6. MAXIMUM OUTPUT POWER TEST

6.1 Applied procedures / limit

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Maximum Output Power	1 watt or 30dBm	5725 - 5825	PASS

6.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	P-series Power meter	Agilent	N1911A	MY45100473	Apr. 25, 2014
2	Wireband Power sensor	Agilent	N1921A	MY51100041	Apr. 25, 2014

Remark: “N/A” denotes no model name, serial no. or calibration specified.
All calibration period of Equipment List is One Year.

6.1.2 TEST PROCEDURE

a. The EUT was directly connected to the power meter and antenna output port as show in the block diagram below,
b. The maximum peak conducted output power was performed in accordance with method 9.1.3 of FCC KDB 558074 D01 DTS Meas Guidance v03r01(A,N20,N40 mode) and 662911 D01 Multiple Transmitter Output v01r02(N20,N40 mode)

6.1.3 DEVIATION FROM STANDARD

No deviation.

6.1.4 TEST SETUP

6.1.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

6.1.6 TEST RESULTS

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 ℃	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX A Mode /CH149, CH157, CH165		

ANT 0				
Test Channel	Frequency (MHz)	Maximum Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH149	5745 MHz	25.13	30	1
CH157	5785 MHz	25.11	30	1
CH165	5825 MHz	25.28	30	1

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 ℃	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N20 Mode /CH149, CH157, CH165		

ANT 0				
Test Channel	Frequency (MHz)	Maximum Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH149	5745 MHz	25.23	30	1
CH157	5785 MHz	25.21	30	1
CH165	5825 MHz	25.19	30	1

ANT 1				
Test Channel	Frequency (MHz)	Maximum Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH149	5745 MHz	25.16	30	1
CH157	5785 MHz	25.19	30	1
CH165	5825 MHz	25.11	30	1

ANT 2				
Test Channel	Frequency (MHz)	Maximum Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH149	5745 MHz	25.26	30	1
CH157	5785 MHz	25.12	30	1
CH165	5825 MHz	25.16	30	1

ANT 0 + ANT 1 + ANT 2				
Test Channel	Frequency (MHz)	Maximum Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH149	5745 MHz	29.98	30	1
CH157	5785 MHz	29.94	30	1
CH165	5825 MHz	29.92	30	1

Note: The EUT incorporates a MIMO function. Physically, the EUT provides three completed transmitters and thee receivers (3T3R), all transmit signals are completely uncorrelated, then, Direction gain = GANT, that is Directional gain=5

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 ℃	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N40 Mode /CH151, CH159		

ANT 0				
Test Channel	Frequency (MHz)	Maximum Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH151	5755 MHz	25.13	30	1
CH159	5795 MHz	25.16	30	1

ANT 1				
Test Channel	Frequency (MHz)	Maximum Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH151	5755 MHz	25.19	30	1
CH159	5795 MHz	25.14	30	1

ANT 2				
Test Channel	Frequency (MHz)	Maximum Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH151	5755 MHz	25.21	30	1
CH159	5795 MHz	25.28	30	1

ANT 0 + ANT 1 + ANT 2				
Test Channel	Frequency (MHz)	Maximum Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH151	5755 MHz	29.94	30	1
CH159	5795 MHz	29.96	30	1

Note: The EUT incorporates a MIMO function. Physically, the EUT provides three completed transmitters and thee receivers (3T3R), all transmit signals are completely uncorrelated, then, Direction gain = G_{ANT}, that is Directional gain=5.

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 ℃	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N20 Mode /CH149, CH157, CH165		

ANT 0				
Test Channel	Frequency (MHz)	Maximum Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH149	5745 MHz	25.22	30	1
CH157	5785 MHz	25.16	30	1
CH165	5825 MHz	25.16	30	1

ANT 1				
Test Channel	Frequency (MHz)	Maximum Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH149	5745 MHz	25.18	30	1
CH157	5785 MHz	25.21	30	1
CH165	5825 MHz	25.14	30	1

ANT 2				
Test Channel	Frequency (MHz)	Maximum Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH149	5745 MHz	25.26	30	1
CH157	5785 MHz	25.27	30	1
CH165	5825 MHz	25.23	30	1

ANT 0 + ANT 1 + ANT 2				
Test Channel	Frequency (MHz)	Maximum Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH149	5745 MHz	29.99	30	1
CH157	5785 MHz	29.98	30	1
CH165	5825 MHz	29.94	30	1

Note: The EUT incorporates a MIMO function. Physically, the EUT provides three completed transmitters and thee receivers (3T3R), all transmit signals are completely uncorrelated, then, Direction gain = G_{ANT}, that is Directional gain=5.

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 ℃	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N40 Mode /CH151, CH159		

ANT 0				
Test Channel	Frequency (MHz)	Maximum Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH151	5755 MHz	25.15	30	1
CH159	5795 MHz	25.08	30	1

ANT 1				
Test Channel	Frequency (MHz)	Maximum Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH151	5755 MHz	25.19	30	1
CH159	5795 MHz	25.17	30	1

ANT 2				
Test Channel	Frequency (MHz)	Maximum Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH151	5755 MHz	25.16	30	1
CH159	5795 MHz	25.11	30	1

ANT 0 + ANT 1 + ANT 2				
Test Channel	Frequency (MHz)	Maximum Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH151	5755 MHz	29.93	30	1
CH159	5795 MHz	29.89	30	1

Note: The EUT incorporates a MIMO function. Physically, the EUT provides three completed transmitters and thee receivers (3T3R), all transmit signals are completely uncorrelated, then, Direction gain = G_{ANT}, that is Directional gain=5.

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 ℃	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N80 Mode /CH155		

ANT 0				
Test Channel	Frequency (MHz)	Maximum Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH155	5795 MHz	24.93	30	1

ANT 1				
Test Channel	Frequency (MHz)	Maximum Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH155	5795 MHz	24.86	30	1

ANT 2				
Test Channel	Frequency (MHz)	Maximum Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH155	5795 MHz	24.82	30	1

ANT 0 + ANT 1 + ANT 2				
Test Channel	Frequency (MHz)	Maximum Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH155	5755 MHz	29.64	30	1

Note: The EUT incorporates a MIMO function. Physically, the EUT provides three completed transmitters and thee receivers (3T3R), all transmit signals are completely uncorrelated, then, Direction gain = G_{ANT}, that is Directional gain=5.

7. ANTENNA CONDUCTED SPURIOUS EMISSION

7.1 Applied procedures / limit

20dB in any 100 KHz bandwidth outside the operating frequency band, In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
960~1000	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

Frequency (MHz)	(dBuV/m) (at 3 meters)	
	Peak	Average
Above 1000	74	54

7.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Nov. 09, 2014

Remark: “N/A” denotes no model name, serial no. or calibration specified.
All calibration period of Equipment List is One Year.

7.1.2 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
b. Spectrum Setting : RBW= 100KHz, VBW=300KHz, Sweep time =20 ms.

7.1.3 DEVIATION FROM STANDARD

No deviation.

7.1.4 TEST SETUP

7.1.5 EUT OPERATION CONDITIONS

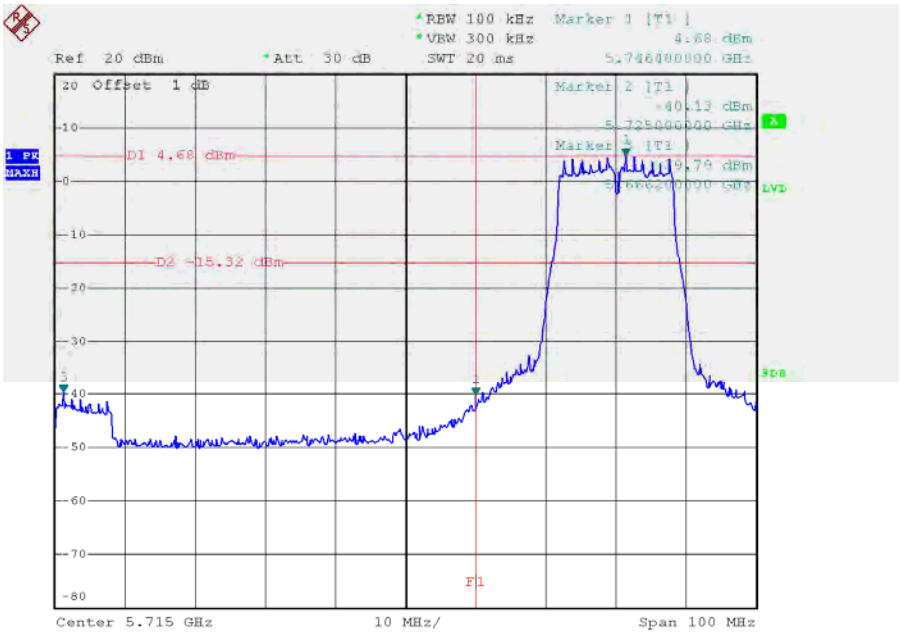
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

7.1.6 TEST RESULTS

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 ℃	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX A Mode /CH149, CH157, CH165		

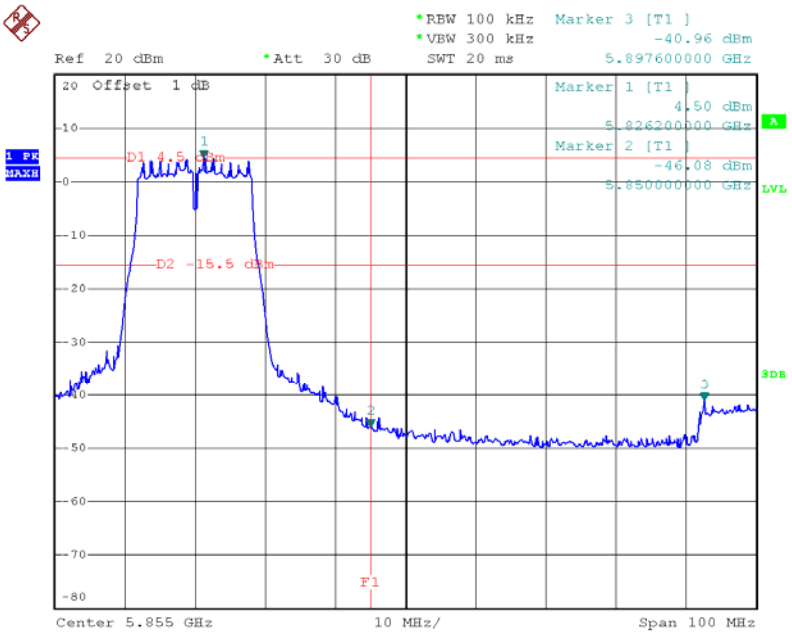
Channel of Worst Data: CH149			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5666.20	-39.79	5897.60	-40.96
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

TX mode CH149



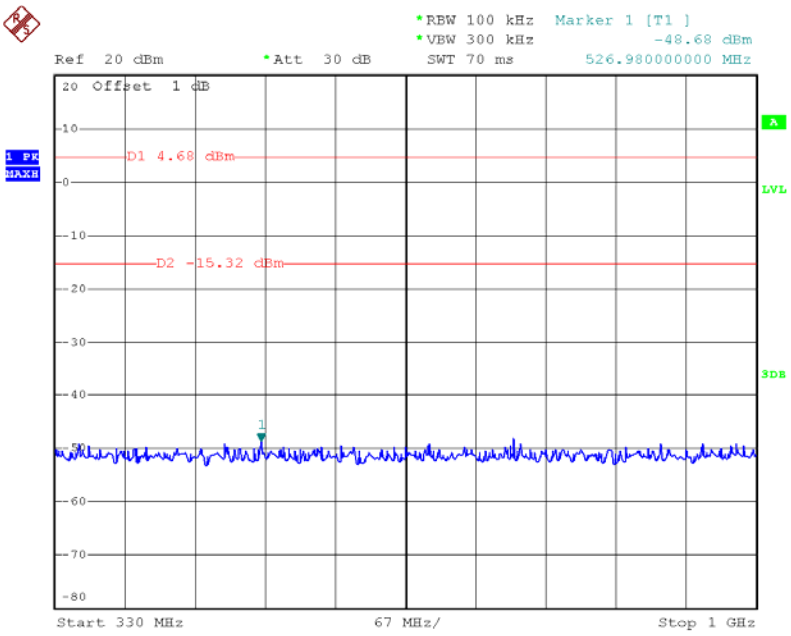
Date: 30.NOV.2013 04:57:21

TX mode CH165



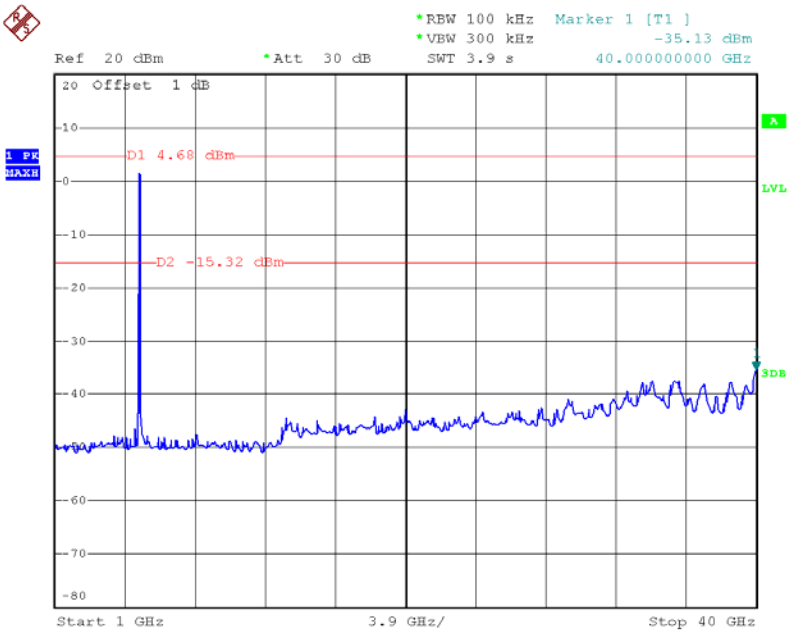
Date: 30.NOV.2013 05:02:05

TX mode CH149 (30M~1000MHz)



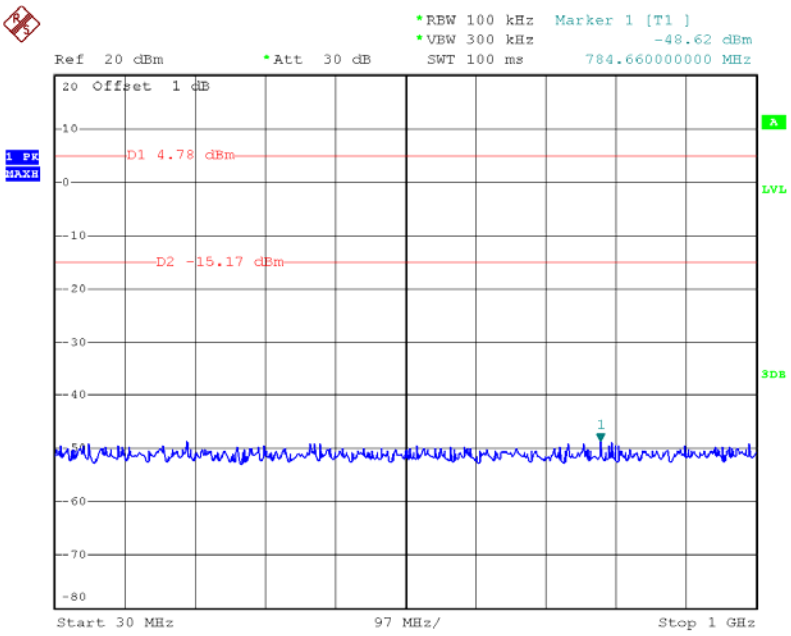
Date: 30.NOV.2013 04:57:32

TX mode CH149 (1000MHz~10th Harmonic)



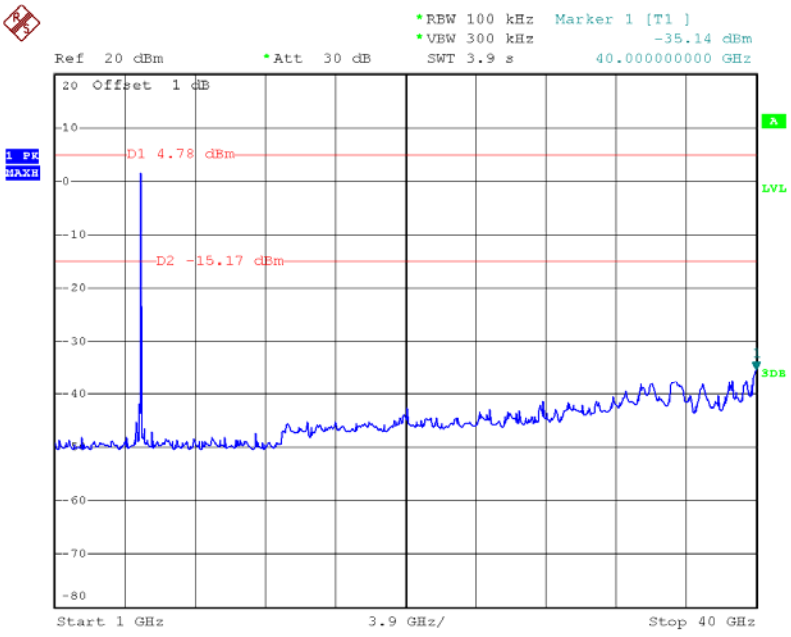
Date: 30.NOV.2013 04:57:59

TX mode CH157 (30M~1000MHz)



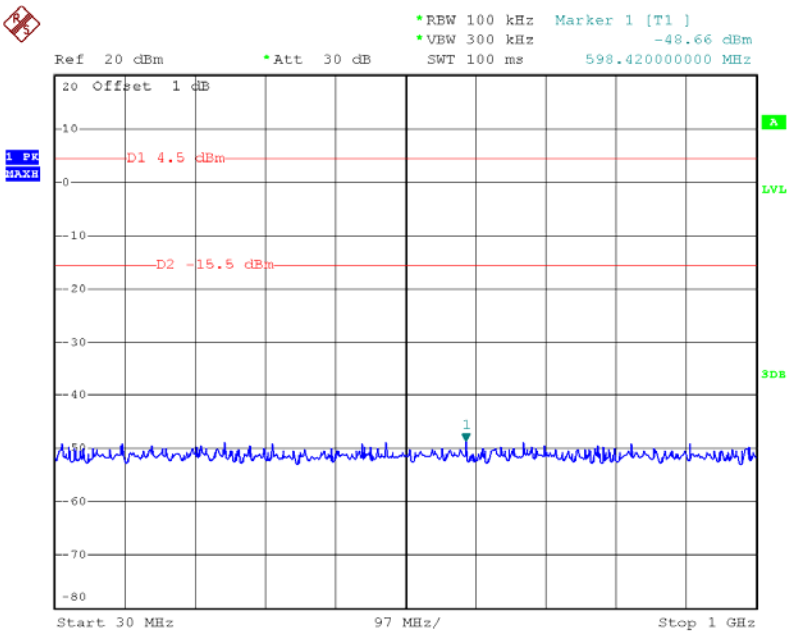
Date: 30.NOV.2013 04:59:37

TX mode CH157 (1000MHz~10th Harmonic)



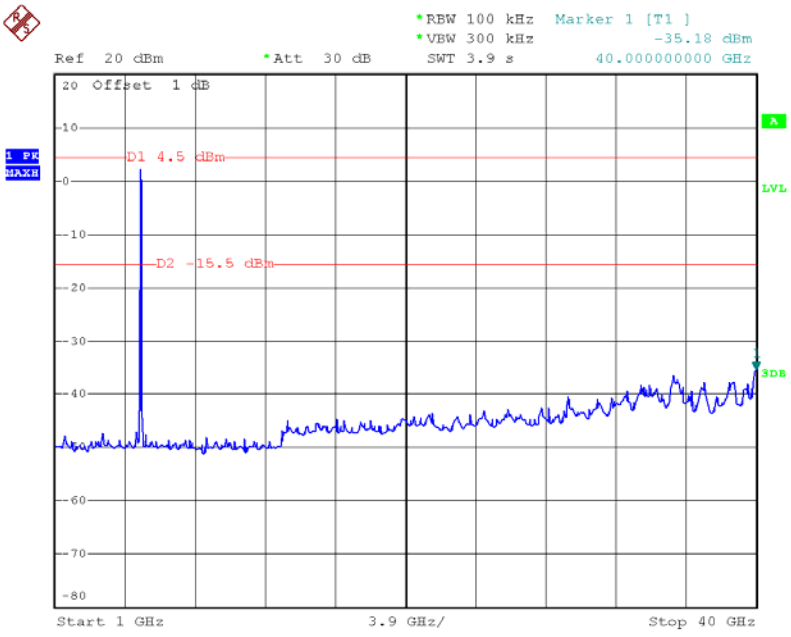
Date: 30.NOV.2013 05:00:04

TX mode CH165 (30M~1000MHz)



Date: 30.NOV.2013 05:02:15

TX mode CH165 (1000MHz~10th Harmonic)

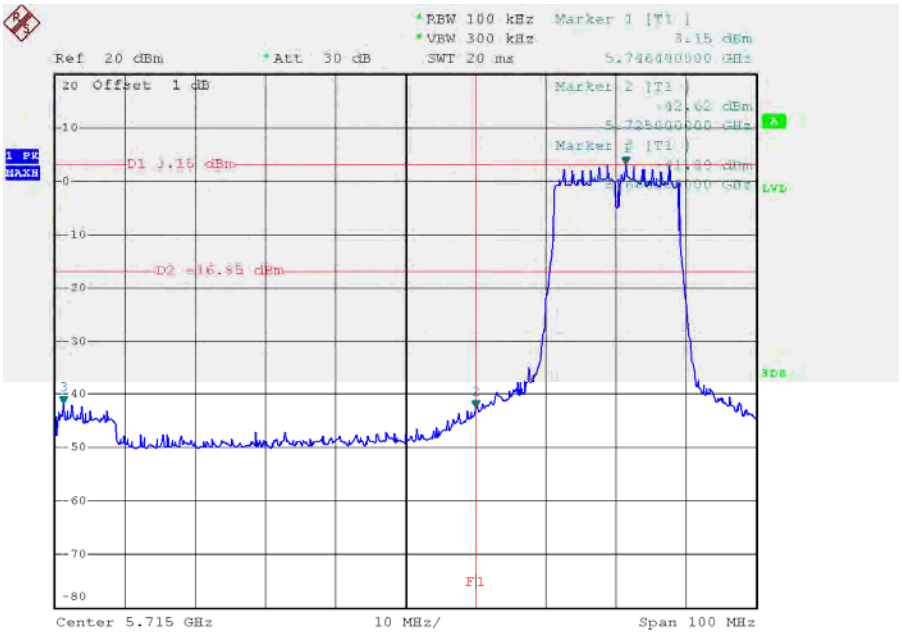


Date: 30.NOV.2013 05:02:36

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 ℃	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N20Mode /CH149, CH157, CH165 / ANT 0		

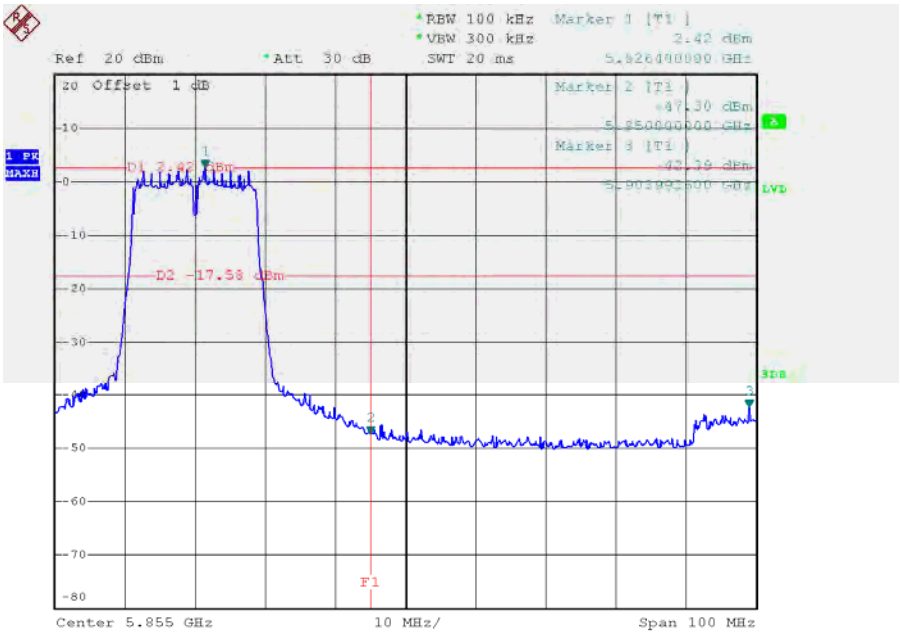
Channel of Worst Data: CH149			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5660.00	-41.09	5903.99	-42.39
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

TX mode CH149



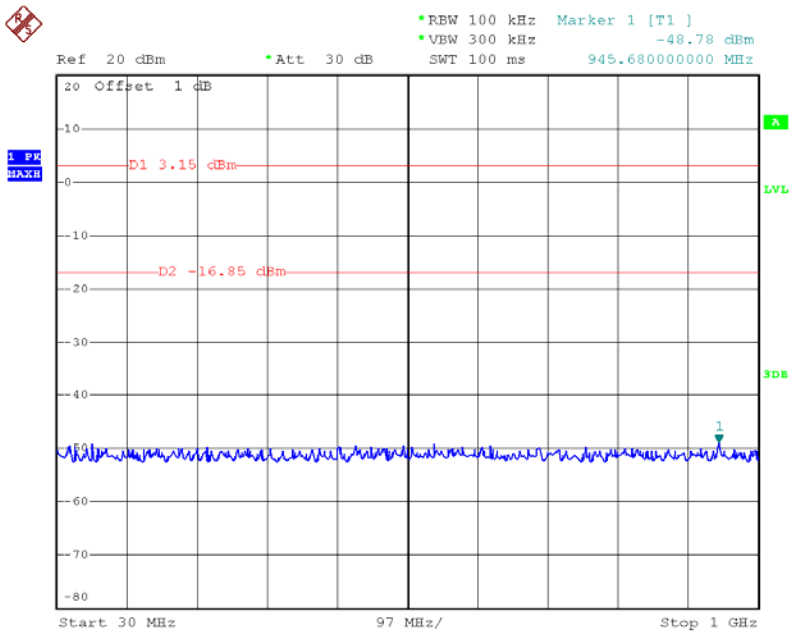
Date: 30.NOV.2013 05:06:49

TX mode CH165



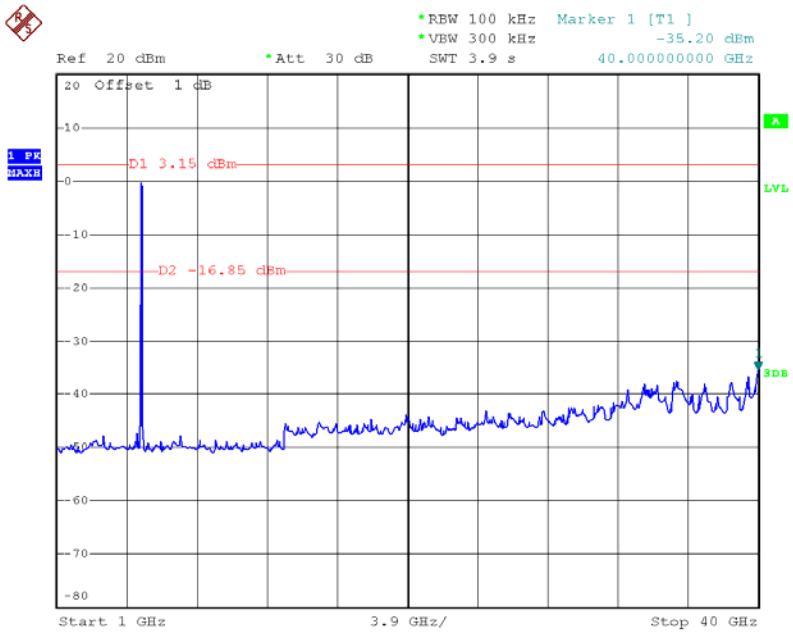
Date: 30.NOV.2013 05:21:50

TX mode CH149 (30M~1000MHz)



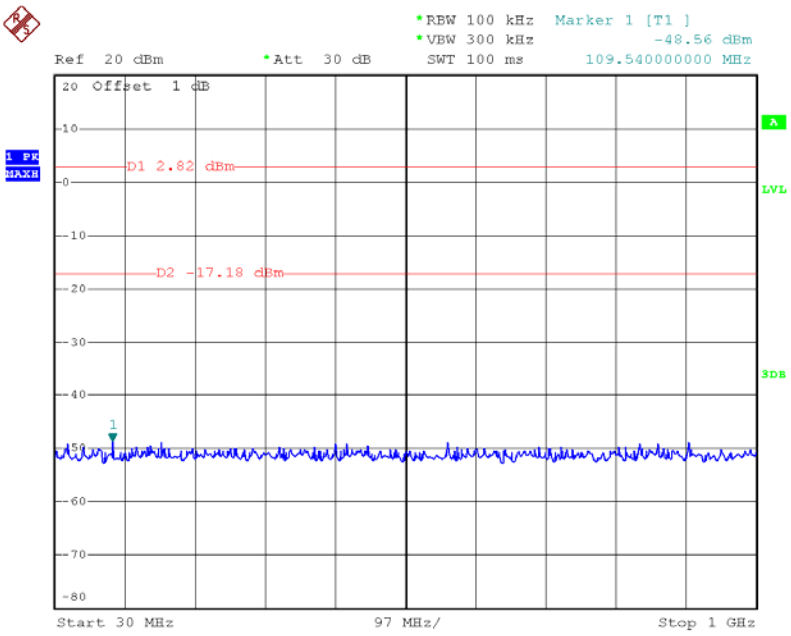
Date: 30.NOV.2013 05:07:00

TX mode CH149 (1000MHz~10th Harmonic)



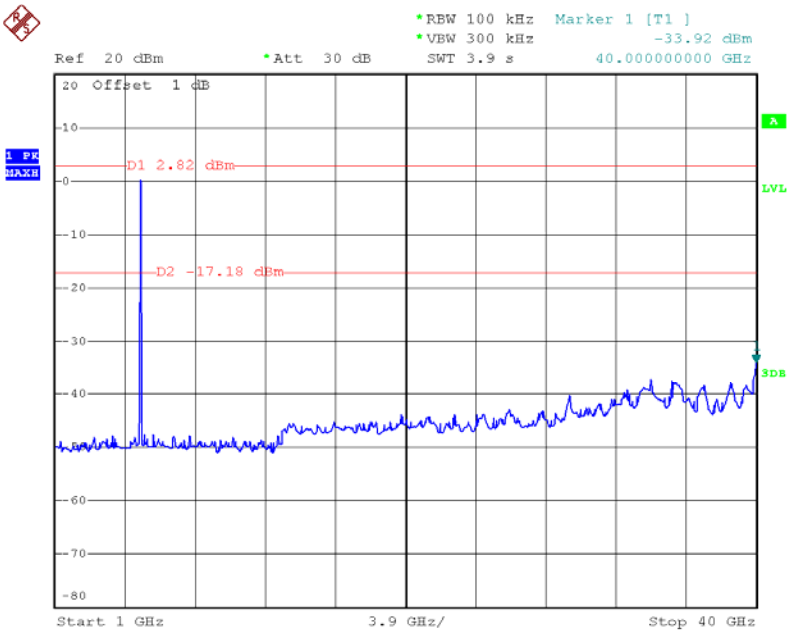
Date: 30.NOV.2013 05:07:14

TX mode CH157 (30M~1000MHz)



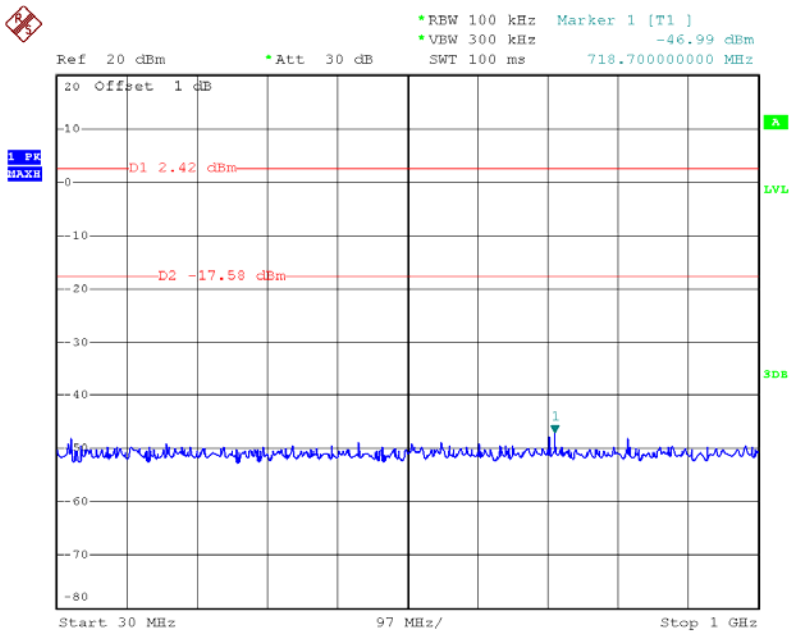
Date: 30.NOV.2013 05:15:41

TX mode CH157 (1000MHz~10th Harmonic)



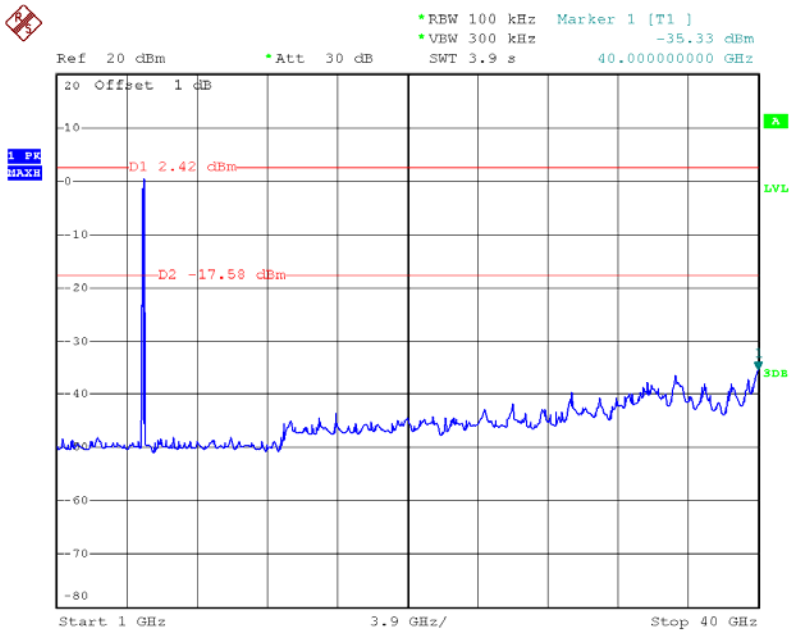
Date: 30.NOV.2013 05:16:01

TX mode CH165 (30M~1000MHz)



Date: 30.NOV.2013 05:22:04

TX mode CH165 (1000MHz~10th Harmonic)

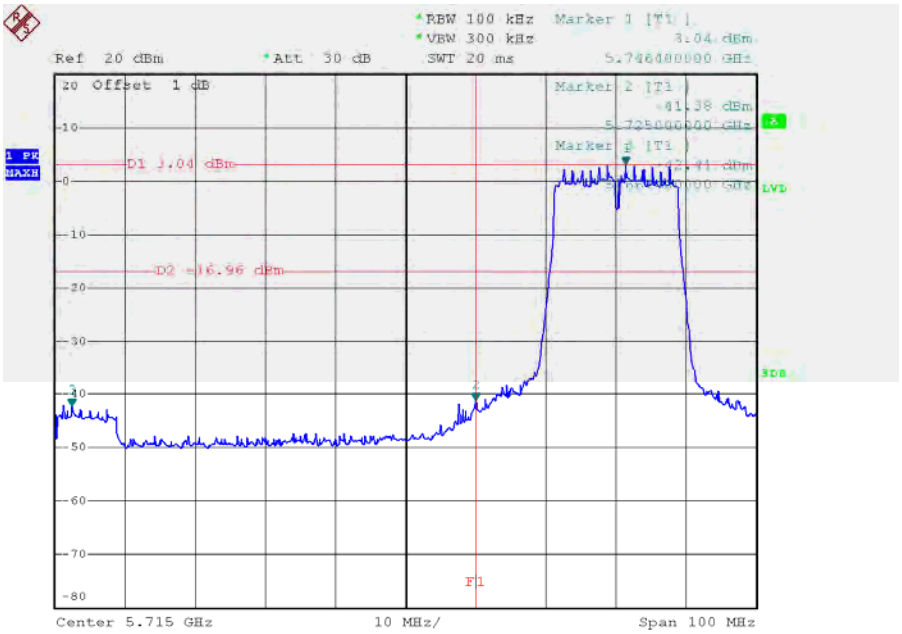


Date: 30.NOV.2013 05:22:23

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 ℃	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N20 Mode /CH149, CH157, CH165 / ANT 1		

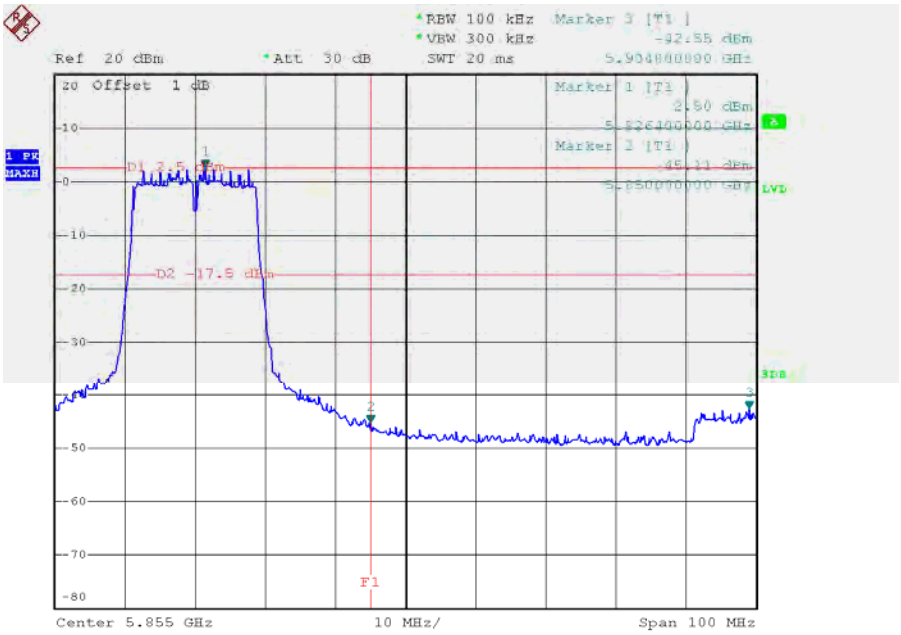
Channel of Worst Data: CH149			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5725.00	-41.38	5904.00	-42.55
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

TX mode CH149



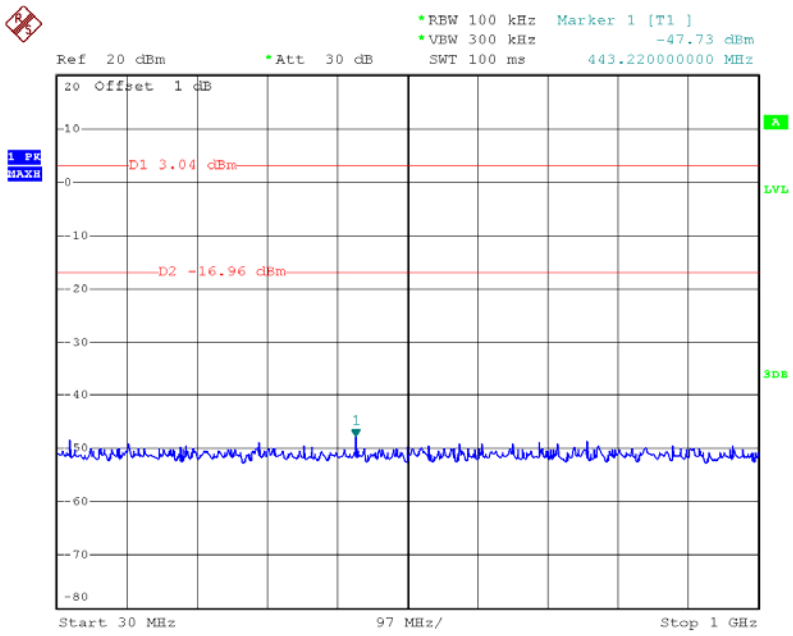
Date: 30.NOV.2013 05:08:17

TX mode CH165



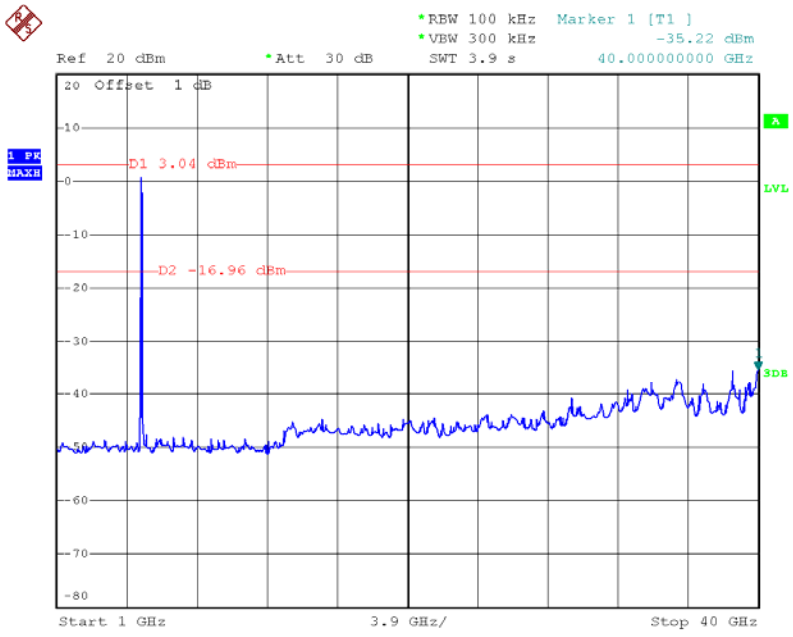
Date: 30.NOV.2013 05:25:24

TX mode CH149 (30M~1000MHz)



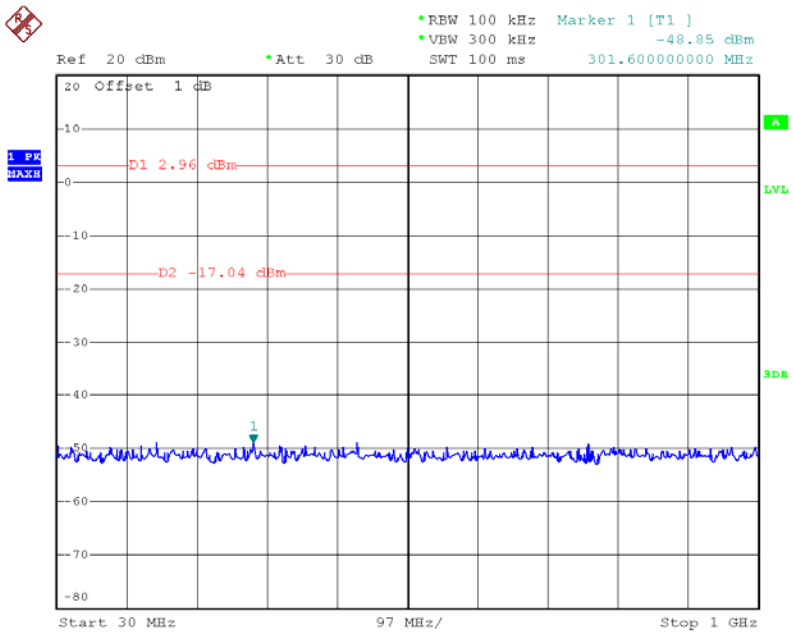
Date: 30.NOV.2013 05:08:28

TX mode CH149 (1000MHz~10th Harmonic)



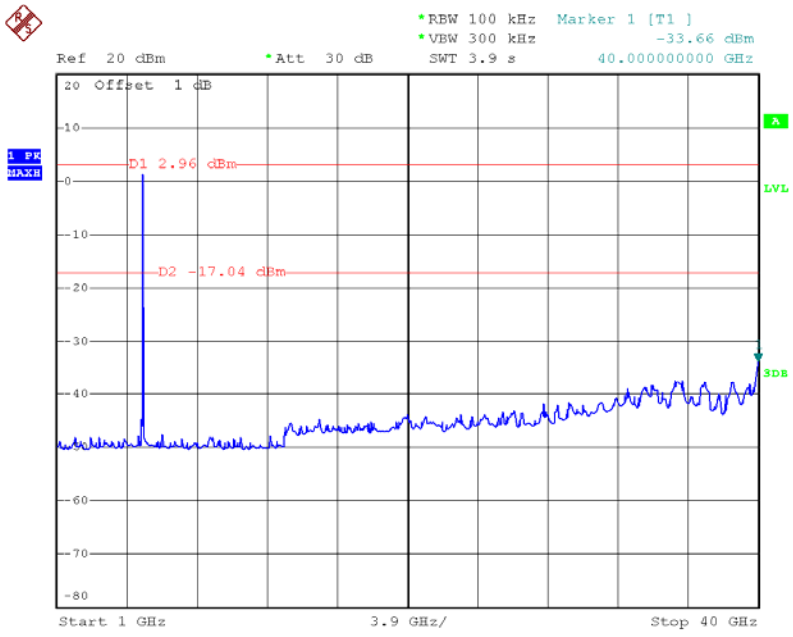
Date: 30.NOV.2013 05:08:41

TX mode CH157 (30M~1000MHz)



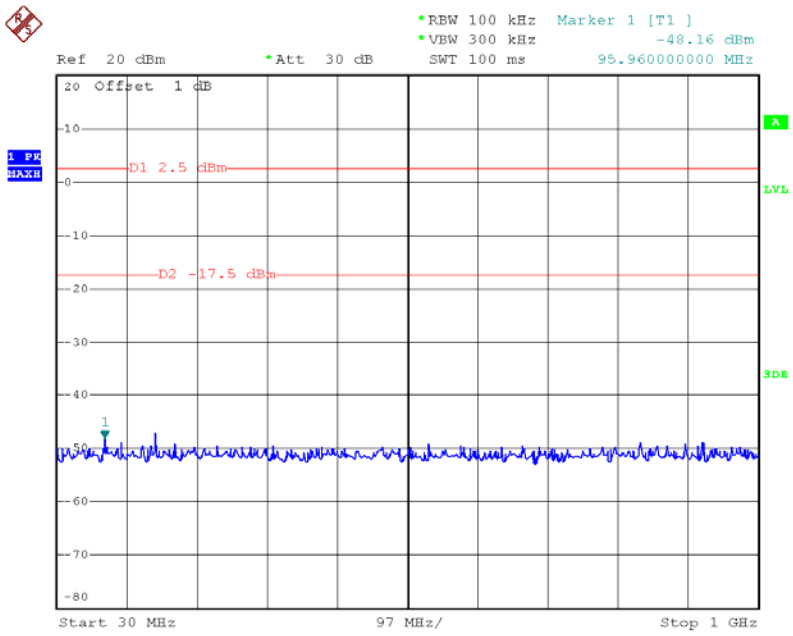
Date: 30.NOV.2013 05:16:37

TX mode CH157 (1000MHz~10th Harmonic)



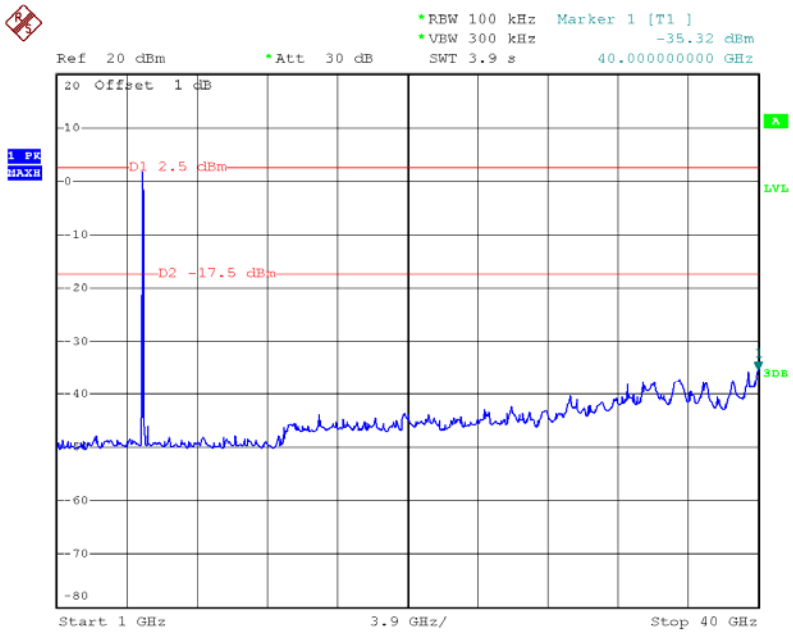
Date: 30.NOV.2013 05:17:02

TX mode CH165 (30M~1000MHz)



Date: 30.NOV.2013 05:25:36

TX mode CH165 (1000MHz~10th Harmonic)

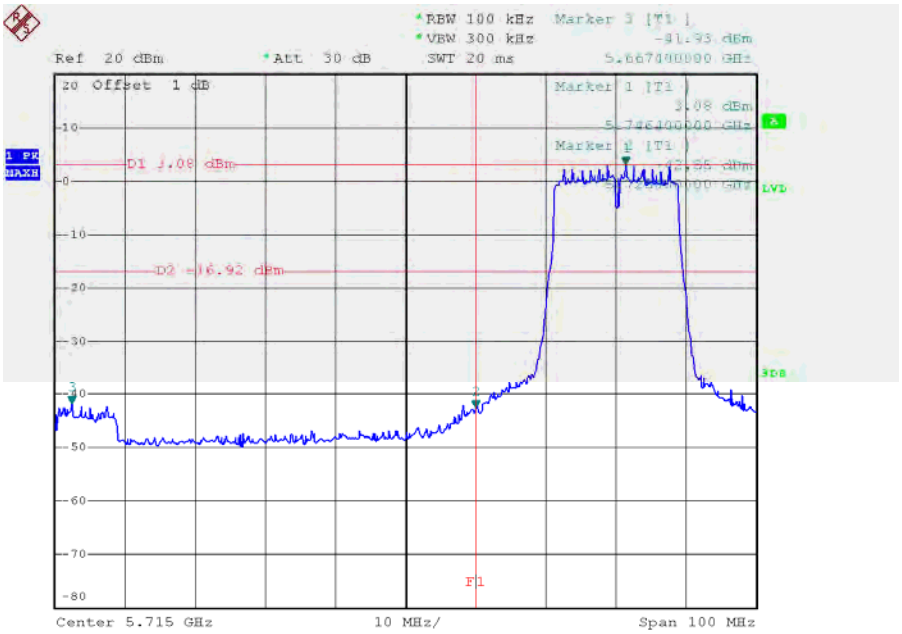


Date: 30.NOV.2013 05:26:13

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 ℃	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N20 Mode /CH149, CH157, CH165 / ANT 2		

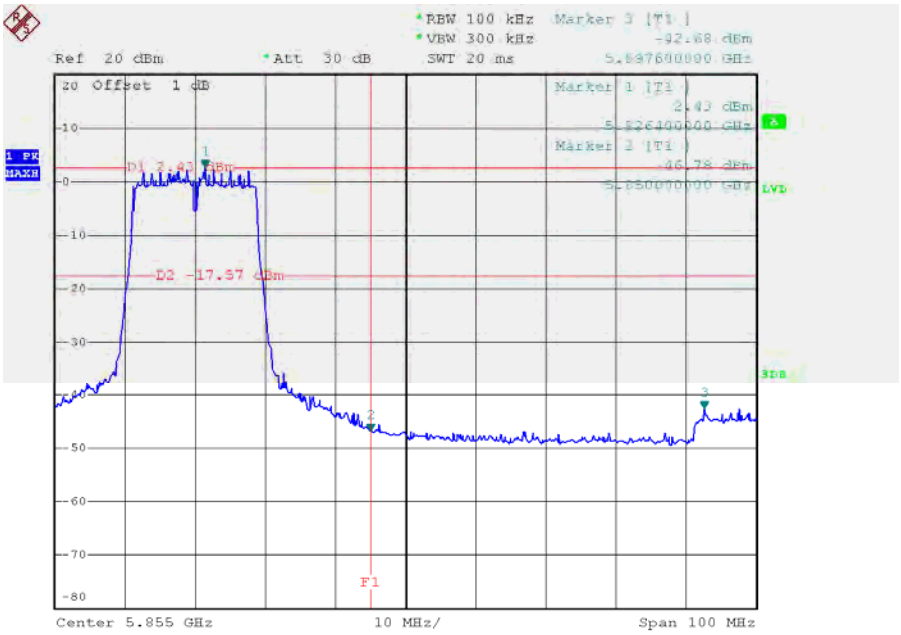
Channel of Worst Data: CH149			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5667.40	-41.93	5897.60	-42.68
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

TX mode CH149



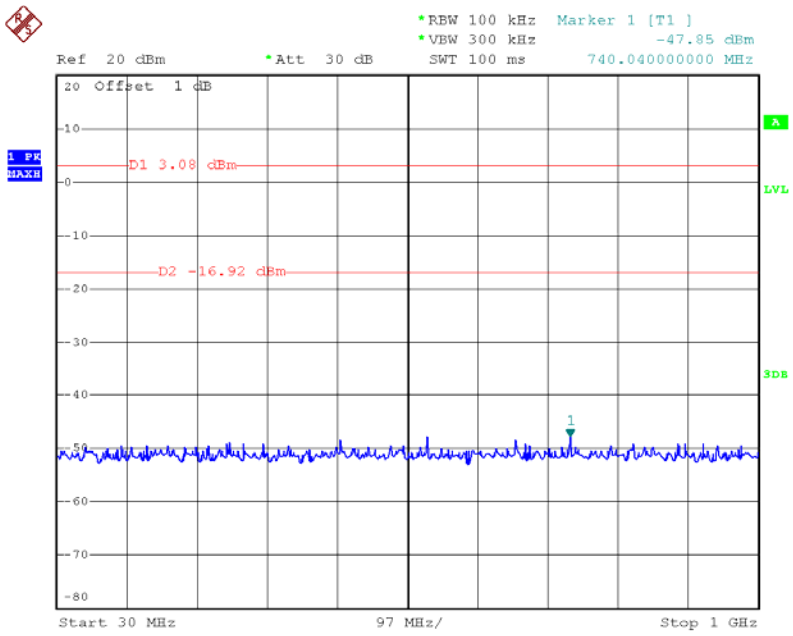
Date: 30.NOV.2013 05:10:59

TX mode CH165



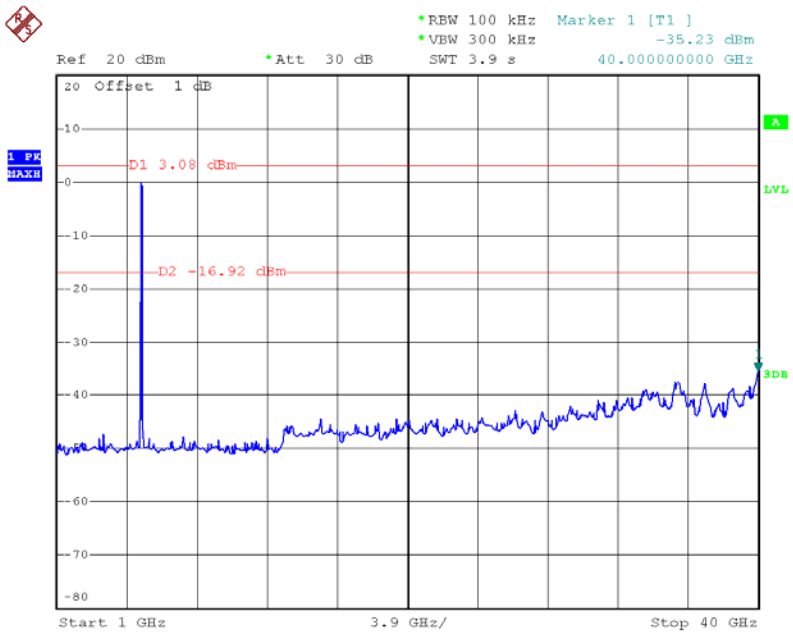
Date: 30.NOV.2013 05:29:28

TX mode CH149 (30M~1000MHz)



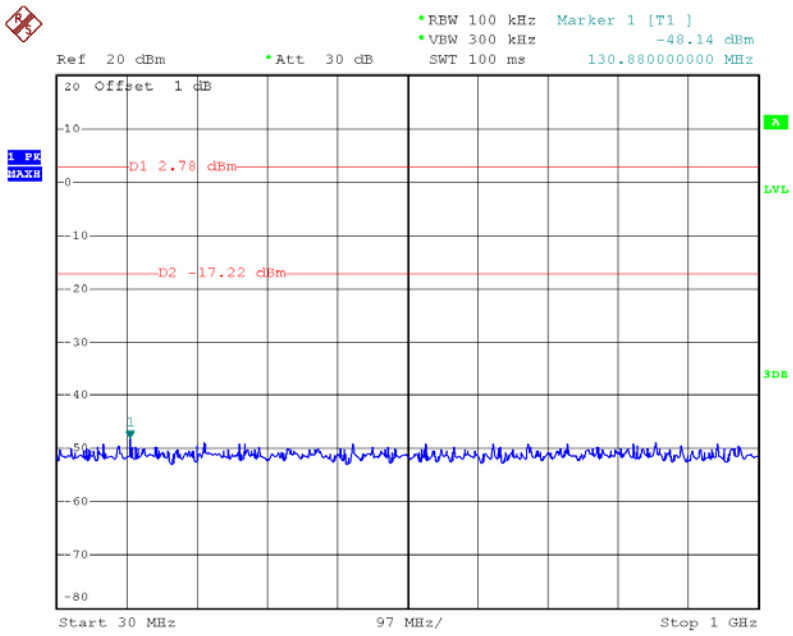
Date: 30.NOV.2013 05:11:12

TX mode CH149 (1000MHz~10th Harmonic)



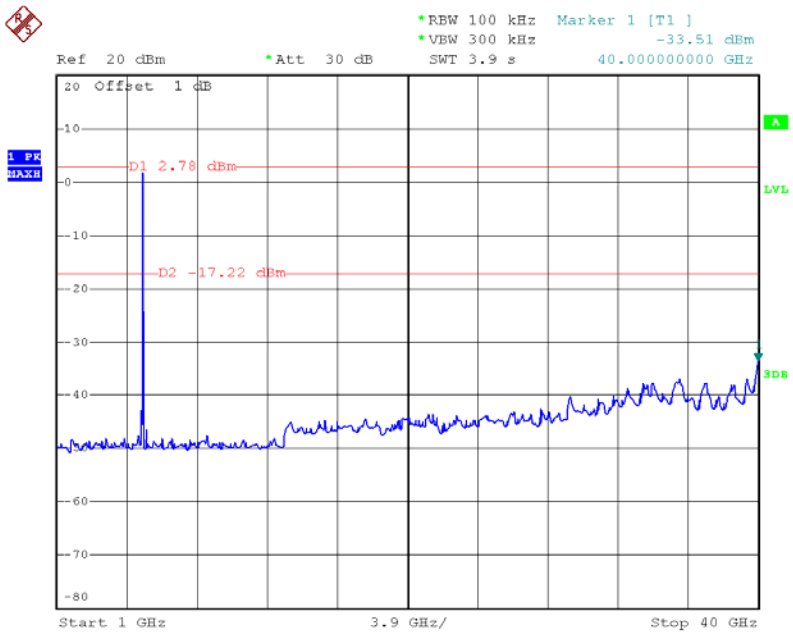
Date: 30.NOV.2013 05:11:26

TX mode CH157 (30M~1000MHz)



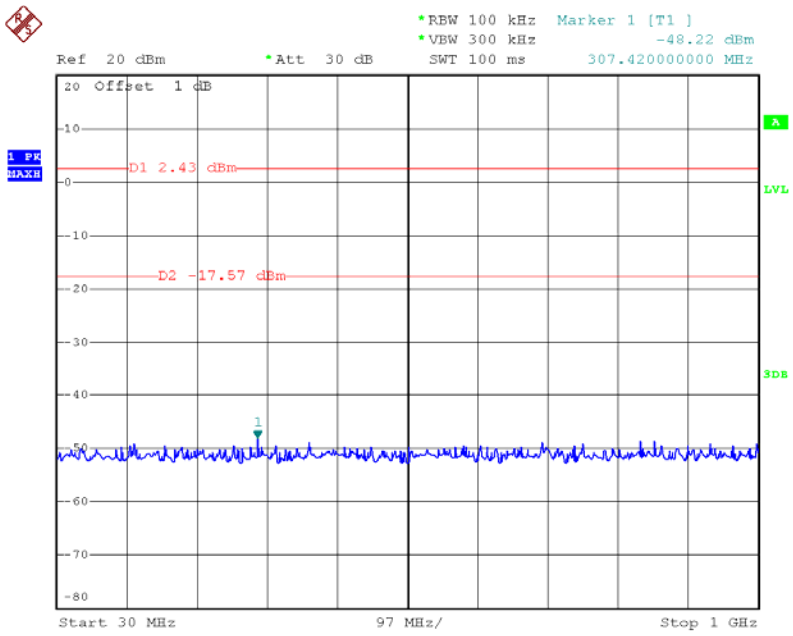
Date: 30.NOV.2013 05:17:35

TX mode CH157 (1000MHz~10th Harmonic)



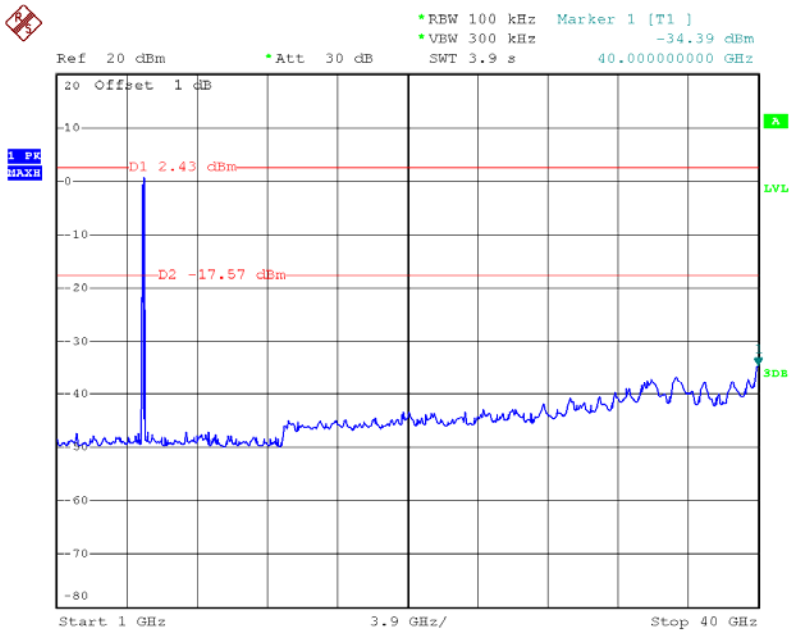
Date: 30.NOV.2013 05:18:09

TX mode CH165 (30M~1000MHz)



Date: 30.NOV.2013 05:29:41

TX mode CH165 (1000MHz~10th Harmonic)

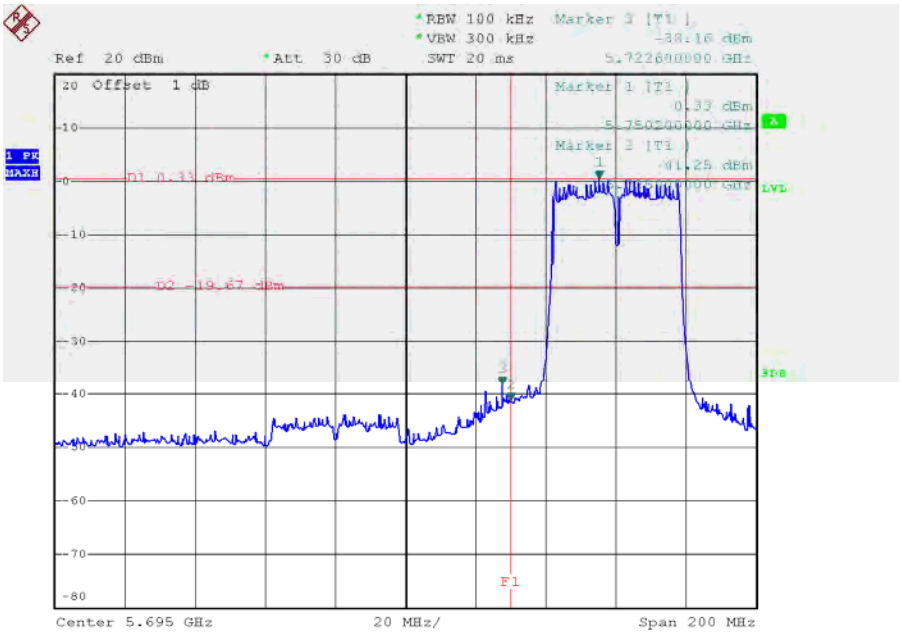


Date: 30.NOV.2013 05:31:11

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 ℃	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N40 Mode /CH151, CH159 / ANT 0		

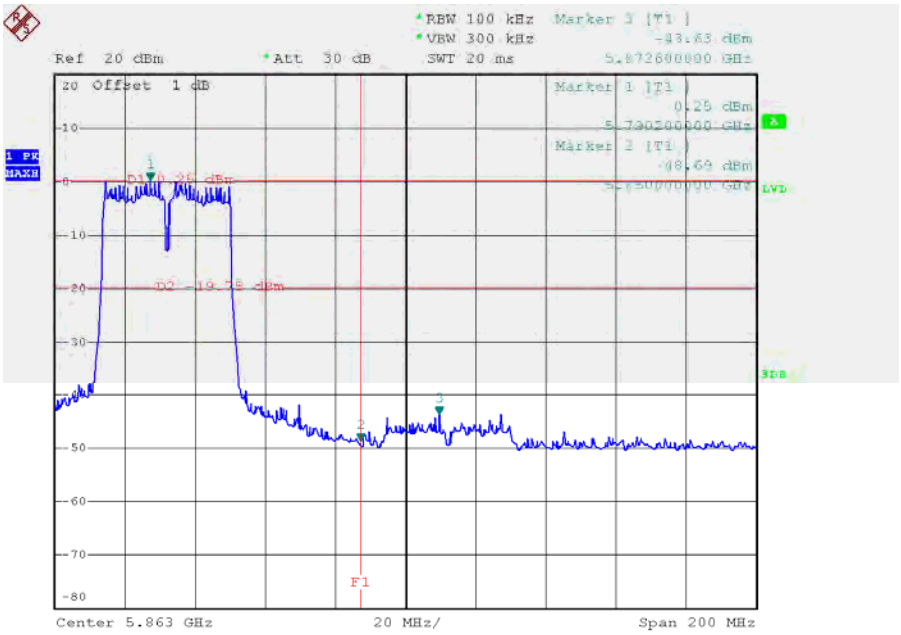
Channel of Worst Data: CH151			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5722.60	-38.16	5873.60	-43.63
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

TX mode CH151



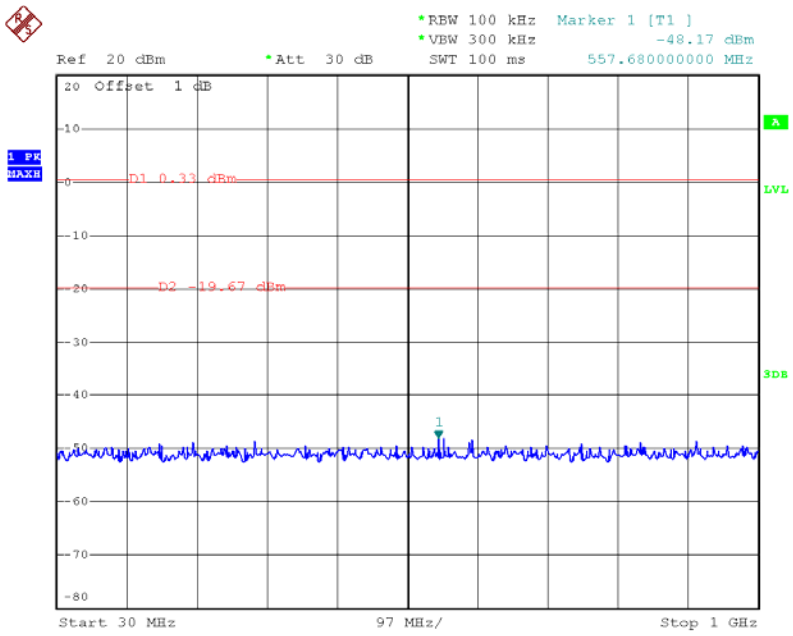
Date: 30.NOV.2013 05:40:18

TX mode CH159



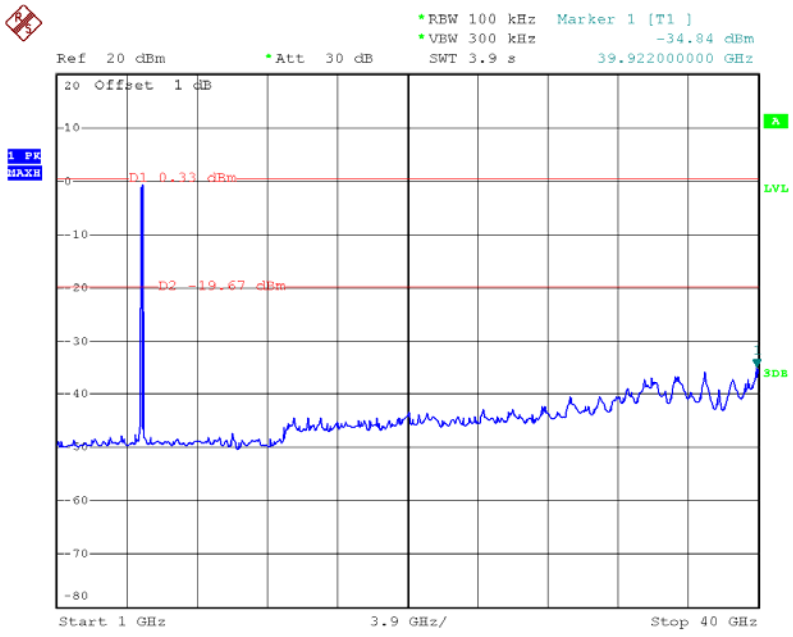
Date: 30.NOV.2013 05:52:28

TX mode CH151(30M~1000MHz)



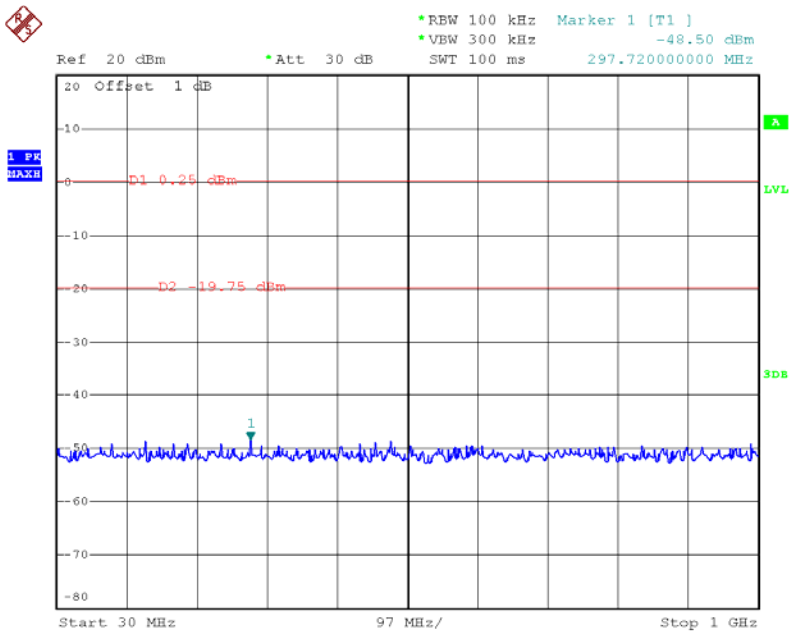
Date: 30.NOV.2013 05:40:31

TX mode CH151 (1000MHz~10th Harmonic)



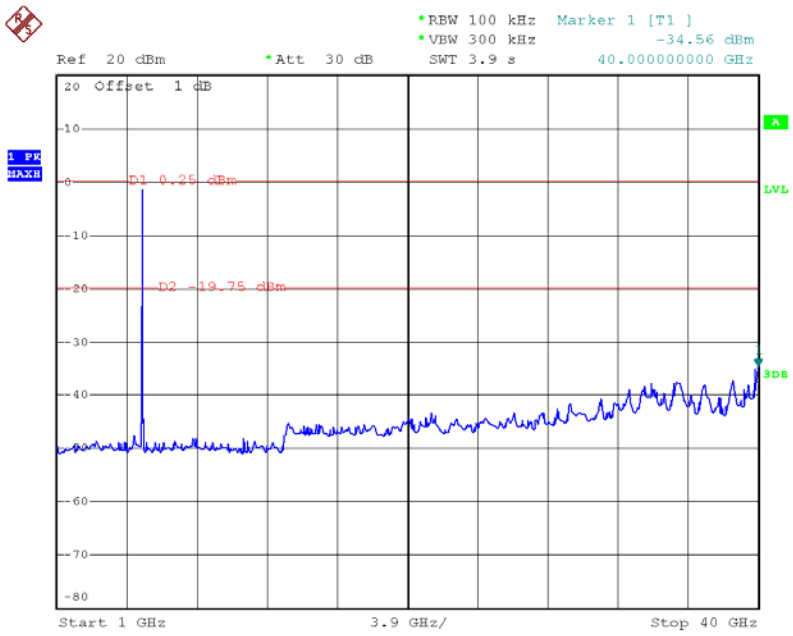
Date: 30.NOV.2013 05:41:33

TX mode CH159 (30M~1000MHz)



Date: 30.NOV.2013 05:52:39

TX mode CH159 (1000MHz~10th Harmonic)

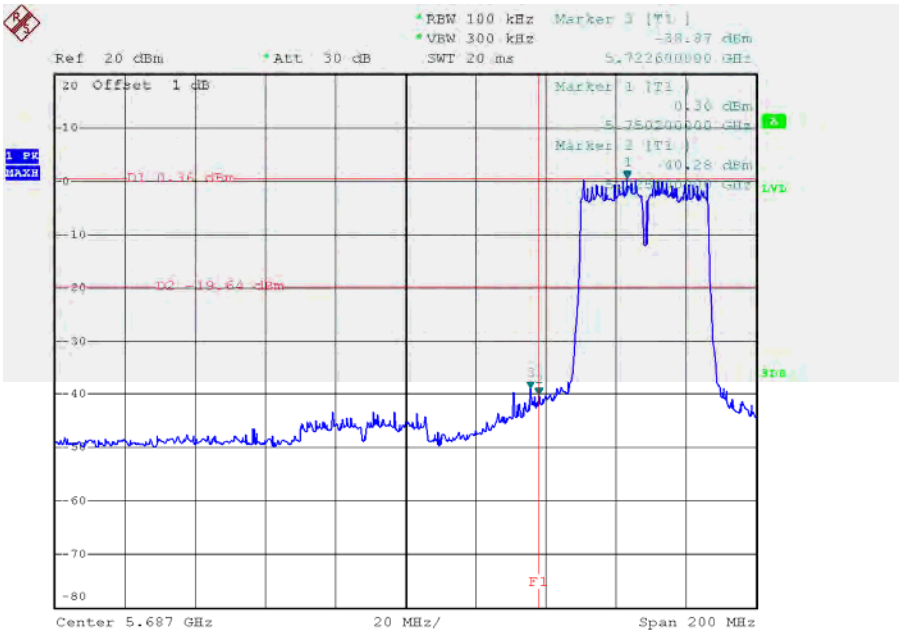


Date: 30.NOV.2013 05:52:54

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 ℃	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N40 Mode /CH151, CH159 / ANT 1		

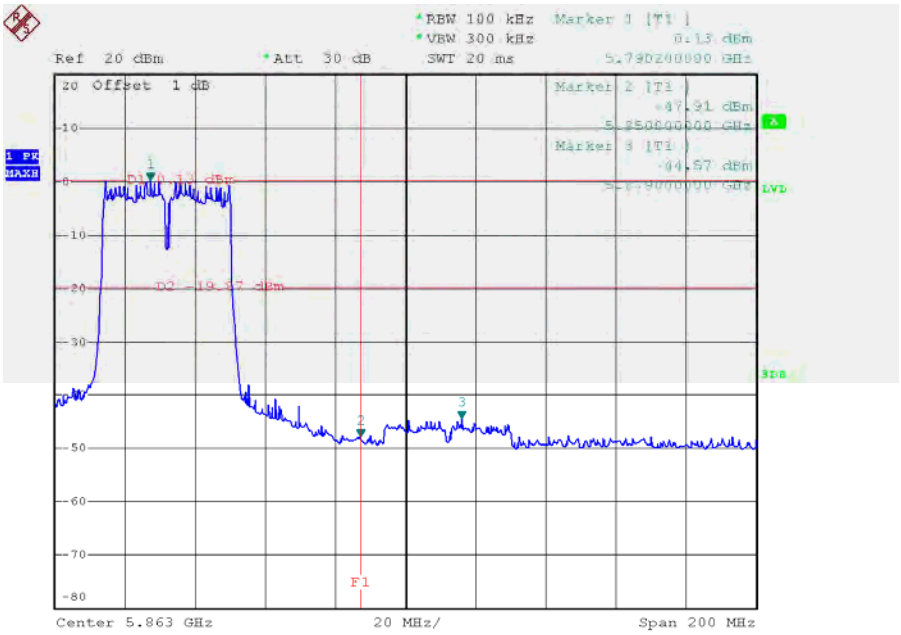
Channel of Worst Data: CH151			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5722.60	-38.87	5879.00	-44.57
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

TX mode CH151



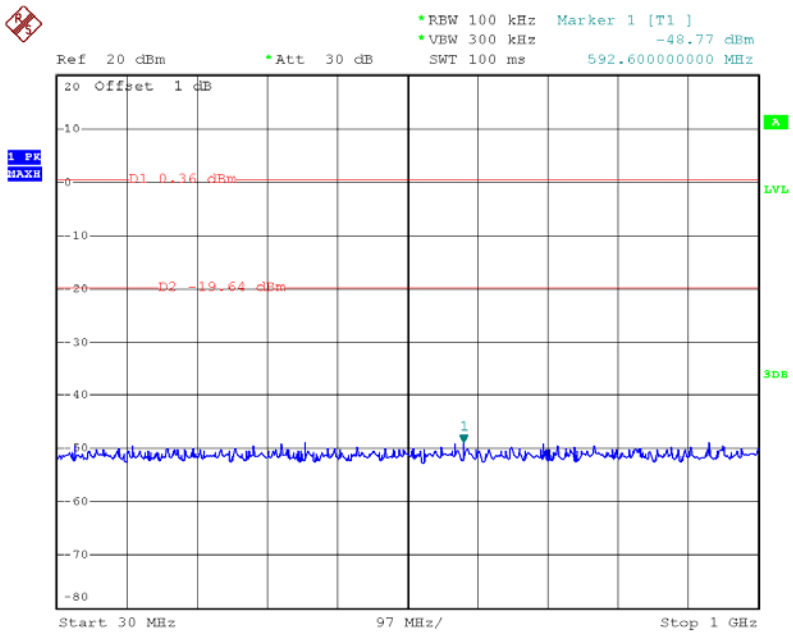
Date: 30.NOV.2013 05:43:13

TX mode CH159



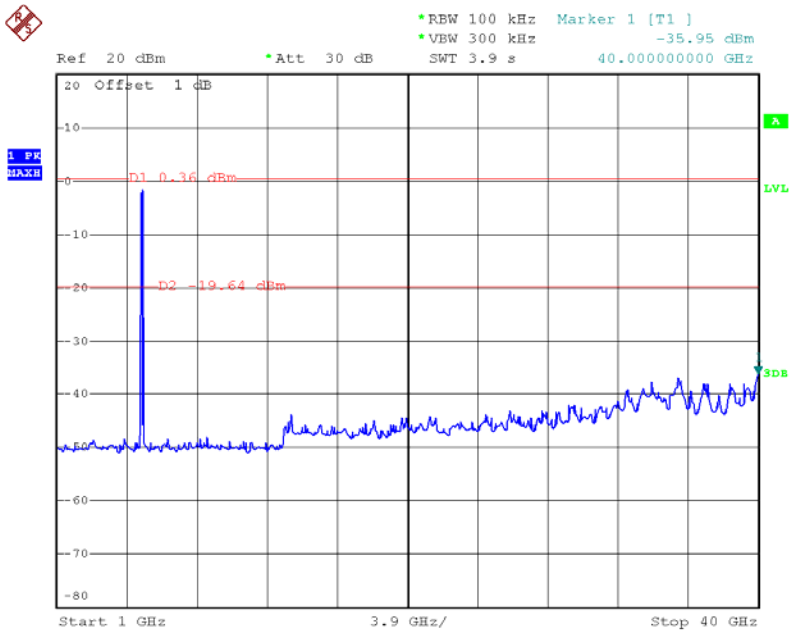
Date: 30.NOV.2013 05:54:41

TX mode CH151(30M~1000MHz)



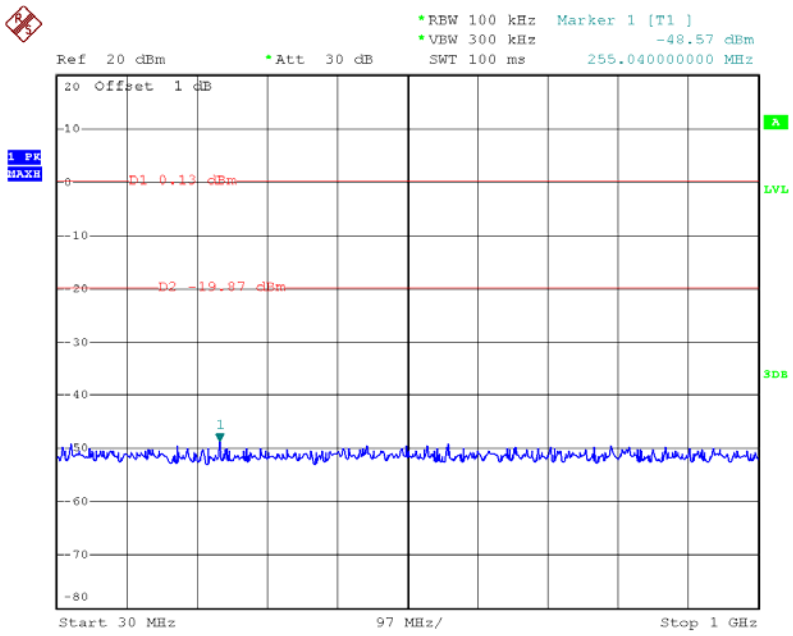
Date: 30.NOV.2013 05:43:26

TX mode CH151 (1000MHz~10th Harmonic)



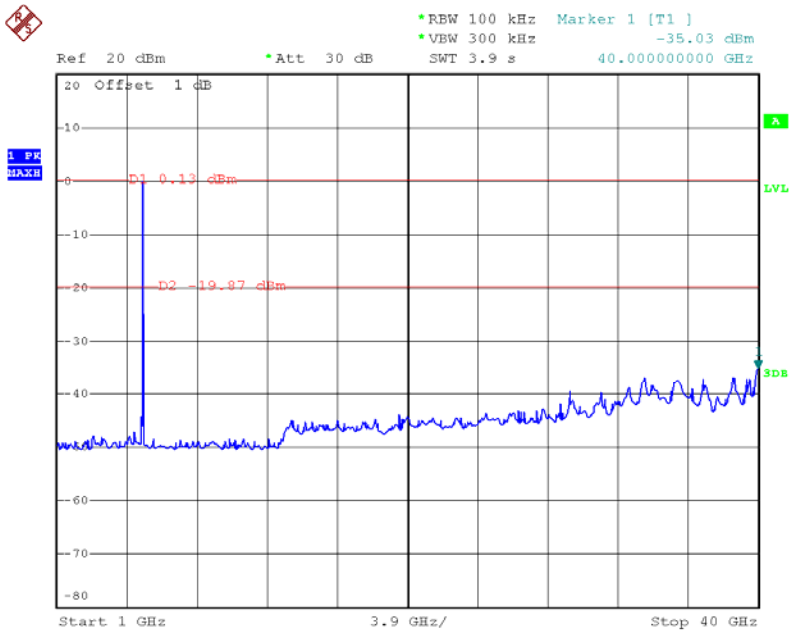
Date: 30.NOV.2013 05:43:39

TX mode CH159 (30M~1000MHz)



Date: 30.NOV.2013 05:54:52

TX mode CH159 (1000MHz~10th Harmonic)

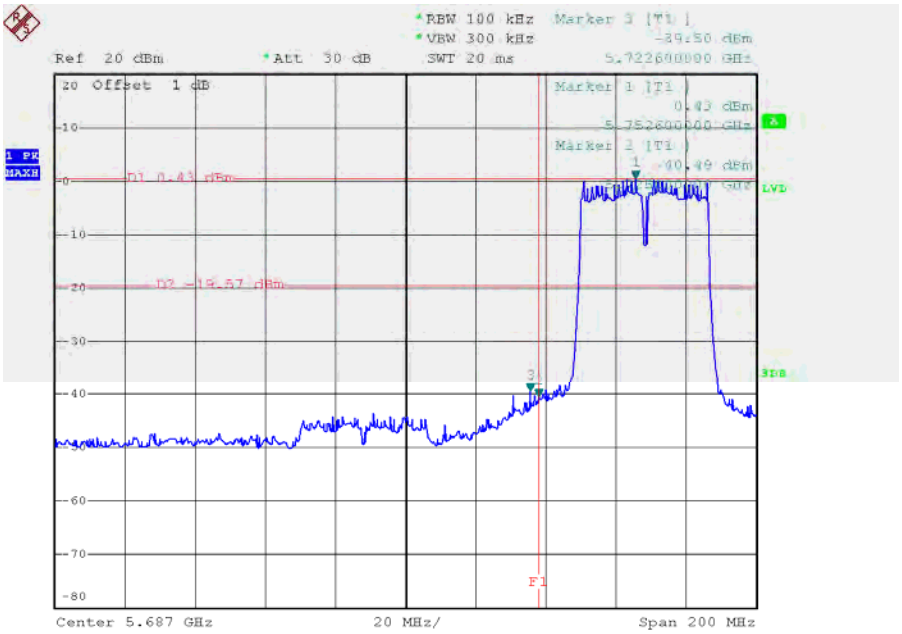


Date: 30.NOV.2013 05:55:21

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 ℃	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N40 Mode /CH151, CH159 / ANT 2		

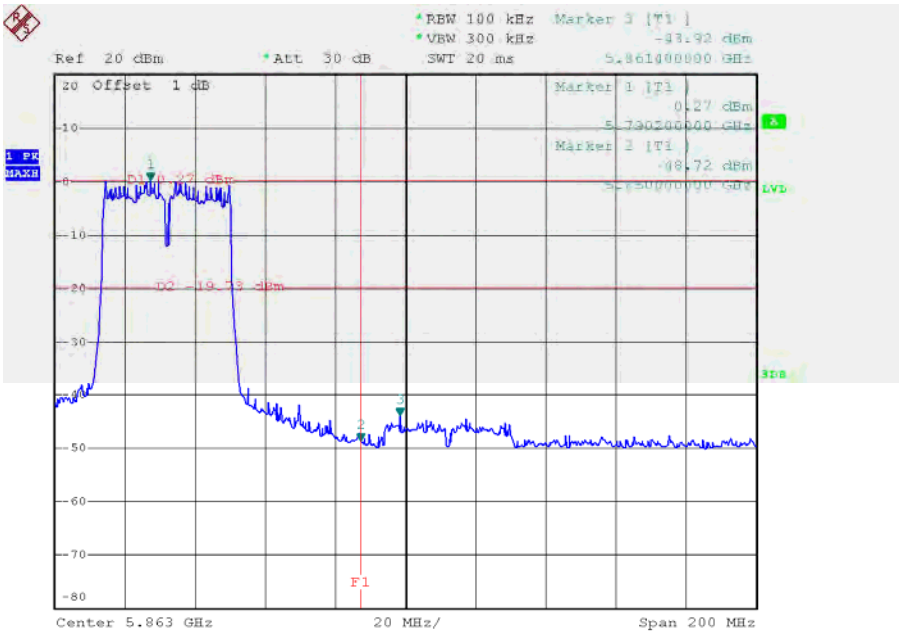
Channel of Worst Data: CH151			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5772.60	-39.50	5861.40	-43.92
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

TX mode CH151



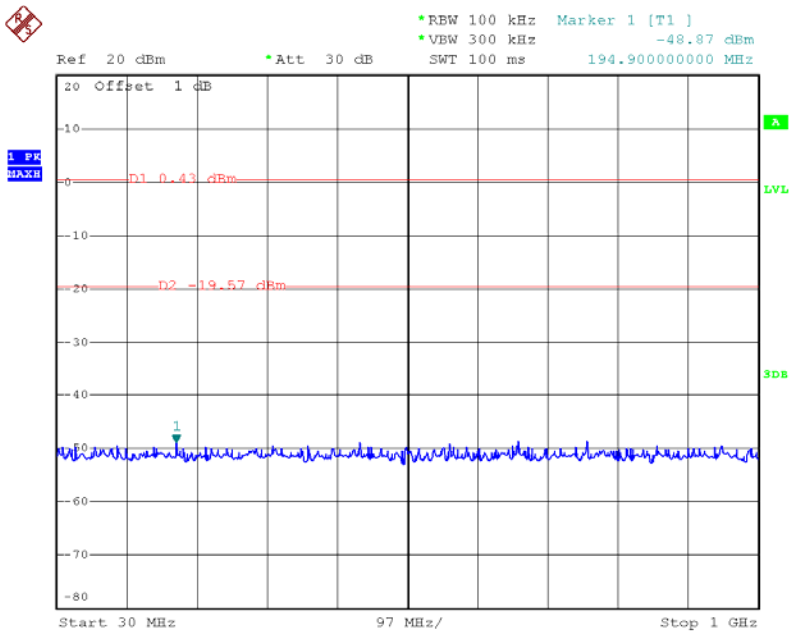
Date: 30.NOV.2013 05:45:02

TX mode CH159



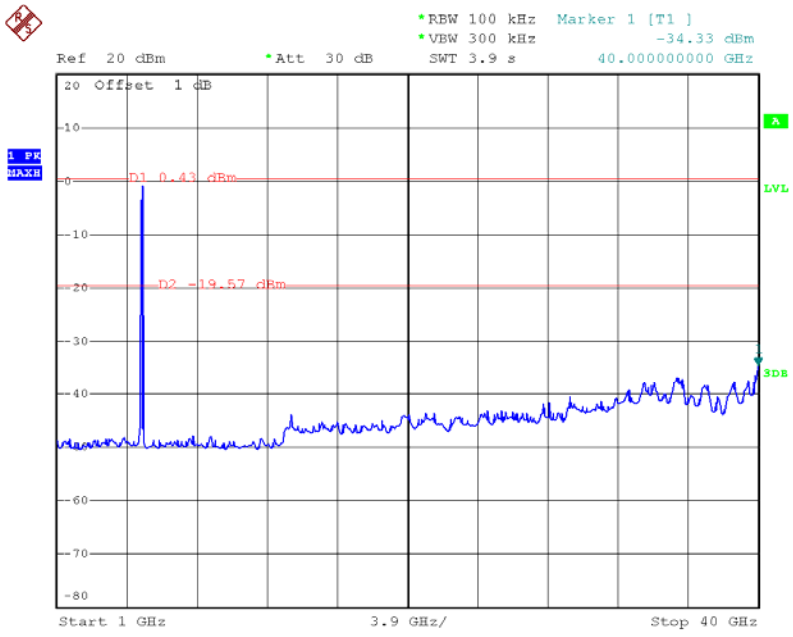
Date: 30.NOV.2013 05:57:01

TX mode CH151(30M~1000MHz)



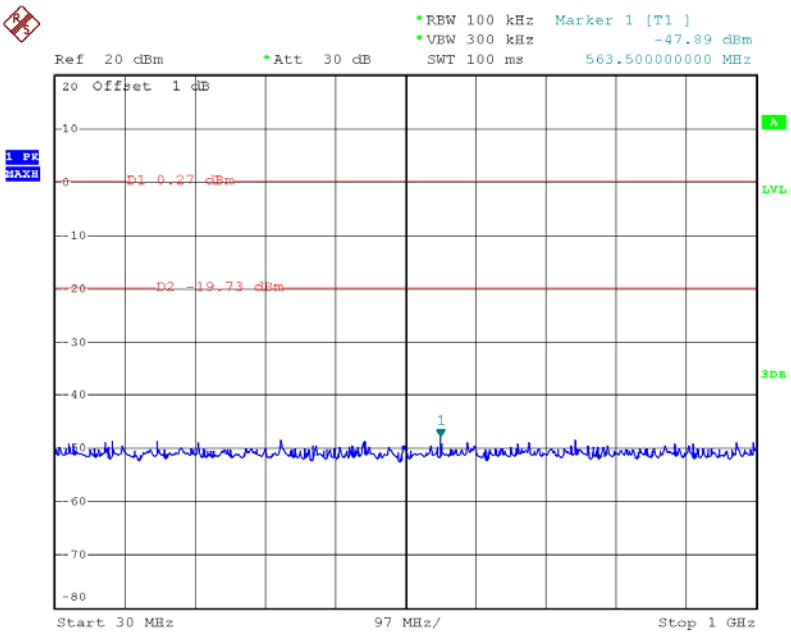
Date: 30.NOV.2013 05:45:17

TX mode CH151 (1000MHz~10th Harmonic)



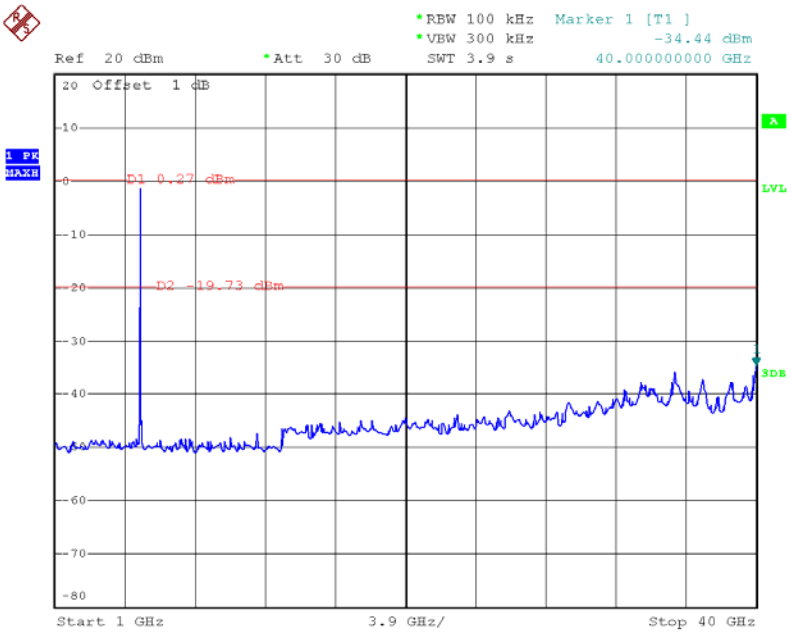
Date: 30.NOV.2013 05:45:50

TX mode CH159 (30M~1000MHz)



Date: 30.NOV.2013 05:57:19

TX mode CH159 (1000MHz~10th Harmonic)

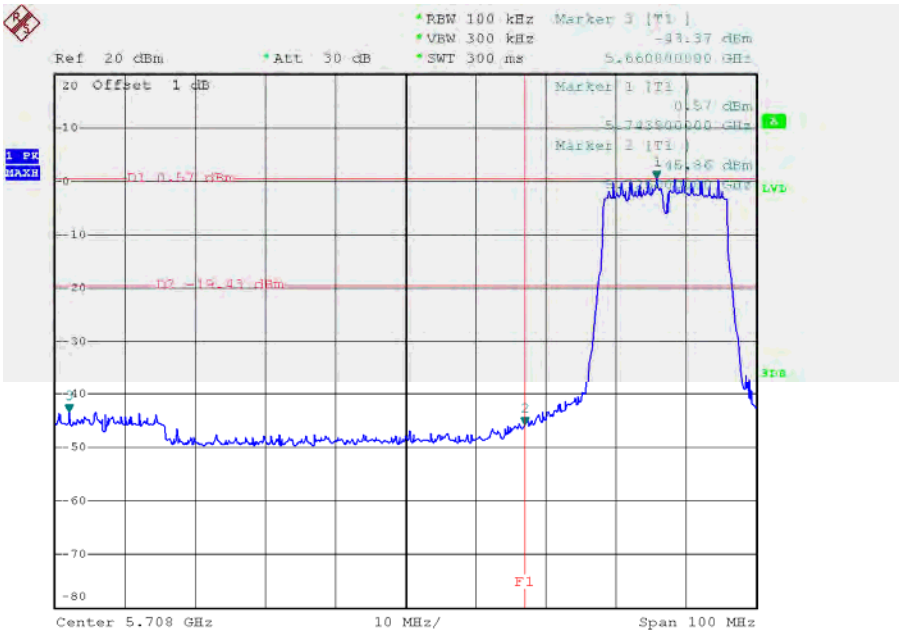


Date: 30.NOV.2013 05:57:36

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 ℃	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N20 Mode /CH149, CH157, CH165 / ANT 0		

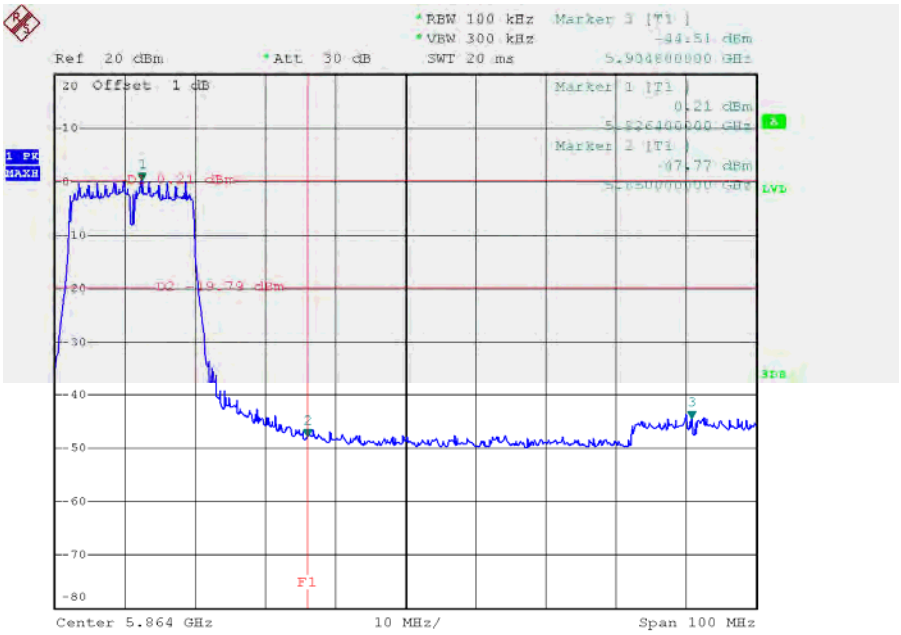
Channel of Worst Data: CH149			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5660.00	-43.37	5904.80	-44.51
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

TX mode CH149



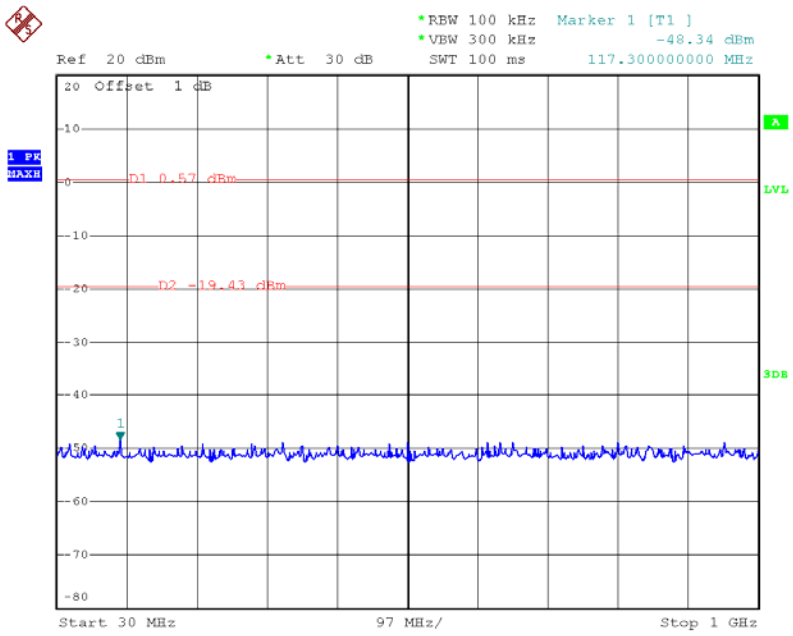
Date: 3.DEC.2013 08:37:27

TX mode CH165



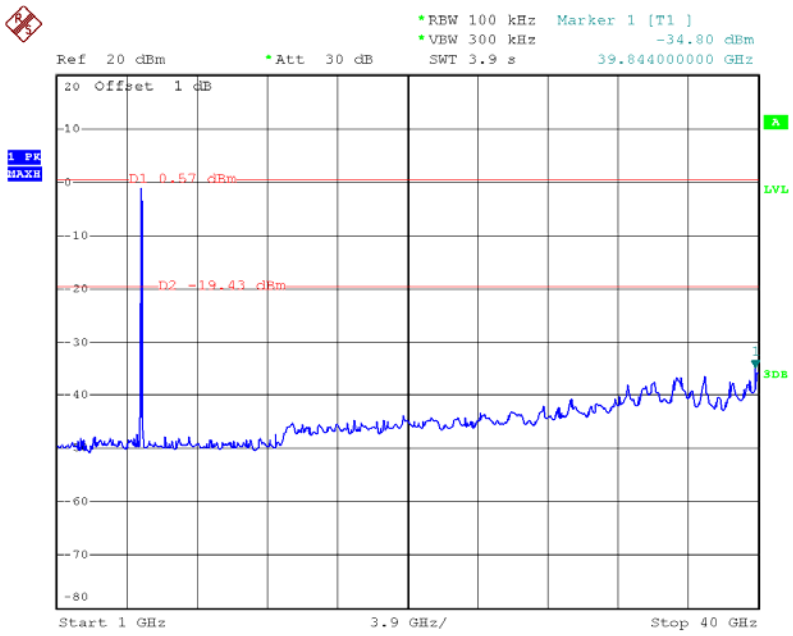
Date: 3.DEC.2013 08:59:36

TX mode CH149 (30M~1000MHz)



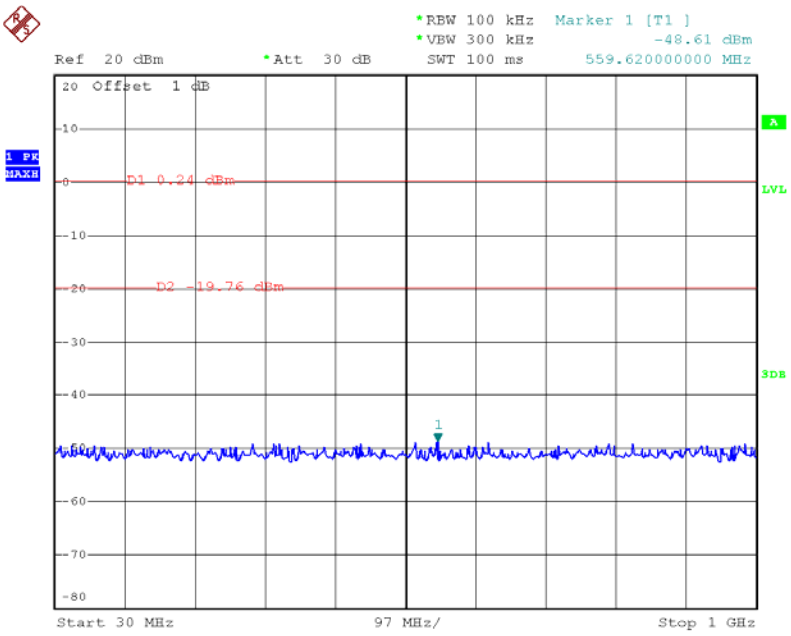
Date: 3.DEC.2013 08:38:59

TX mode CH149 (1000MHz~10th Harmonic)



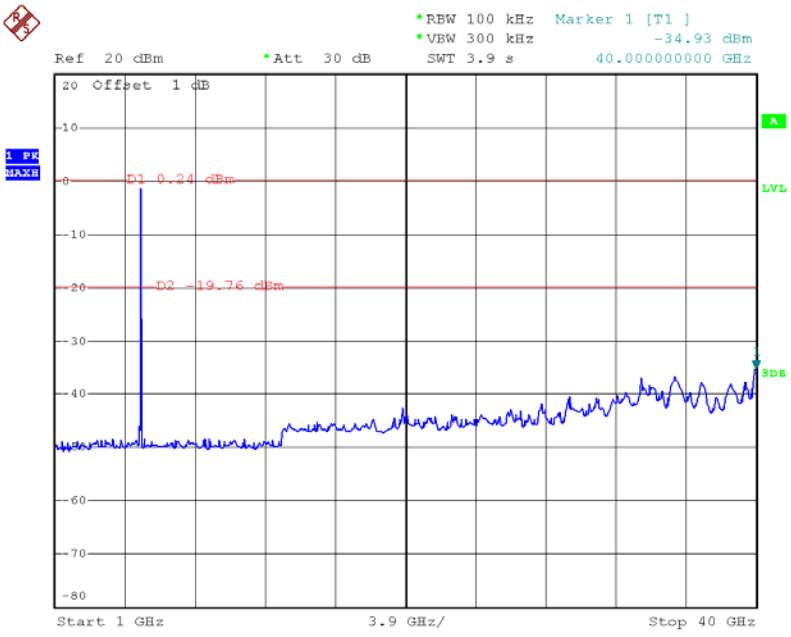
Date: 3.DEC.2013 08:38:49

TX mode CH157 (30M~1000MHz)



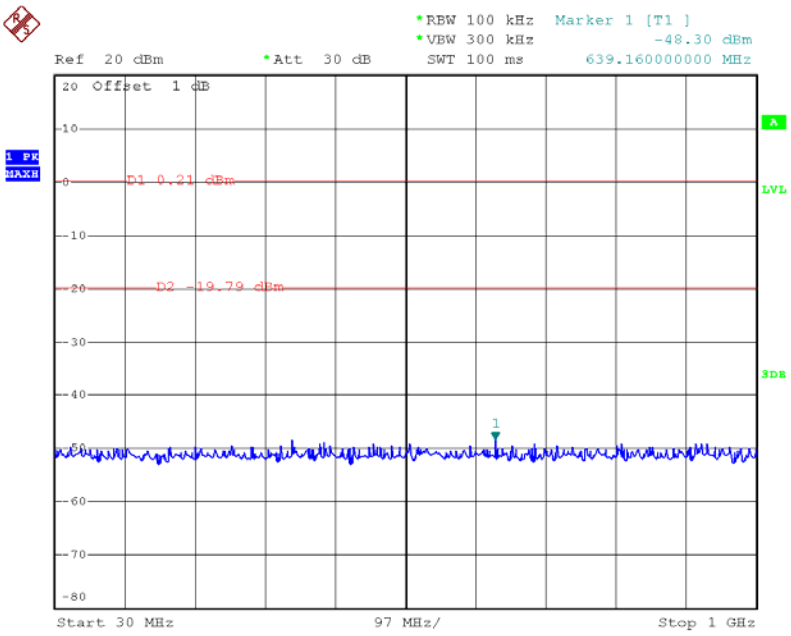
Date: 3.DEC.2013 08:49:03

TX mode CH157 (1000MHz~10th Harmonic)



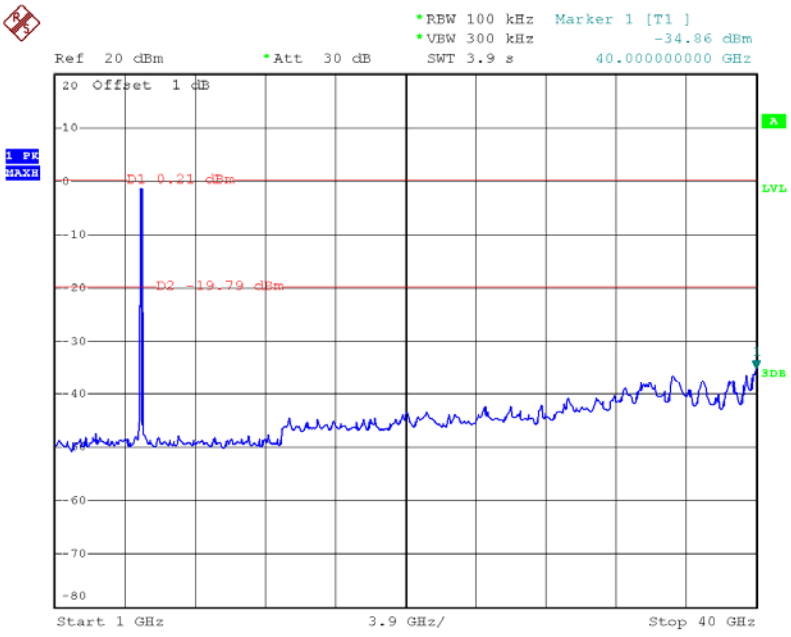
Date: 3.DEC.2013 08:49:34

TX mode CH165 (30M~1000MHz)



Date: 3.DEC.2013 08:59:50

TX mode CH165 (1000MHz~10th Harmonic)

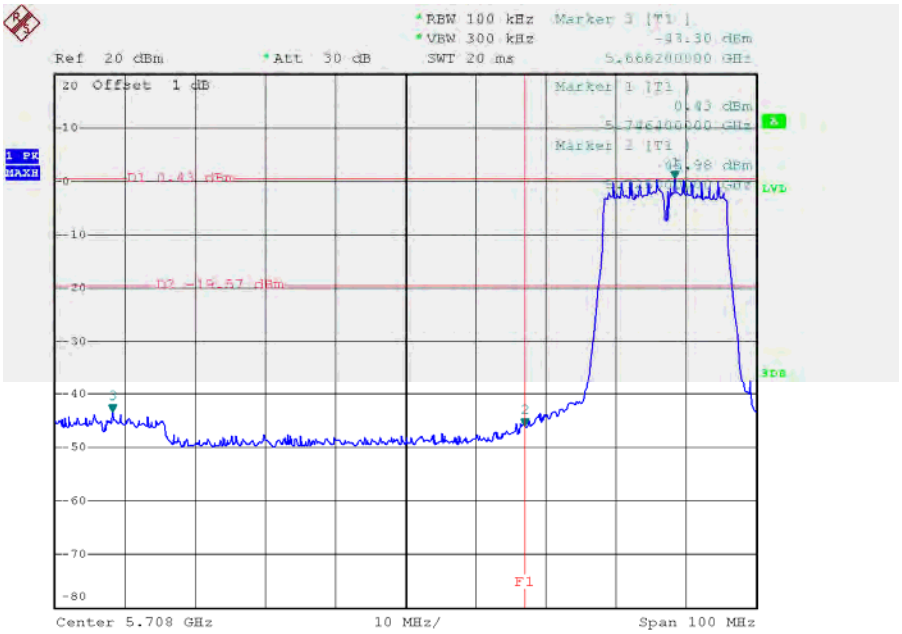


Date: 3.DEC.2013 09:00:57

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 ℃	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N20 Mode /CH149, CH157, CH165 / ANT 1		

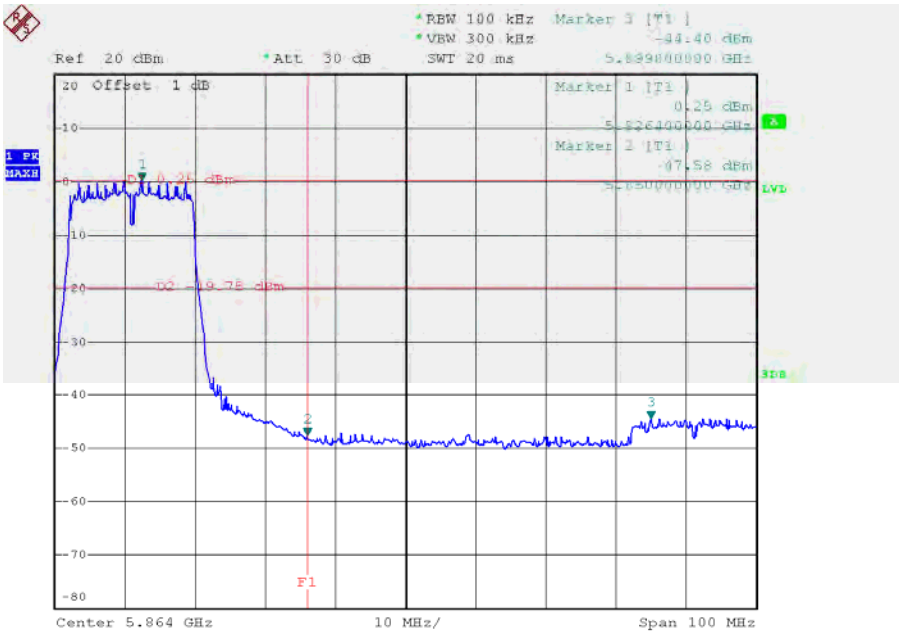
Channel of Worst Data: CH149			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5666.20	-43.30	5899.00	-44.40
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

TX mode CH149



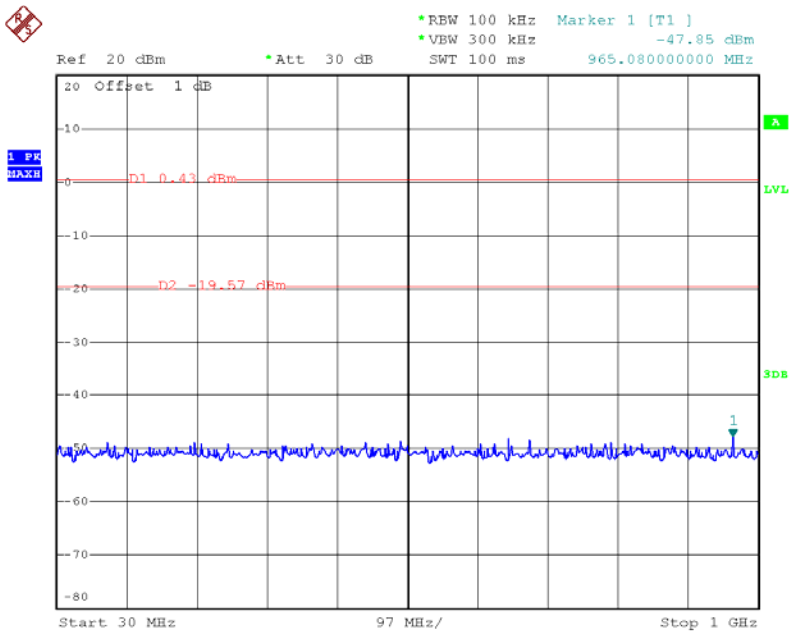
Date: 3.DEC.2013 08:40:00

TX mode CH165



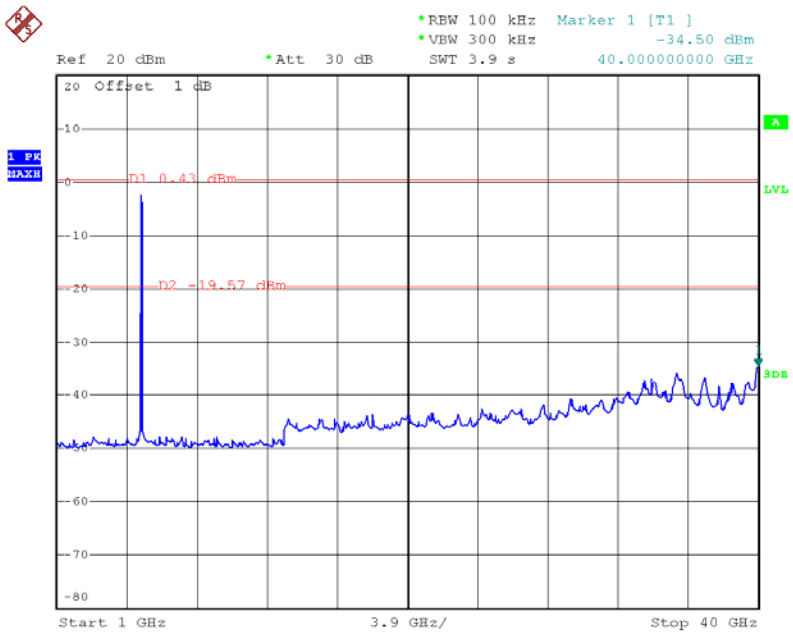
Date: 3.DEC.2013 09:03:04

TX mode CH149 (30M~1000MHz)



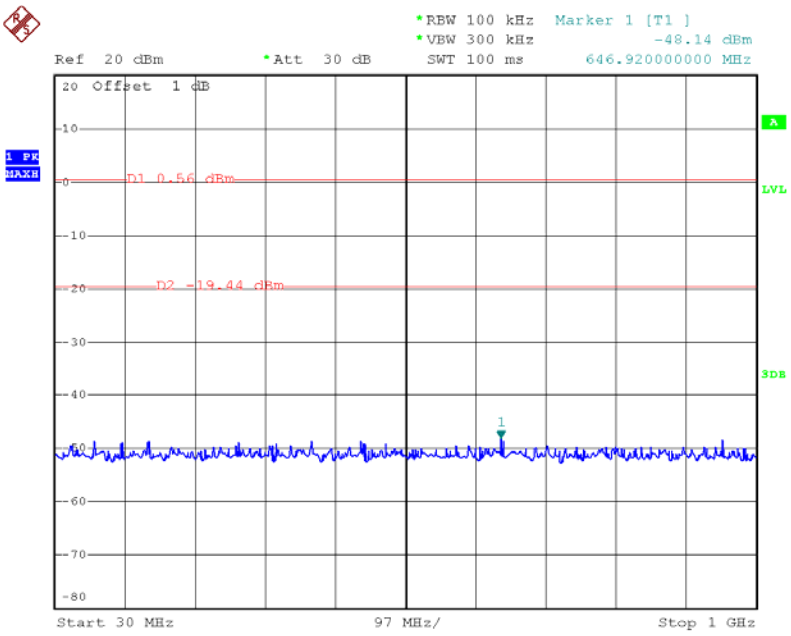
Date: 3.DEC.2013 08:40:18

TX mode CH149 (1000MHz~10th Harmonic)



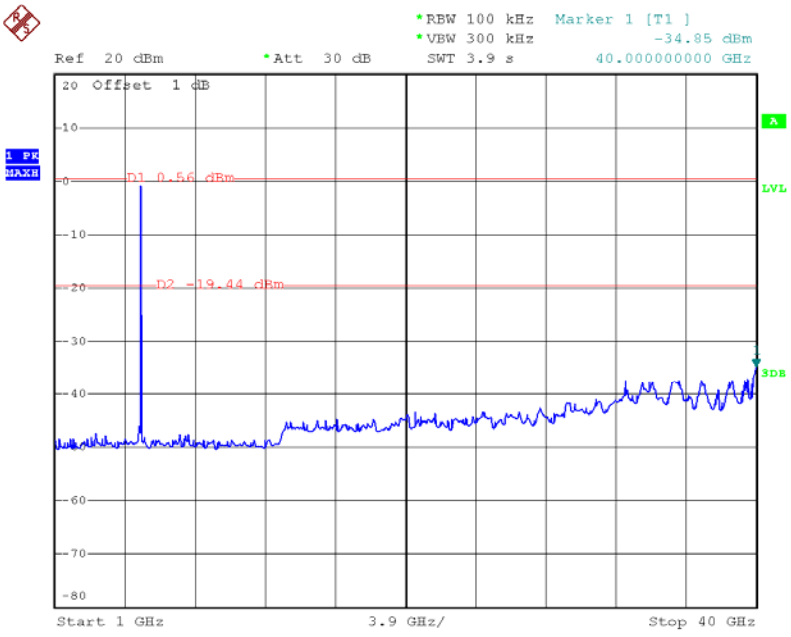
Date: 3.DEC.2013 08:41:30

TX mode CH157 (30M~1000MHz)



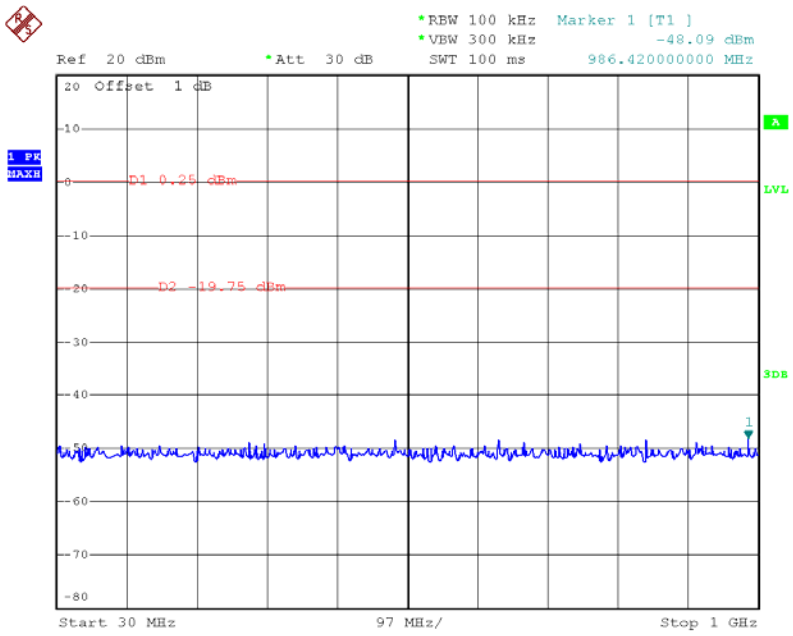
Date: 3.DEC.2013 08:52:20

TX mode CH157 (1000MHz~10th Harmonic)



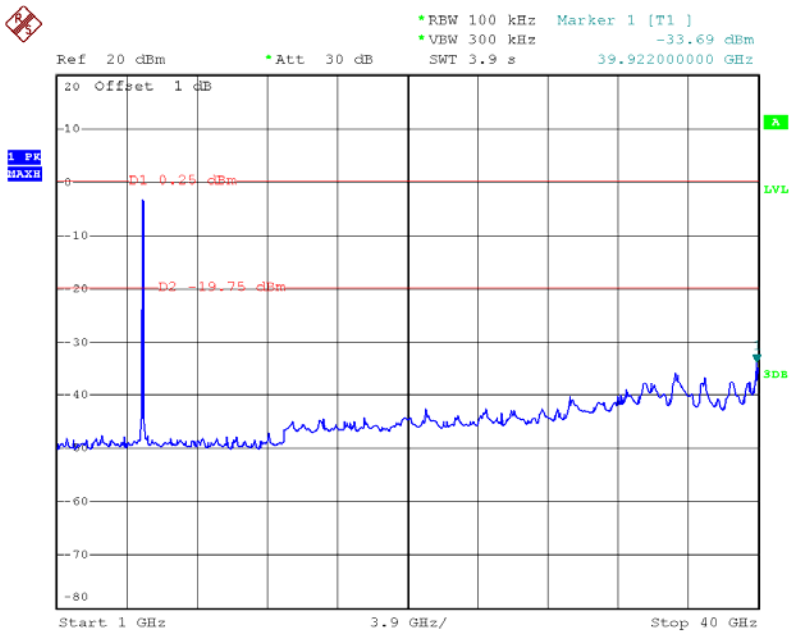
Date: 3.DEC.2013 08:52:59

TX mode CH165 (30M~1000MHz)



Date: 3.DEC.2013 09:03:25

TX mode CH165 (1000MHz~10th Harmonic)

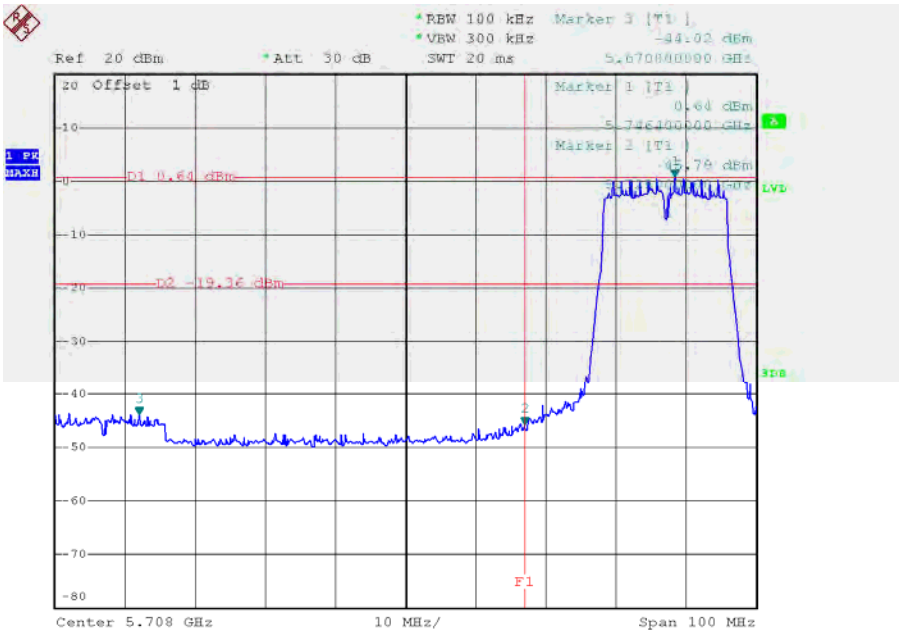


Date: 3.DEC.2013 09:04:19

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 ℃	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N20 Mode /CH149, CH157, CH165 / ANT 2		

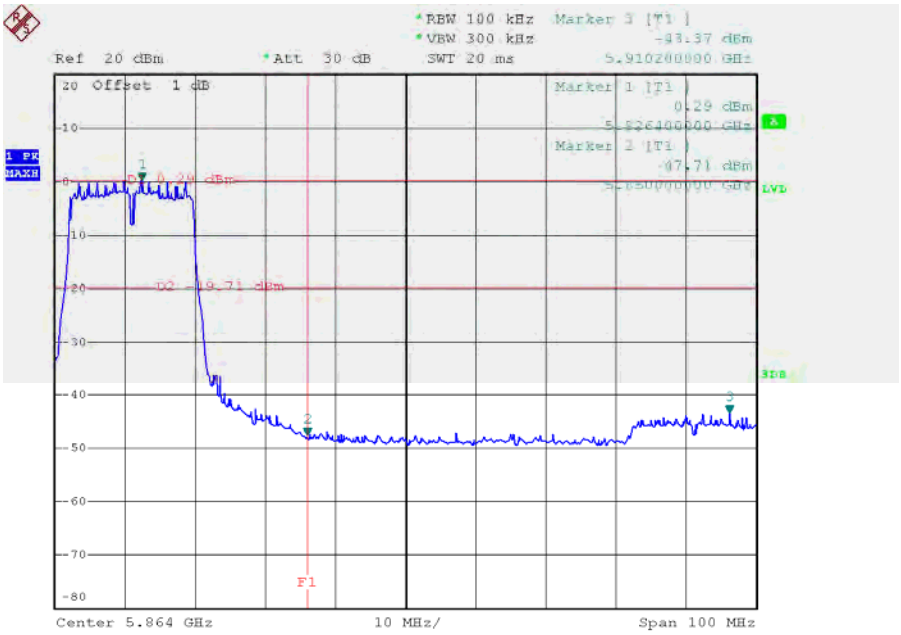
Channel of Worst Data: CH149			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5670.00	-44.02	5910.20	-43.37
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

TX mode CH149



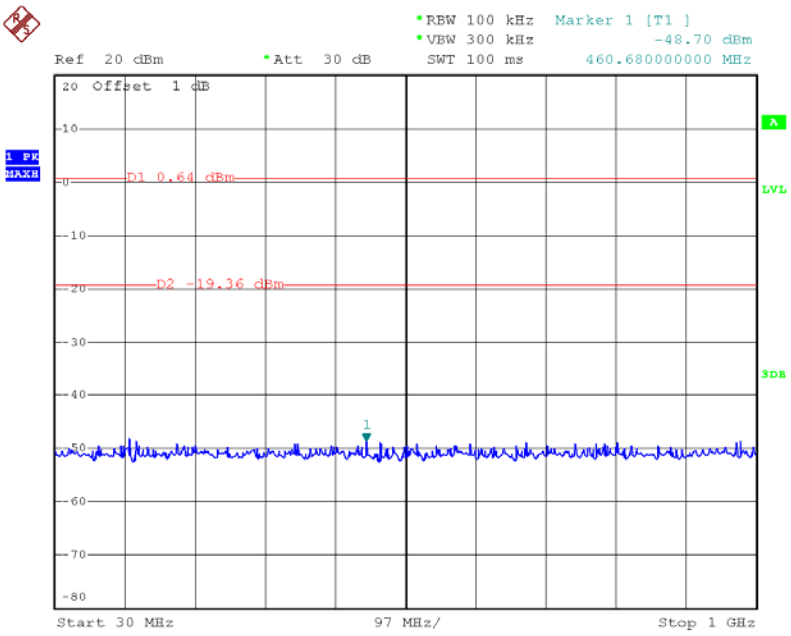
Date: 3.DEC.2013 08:43:09

TX mode CH165



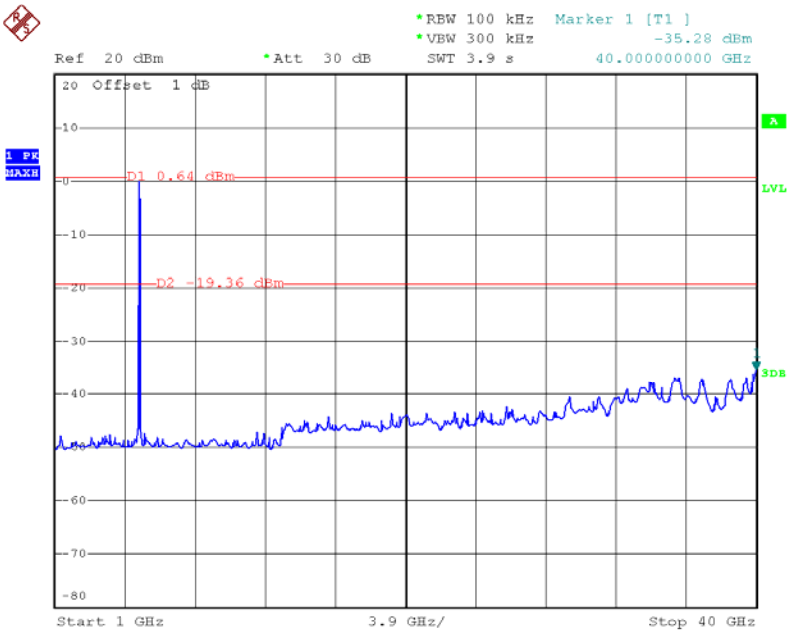
Date: 3.DEC.2013 09:07:29

TX mode CH149 (30M~1000MHz)



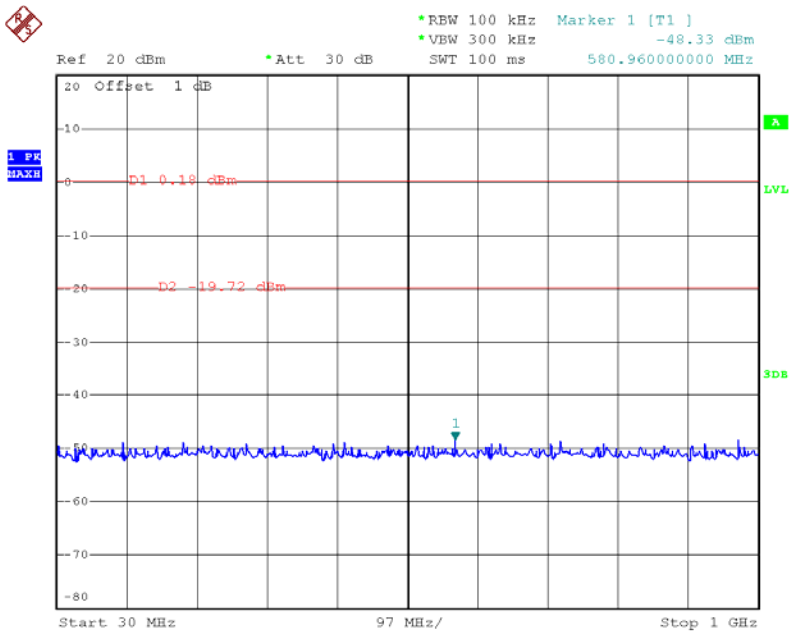
Date: 3.DEC.2013 08:43:56

TX mode CH149 (1000MHz~10th Harmonic)



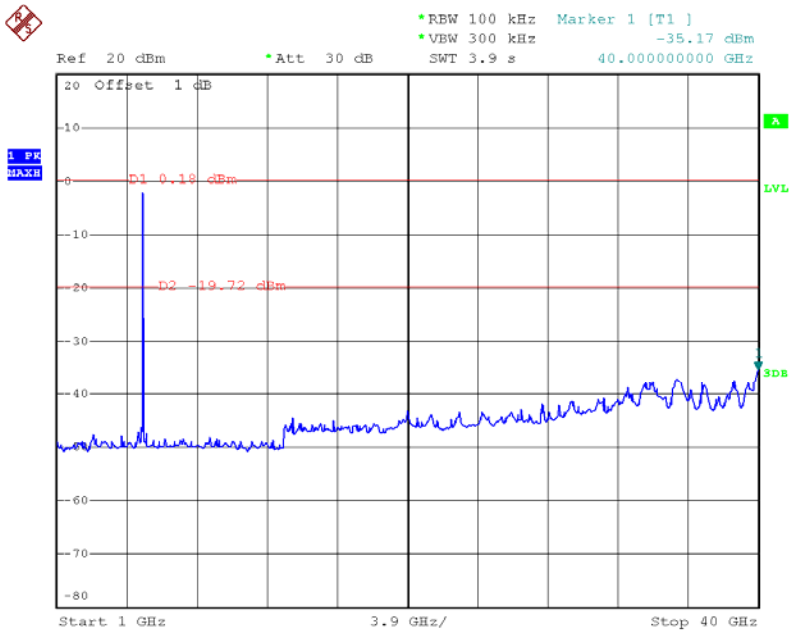
Date: 3.DEC.2013 08:44:34

TX mode CH157 (30M~1000MHz)



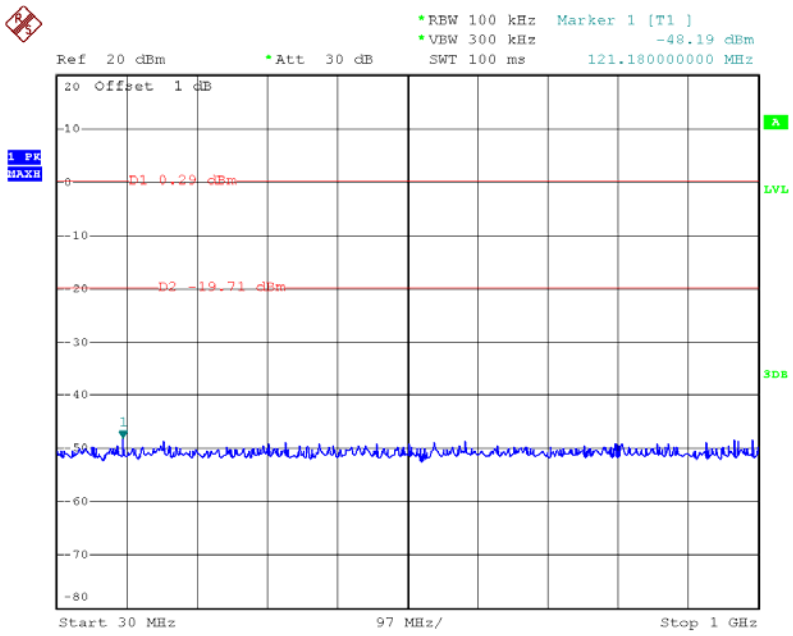
Date: 3.DEC.2013 08:53:45

TX mode CH157 (1000MHz~10th Harmonic)



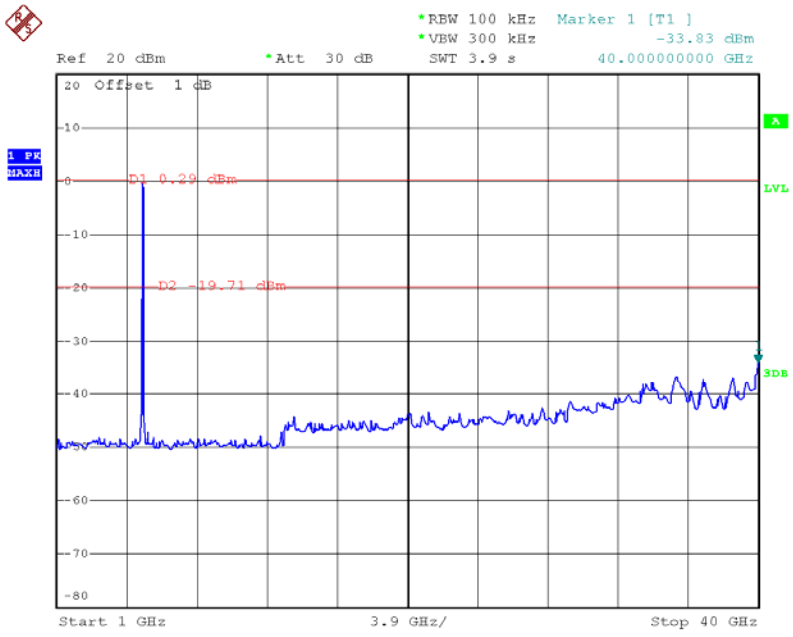
Date: 3.DEC.2013 08:54:14

TX mode CH165 (30M~1000MHz)



Date: 3.DEC.2013 09:07:48

TX mode CH165 (1000MHz~10th Harmonic)

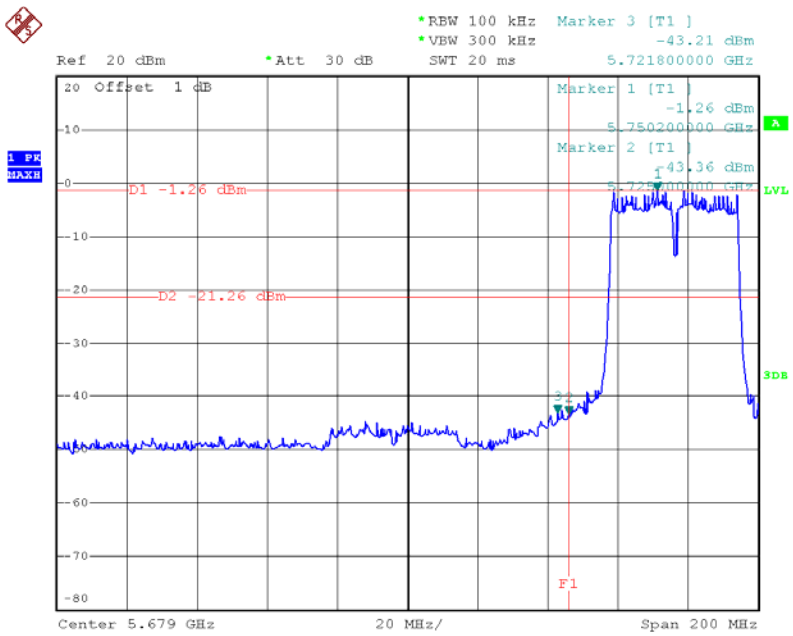


Date: 3.DEC.2013 09:08:25

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 ℃	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N40 Mode /CH151, CH159 / ANT 0		

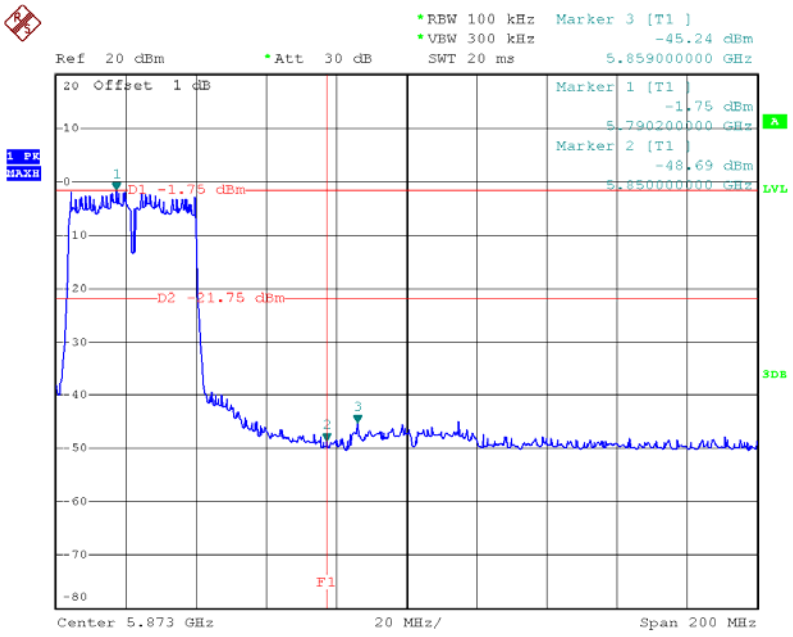
Channel of Worst Data: CH151			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5721.80	-43.21	5859.00	-45.24
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

TX mode CH151



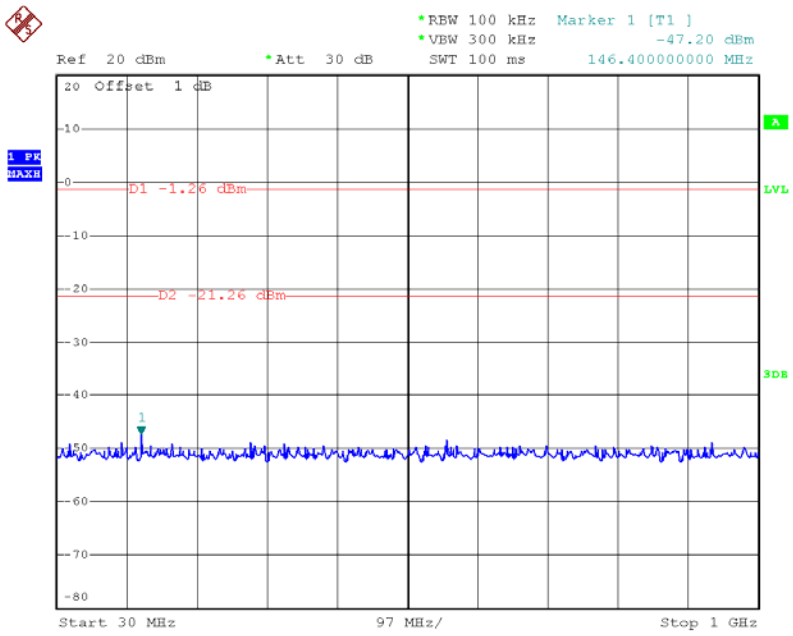
Date: 3.DEC.2013 09:14:48

TX mode CH159



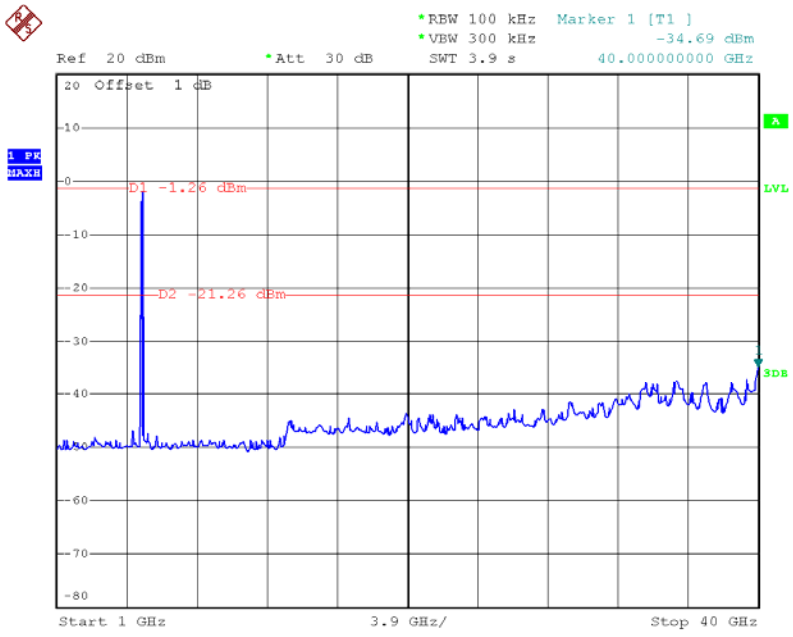
Date: 3.DEC.2013 09:23:37

TX mode CH151(30M~1000MHz)



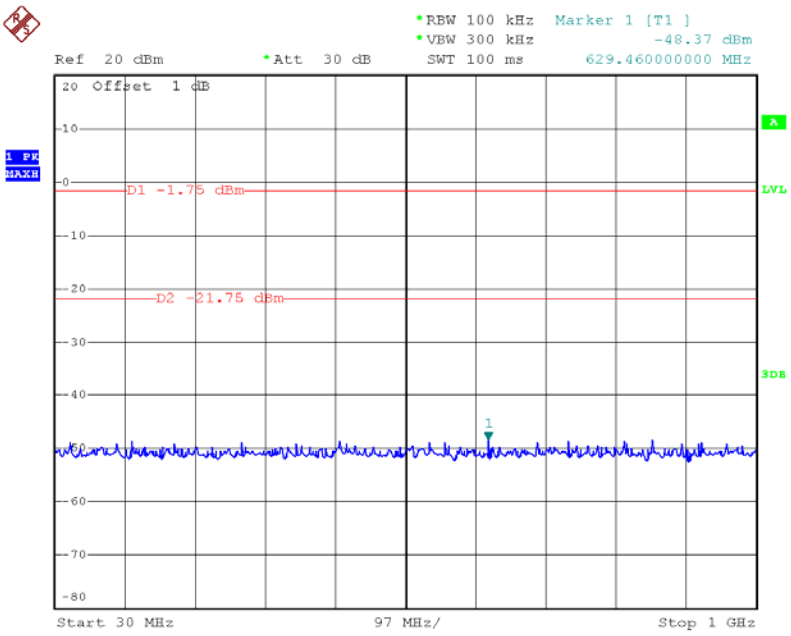
Date: 3.DEC.2013 09:15:04

TX mode CH151 (1000MHz~10th Harmonic)



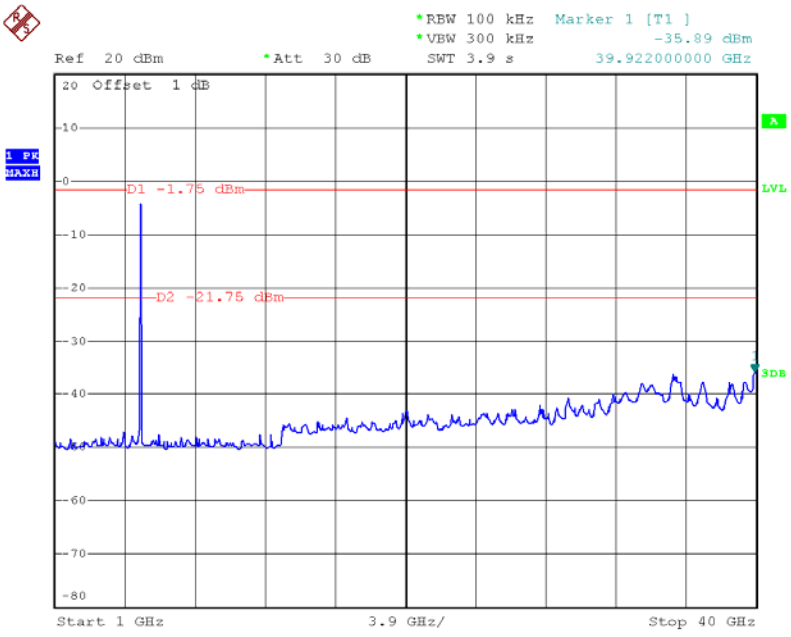
Date: 3.DEC.2013 09:15:23

TX mode CH159 (30M~1000MHz)



Date: 3.DEC.2013 09:23:53

TX mode CH159 (1000MHz~10th Harmonic)

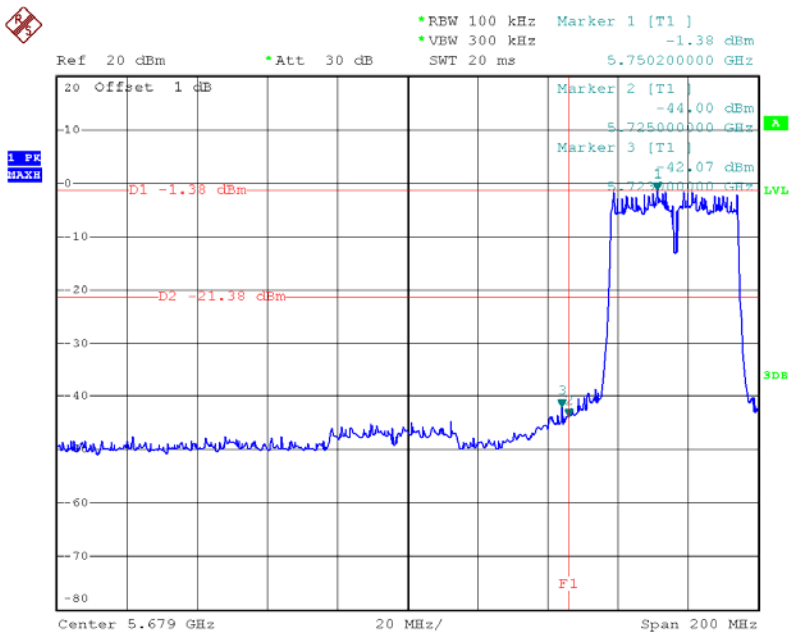


Date: 3.DEC.2013 09:24:24

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 ℃	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N40 Mode /CH151, CH159 / ANT 1		

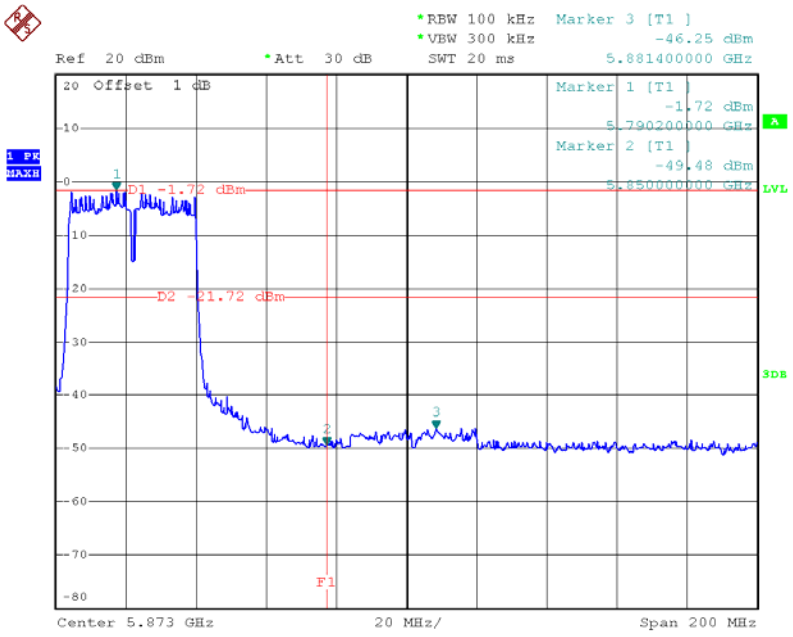
Channel of Worst Data: CH151			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5723.00	-42.07	5881.40	-46.25
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

TX mode CH151



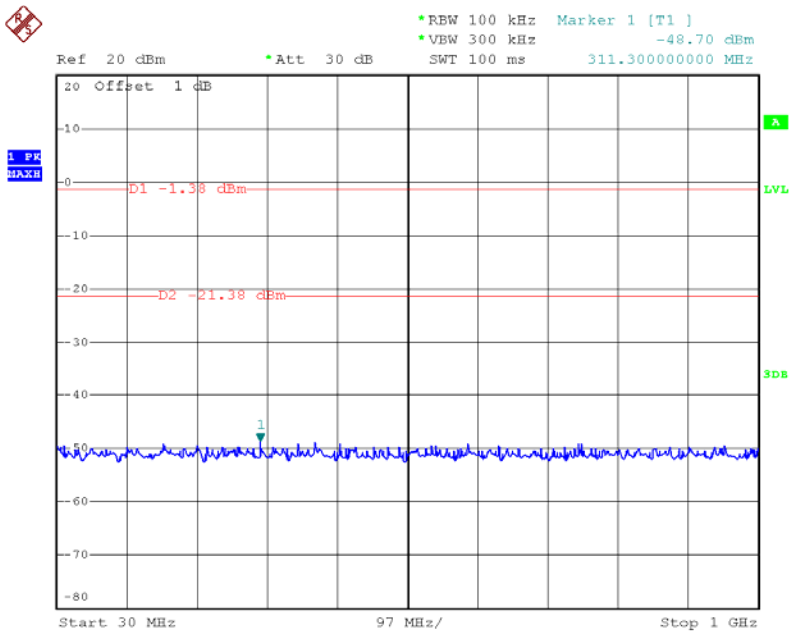
Date: 3.DEC.2013 09:16:10

TX mode CH159



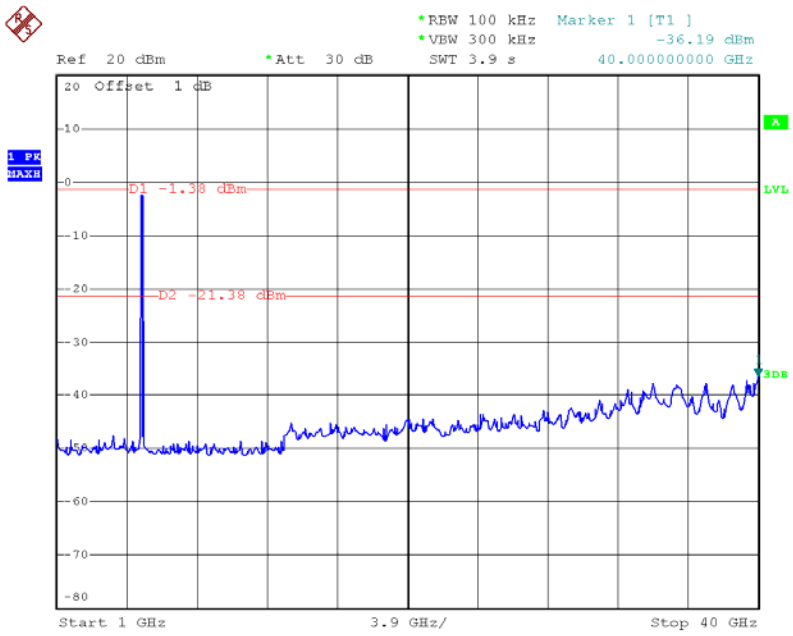
Date: 3.DEC.2013 09:25:18

TX mode CH151(30M~1000MHz)



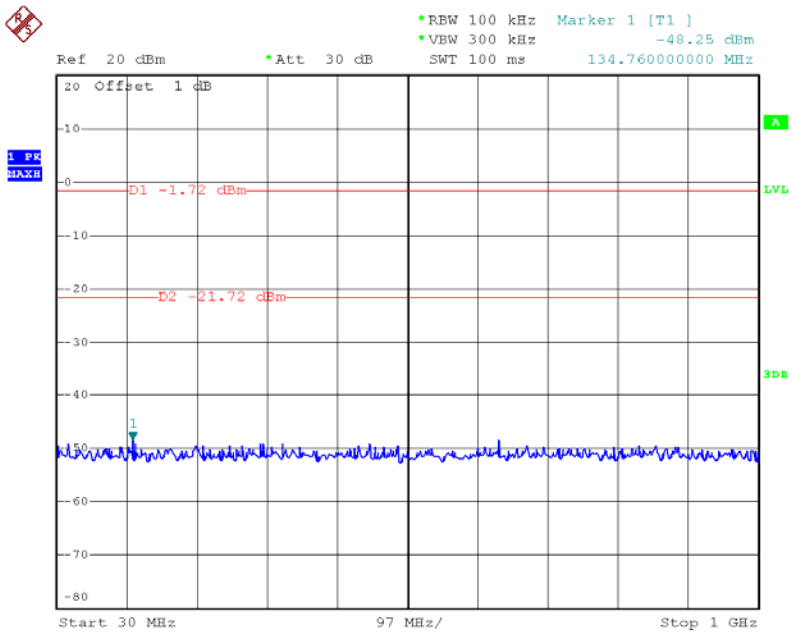
Date: 3.DEC.2013 09:16:22

TX mode CH151 (1000MHz~10th Harmonic)



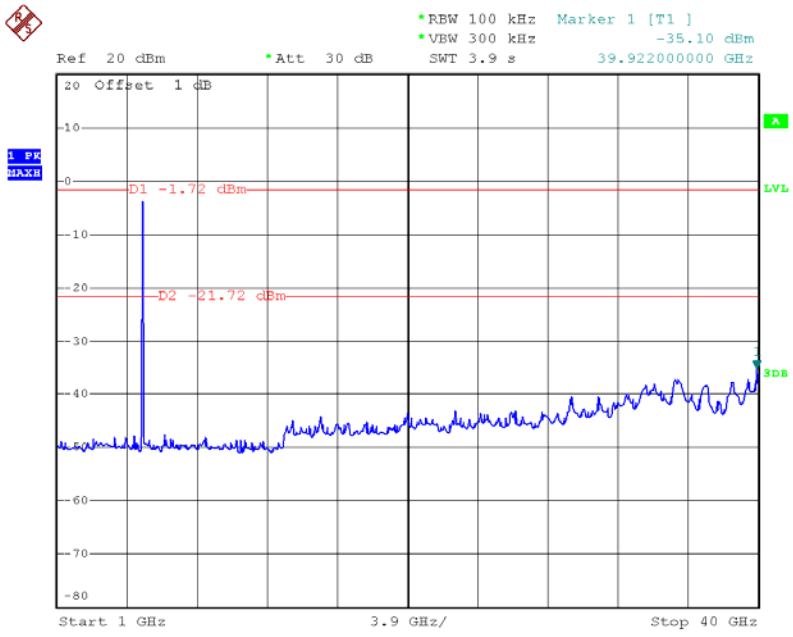
Date: 3.DEC.2013 09:16:34

TX mode CH159 (30M~1000MHz)



Date: 3.DEC.2013 09:25:32

TX mode CH159 (1000MHz~10th Harmonic)

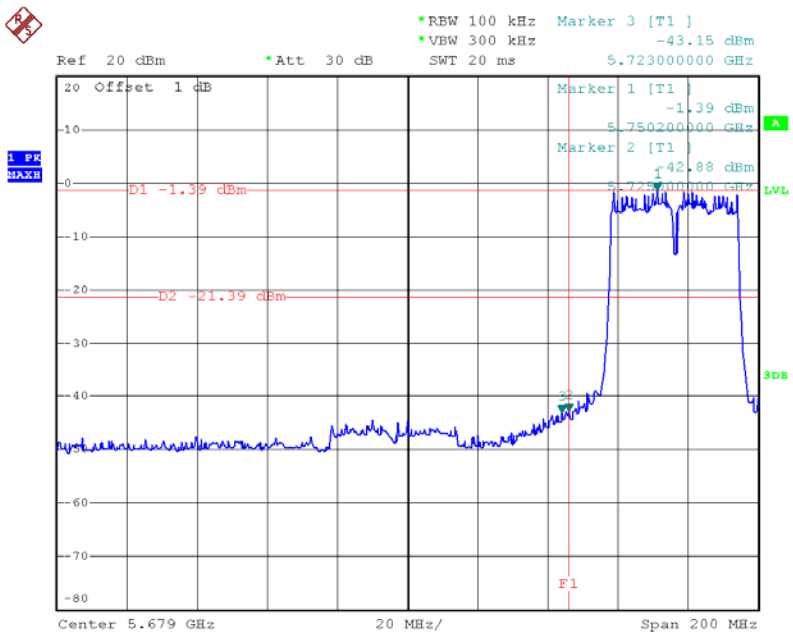


Date: 3.DEC.2013 09:25:50

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 ℃	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N40 Mode /CH151, CH159 / ANT 2		

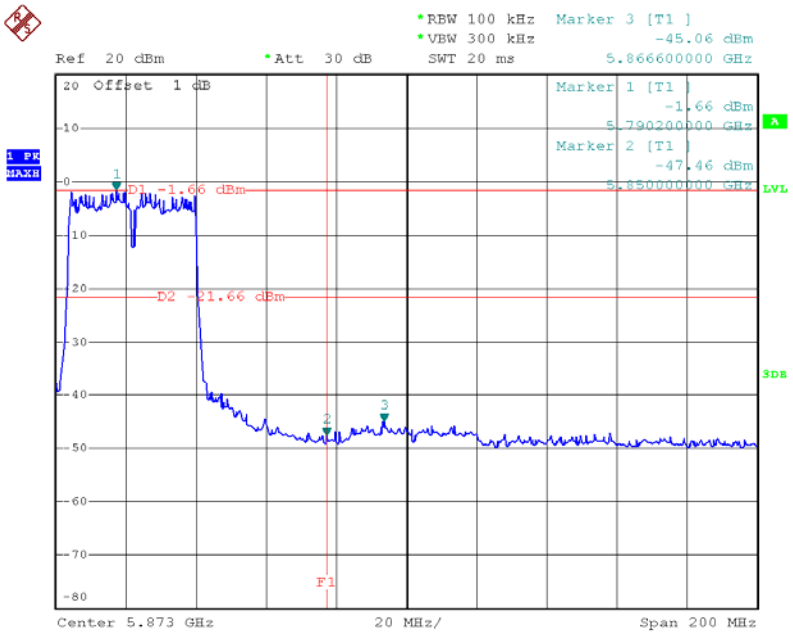
Channel of Worst Data: CH151			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5725.00	-42.88	5866.30	-45.06
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

TX mode CH151



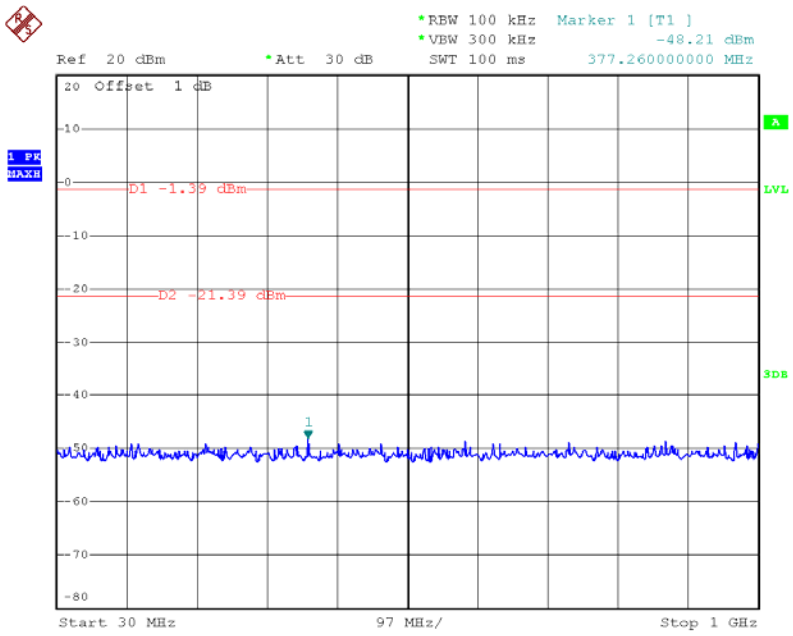
Date: 3.DEC.2013 09:17:26

TX mode CH159



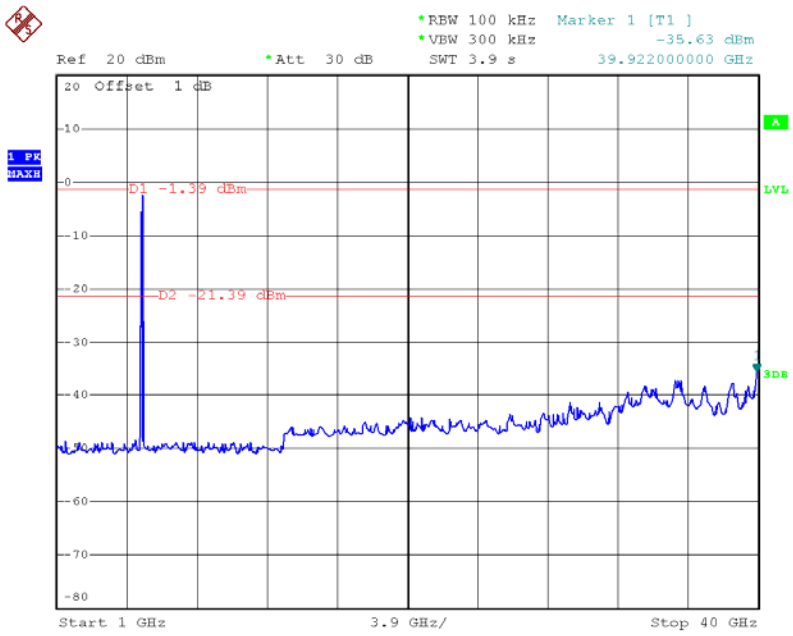
Date: 3.DEC.2013 09:29:02

TX mode CH151(30M~1000MHz)



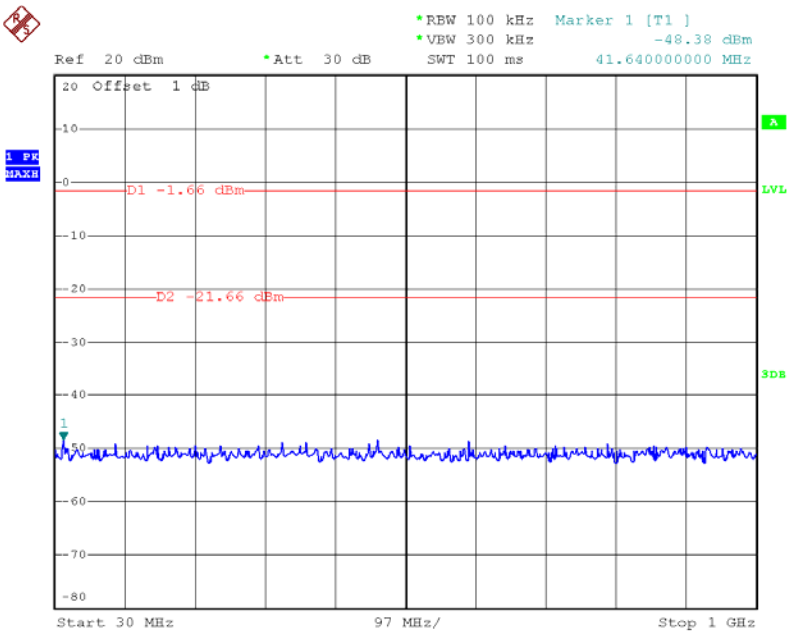
Date: 3.DEC.2013 09:17:39

TX mode CH151 (1000MHz~10th Harmonic)



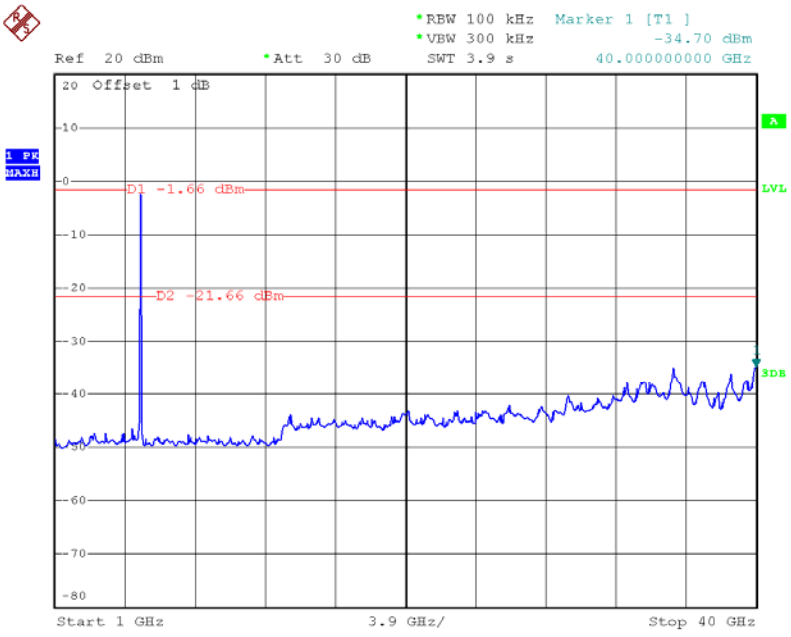
Date: 3.DEC.2013 09:18:04

TX mode CH159 (30M~1000MHz)



Date: 3.DEC.2013 09:29:15

TX mode CH159 (1000MHz~10th Harmonic)

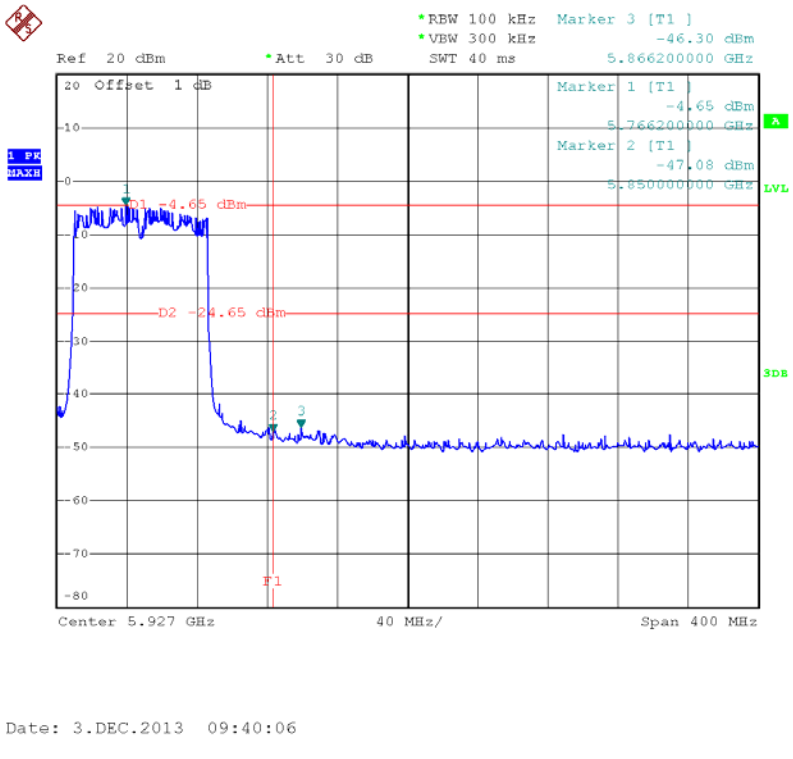


Date: 3.DEC.2013 09:30:55

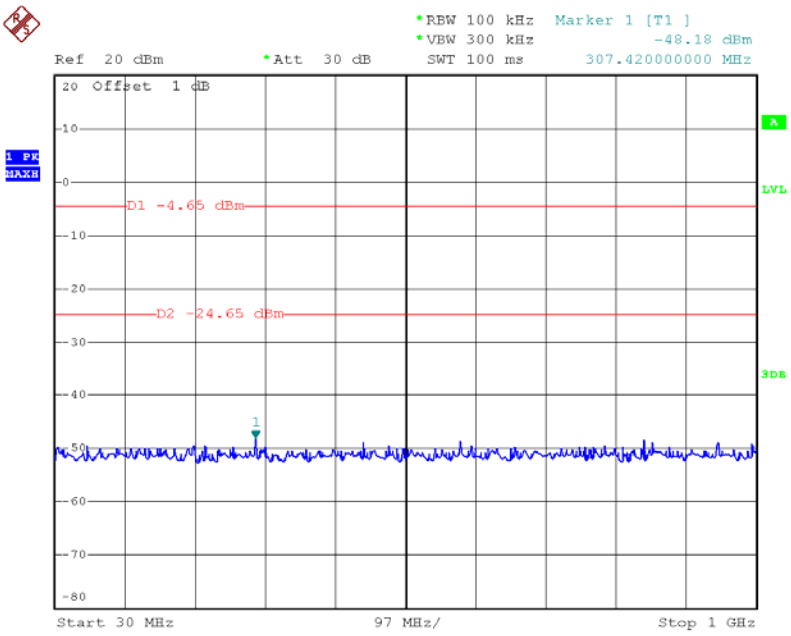
EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 ℃	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N80 Mode /CH155 / ANT 0		

Channel of Worst Data: CH155	
The max. radio frequency power in any 100kHz bandwidth outside the frequency band	
FREQUENCY(MHz)	POWER(dBm)
5866.20	-46.30
Result	
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.	

TX mode CH155

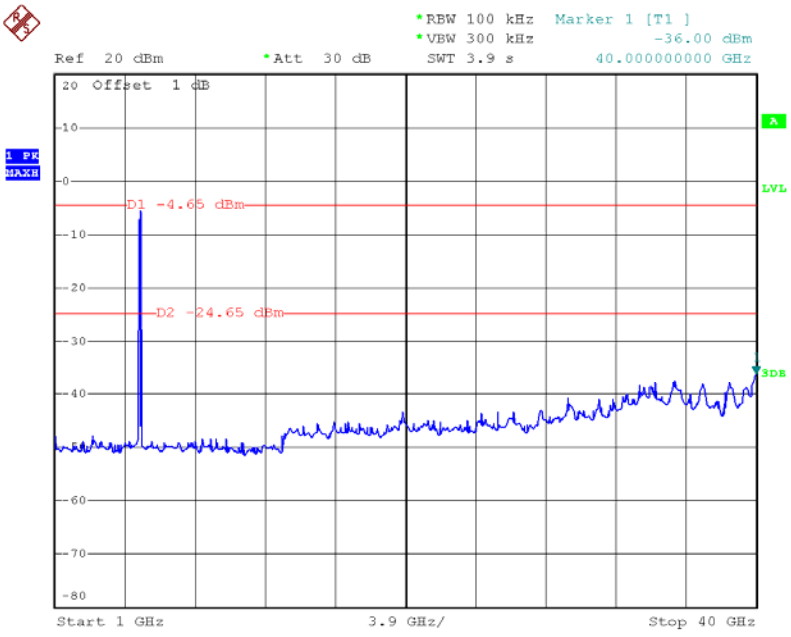


TX mode CH155(30M~1000MHz)



Date: 3.DEC.2013 09:40:21

TX mode CH155 (1000MHz~10th Harmonic)

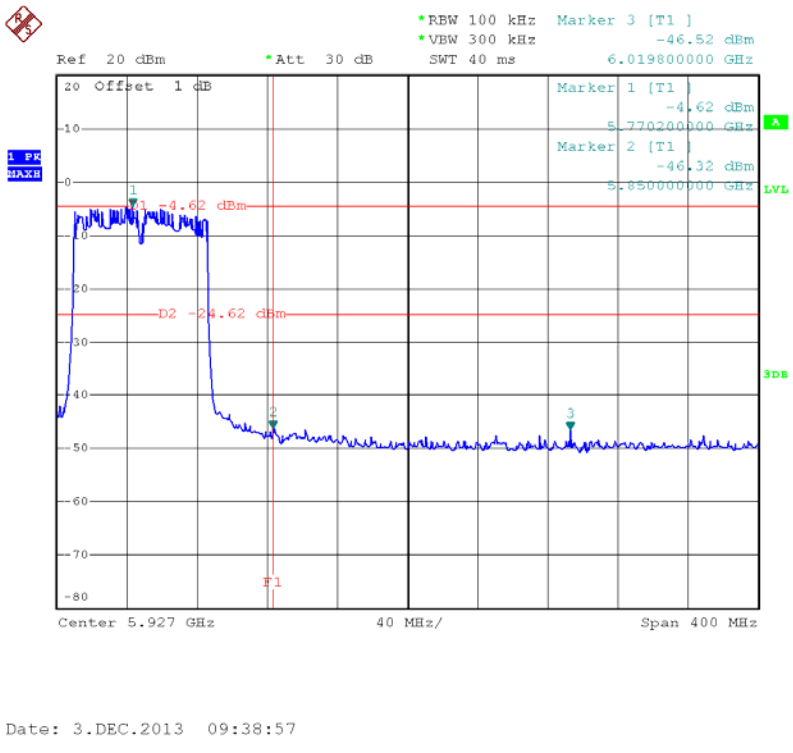


Date: 3.DEC.2013 09:40:34

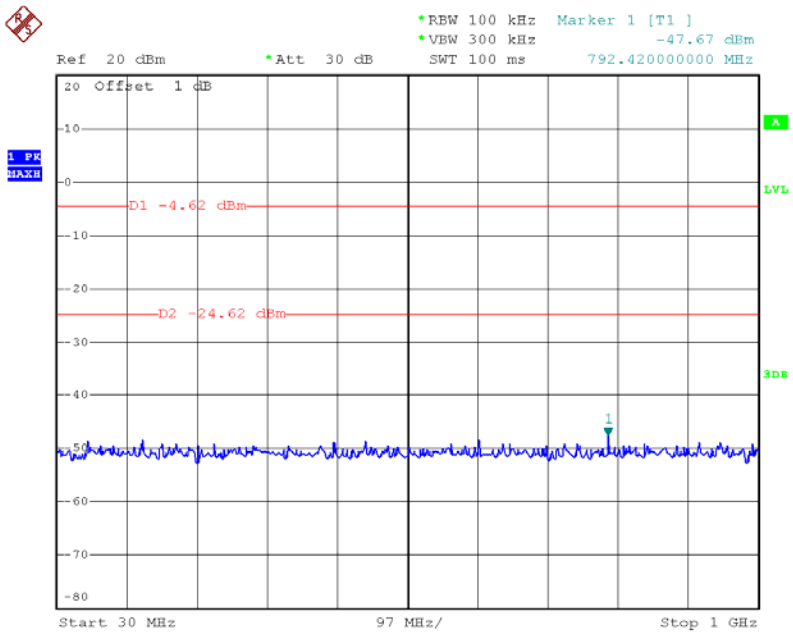
EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 ℃	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N80 Mode /CH155 / ANT 1		

Channel of Worst Data: CH155	
The max. radio frequency power in any 100kHz bandwidth outside the frequency band	
FREQUENCY(MHz)	POWER(dBm)
5850.00	-46.32
Result	
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.	

TX mode CH155

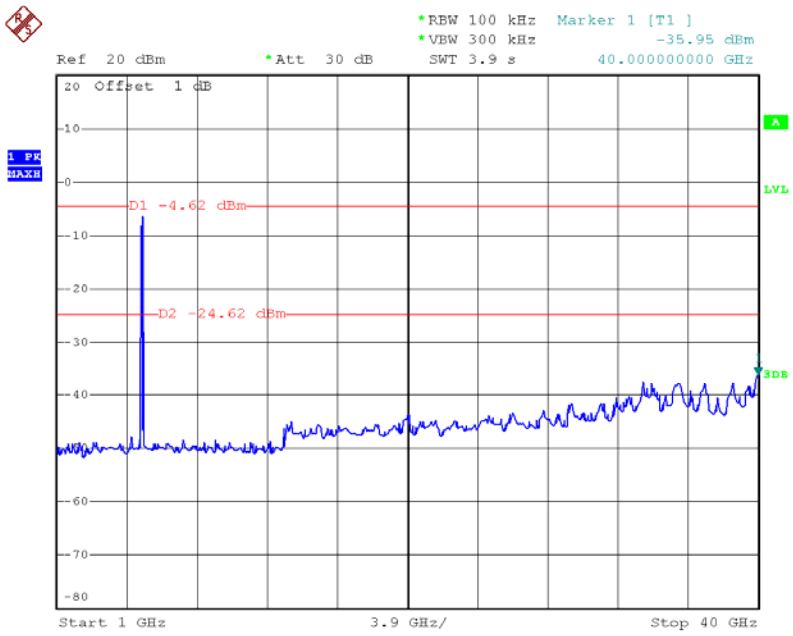


TX mode CH155(30M~1000MHz)



Date: 3.DEC.2013 09:39:11

TX mode CH155 (1000MHz~10th Harmonic)

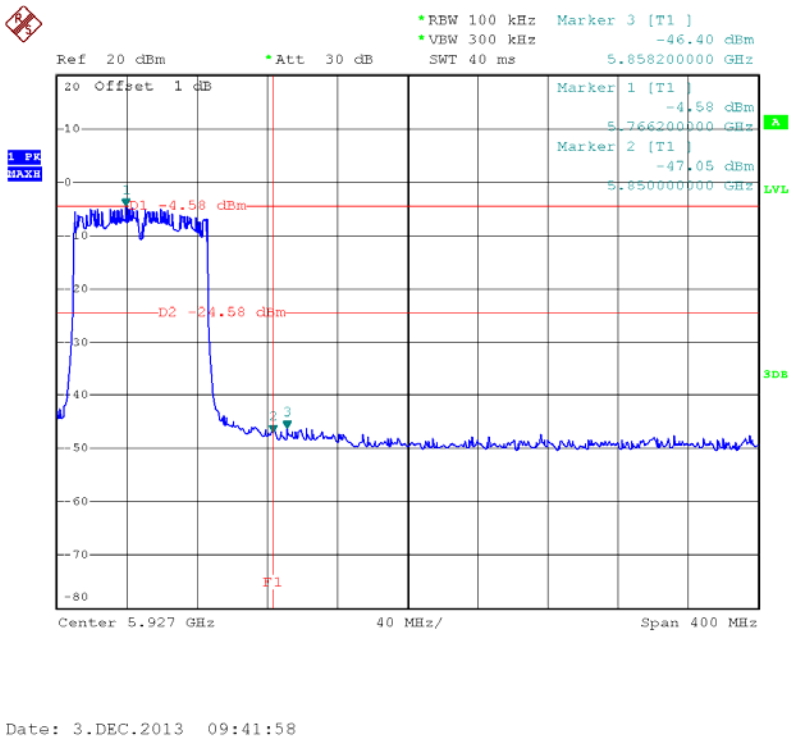


Date: 3.DEC.2013 09:39:27

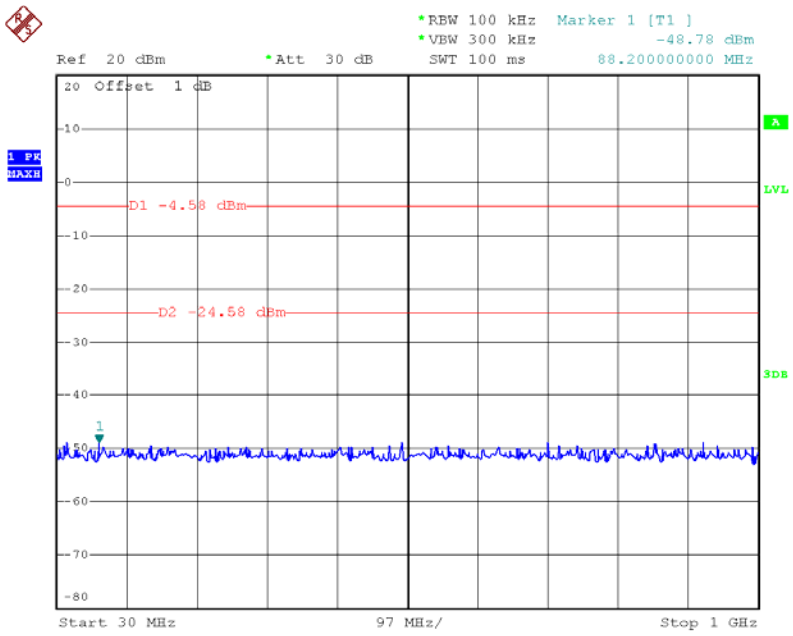
EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 ℃	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N80 Mode /CH155 / ANT 2		

Channel of Worst Data: CH155	
The max. radio frequency power in any 100kHz bandwidth outside the frequency band	
FREQUENCY(MHz)	POWER(dBm)
5858.20	-46.40
Result	
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.	

TX mode CH155

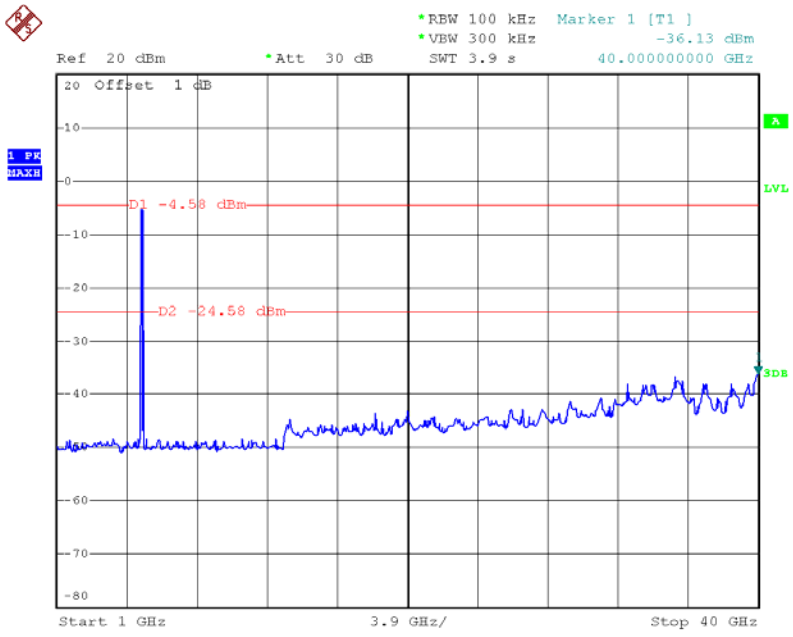


TX mode CH155(30M~1000MHz)



Date: 3.DEC.2013 09:42:09

TX mode CH155 (1000MHz~10th Harmonic)



Date: 3.DEC.2013 09:42:29

8. POWER SPECTRAL DENSITY TEST

8.1 Applied procedures / limit

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(e)	Power Spectral Density	8 dBm (in any 3KHz)	5745 - 5825	PASS

8.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Nov. 09, 2014

Remark: “N/A” denotes no model name, serial no. or calibration specified.
All calibration period of Equipment List is One Year.

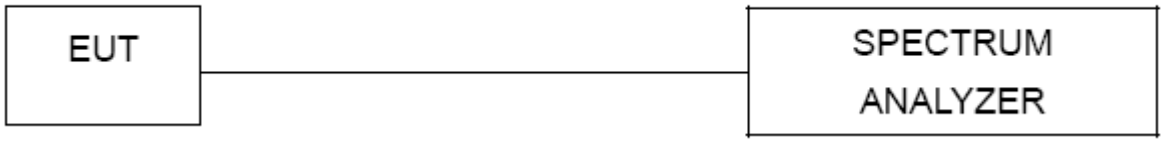
8.1.2 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
b. Spectrum Setting : RBW=3KHz, VBW=10KHz, Sweep time = auto.
c. The power spectral density was performed in accordance with method 10.2 of FCC KDB 558074 D01 DTS Meas Guidance v03r01 (A, N20, N40 mode) and 662911 D01 Multiple Transmitter Output v01r02. (N20,N40 mode)

8.1.3 DEVIATION FROM STANDARD

No deviation.

8.1.4 TEST SETUP



8.1.5 EUT OPERATION CONDITIONS

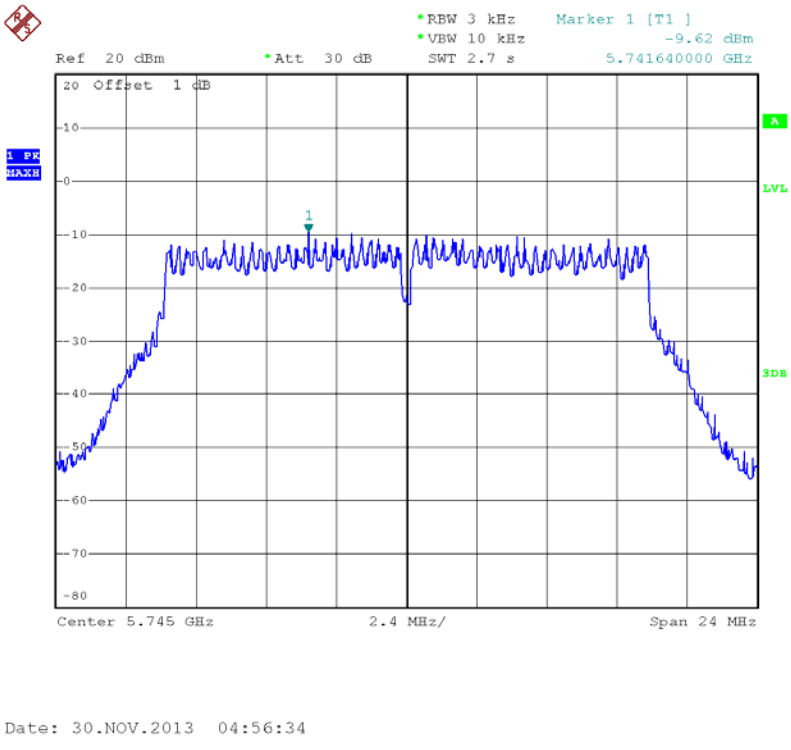
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

8.1.6 TEST RESULTS

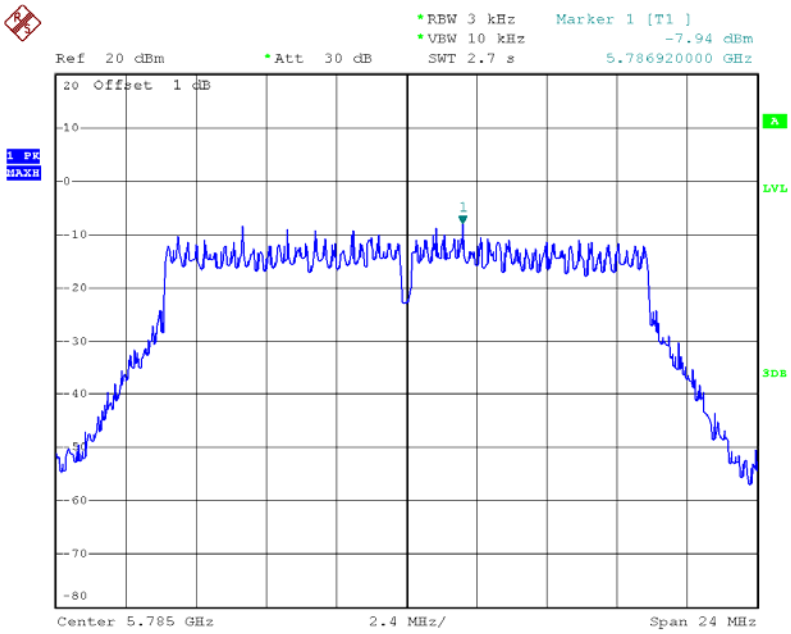
EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	23 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX A Mode /CH149, CH157, CH165		

Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH149	5745 MHz	-9.62	8
CH157	5785 MHz	-7.94	8
CH165	5825 MHz	-8.48	8

TX CH149

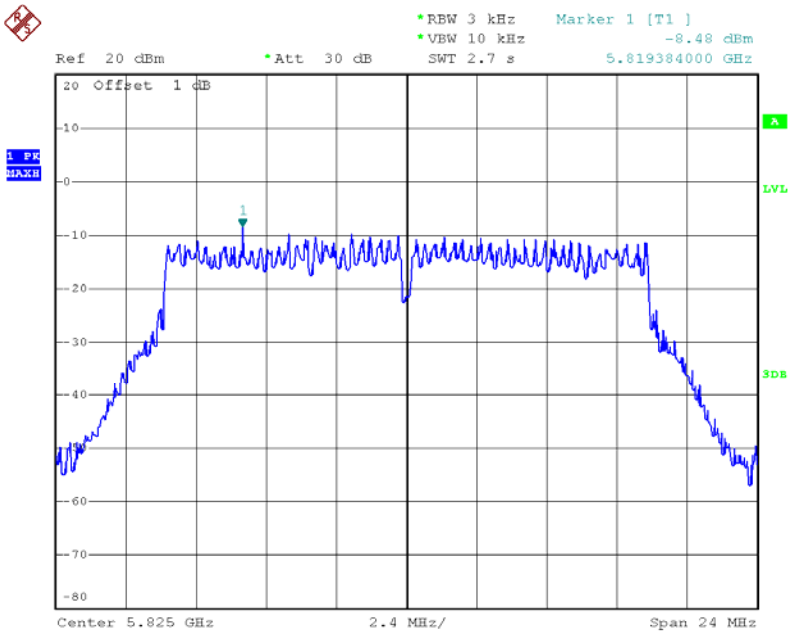


TX CH157



Date: 30.NOV.2013 04:59:02

TX CH165

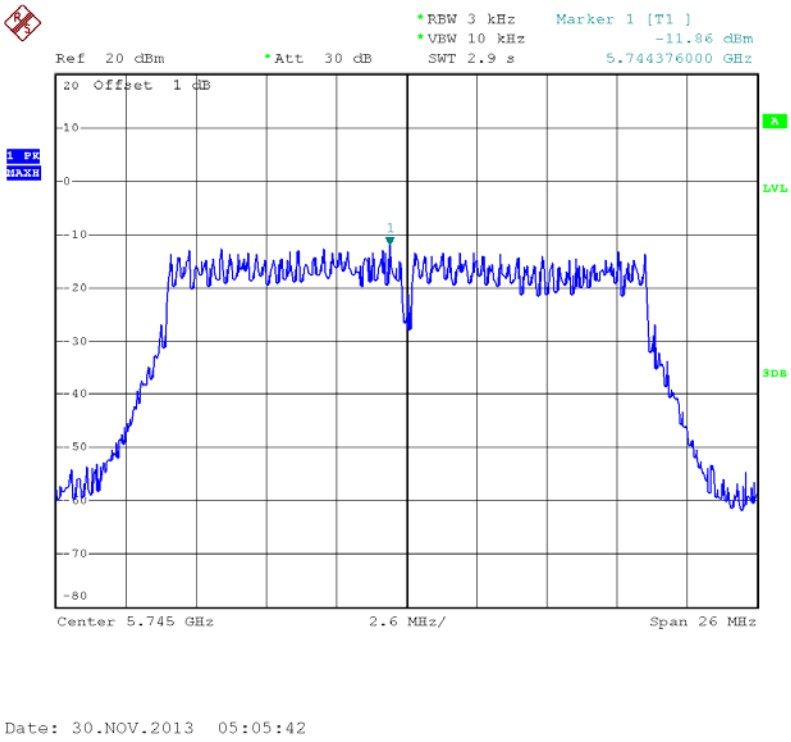


Date: 30.NOV.2013 05:01:10

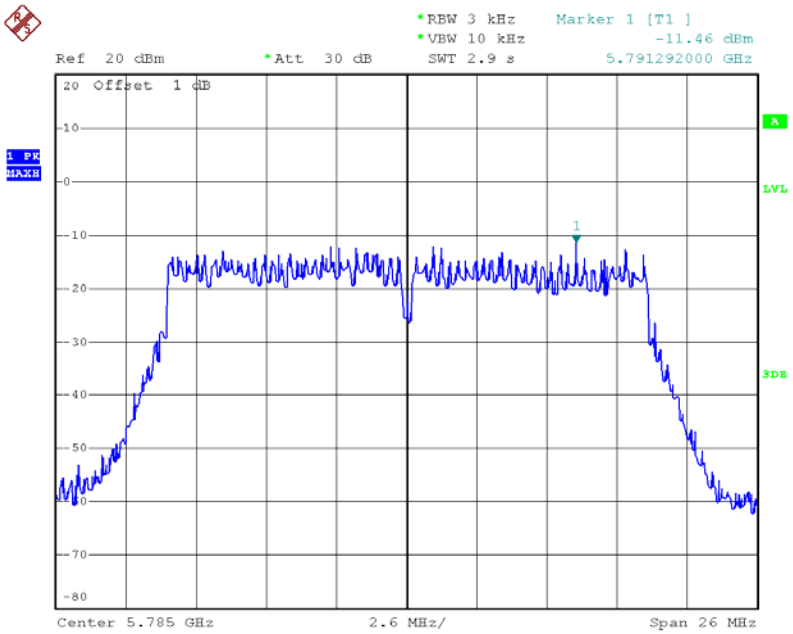
EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	23 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N20 Mode /CH149, CH157, CH165 / ANT 0		

Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH149	5745 MHz	-11.86	8
CH157	5785 MHz	-11.46	8
CH165	5825 MHz	-12.38	8

TX CH149

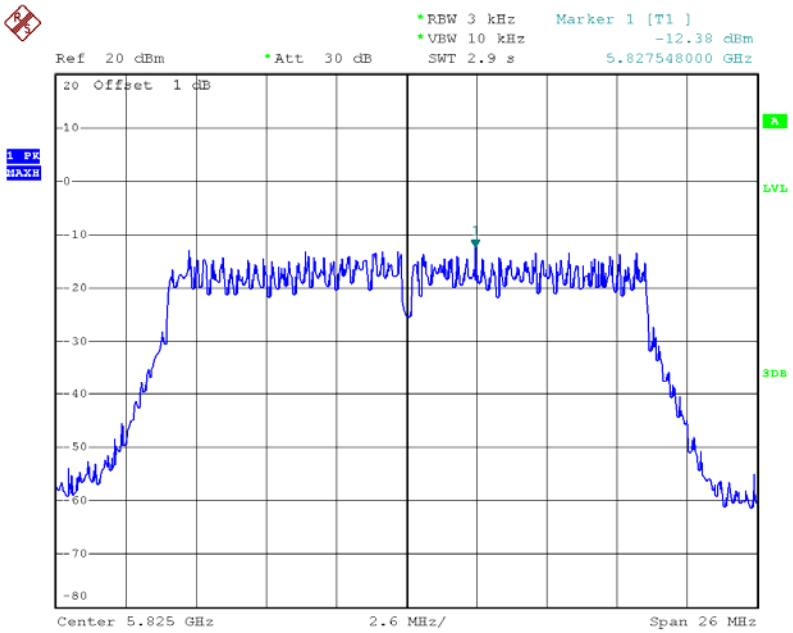


TX CH157



Date: 30.NOV.2013 05:14:42

TX CH165-

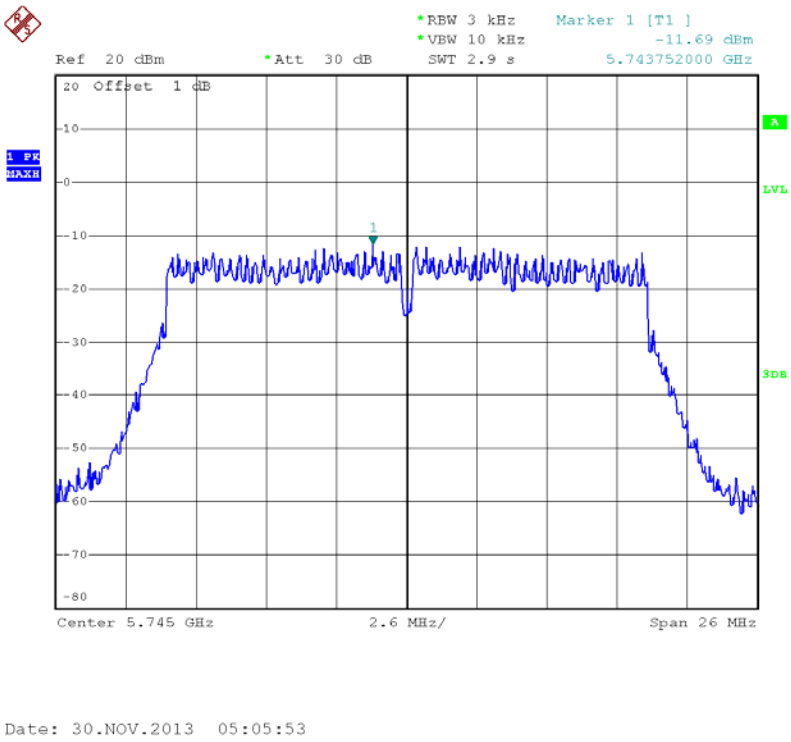


Date: 30.NOV.2013 05:20:44

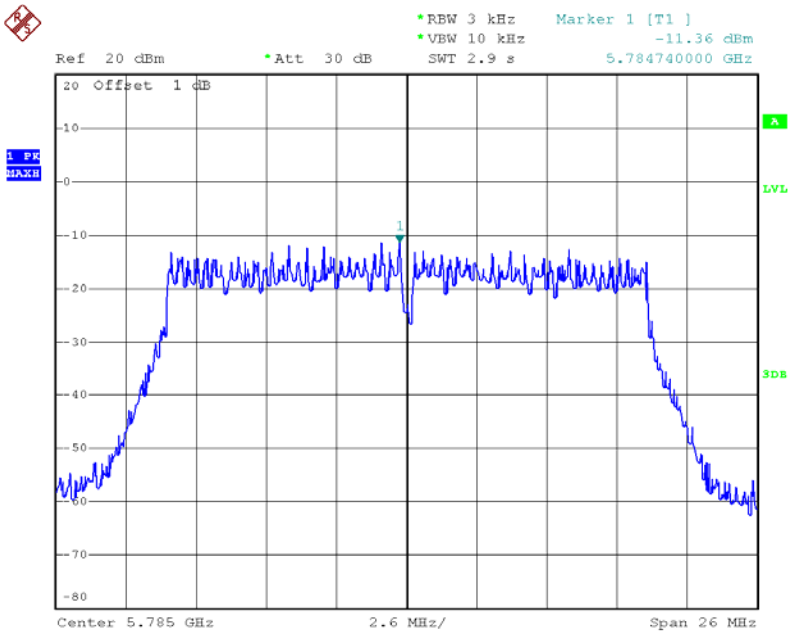
EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	23 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N20 Mode /CH149, CH157, CH165 / ANT 1		

Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH149	5745 MHz	-11.69	8
CH157	5785 MHz	-11.36	8
CH165	5825 MHz	-11.58	8

TX CH149

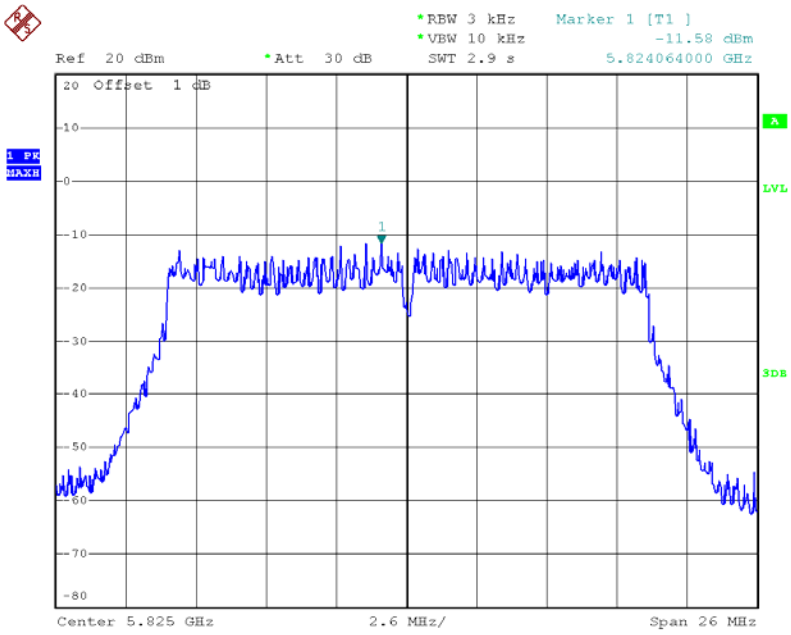


TX CH157



Date: 30.NOV.2013 05:14:48

TX CH165-

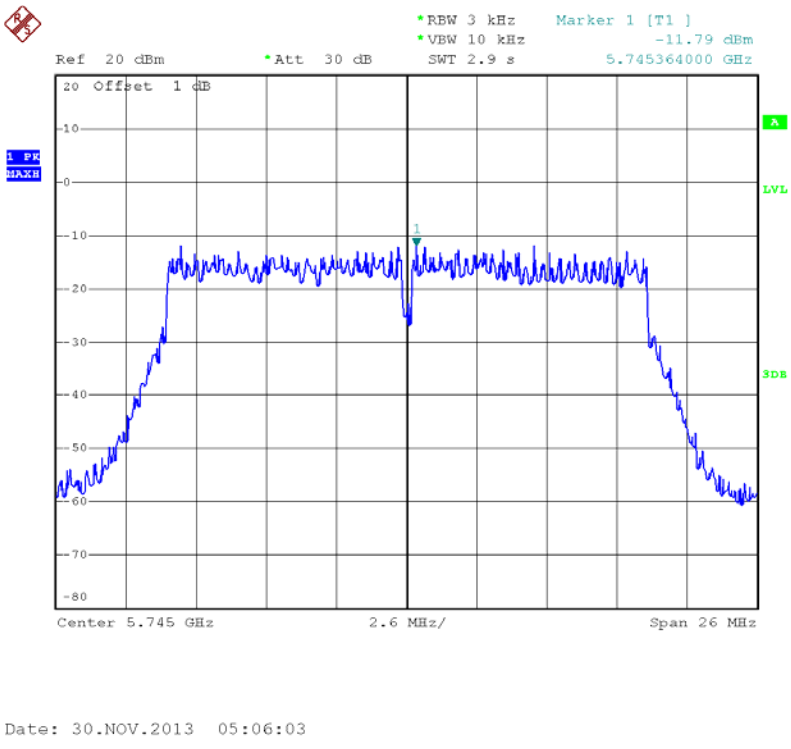


Date: 30.NOV.2013 05:20:51

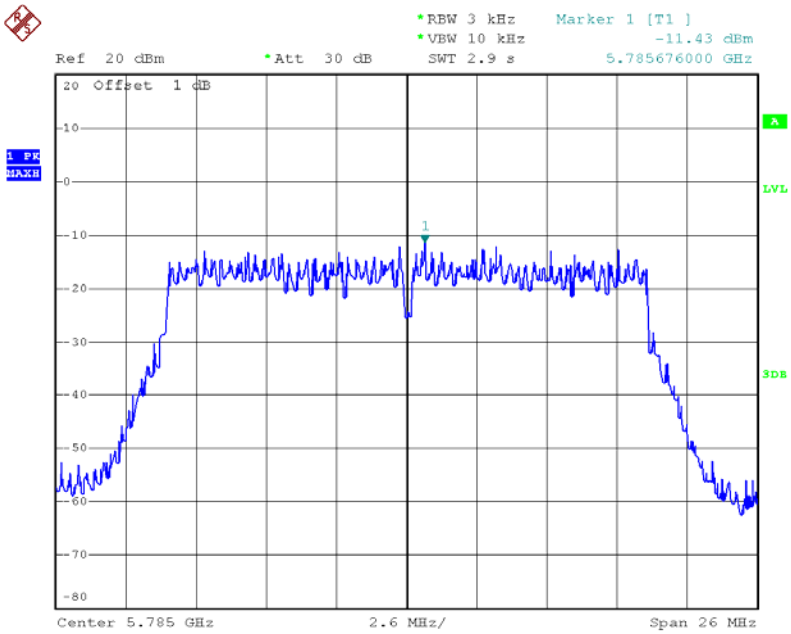
EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	23 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N20 Mode /CH149, CH157, CH165 / ANT 2		

Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH149	5745 MHz	-11.79	8
CH157	5785 MHz	-11.43	8
CH165	5825 MHz	-12.16	8

TX CH149

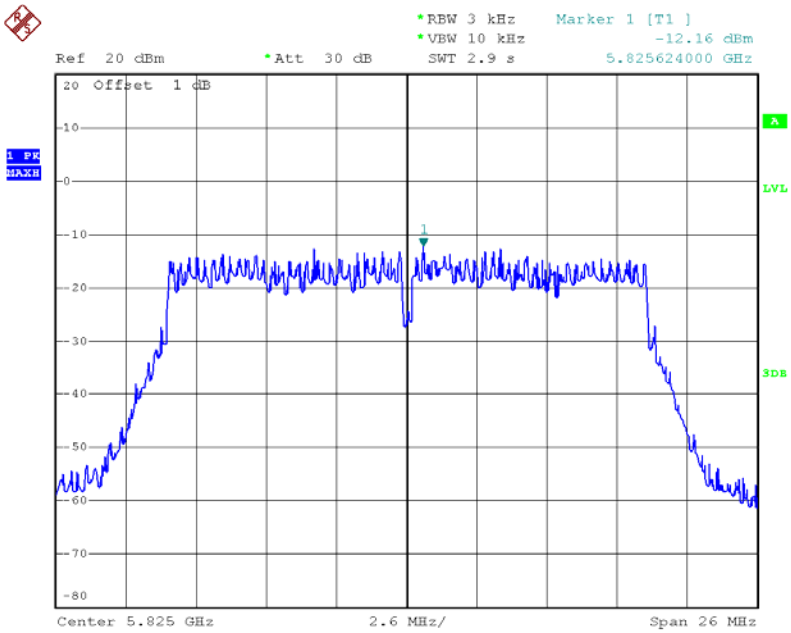


TX CH157



Date: 30.NOV.2013 05:14:56

TX CH165-



Date: 30.NOV.2013 05:20:57

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	23 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N20 Mode /CH149, CH157, CH165 / ANT 0 + ANT 1+ ANT 2		

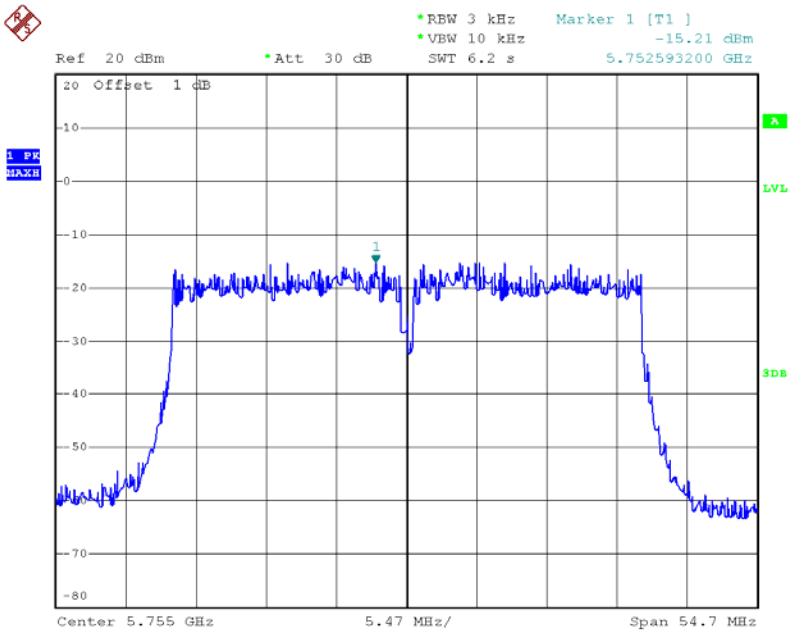
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH149	5745 MHz	-7.00	8
CH157	5785 MHz	-6.64	8
CH165	5825 MHz	-7.25	8

Note: The EUT incorporates a MIMO function. Physically, the EUT provides three completed transmitters and thee receivers (3T3R) , all transmit signals are completely uncorrelated, then,**Direction gain = G_{ANT}**, that is Directional gain=5

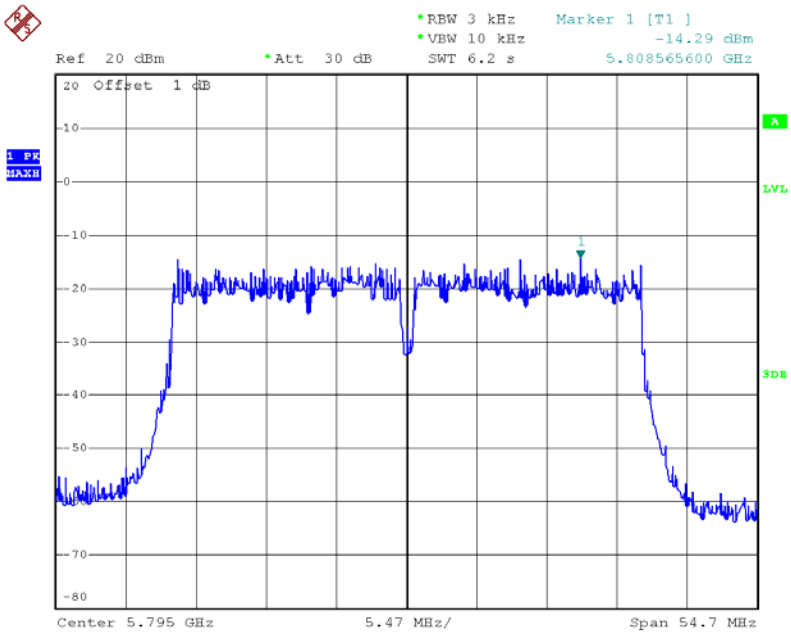
EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	23 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N40 Mode /CH151, CH159 / ANT 0		

Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH151	5755 MHz	-15.21	8
CH159	5795 MHz	-14.29	8

TX CH151



TX CH159

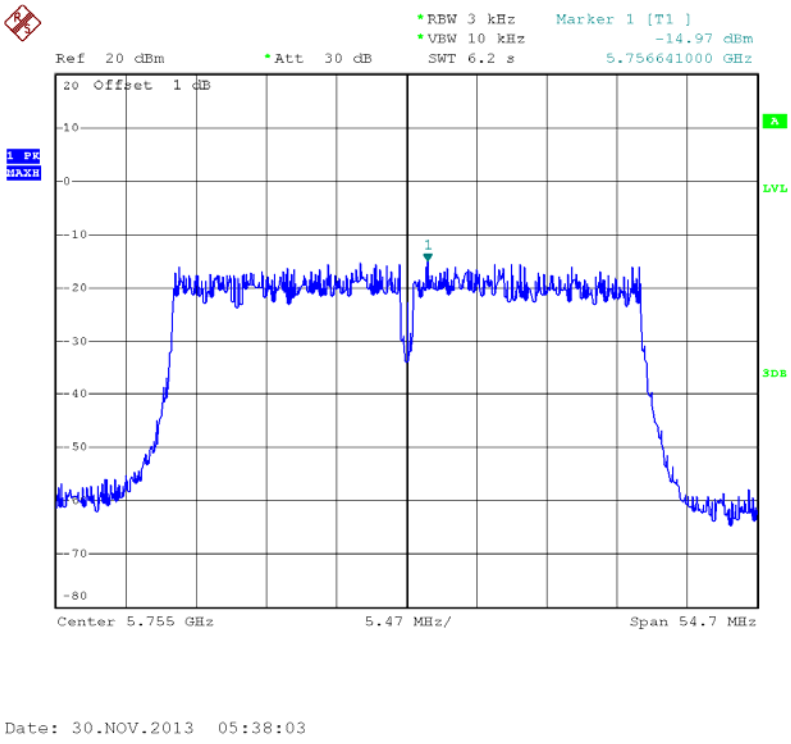


Date: 30.NOV.2013 05:50:36

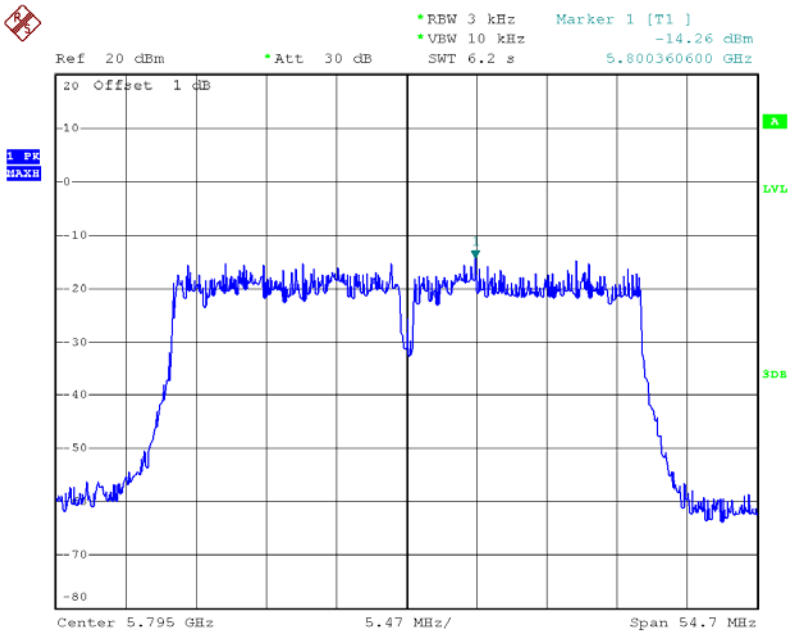
EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	23 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N40 Mode /CH151, CH159 / ANT 1		

Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH151	5755 MHz	-14.97	8
CH159	5795 MHz	-14.26	8

TX CH151



TX CH159

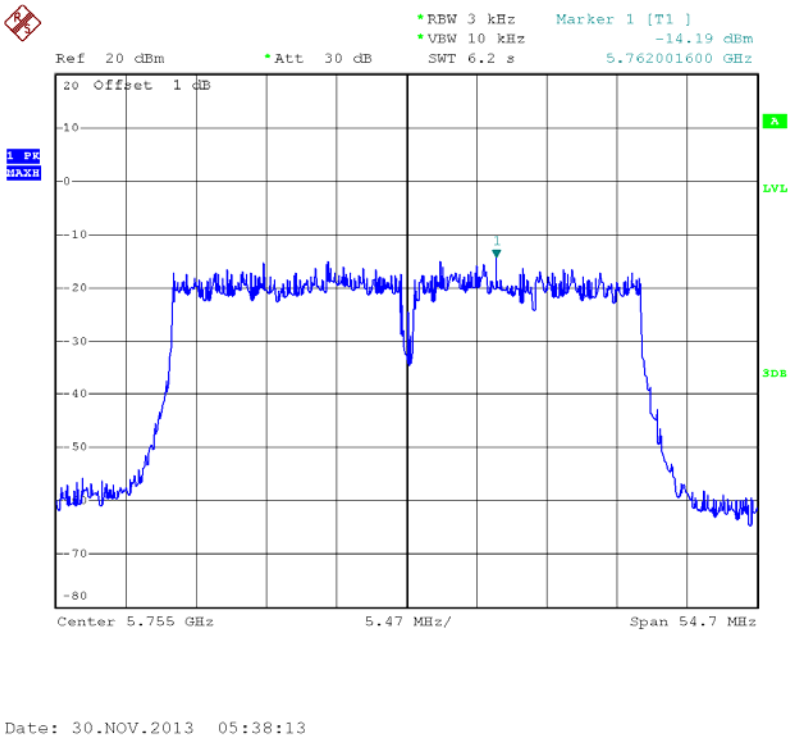


Date: 30.NOV.2013 05:50:46

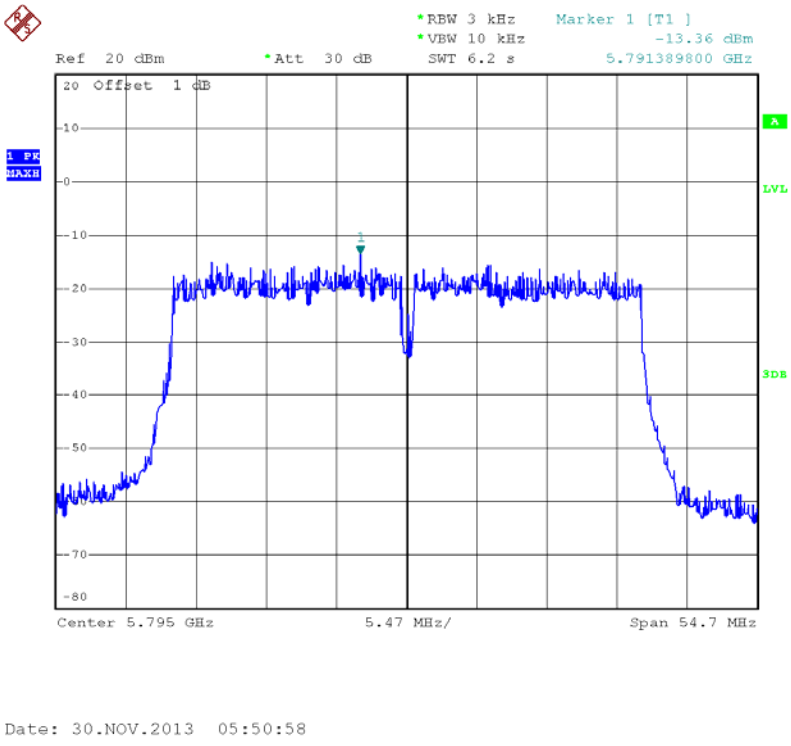
EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	23 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N40 Mode /CH151, CH159 / ANT 2		

Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH151	5755 MHz	-14.19	8
CH159	5795 MHz	-13.36	-8

TX CH151



TX CH159


*RBW 3 kHz
*VBW 10 kHz
SWT 6.2 s
Marker 1 [T1]
-13.36 dBm
5.791389800 GHz
Ref 20 dBm
*Att 30 dB
20 Offset 1 dB
1 PK
MAXH
A
LVL
3DB
Center 5.795 GHz
5.47 MHz/
Span 54.7 MHz
Date: 30.NOV.2013 05:50:58

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	23 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N40 Mode /CH151, CH159 / ANT 0+ANT 1+ANT 2		

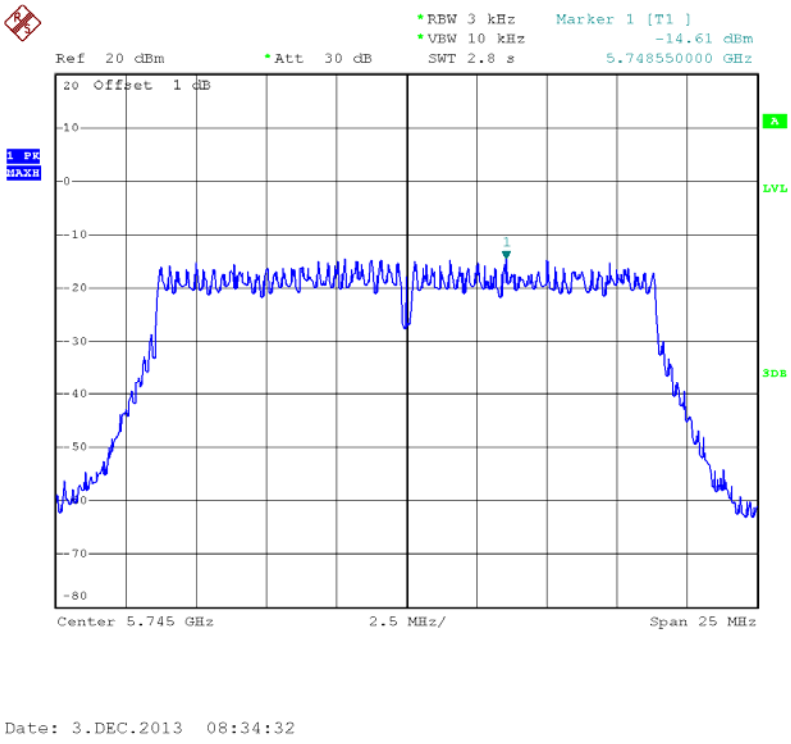
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH151	5755 MHz	-9.99	8
CH159	5795 MHz	-9.17	8

Note: The EUT incorporates a MIMO function. Physically, the EUT provides three completed transmitters and thee receivers (3T3R) , all transmit signals are completely uncorrelated, then,**Direction gain = G_{ANT}**, that is Directional gain=5.

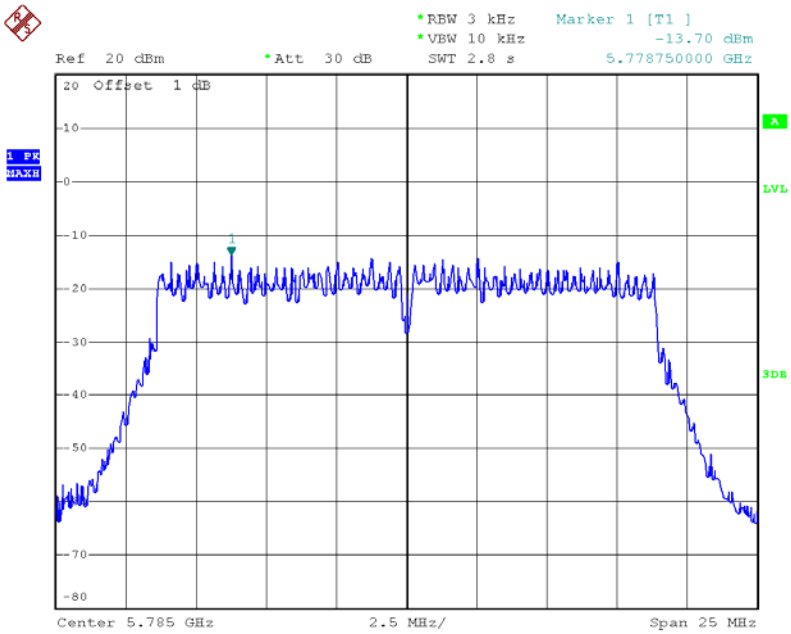
EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	23 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N20 Mode /CH149, CH157, CH165 / ANT 0		

Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH149	5745 MHz	-14.61	8
CH157	5785 MHz	-13.70	8
CH165	5825 MHz	-13.52	8

TX CH149

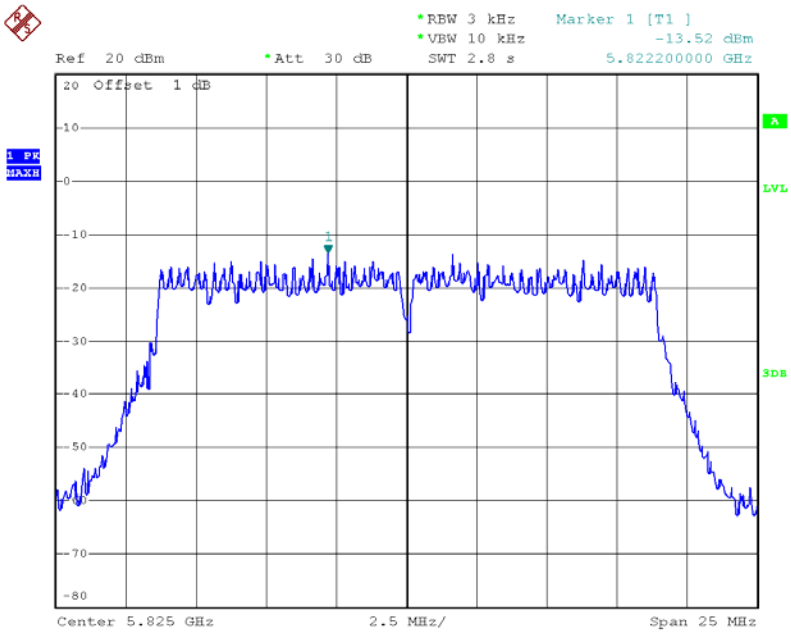


TX CH157



Date: 3.DEC.2013 08:47:56

TX CH165-

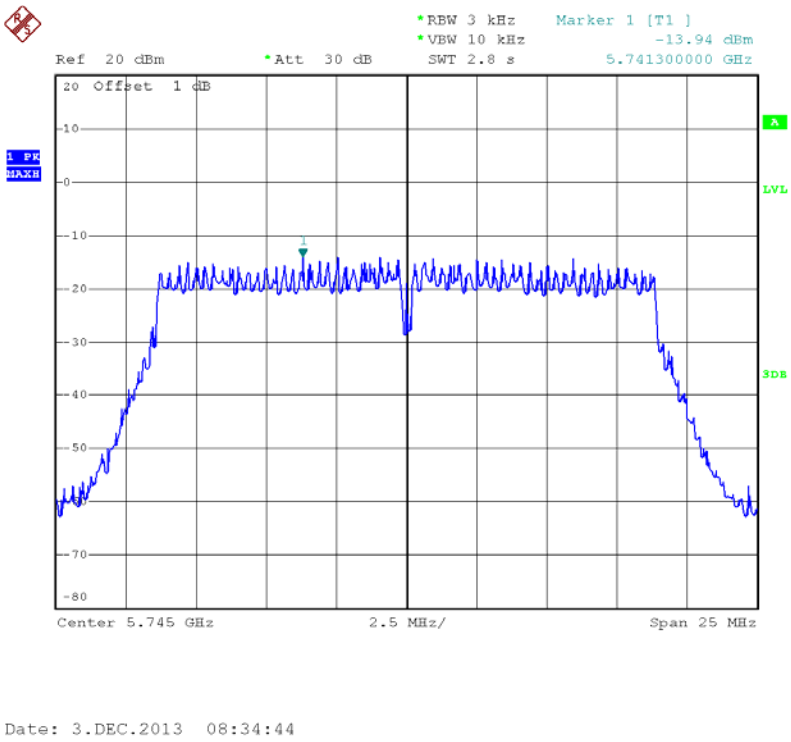


Date: 3.DEC.2013 08:57:35

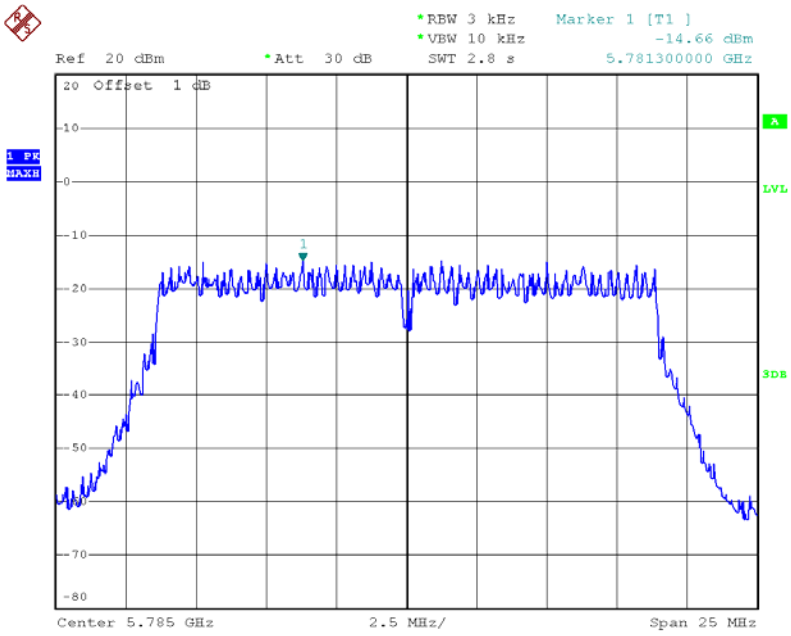
EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	23 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N20 Mode /CH149, CH157, CH165 / ANT 1		

Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH149	5745 MHz	-13.94	8
CH157	5785 MHz	-14.66	8
CH165	5825 MHz	-13.95	8

TX CH149

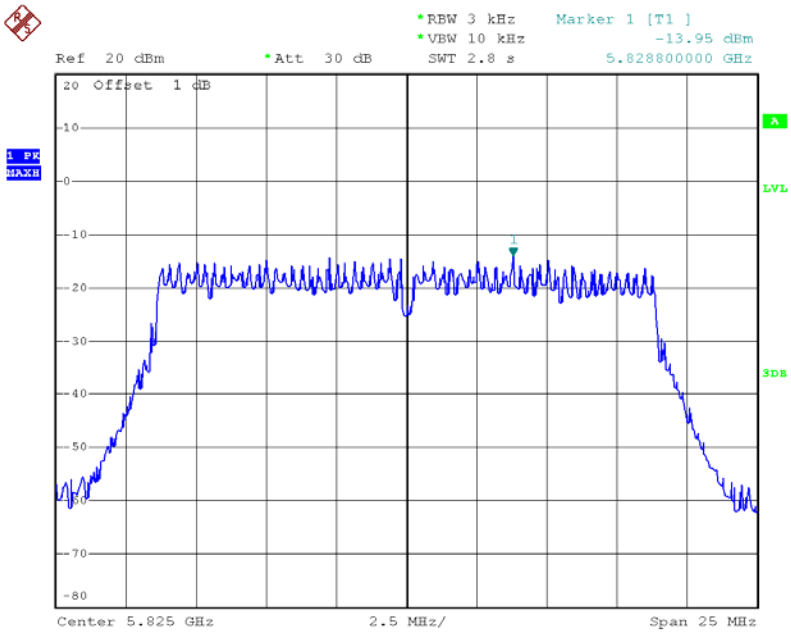


TX CH157



Date: 3.DEC.2013 08:48:05

TX CH165-

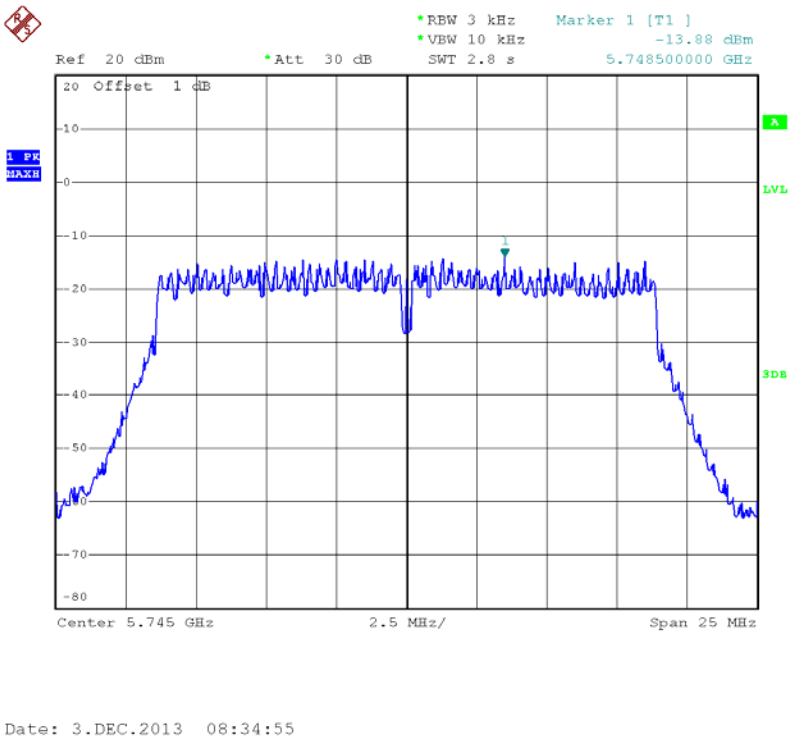


Date: 3.DEC.2013 08:57:45

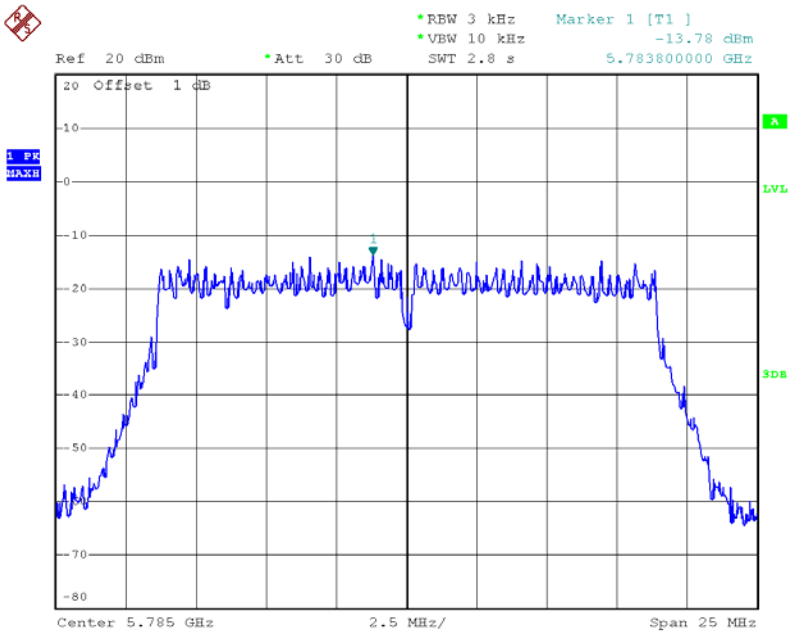
EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	23 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N20 Mode /CH149, CH157, CH165 / ANT 2		

Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH149	5745 MHz	-13.88	8
CH157	5785 MHz	-13.78	8
CH165	5825 MHz	-14.12	8

TX CH149

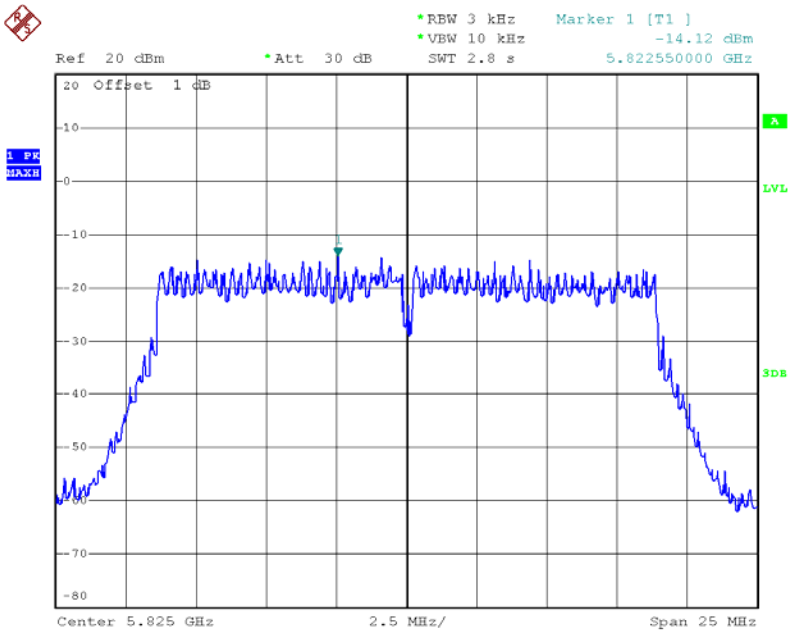


TX CH157



Date: 3.DEC.2013 08:48:15

TX CH165-



Date: 3.DEC.2013 08:57:52

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	23 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N20 Mode /CH149, CH157, CH165 / ANT 0 + ANT 1+ ANT 2		

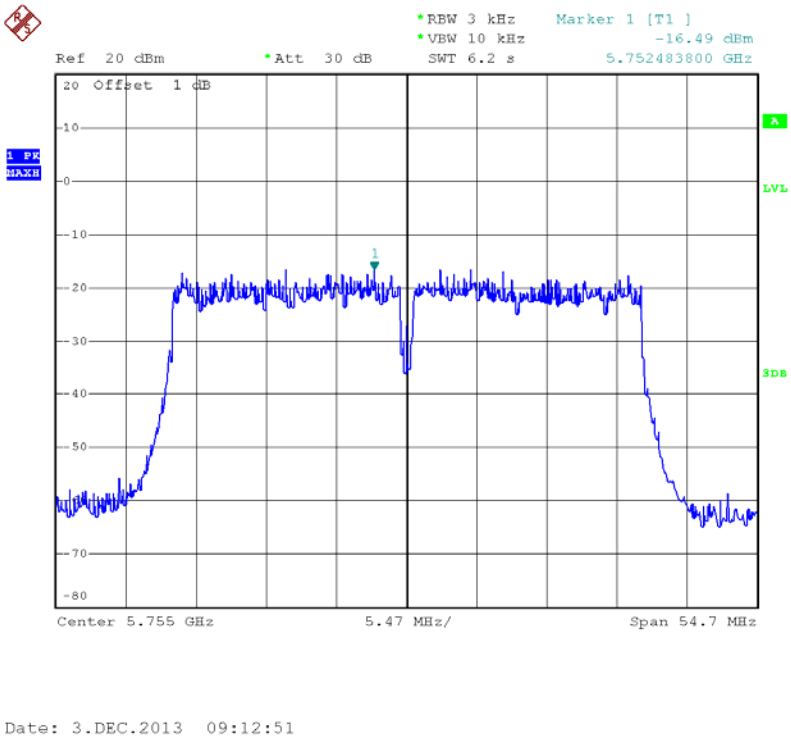
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH149	5745 MHz	-9.35	8
CH157	5785 MHz	-9.25	8
CH165	5825 MHz	-9.08	8

Note: The EUT incorporates a MIMO function. Physically, the EUT provides three completed transmitters and thee receivers (3T3R) , all transmit signals are completely uncorrelated, then,**Direction gain = G_{ANT}**, that is Directional gain=5.

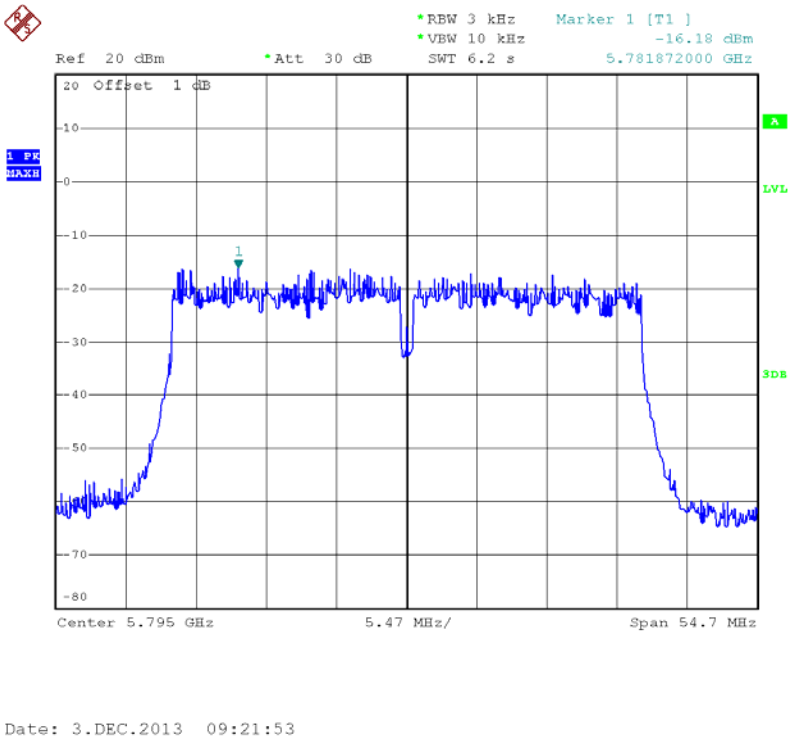
EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	23 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N40 Mode /CH151, CH159 / ANT 0		

Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH151	5755 MHz	-16.49	8
CH159	5795 MHz	-16.18	8

TX CH151



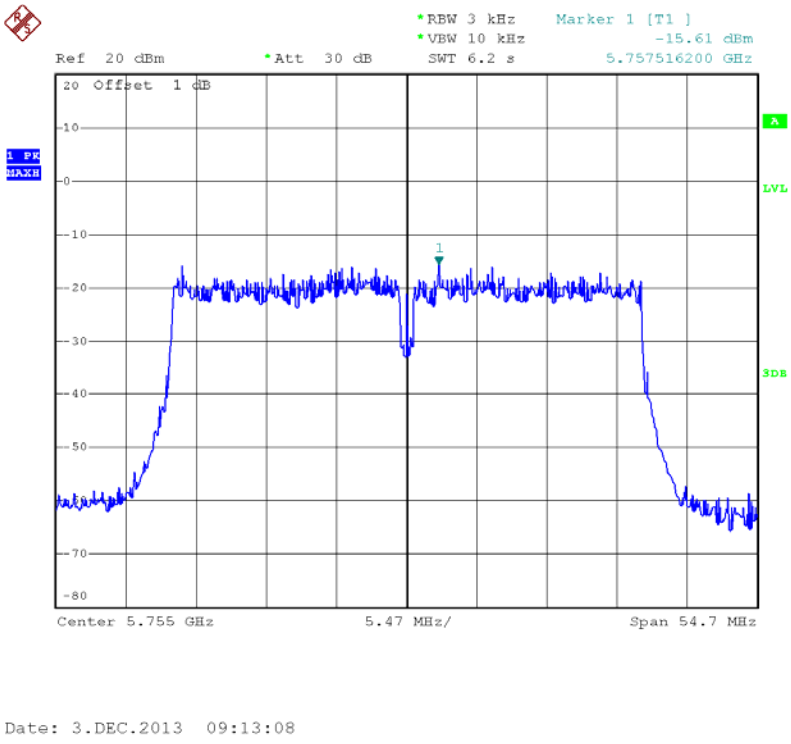
TX CH159


*RBW 3 kHz
*VBW 10 kHz
SWT 6.2 s
Marker 1 [T1]
-16.18 dBm
5.781872000 GHz
Ref 20 dBm
*Att 30 dB
20 Offset 1 dB
1 PK
MAXH
A
LVL
3DB
Center 5.795 GHz
5.47 MHz/
Span 54.7 MHz
Date: 3.DEC.2013 09:21:53

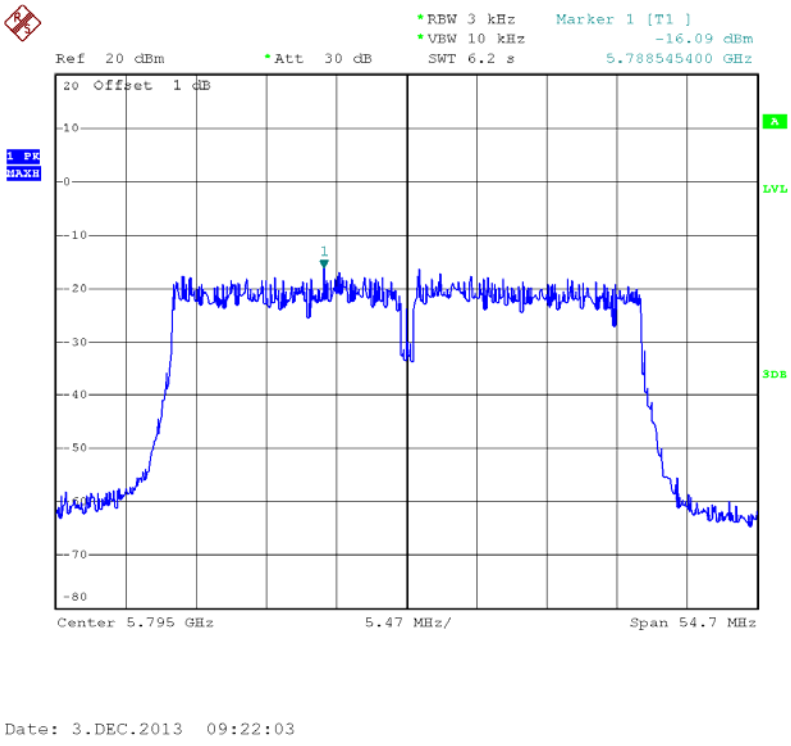
EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	23 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N40 Mode /CH151, CH159 / ANT 1		

Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH151	5755 MHz	-15.61	8
CH159	5795 MHz	-16.09	8

TX CH151



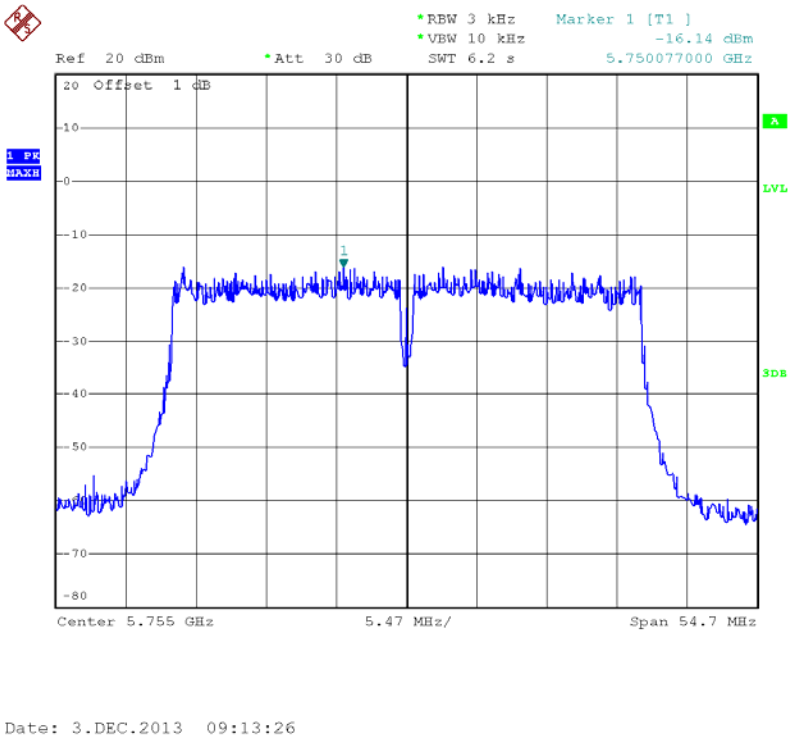
TX CH159


*RBW 3 kHz
*VBW 10 kHz
SWT 6.2 s
Marker 1 [T1]
-16.09 dBm
5.788545400 GHz
Ref 20 dBm
*Att 30 dB
20 Offset 1 dB
1 PK
MAXH
A
LVL
3DB
Center 5.795 GHz
5.47 MHz/
Span 54.7 MHz
Date: 3.DEC.2013 09:22:03

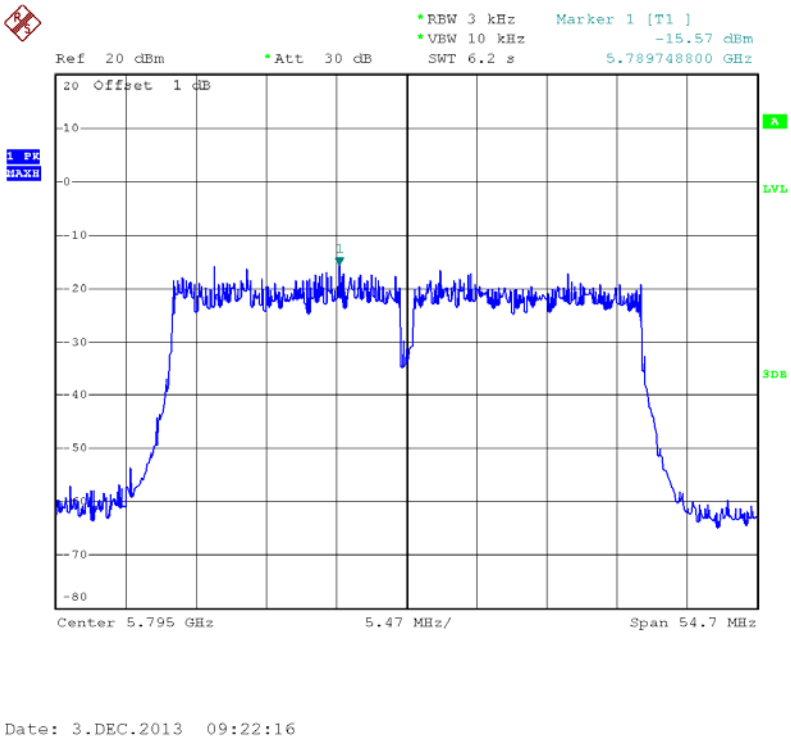
EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	23 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N40 Mode /CH151, CH159 / ANT 2		

Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH151	5755 MHz	-16.14	8
CH159	5795 MHz	-15.57	8

TX CH151



TX CH159


*RBW 3 kHz
*VBW 10 kHz
SWT 6.2 s
Marker 1 [T1]
-15.57 dBm
5.789748800 GHz
Ref 20 dBm
*Att 30 dB
20 Offset 1 dB
1 PK
MAXH
A
LVL
3DB
Center 5.795 GHz
5.47 MHz/
Span 54.7 MHz
Date: 3.DEC.2013 09:22:16

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	23 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N40 Mode /CH151, CH159 / ANT 0 + ANT 1+ ANT 2		

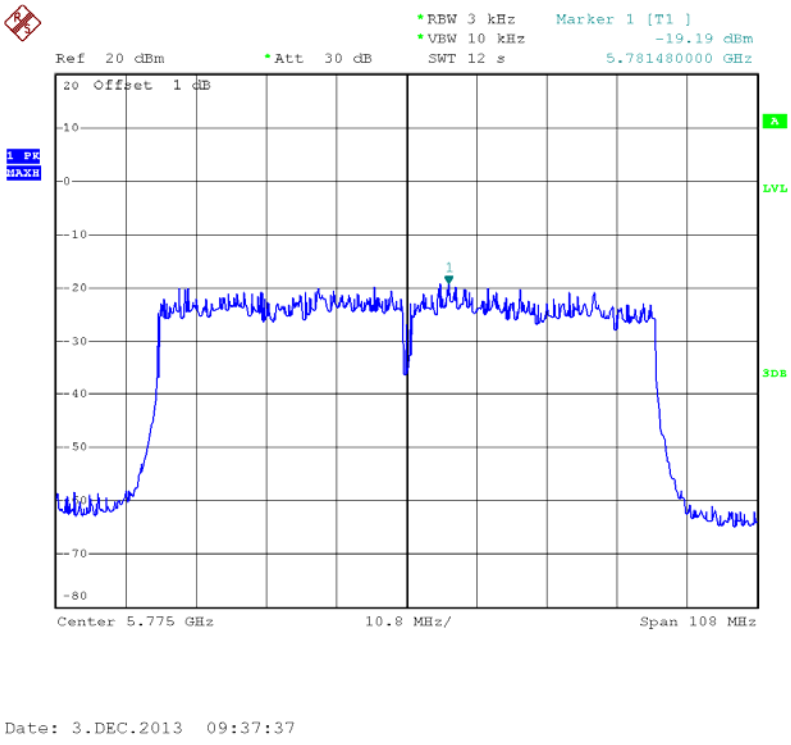
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH151	5755 MHz	-11.29	8
CH159	5795 MHz	-11.16	8

Note: The EUT incorporates a MIMO function. Physically, the EUT provides three completed transmitters and thee receivers (3T3R) , all transmit signals are completely uncorrelated, then,**Direction gain = G_{ANT}**, that is Directional gain=5.

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	23 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N80 Mode /CH155 / ANT 0		

Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH155	5775 MHz	-19.19	8

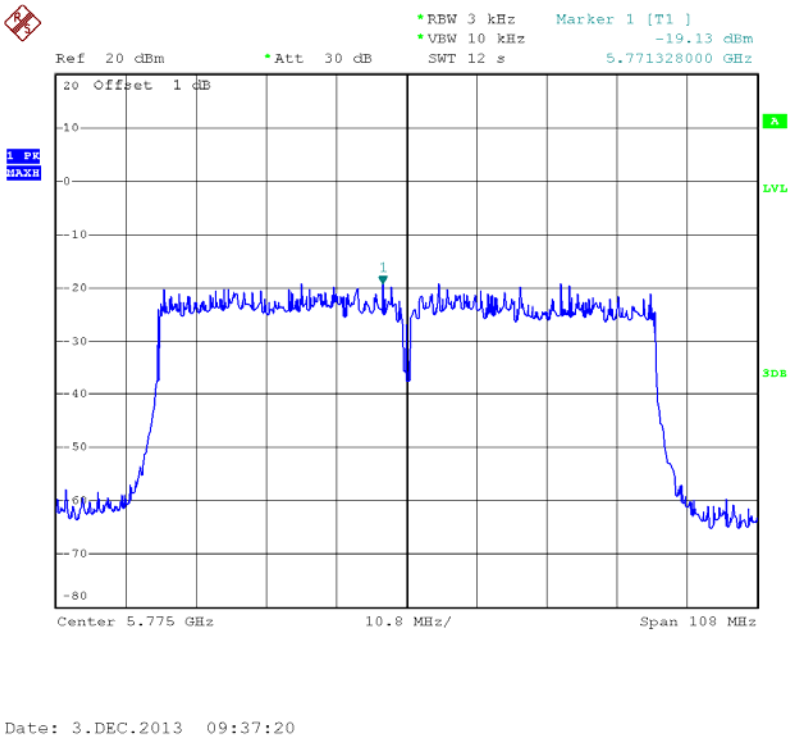
TX CH155



EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	23 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N80 Mode /CH155 / ANT 1		

Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH155	5775 MHz	-19.13	8

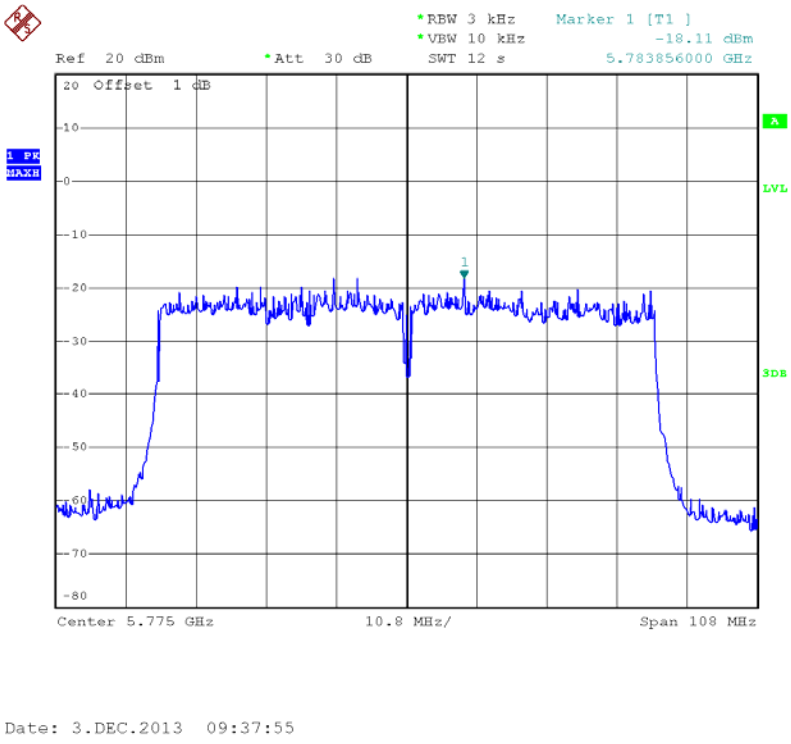
TX CH155



EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	23 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N80 Mode /CH155 / ANT 2		

Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH155	5775 MHz	-18.11	8

TX CH155



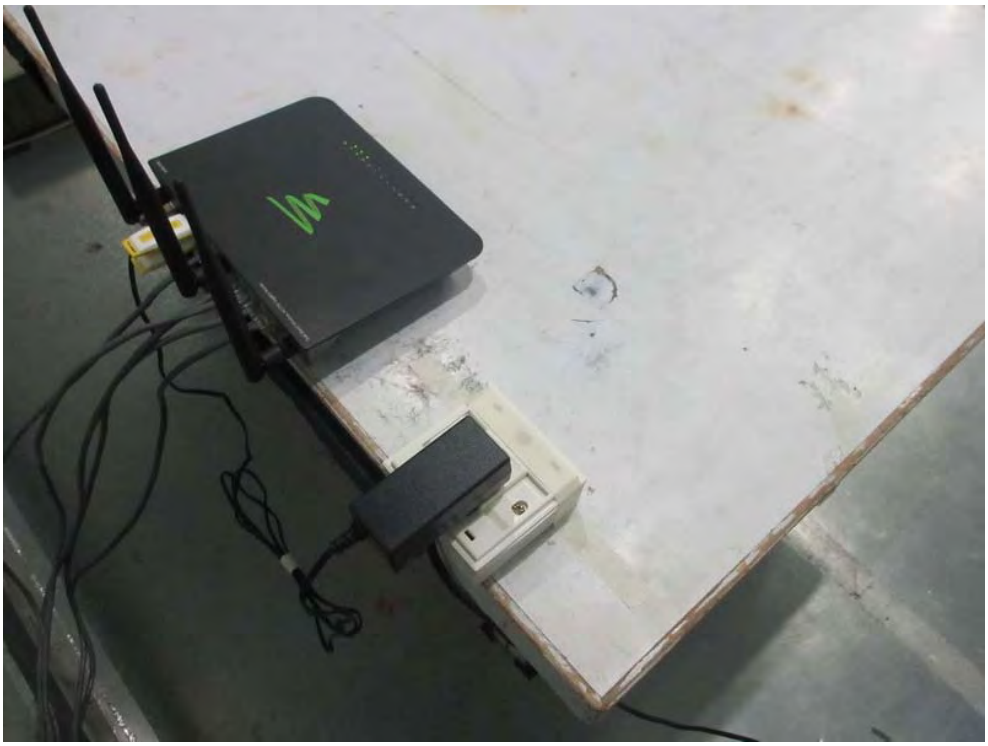
EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	23 ℃	Relative Humidity:	51 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N80 Mode /CH155 / ANT 0 + ANT 1+ ANT 2		

Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH155	5775 MHz	-14.00	8

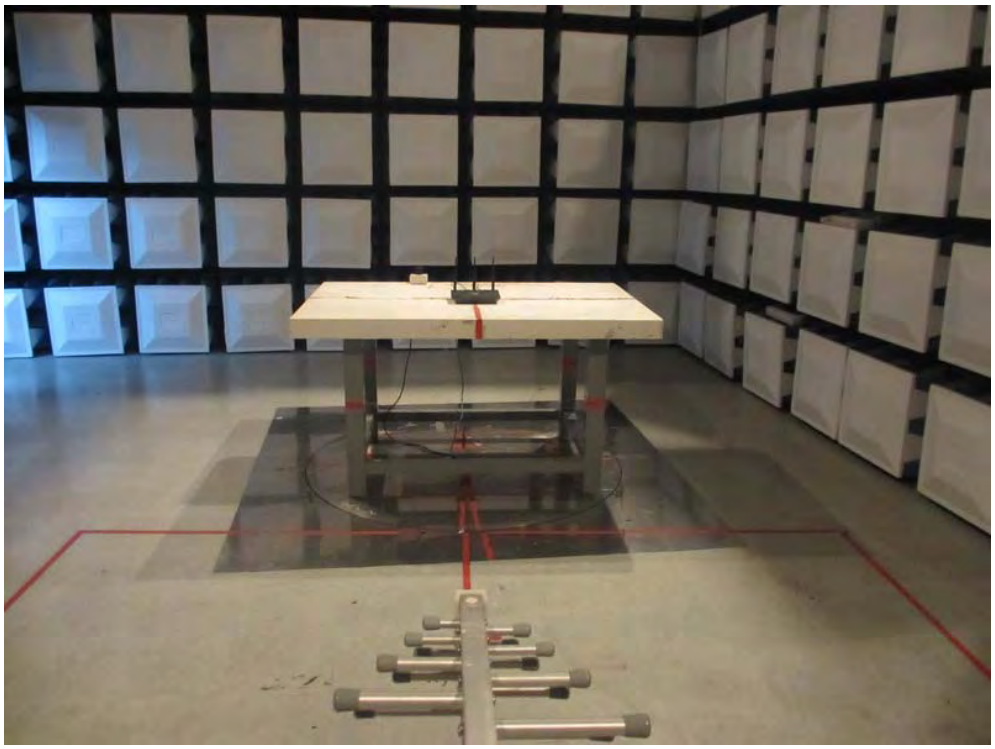
Note: The EUT incorporates a MIMO function. Physically, the EUT provides three completed transmitters and thee receivers (3T3R) , all transmit signals are completely uncorrelated, then,**Direction gain = G_{ANT}**, that is Directional gain=5.

9. EUT TEST PHOTO

Conducted Measurement Photos



Radiated Measurement Photos
30M~1000MHz



Radiated Measurement Photos
Above 1000MHz