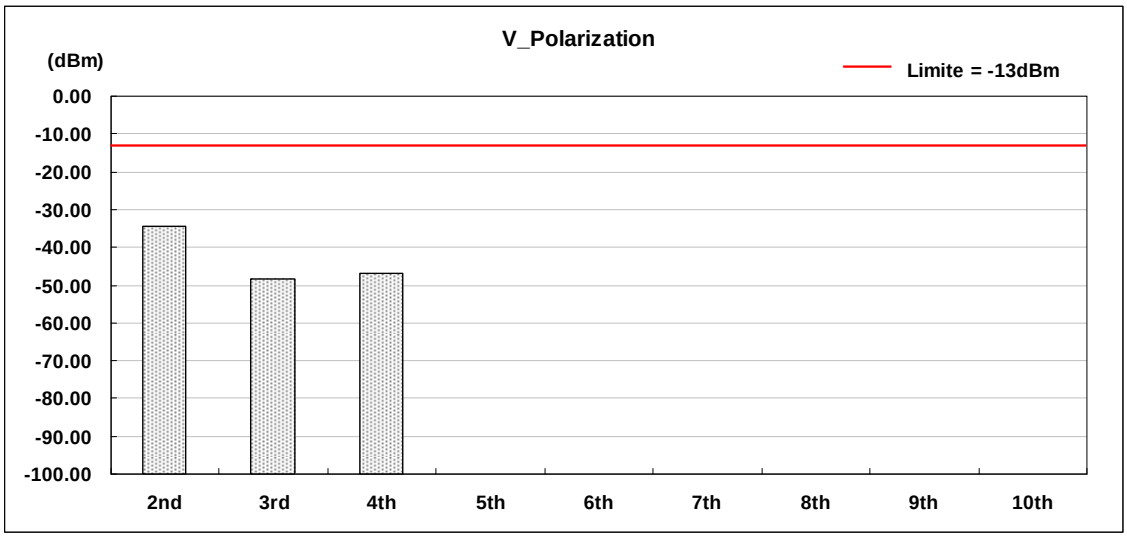
Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Field Strength of Spurious Radiation		
Test Mode	Mode 6: WCDMA Band V Link / CH4132	Polarization	Horizontal
Date of Test	02/04/2010	Test Site	TE01

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit (dBm)	S.G Power (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dBm)	Peak Output Power (dBm)
2nd	1652.8	H	-13	-37.94	10.74	0.59	-27.79
3rd	2479.2	H	-13	-61.23	10.68	0.63	-51.18
4th	3305.6	H	-13	-62.67	10.80	0.78	-52.65
5th	4132.0	H	-13	*	*	*	*
6th	4958.4	H	-13	*	*	*	*
7th	5784.8	H	-13	*	*	*	*
8th	6611.2	H	-13	*	*	*	*
9th	7437.6	H	-13	*	*	*	*
10th	8264.0	H	-13	*	*	*	*



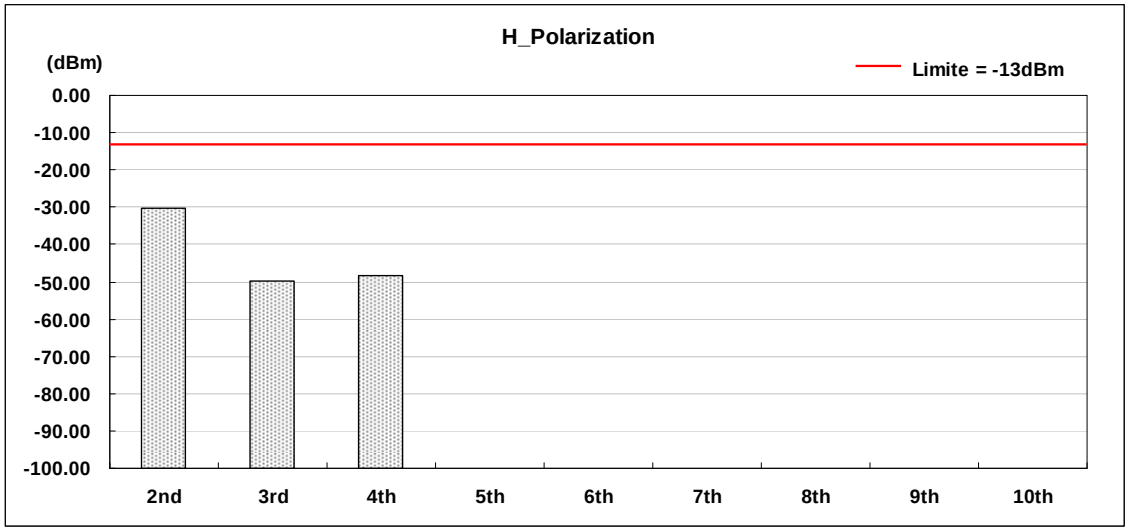
Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Field Strength of Spurious Radiation		
Test Mode	Mode 6: WCDMA Band V Link / CH4132	Polarization	Vertical
Date of Test	02/04/2010	Test Site	TE01

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit (dBm)	S.G Power (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dBm)	Peak Output Power (dBm)
2nd	1652.8	V	-13	-44.45	10.74	0.59	-34.30
3rd	2479.2	V	-13	-58.23	10.68	0.63	-48.18
4th	3305.6	V	-13	-56.96	10.80	0.78	-46.94
5th	4132.0	V	-13	*	*	*	*
6th	4958.4	V	-13	*	*	*	*
7th	5784.8	V	-13	*	*	*	*
8th	6611.2	V	-13	*	*	*	*
9th	7437.6	V	-13	*	*	*	*
10th	8264.0	V	-13	*	*	*	*



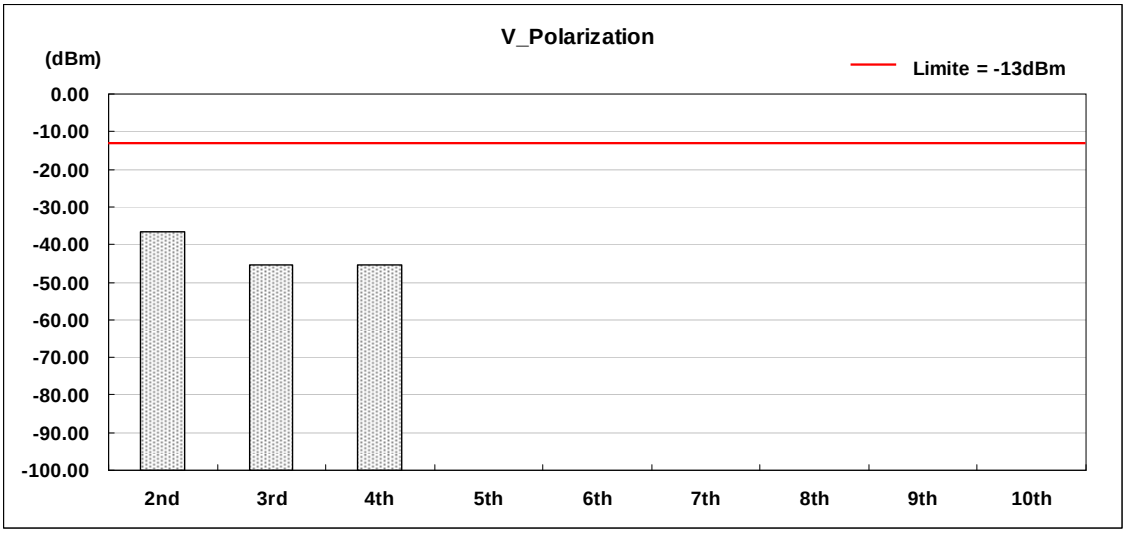
Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Field Strength of Spurious Radiation		
Test Mode	Mode 6: WCDMA Band V Link / CH4183	Polarization	Horizontal
Date of Test	02/04/2010	Test Site	TE01

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit (dBm)	S.G Power (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dBm)	Peak Output Power (dBm)
2nd	1673.2	H	-13	-40.55	10.74	0.59	-30.40
3rd	2509.8	H	-13	-59.83	10.68	0.63	-49.78
4th	3346.4	H	-13	-58.30	10.80	0.78	-48.28
5th	4183.0	H	-13	*	*	*	*
6th	5019.6	H	-13	*	*	*	*
7th	5856.2	H	-13	*	*	*	*
8th	6692.8	H	-13	*	*	*	*
9th	7529.4	H	-13	*	*	*	*
10th	8366.0	H	-13	*	*	*	*



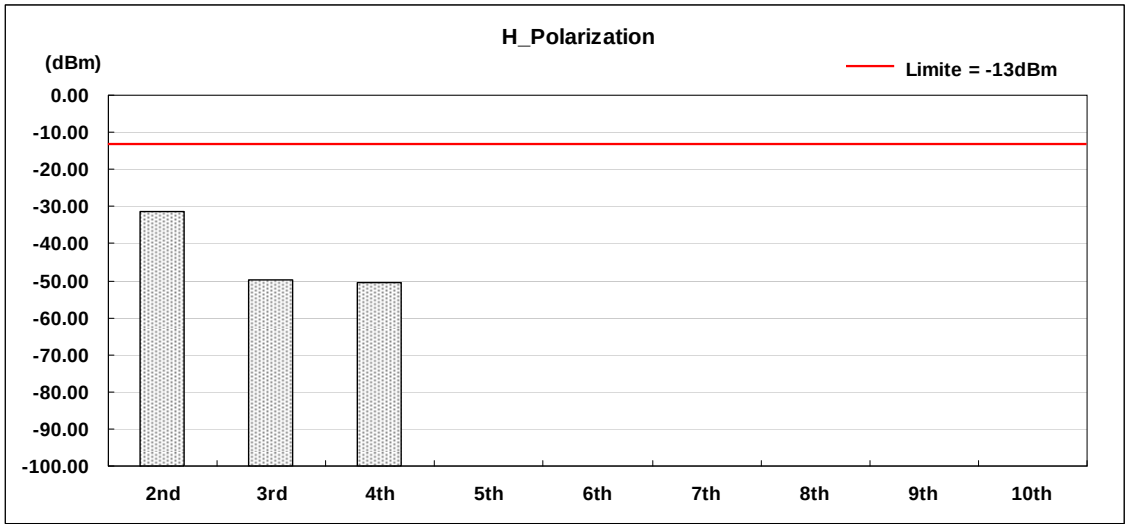
Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Field Strength of Spurious Radiation		
Test Mode	Mode 6: WCDMA Band V Link / CH4183	Polarization	Vertical
Date of Test	02/04/2010	Test Site	TE01

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit (dBm)	S.G Power (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dBm)	Peak Output Power (dBm)
2nd	1673.2	V	-13	-46.96	10.74	0.59	-36.81
3rd	2509.8	V	-13	-55.54	10.68	0.63	-45.49
4th	3346.4	V	-13	-55.27	10.80	0.78	-45.25
5th	4183.0	V	-13	*	*	*	*
6th	5019.6	V	-13	*	*	*	*
7th	5856.2	V	-13	*	*	*	*
8th	6692.8	V	-13	*	*	*	*
9th	7529.4	V	-13	*	*	*	*
10th	8366.0	V	-13	*	*	*	*



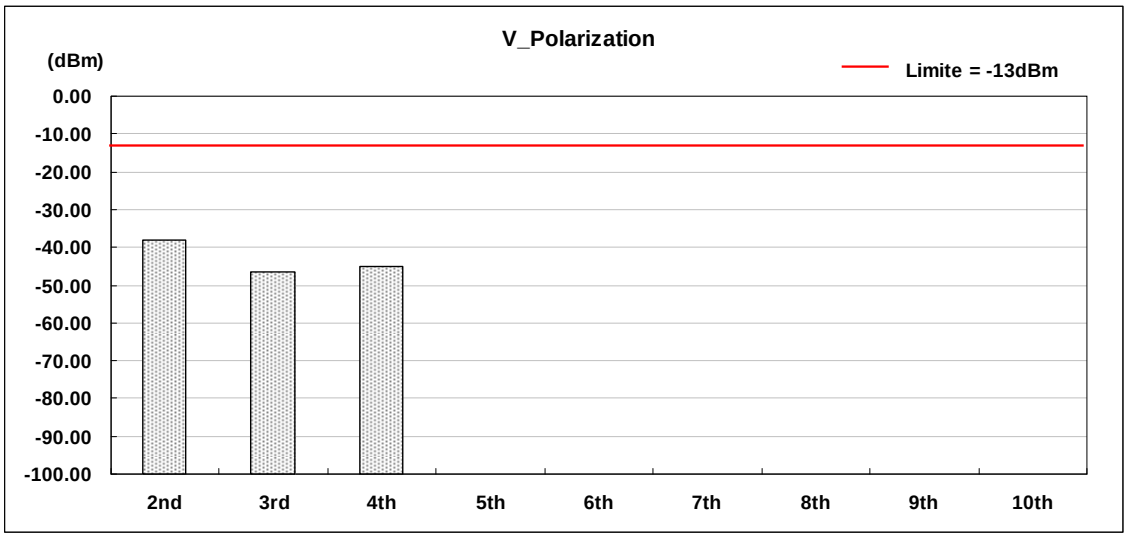
Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Field Strength of Spurious Radiation		
Test Mode	Mode 6: WCDMA Band V Link / CH4233	Polarization	Horizontal
Date of Test	02/04/2010	Test Site	TE01

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit (dBm)	S.G Power (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dBm)	Peak Output Power (dBm)
2nd	1693.2	H	-13	-41.53	10.74	0.59	-31.38
3rd	2539.8	H	-13	-59.69	10.68	0.63	-49.64
4th	3386.4	H	-13	-60.44	10.80	0.78	-50.42
5th	4233.0	H	-13	*	*	*	*
6th	5079.6	H	-13	*	*	*	*
7th	5926.2	H	-13	*	*	*	*
8th	6772.8	H	-13	*	*	*	*
9th	7619.4	H	-13	*	*	*	*
10th	8466.0	H	-13	*	*	*	*



Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Field Strength of Spurious Radiation		
Test Mode	Mode 6: WCDMA Band V Link / CH4233	Polarization	Vertical
Date of Test	02/04/2010	Test Site	TE01

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit (dBm)	S.G Power (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dBm)	Peak Output Power (dBm)
2nd	1693.2	V	-13	-48.38	10.74	0.59	-38.23
3rd	2539.8	V	-13	-56.52	10.68	0.63	-46.47
4th	3386.4	V	-13	-54.91	10.80	0.78	-44.89
5th	4233.0	V	-13	*	*	*	*
6th	5079.6	V	-13	*	*	*	*
7th	5926.2	V	-13	*	*	*	*
8th	6772.8	V	-13	*	*	*	*
9th	7619.4	V	-13	*	*	*	*
10th	8466.0	V	-13	*	*	*	*



7 Frequency Stability (Temperature Variation) Test

7.1. Limit

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center frequency.

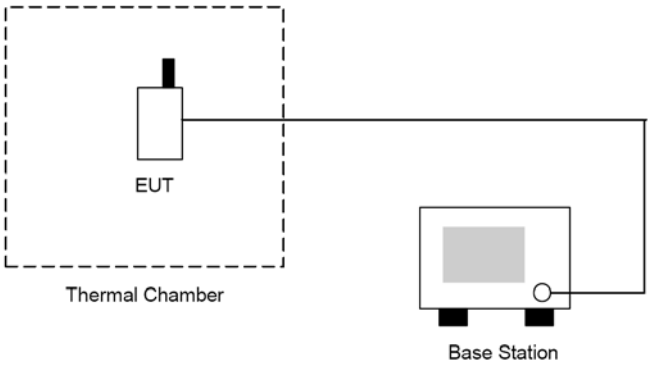
7.2. Test Instruments

Describe	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Universal Radio Communication Tester	ROHDE & SCHWARZ	CMU200	109369	07/29/2009	(2)
Temperature & Humidity Chamber	GIANT FORCE	GHT-225-70-1	GF-94454-1	07/24/2009	(2)
Test Site	ATL	TE02	TE02	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

7.3. Setup



7.4. Test Procedure

The measurement is made according to FCC rules part 22 and 24:

1. The EUT and test equipment were set up as shown on the following section.
2. With all power removed, the temperature was decreased to -30℃ and permitted to stabilize for three hours. Power was applied and the maximum change in frequency was note within one minute.
3. With power OFF, the temperature was raised in 10℃ steps. The sample was permitted to stabilize at each step for at least one-half hour. Power was applied and the maximum frequency change was noted within one minute.
4. The temperature tests were performed for the worst case.
5. Test data was recorded.

7.5. Uncertainty

The measurement uncertainty is defined as for Frequency Stability (Temperature Variation) measurement is ± 10Hz.

7.6. Test Result

Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Frequency Stability (Temperature Variation)		
Test Mode	Mode 1: GSM850 Link		
Date of Test	02/04/2010	Test Site	TE02

Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Result
-30	39.92	**0.048**	±2.5	Pass
-20	40.44	**0.048**	±2.5	Pass
-10	39.68	**0.047**	±2.5	Pass
0	41.29	**0.049**	±2.5	Pass
10	39.51	**0.047**	±2.5	Pass
20	38.42	**0.046**	±2.5	Pass
30	36.76	**0.044**	±2.5	Pass
40	36.35	**0.043**	±2.5	Pass
50	35.48	**0.042**	±2.5	Pass

Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Frequency Stability (Temperature Variation)		
Test Mode	Mode 2: GSM1900 Link		
Date of Test	02/04/2010	Test Site	TE02

Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Result
-30	32.32	**0.017**	±2.5	Pass
-20	30.41	**0.016**	±2.5	Pass
-10	39.59	**0.021**	±2.5	Pass
0	34.78	**0.019**	±2.5	Pass
10	36.22	**0.019**	±2.5	Pass
20	34.75	**0.018**	±2.5	Pass
30	32.72	**0.017**	±2.5	Pass
40	34.78	**0.019**	±2.5	Pass
50	32.32	**0.017**	±2.5	Pass

Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Frequency Stability (Temperature Variation)		
Test Mode	Mode 5: WCDMA Band II Link		
Date of Test	02/04/2010	Test Site	TE02

Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Result
-30	34.96	**0.042**	±2.5	Pass
-20	32.77	**0.039**	±2.5	Pass
-10	30.85	**0.037**	±2.5	Pass
0	25.26	**0.030**	±2.5	Pass
10	35.48	**0.042**	±2.5	Pass
20	32.32	**0.039**	±2.5	Pass
30	34.71	**0.041**	±2.5	Pass
40	32.12	**0.038**	±2.5	Pass
50	31.98	**0.038**	±2.5	Pass

Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Test Item	Frequency Stability (Temperature Variation)		
Test Mode	Mode 6: WCDMA Band V Link		
Date of Test	02/04/2010	Test Site	TE02

Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Result
-30	34.77	**0.018**	±2.5	Pass
-20	32.59	**0.017**	±2.5	Pass
-10	30.18	**0.016**	±2.5	Pass
0	29.49	**0.016**	±2.5	Pass
10	28.54	**0.015**	±2.5	Pass
20	29.51	**0.016**	±2.5	Pass
30	29.66	**0.016**	±2.5	Pass
40	29.48	**0.016**	±2.5	Pass
50	29.74	**0.016**	±2.5	Pass

8 Frequency Stability (Voltage Variation) Test

8.1. Limit

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center frequency.

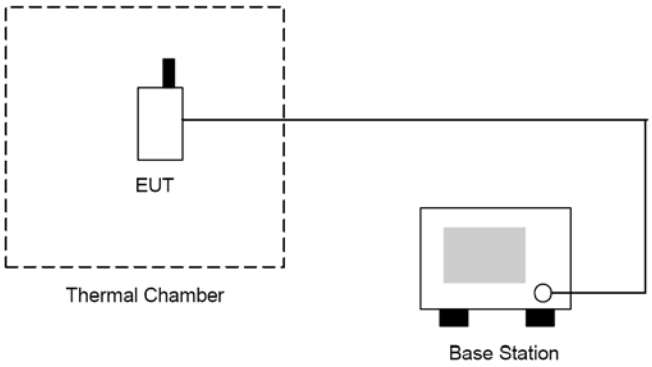
8.2. Test Instruments

Describe	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Universal Radio Communication Tester	ROHDE & SCHWARZ	CMU200	109369	07/29/2009	(2)
Temperature & Humidity Chamber	GIANT FORCE	GHT-225-70-1	GF-94454-1	07/24/2009	(2)
Test Site	ATL	TE02	TE02	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

8.3. Setup



8.4. Test Procedure

1. The EUT was placed in a temperature chamber at 25±5 ℃ and connected as the following section.
2. The power supply voltage to the EUT was varied from BEP to 115% of the nominal value measured at the input to the EUT.
3. The variation in frequency was measured for the worst case.

8.5. Uncertainty

The measurement uncertainty is defined as for Frequency Stability (Voltage Variation) measurement is ± 10Hz.

8.6. Test Result

Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module				
Test Item	Frequency Stability (Voltage Variation)				
Test Mode	Mode 1: GSM850 Link				
Date of Test	02/04/2010	Test Site	TE02		
Level	Voltage [V]	Deviation [Hz]	Deviation [ppm]	Limit [ppm]	Result
Battery full point	4.20	40.19	**0.048**	±2.5	Pass
Normal	3.80	39.21	**0.047**	±2.5	Pass
Battery cut-off point	3.50	39.39	**0.047**	±2.5	Pass

Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module				
Test Item	Frequency Stability (Voltage Variation)				
Test Mode	Mode 2: GSM1900 Link				
Date of Test	02/04/2010	Test Site	TE02		
Level	Voltage [V]	Deviation [Hz]	Deviation [ppm]	Limit [ppm]	Result
Battery full point	4.20	39.58	**0.021**	±2.5	Pass
Normal	3.80	38.42	**0.020**	±2.5	Pass
Battery cut-off point	3.50	39.19	**0.021**	±2.5	Pass

Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module				
Test Item	Frequency Stability (Voltage Variation)				
Test Mode	Mode 5: WCDMA Band II Link				
Date of Test	02/04/2010	Test Site	TE02		
Level	Voltage [V]	Deviation [Hz]	Deviation [ppm]	Limit [ppm]	Result
Battery full point	4.20	39.61	**0.047**	±2.5	Pass
Normal	3.80	41.62	**0.050**	±2.5	Pass
Battery cut-off point	3.50	39.49	**0.047**	±2.5	Pass

Product	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module				
Test Item	Frequency Stability (Voltage Variation)				
Test Mode	Mode 6: WCDMA Band V Link				
Date of Test	02/04/2010	Test Site	TE02		
Level	Voltage [V]	Deviation [Hz]	Deviation [ppm]	Limit [ppm]	Result
Battery full point	4.20	40.22	**0.021**	±2.5	Pass
Normal	3.80	41.49	**0.022**	±2.5	Pass
Battery cut-off point	3.50	39.53	**0.021**	±2.5	Pass

9 AC Power Conducted Emissions Test

9.1. Limit

Frequency range (MHz)	Limits (dBuV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5.0	56	46
5.0 to 30	60	50

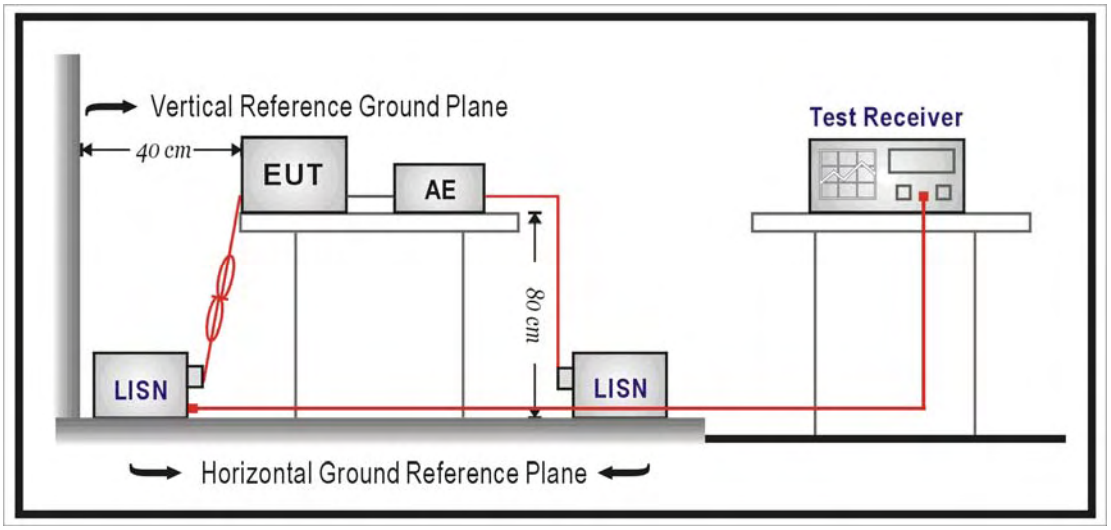
9.2. Test Instruments

Describe	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Test Receiver	R&S	ESCI	100722	10/08/2009	(1)
LISN	EMCO	3816/2 SH	00060110	06/05/2009	(1)
LISN	EMCO	3816/2 SH	00060111	06/29/2009	(1)
Transient Limiter	ELECTRO-METRICS	EM-7600	777	09/22/2009	(1)
Test Site	ATL	TE02	TE02	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

9.3. Setup



9.4. Test Procedure

The measurement is made according to FCC rules15.207:

The power line conducted emission measurements were performed in a shielded enclosure. The EUT was assembled on a wooden table which is 80 centimeters high, was placed 40 centimeters from the back wall and at least 1 meter from the sidewall.

Power was fed to the EUT from the public utility power grid through a line filter and EMCO Model 3162/2 SH Line Impedance Stabilization Networks (LISN). The LISN housing, measuring instrumentation case, ground plane, etc., were electrically bonded together at the same RF potential. The Spectrum analyzer was connected to the AC line through an isolation transformer. The 50-ohm output of the LISN was connected to the spectrum analyzer directly. Conducted emission levels were in the CISPR quasi-peak detection mode. The analyzer's 6 dB bandwidth was set to 9 KHz. No post-detector video filter was used.

The spectrum was scanned from 150 KHz to 30 MHz. The physical arrangement of the test system and associated cabling was varied (within the scope of arrangements likely to be encountered in actual use) to determine the effect on the unit's emanations in amplitude and frequency. All spurious emission frequencies were observed. The highest emission amplitudes relative to the appropriate limit were measured and have been recorded in section 10.6.

9.5. Uncertainty

The measurement uncertainty is defined as for AC power conducted emission measurement is ± 2.24 dB.

9.6. Test Result

Not applicable.