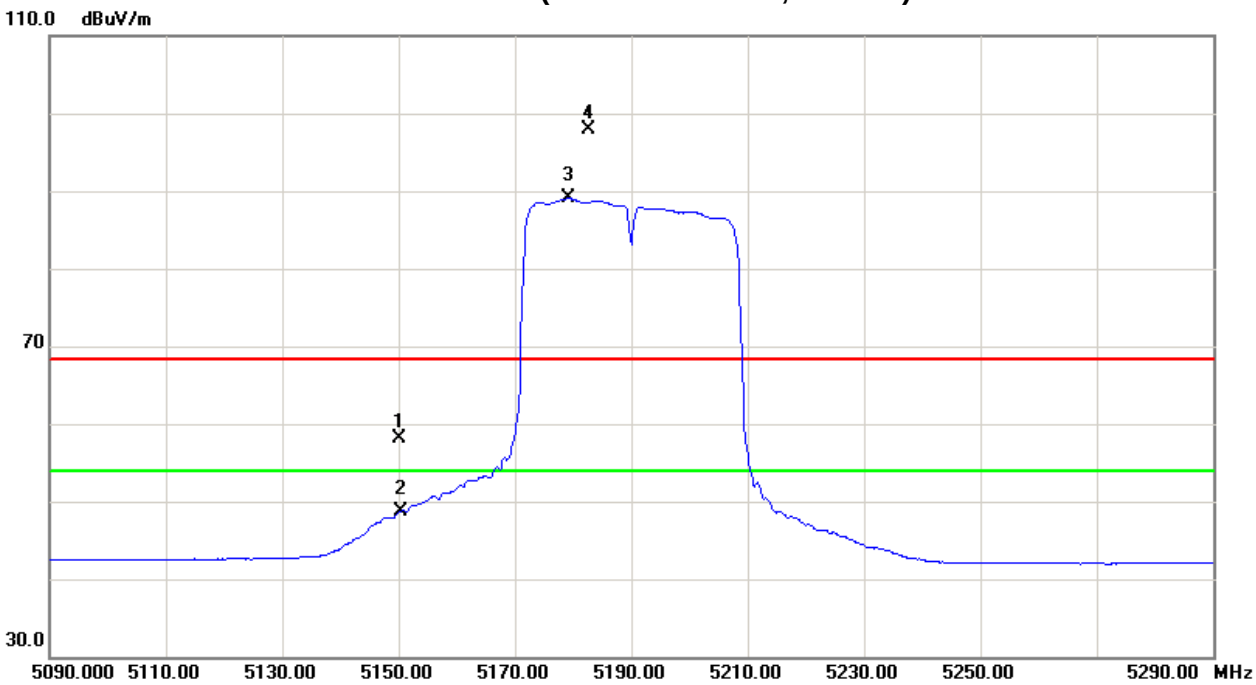
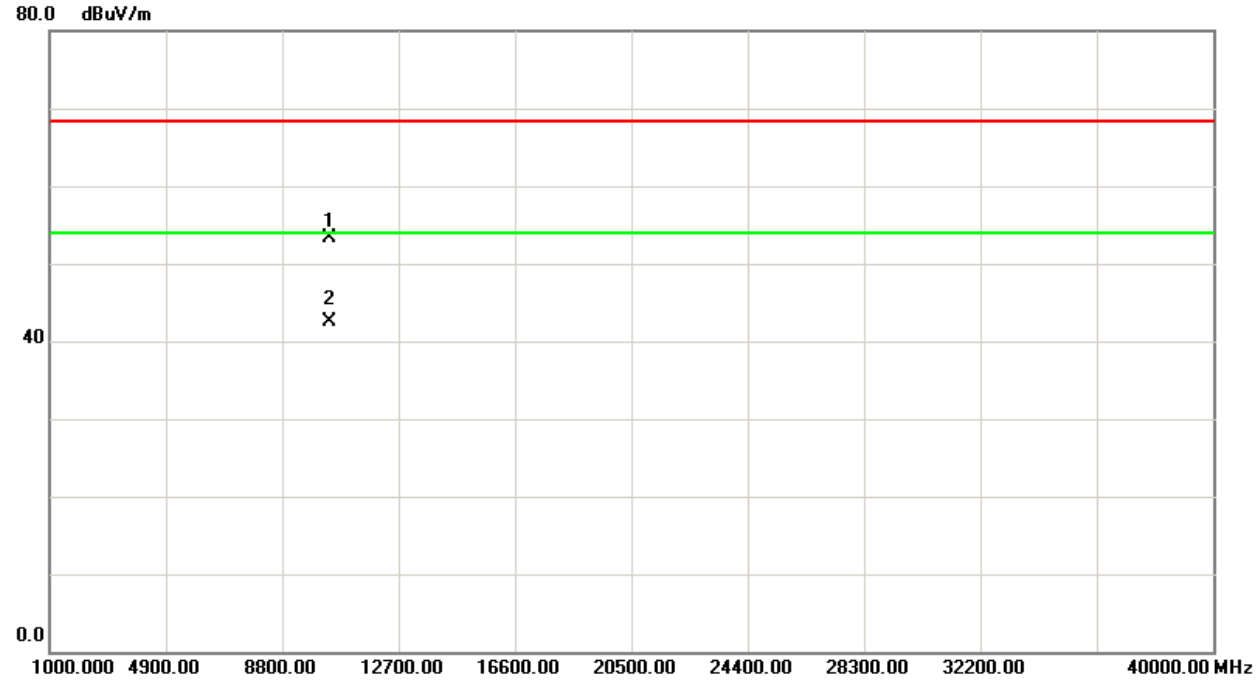
Orthogonal Axis:X
Band 1/CH38(Above 1000 MHz, Vertical)





EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 1/ TX N40 Mode 5190MHz/Dipole Antenna with external cable		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak	AV		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)									
5150.00	H	10.55	0.37	42.72	53.27	43.09	-51.50	-61.68	68.30	54.00	-27.00	-41.30	X/E
5191.40	H	46.24	37.40	42.82	89.06	80.22	-15.71	-24.55					X/F
10386.15	H	37.12	26.15	15.98	53.10	42.13	-51.67	-62.64	68.30	54.00	-27.00	-41.30	X/H

Remark:

(1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto

(2) All readings are Peak unless otherwise stated AV in column of『Note』. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.

(3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency。"F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)

(4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission 。

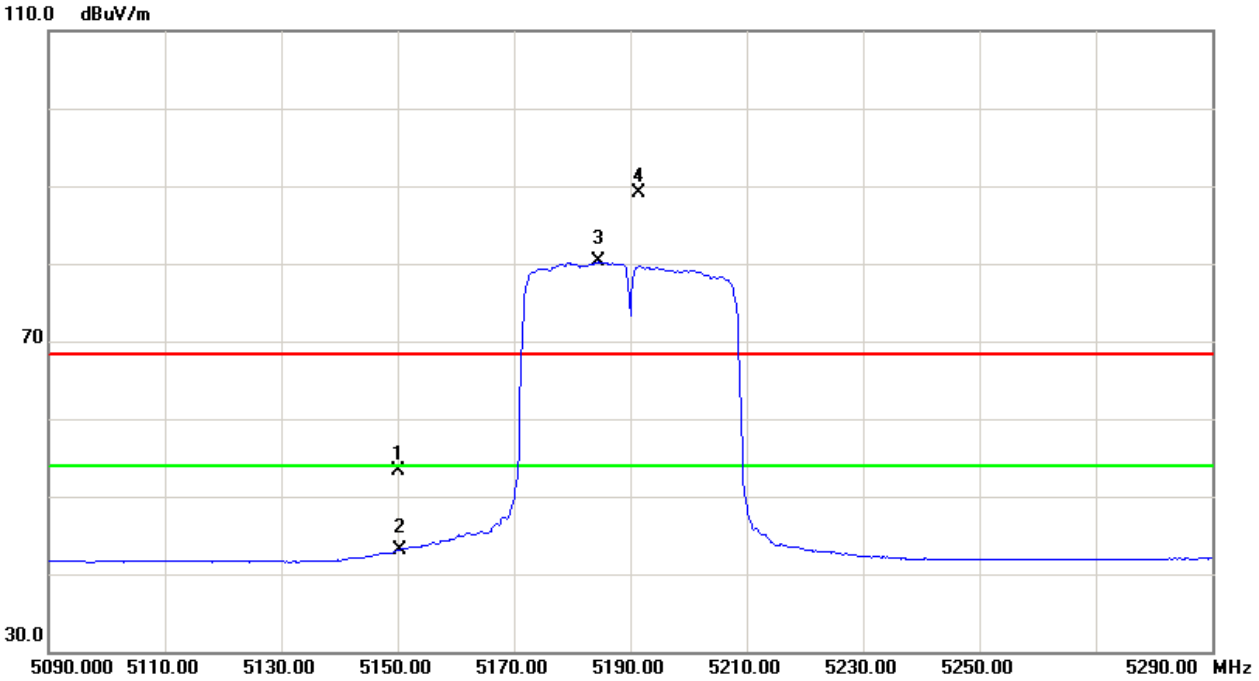
(5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

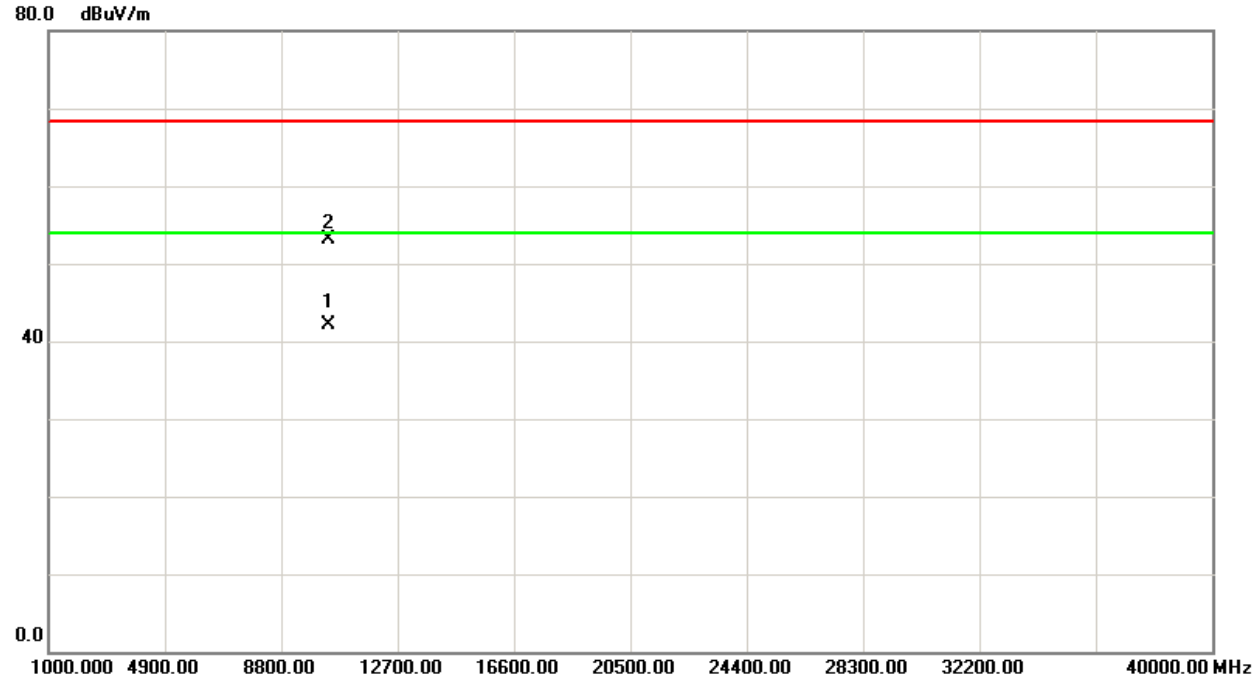
(6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(7) EUT Orthogonal Axes:
"X" - denotes Laid on Table；"Y" - denotes Vertical Stand；"Z" - denotes Side Stand

(8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Orthogonal Axis:X
Band 1/CH38(Above 1000 MHz, Horizontal)





EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 1/ TX N40 Mode 5230MHz/Dipole Antenna with external cable		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak	AV		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)									
5227.00	V	53.14	48.33	42.91	96.05	91.24	-8.72	-13.53					X/F
10455.16	V	37.45	26.46	15.89	53.34	42.35	-51.43	-62.42	68.30	54.00	-27.00	-41.30	X/H

Remark:

(1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto

(2) All readings are Peak unless otherwise stated AV in column of『Note』. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.

(3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency。"F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)

(4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission 。

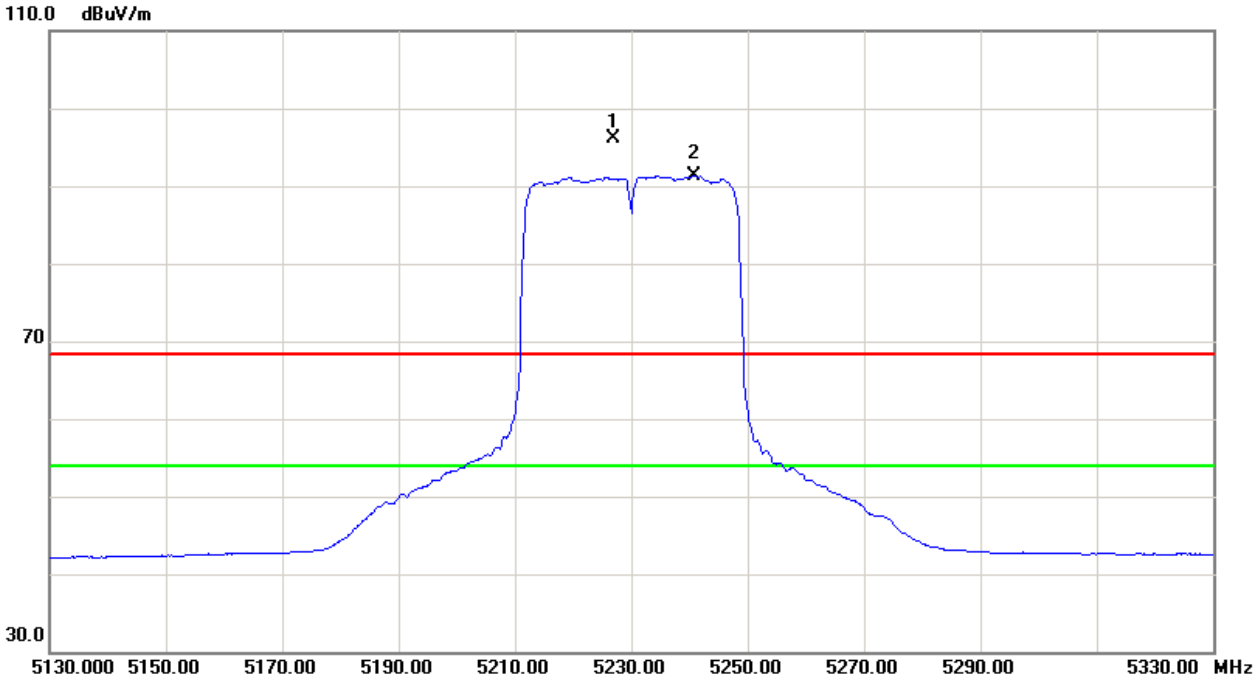
(5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

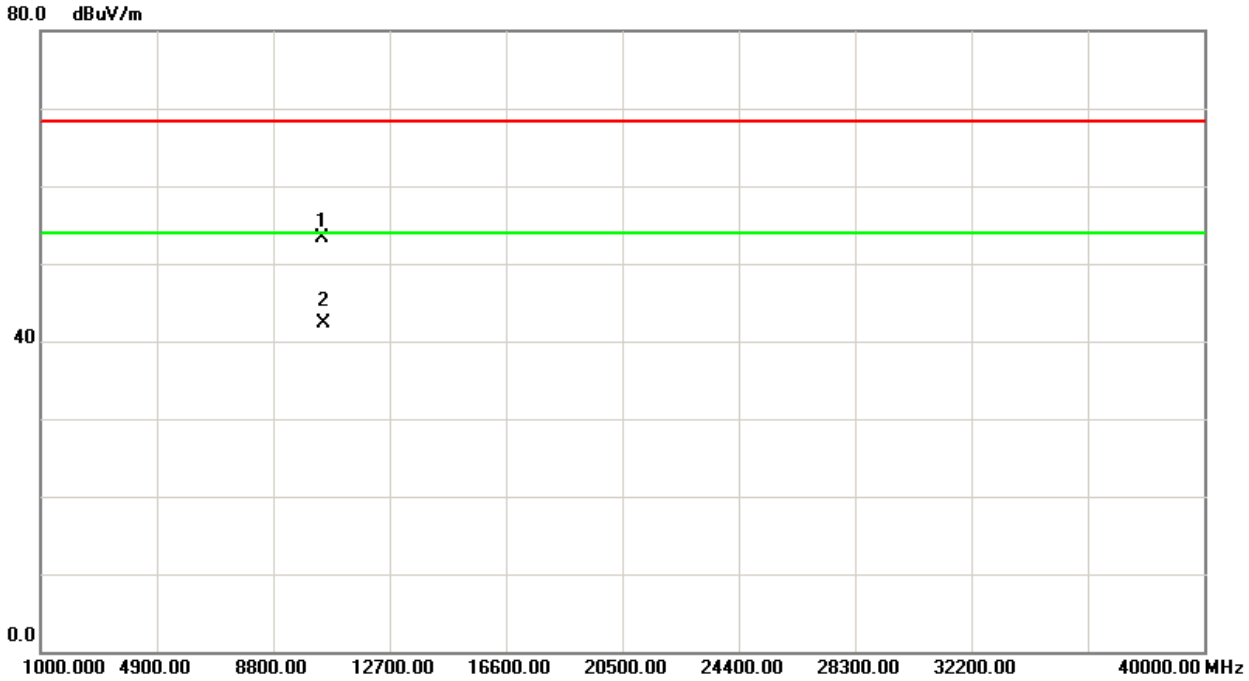
(6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(7) EUT Orthogonal Axes:
"X" - denotes Laid on Table；"Y" - denotes Vertical Stand；"Z" - denotes Side Stand

(8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Orthogonal Axis:X
Band 1/CH46(Above 1000 MHz, Vertical)





EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 1/ TX N40 Mode 5230MHz/Dipole Antenna with external cable		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak	AV		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)									
5235.00	H	45.59	36.01	42.93	88.52	78.94	-16.25	-25.83					X/F
10456.05	H	37.34	26.41	15.86	53.20	42.27	-51.57	-62.50	68.30	54.00	-27.00	-41.30	X/H

Remark:

(1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto

(2) All readings are Peak unless otherwise stated AV in column of『Note』. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.

(3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency。"F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)

(4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission 。

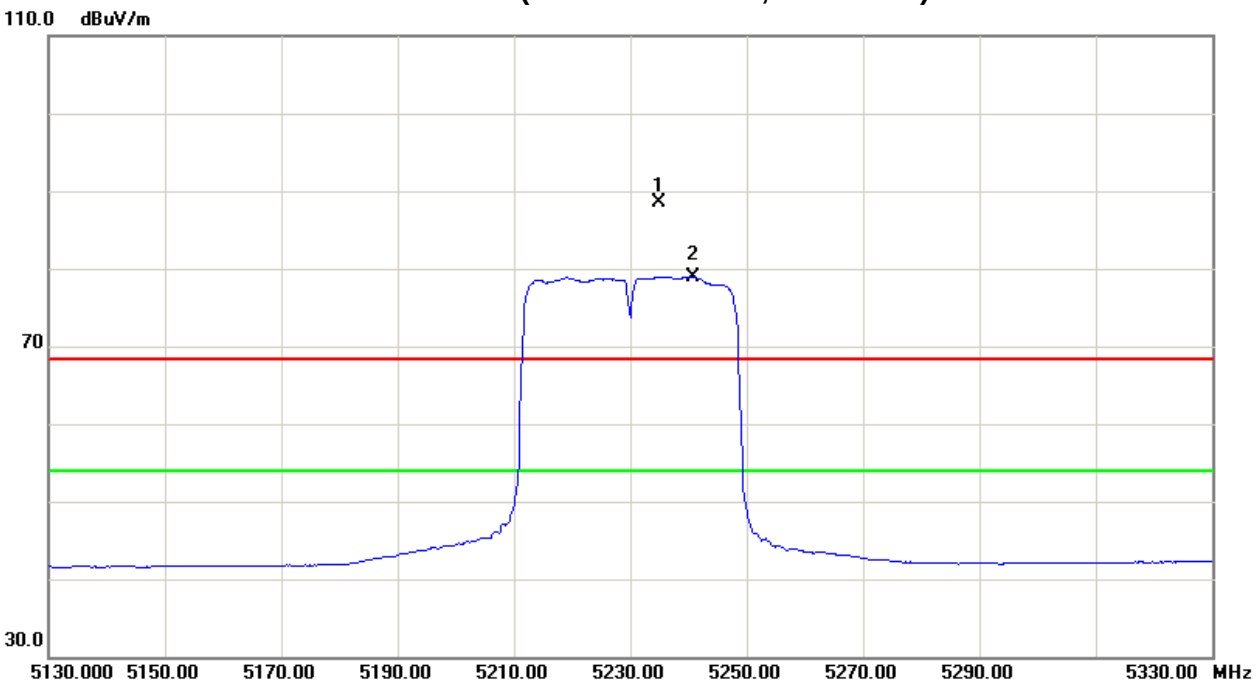
(5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

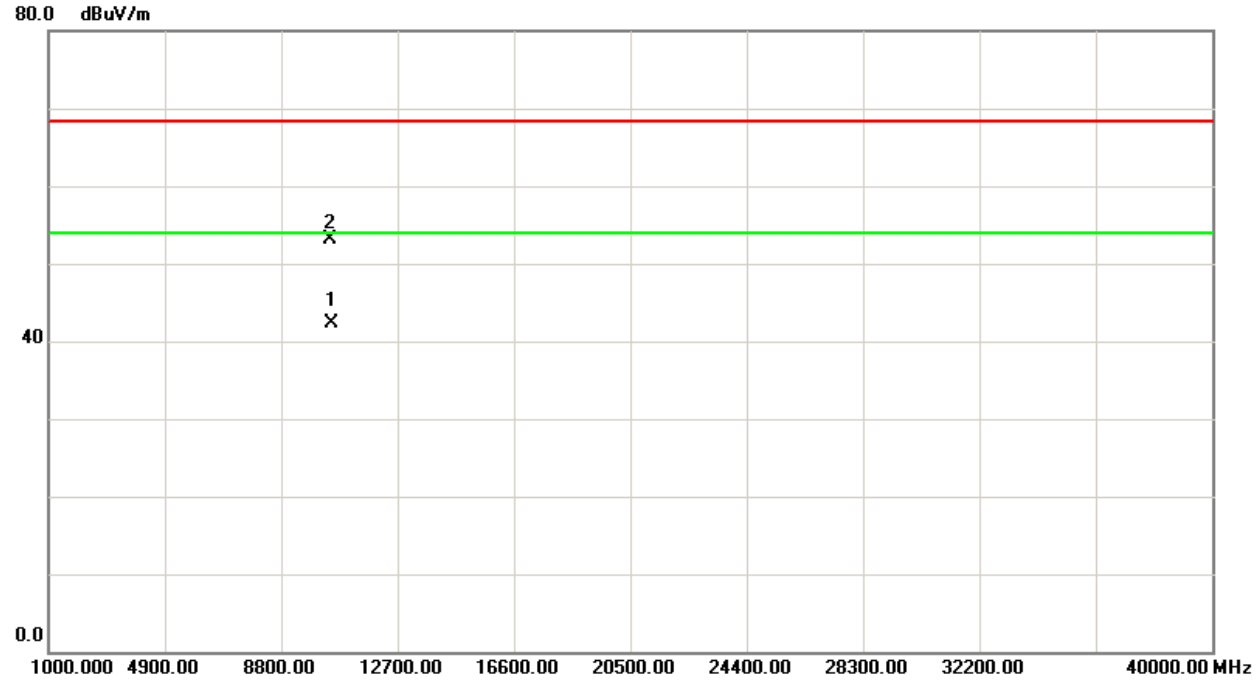
(6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(7) EUT Orthogonal Axes:
"X" - denotes Laid on Table；"Y" - denotes Vertical Stand；"Z" - denotes Side Stand

(8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Orthogonal Axis:X
Band 1/CH46(Above 1000 MHz, Horizontal)





5. 26dB SPECTRUM BANDWIDTH

5.1 APPLIED PROCEDURES / LIMIT

FCC Part15, Subpart E			
Test Item	Limit	Frequency Range (MHz)	Result
26 dB Bandwidth	------	5150MHz~5250	PASS

5.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP_40	100129	Nov.26.2013

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

5.1.2 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,

b.

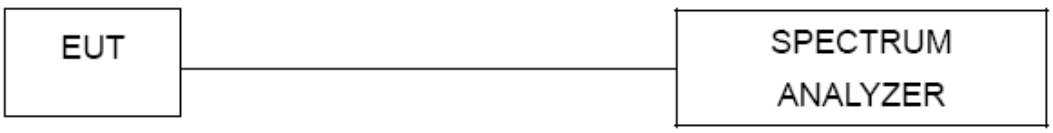
Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	> 26dB Bandwidth
RB	300 kHz
VB	1000 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

c. Measured the spectrum width with power higher than 26dB below carrier

5.1.3 DEVIATION FROM STANDARD

No deviation.

5.1.4 TEST SETUP



5.1.5 EUT OPERATION CONDITIONS

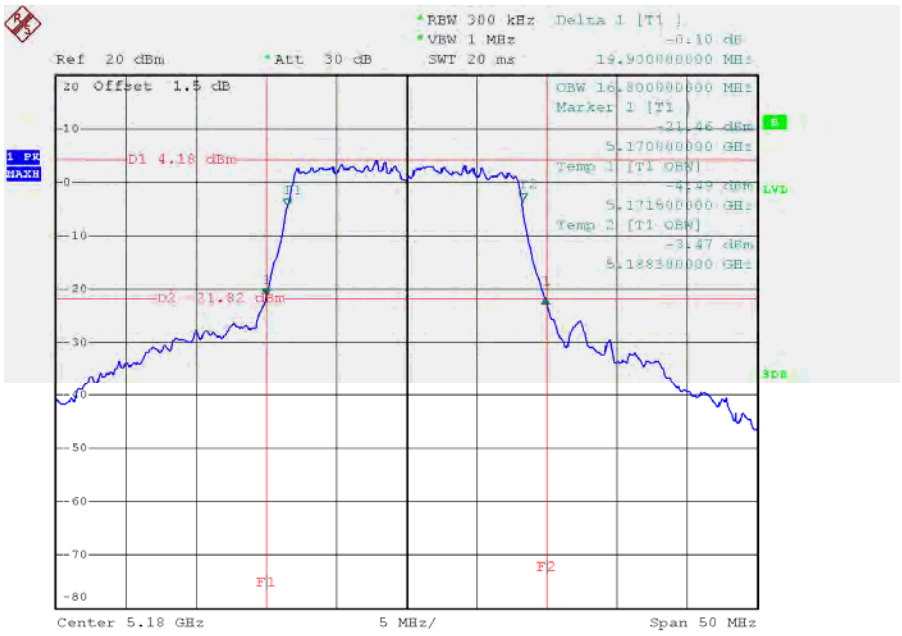
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

5.1.6 TEST RESULTS

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX A Mode /CH36, CH40, CH48/Integral Antenna		

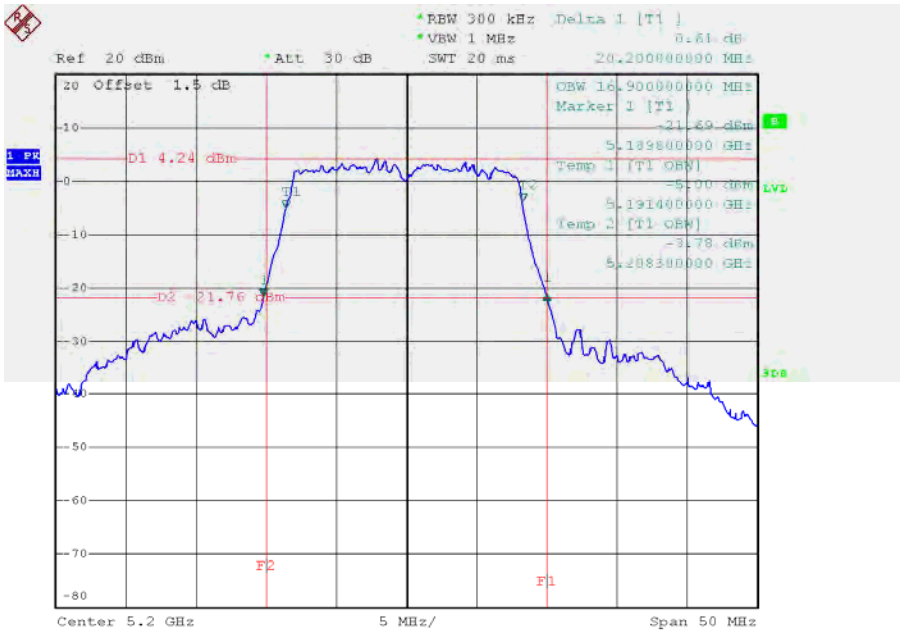
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
CH36	5180	19.90	16.80
CH40	5200	20.20	16.90
CH48	5240	19.90	16.80

CH36



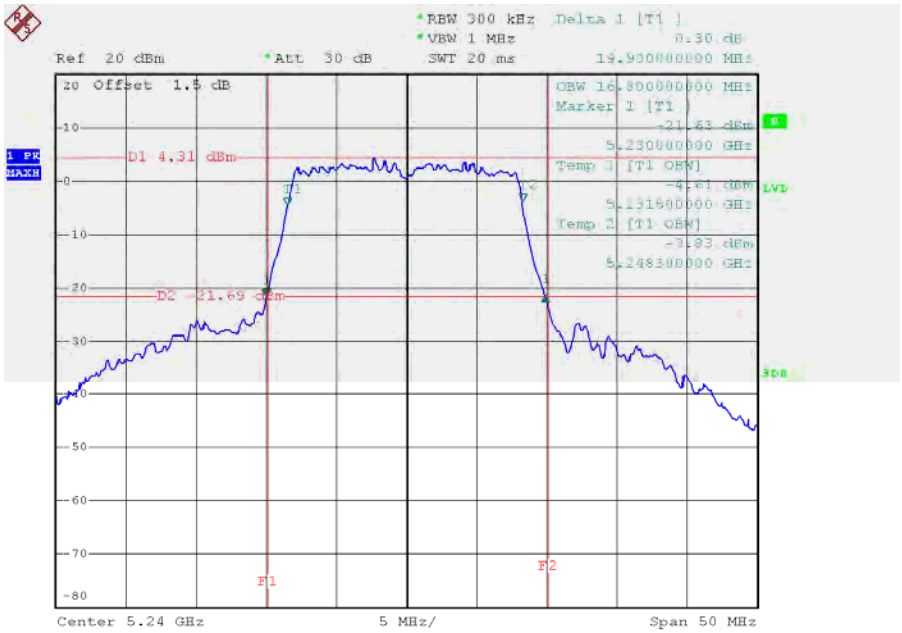
Date: 5.SEP.2013 16:18:18

CH40



Date: 5.SEP.2013 16:22:52

CH48

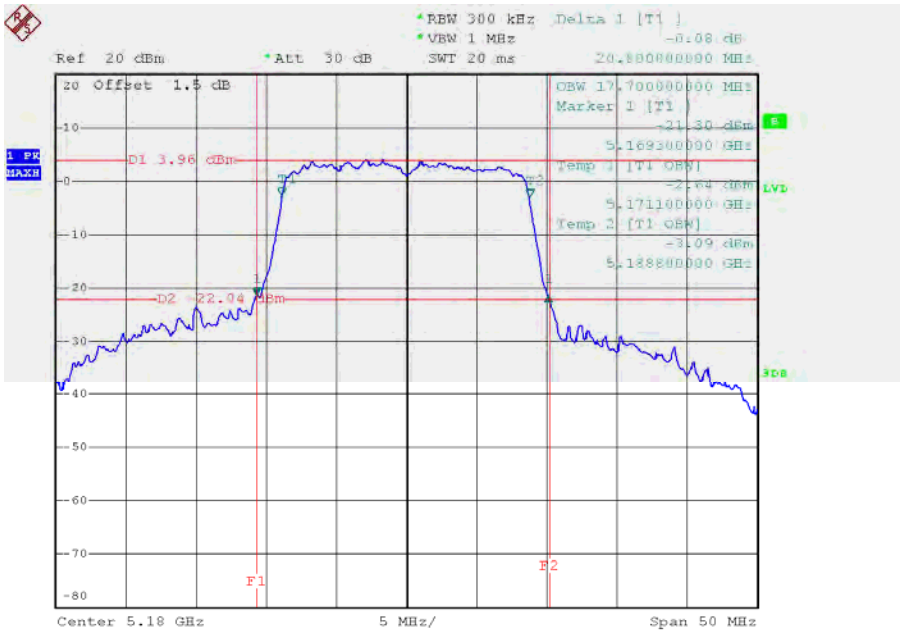


Date: 5.SEP.2013 16:26:06

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N20 Mode /CH36, CH40, CH48/Integral Antenna		

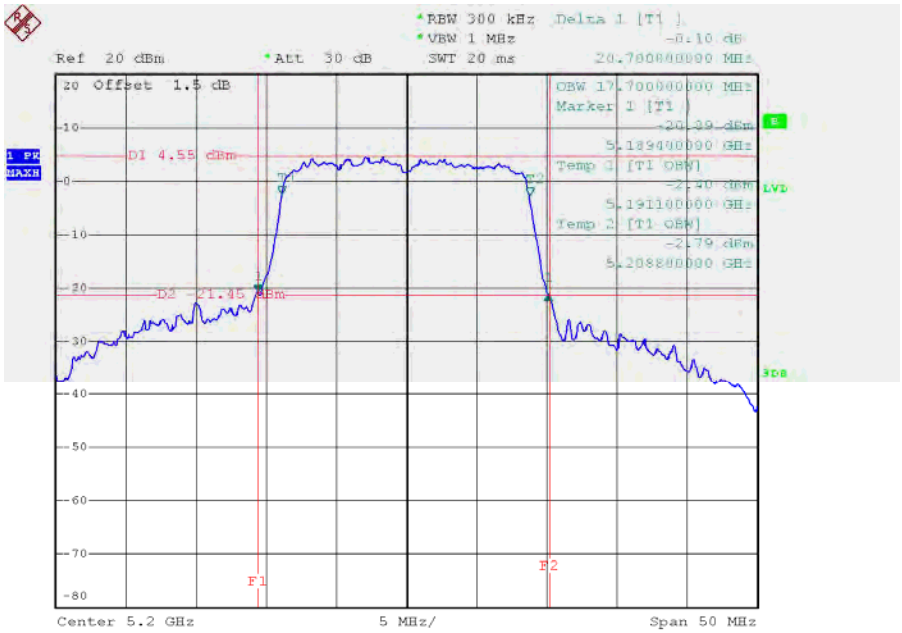
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
CH36	5180	20.80	17.70
CH40	5200	20.70	17.70
CH48	5240	20.90	17.70

CH36



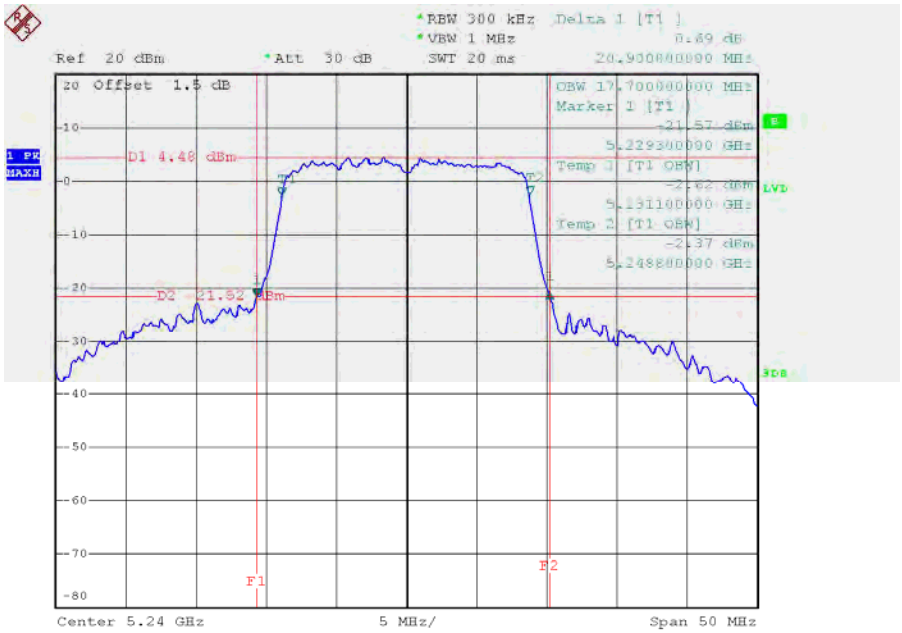
Date: 21.AUG.2013 17:07:32

CH40



Date: 21.AUG.2013 17:19:15

CH48

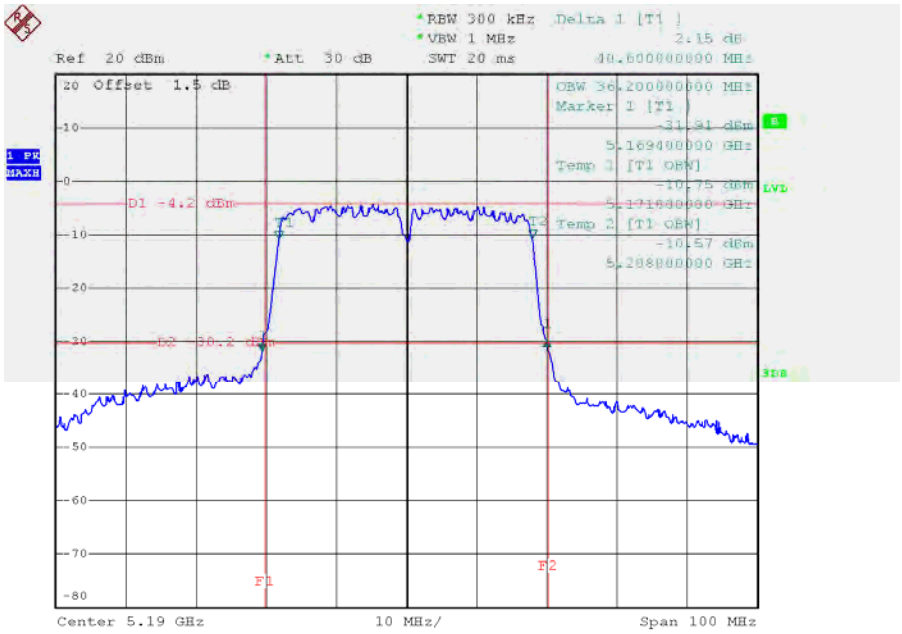


Date: 21.AUG.2013 17:22:57

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N40 Mode /CH38, CH46/Integral Antenna		

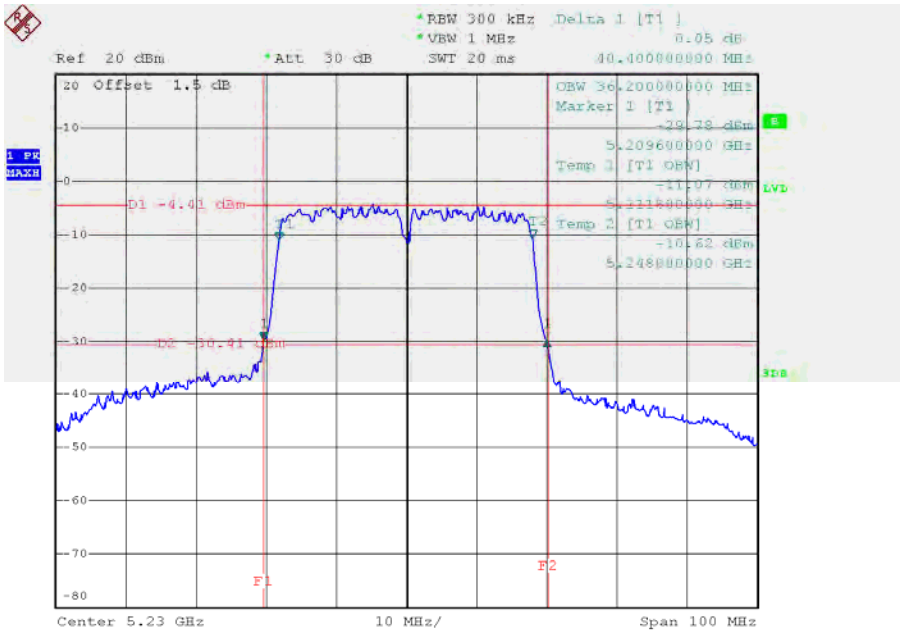
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
CH38	5190	40.60	36.20
CH46	5230	40.40	36.20

CH38



Date: 21.AUG.2013 18:00:15

CH46

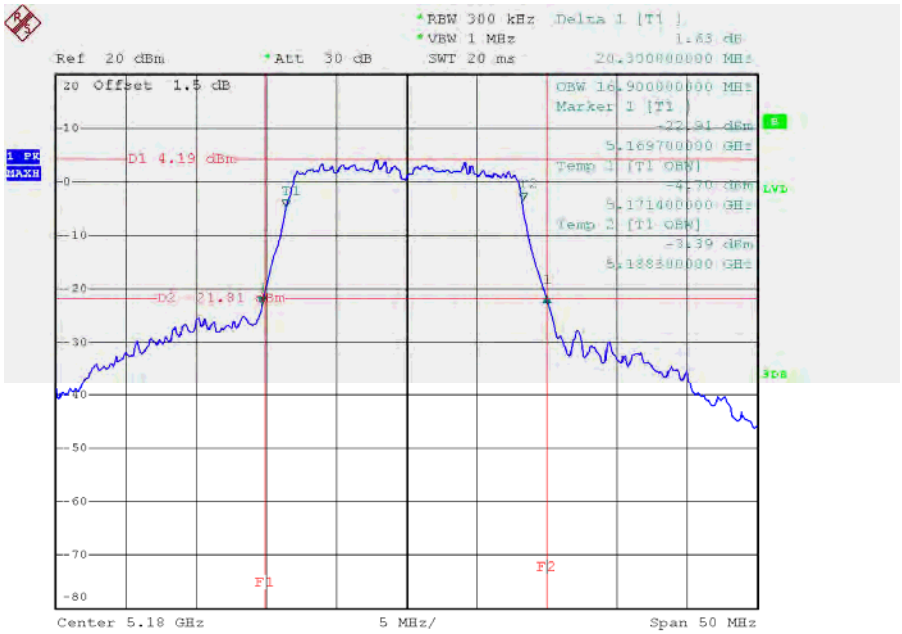


Date: 21.AUG.2013 18:02:23

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX A Mode /CH36, CH40, CH48/Dipole Antenna with external cable		

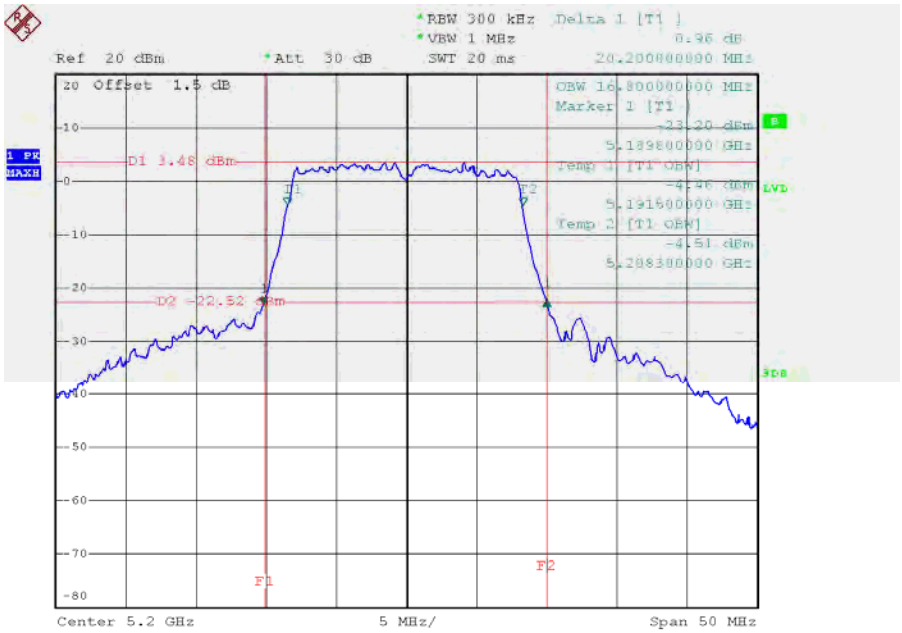
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
CH36	5180	20.30	16.90
CH40	5200	20.20	16.80
CH48	5240	20.00	16.80

CH36



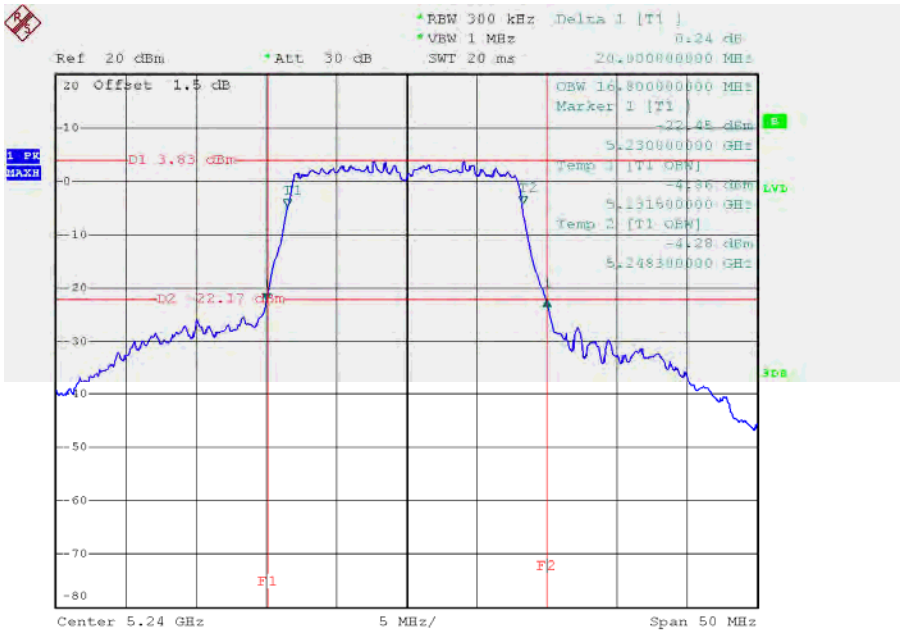
Date: 5.SEP.2013 16:52:35

CH40



Date: 5.SEP.2013 16:55:22

CH48

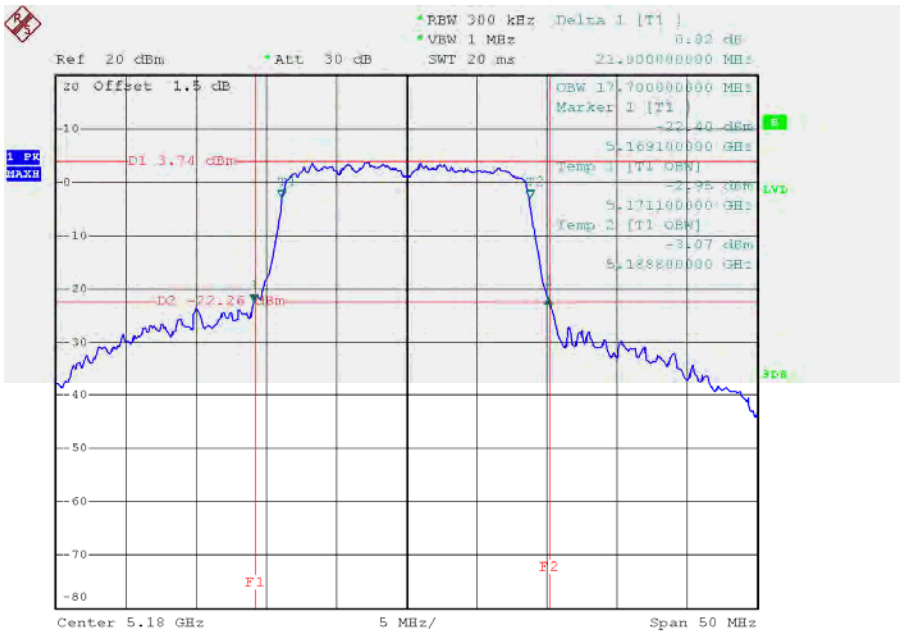


Date: 5.SEP.2013 16:57:40

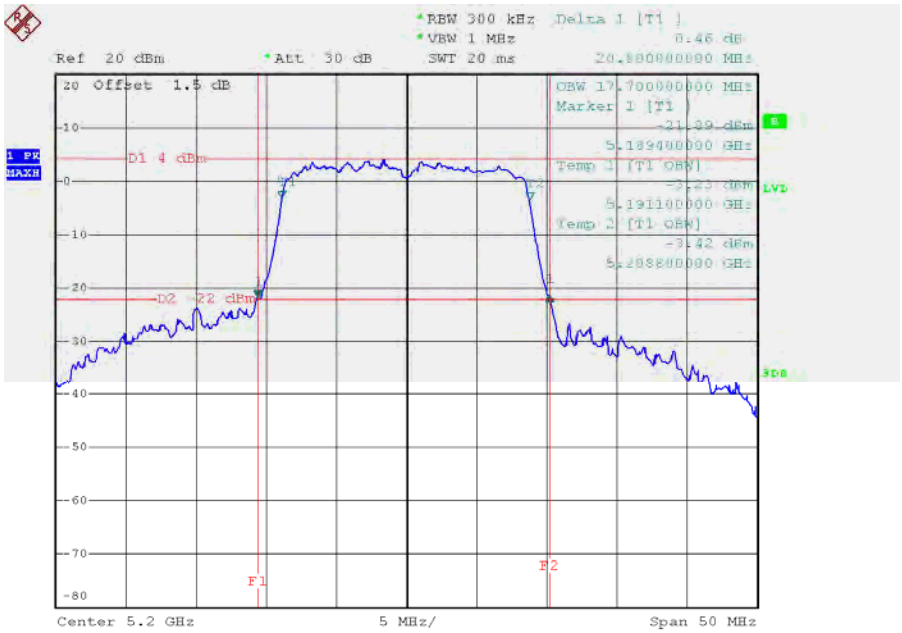
EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TXN20 Mode /CH36, CH40, CH48/Dipole Antenna with external cable		

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
CH36	5180	21.00	17.70
CH40	5200	20.80	17.70
CH48	5240	20.90	17.70

CH36

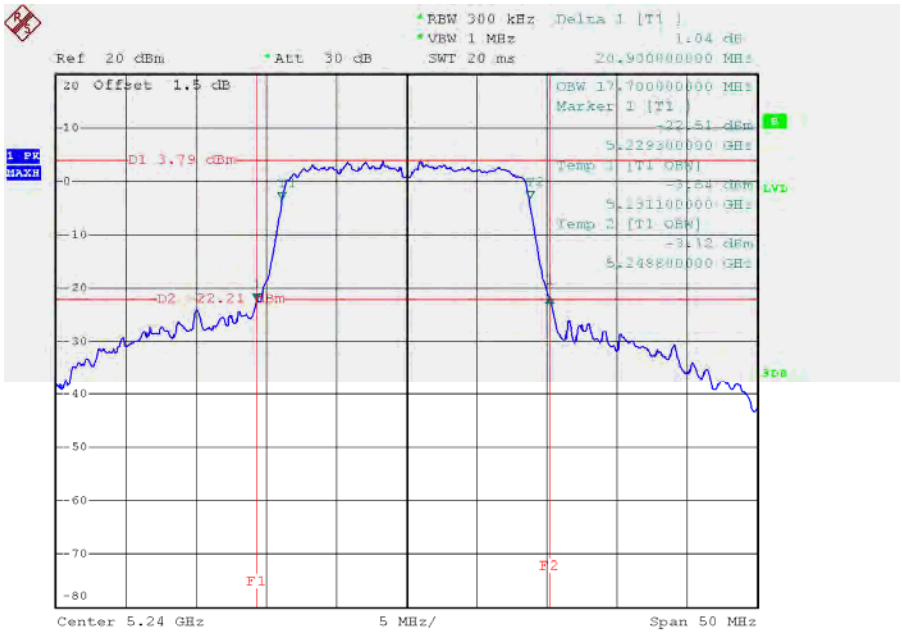


CH40



Date: 24.AUG.2013 17:06:54

CH48

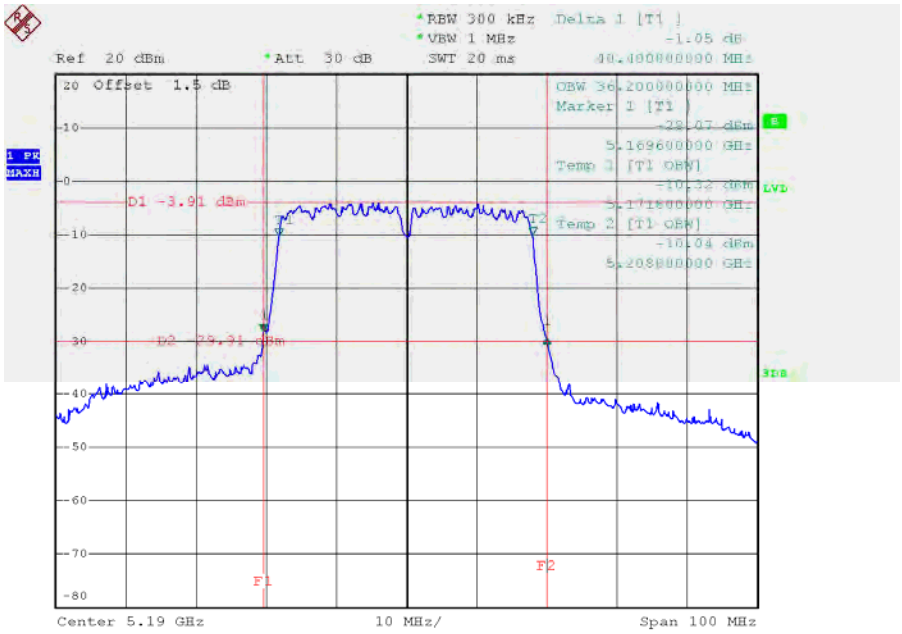


Date: 24.AUG.2013 17:09:13

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TXN40 Mode /CH38, CH46/Dipole Antenna with external cable		

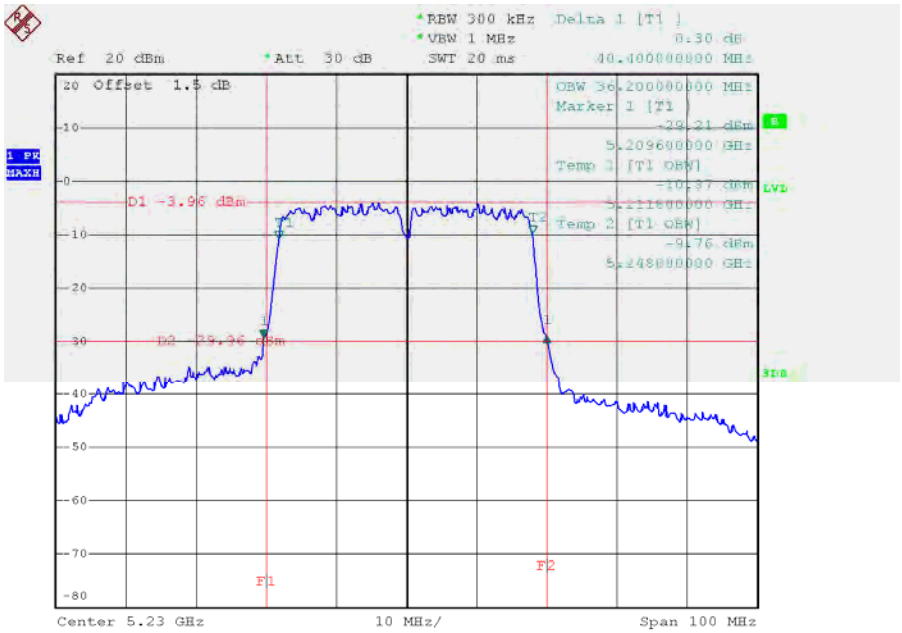
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
CH38	5190	40.40	36.20
CH46	5230	40.40	36.20

CH38



Date: 24.AUG.2013 17:38:03

CH46



Date: 24.AUG.2013 17:47:23

6. MAXIMUM CONDUCTED OUTPUT POWER

6.1 APPLIED PROCEDURES / LIMIT

FCC Part15, Subpart E			
Test Item	Frequency Range (MHz)	Limit	Result
Conducted Output Power	5150 - 5250	not exceed the lesser of 50 mW (17dBm) or 4 dBm + 10log B,	PASS

Note: where "B" is the 26 dB emissions bandwidth in MHz.

6.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP_40	100129	Nov.26.2013

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 spectrum analyzer and antenna output port as show in the block diagram below,

b.

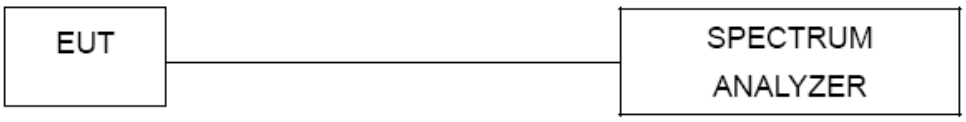
Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RBW	= 1 MHz.
VBW	≥ 3 MHz.
Detector	RMS
Trace	Max Hold
Sweep Time	auto

b. Test was performed in accordance with method of KDB 789033 D01.

6.1.3 DEVIATION FROM STANDARD

No deviation.

6.1.4 TEST SETUP



6.1.5 EUT OPERATION CONDITIONS

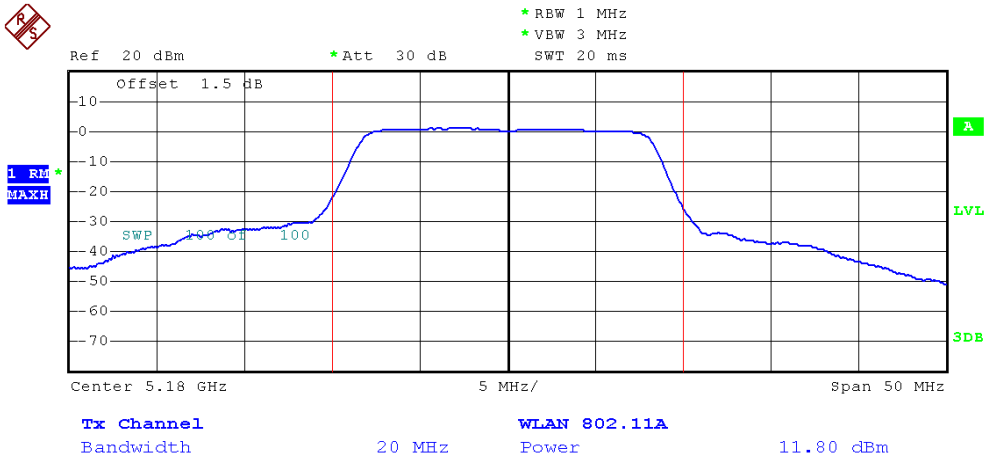
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

6.1.6 TEST RESULTS

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX A Mode/CH36, CH40, CH48/Integral Antenna		

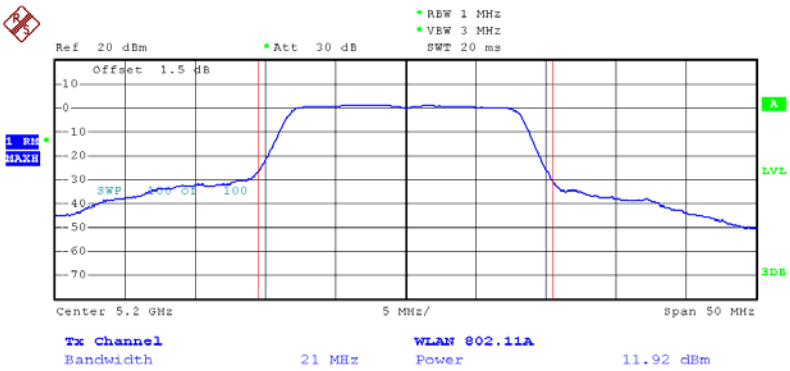
ANT 1				
Test Channel	Frequency (MHz)	Conducted Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH36	5180	11.80	17.00	0.0501
CH40	5200	11.92	17.00	0.0501
CH48	5240	12.03	17.00	0.0501

CH36



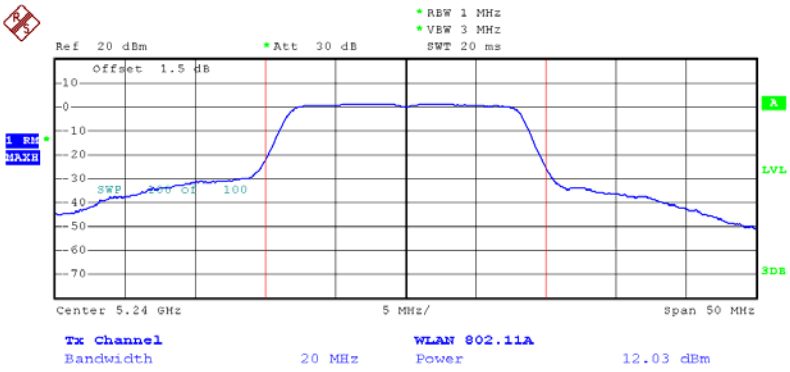
Date: 5.SEP.2013 16:19:30

CH40



Date: 5.SEP.2013 16:24:20

CH48

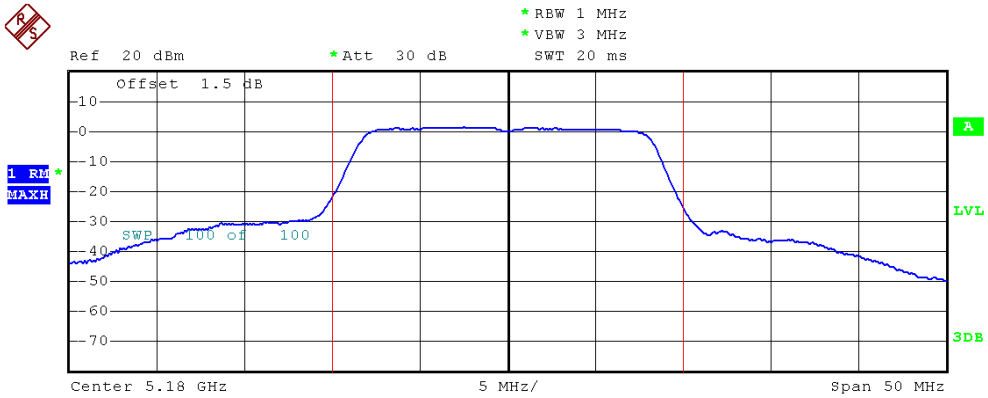


Date: 5.SEP.2013 16:26:23

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX A Mode/CH36, CH40, CH48/Integral Antenna		

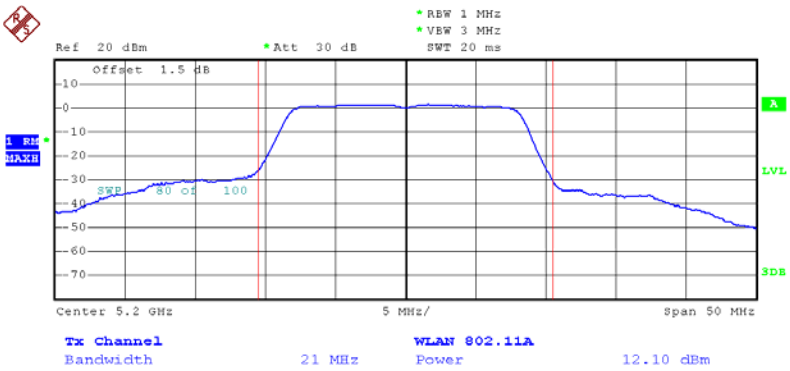
ANT 2				
Test Channel	Frequency (MHz)	Conducted Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH36	5180	12.09	17.00	0.0501
CH40	5200	12.10	17.00	0.0501
CH48	5240	12.15	17.00	0.0501

CH36



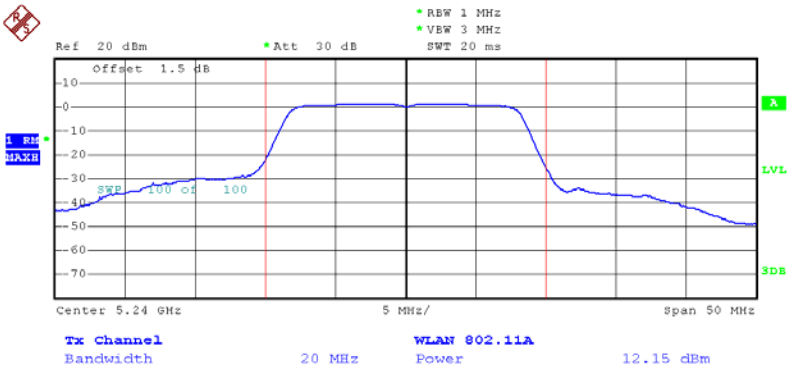
Date: 5.SEP.2013 16:19:56

CH40



Date: 5.SEP.2013 16:23:34

CH48



Date: 5.SEP.2013 16:27:59

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX A Mode/CH36, CH40, CH48/Integral Antenna		

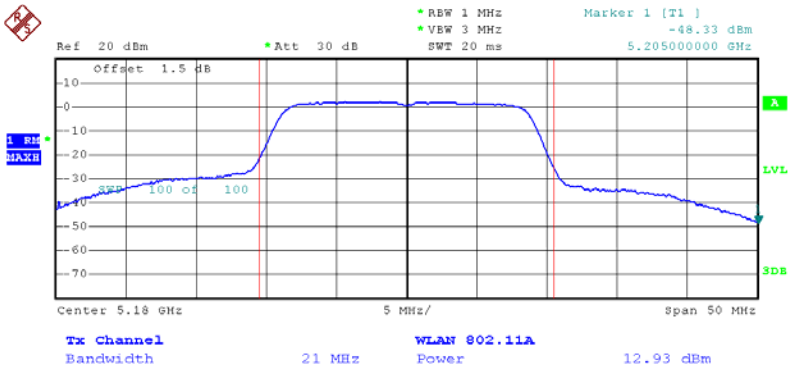
ANT 1+ ANT 2				
Test Channel	Frequency (MHz)	Conducted Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH36	5180	14.96	17.00	0.0501
CH40	5200	15.02	17.00	0.0501
CH48	5240	15.10	17.00	0.0501

Note:The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers (2T2R). all transmit signals are completely uncorrelated, then, **Direction gain = G_{ANT}**, that is Directional gain=3.59 for Dipole antenna and Directional gain=3.0 for Integral Antenna.

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N20 Mode/CH36, CH40, CH48/Integral Antenna		

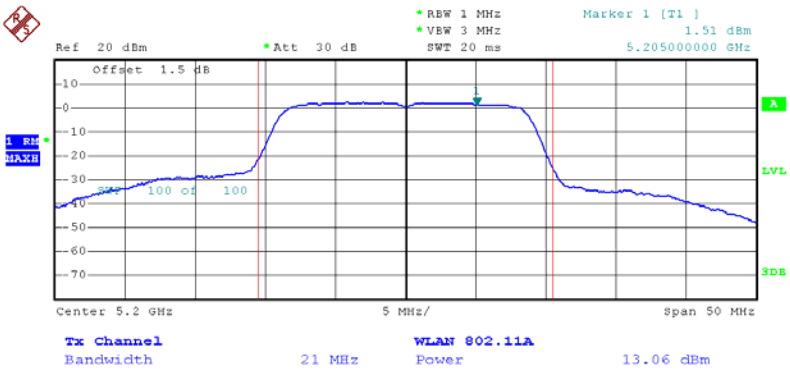
ANT 1				
Test Channel	Frequency (MHz)	Conducted Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH36	5180	12.93	17.00	0.0501
CH40	5200	13.06	17.00	0.0501
CH48	5240	12.89	17.00	0.0501

CH36



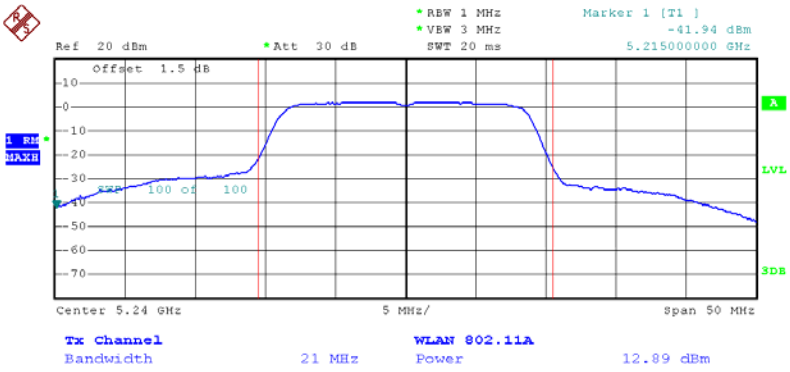
Date: 21.AUG.2013 17:09:29

CH40



Date: 21.AUG.2013 17:19:29

CH48

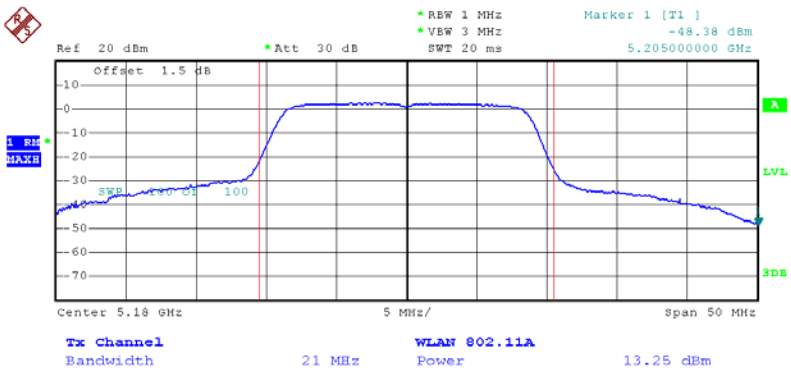


Date: 21.AUG.2013 17:23:08

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N20 Mode/CH36, CH40, CH48/Integral Antenna		

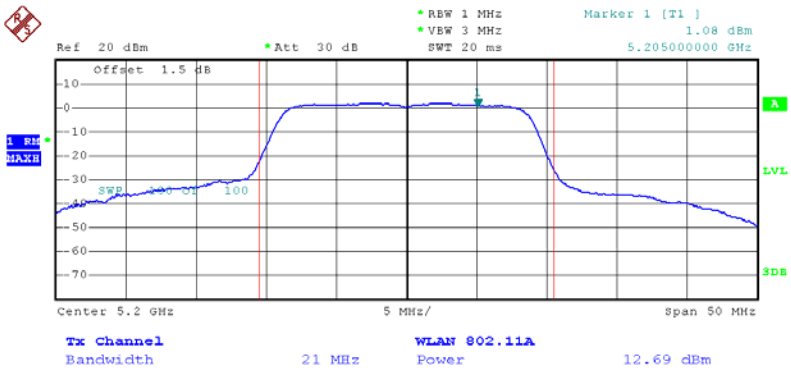
ANT 2				
Test Channel	Frequency (MHz)	Conducted Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH36	5180	13.25	17.00	0.0501
CH40	5200	12.69	17.00	0.0501
CH48	5240	12.88	17.00	0.0501

CH36



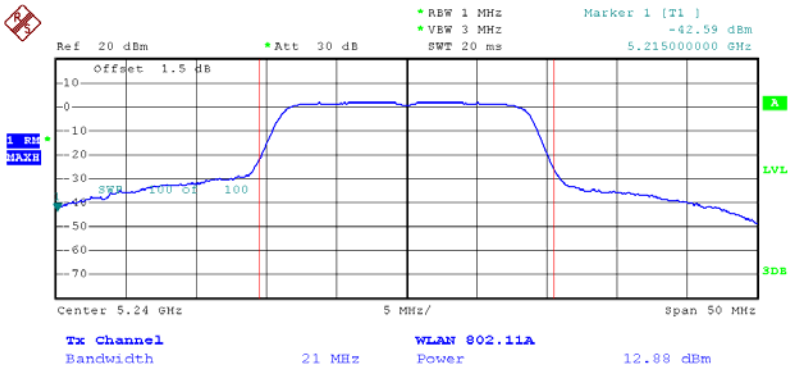
Date: 21.AUG.2013 17:13:55

CH40



Date: 21.AUG.2013 17:18:08

CH48



Date: 21.AUG.2013 17:24:23

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N20 Mode/CH36, CH40, CH48/Integral Antenn		

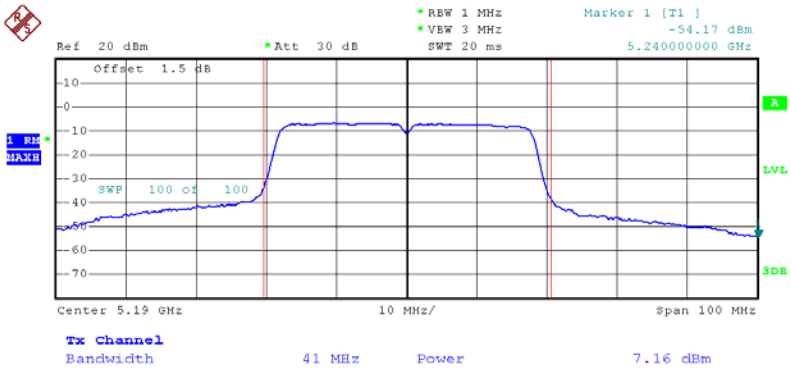
ANT 1+ANT 2				
Test Channel	Frequency (MHz)	Conducted Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH36	5180	16.10	17.00	0.0501
CH40	5200	15.89	17.00	0.0501
CH48	5240	15.90	17.00	0.0501

Note:The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers (2T2R). all transmit signals are completely uncorrelated, then, **Direction gain = G_{ANT}**, that is Directional gain=3.59 for Dipole antenna and Directional gain=3.0 for Integral Antenna.

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N40 Mode/CH38, CH46/Integral Antenna		

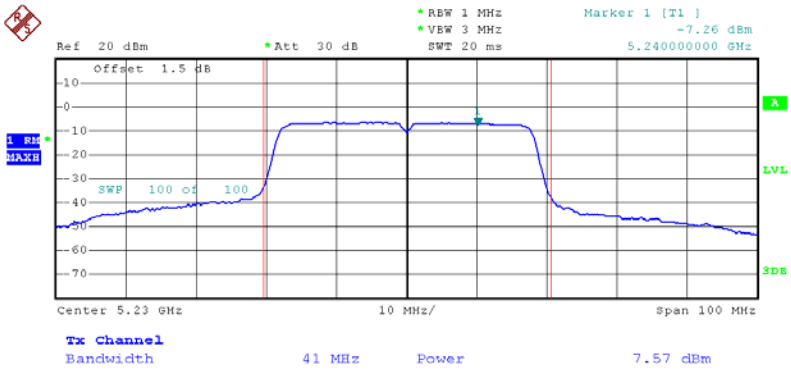
ANT 1				
Test Channel	Frequency (MHz)	Conducted Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH38	5190	7.16	17.00	0.0501
CH46	5230	7.57	17.00	0.0501

CH38



Date: 21.AUG.2013 18:00:58

CH46

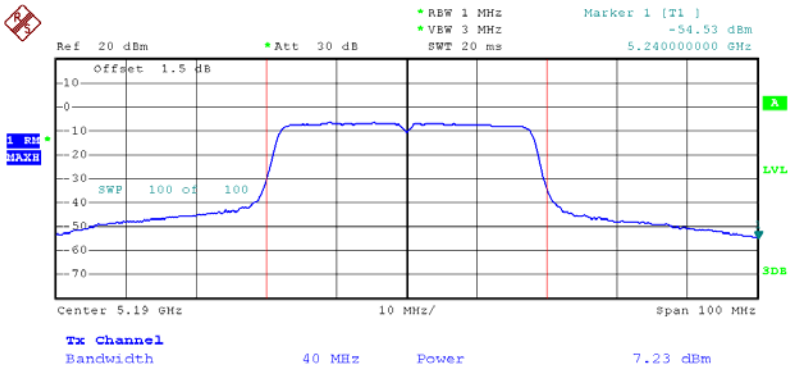


Date: 21.AUG.2013 18:02:47

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N40 Mode/CH38, CH46/Integral Antenna		

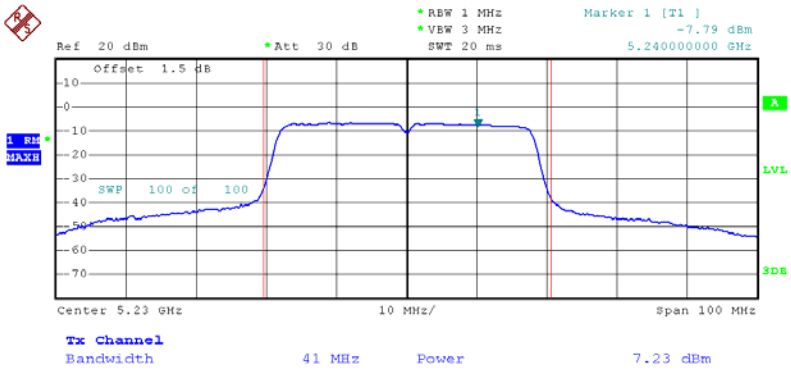
ANT 2				
Test Channel	Frequency (MHz)	Conducted Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH38	5190	7.23	17.00	0.0501
CH46	5230	7.23	17.00	0.0501

CH38



Date: 21.AUG.2013 17:58:43

CH46



Date: 21.AUG.2013 18:04:09

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N40 Mode/CH38, CH46/Integral Antenna		

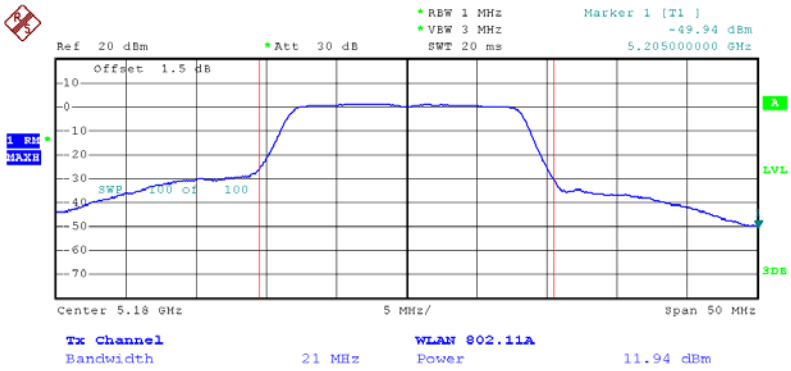
ANT 1+ANT 2				
Test Channel	Frequency (MHz)	Conducted Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH38	5190	10.21	17.00	0.0501
CH46	5230	10.41	17.00	0.0501

Note:The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers (2T2R). all transmit signals are completely uncorrelated, then, **Direction gain = G_{ANT}**, that is Directional gain=3.59 for Dipole antenna and Directional gain=3.0 for Integral Antenna.

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX A Mode/CH36, CH40, CH48/Dipole Antenna with external cable		

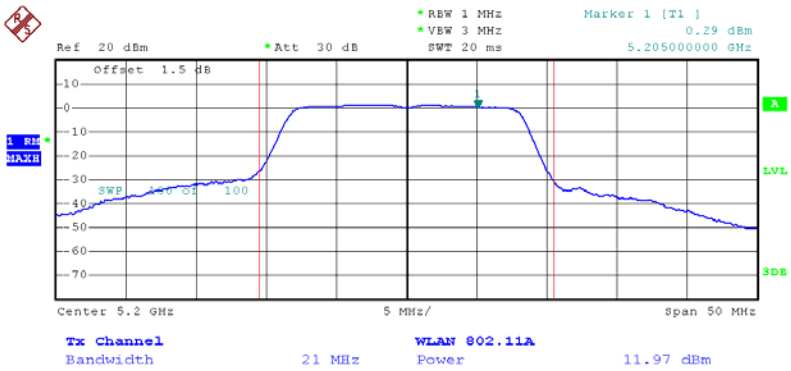
ANT 1				
Test Channel	Frequency (MHz)	Conducted Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH36	5180	11.94	17.00	0.0501
CH40	5200	11.97	17.00	0.0501
CH48	5240	11.72	17.00	0.0501

CH36



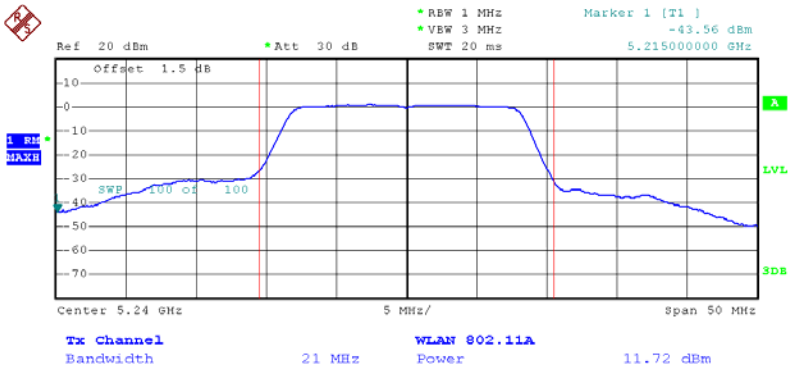
Date: 5.SEP.2013 16:52:53

CH40



Date: 5.SEP.2013 16:55:42

CH48

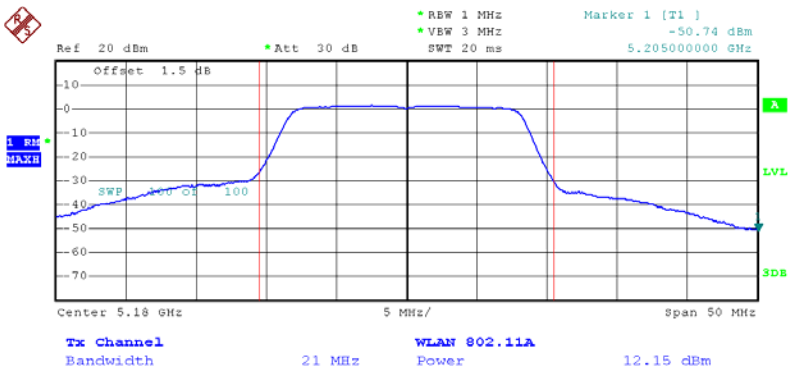


Date: 5.SEP.2013 16:57:57

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX A Mode/CH36, CH40, CH48/Dipole Antenna with external cable		

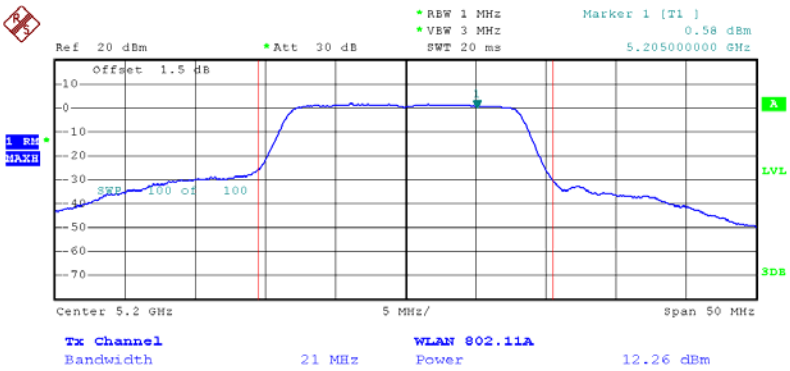
ANT 2				
Test Channel	Frequency (MHz)	Conducted Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH36	5180	12.15	17.00	0.0501
CH40	5200	12.26	17.00	0.0501
CH48	5240	11.90	17.00	0.0501

CH36



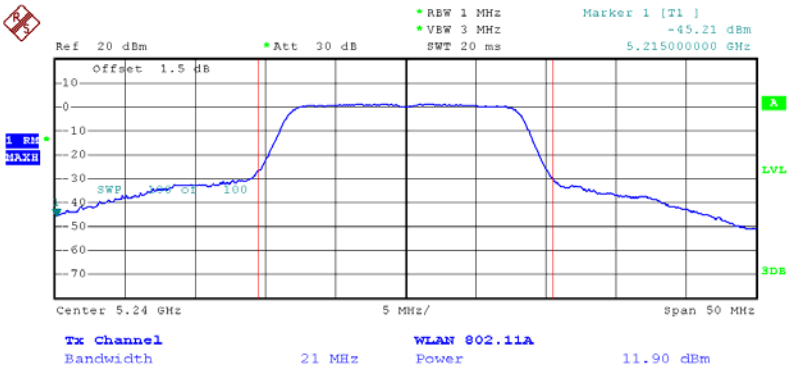
Date: 5.SEP.2013 16:53:48

CH40



Date: 5.SEP.2013 16:56:30

CH48



Date: 5.SEP.2013 16:58:53

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX A Mode/CH36, CH40, CH48/Dipole Antenna with external cable		

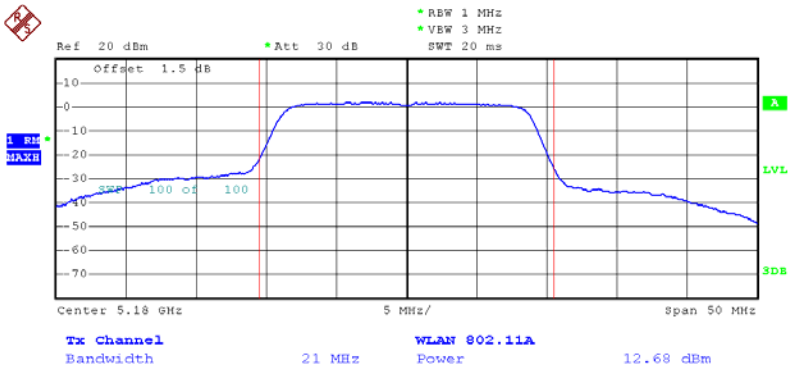
ANT 1+ ANT 2				
Test Channel	Frequency (MHz)	Conducted Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH36	5180	15.06	17.00	0.0501
CH40	5200	15.13	17.00	0.0501
CH48	5240	14.82	17.00	0.0501

Note:The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers (2T2R). all transmit signals are completely uncorrelated, then, **Direction gain = G_{ANT}**, that is Directional gain=3.59 for Dipole antenna and Directional gain=3.0 for Integral Antenna.

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N20 Mode/CH36, CH40, CH48/Dipole Antenna with external cable		

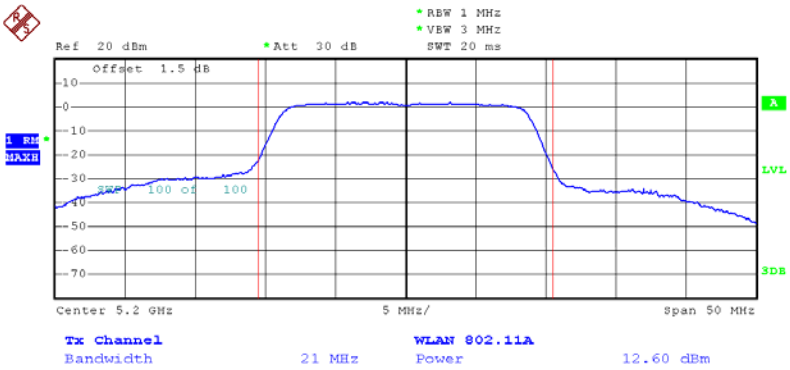
ANT 1				
Test Channel	Frequency (MHz)	Conducted Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH36	5180	12.68	17.00	0.0501
CH40	5200	12.60	17.00	0.0501
CH48	5240	12.93	17.00	0.0501

CH36



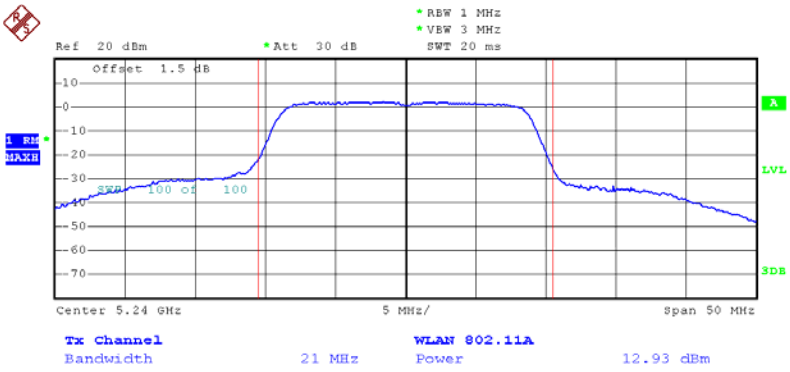
Date: 24.AUG.2013 17:00:52

CH40



Date: 24.AUG.2013 17:07:28

CH48

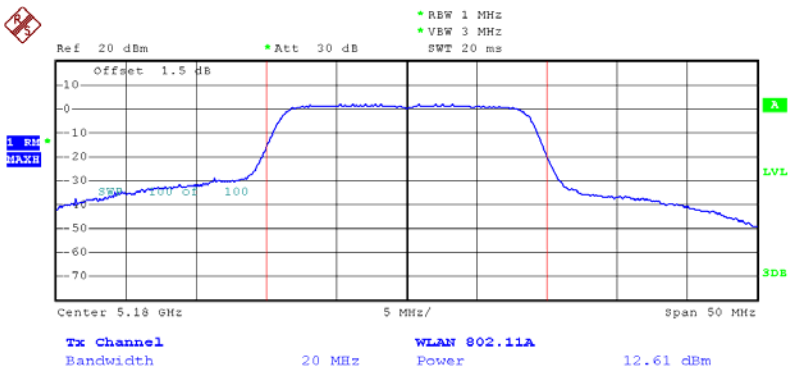


Date: 24.AUG.2013 17:09:31

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N20 Mode/CH36, CH40, CH48/Dipole Antenna with external cable		

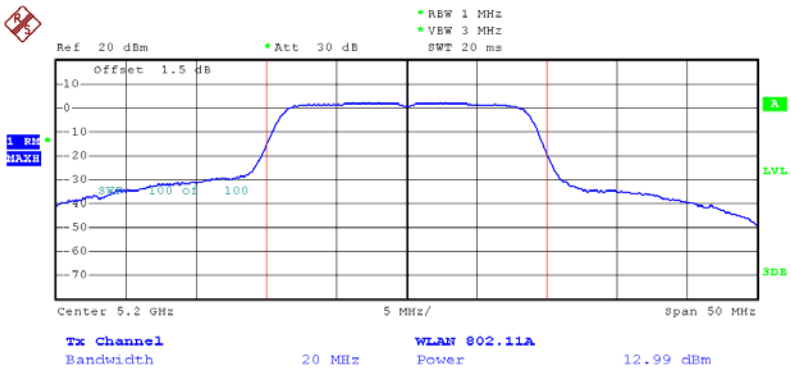
ANT 2				
Test Channel	Frequency (MHz)	Conducted Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH36	5180	12.61	17.00	0.0501
CH40	5200	12.99	17.00	0.0501
CH48	5240	12.95	17.00	0.0501

CH36



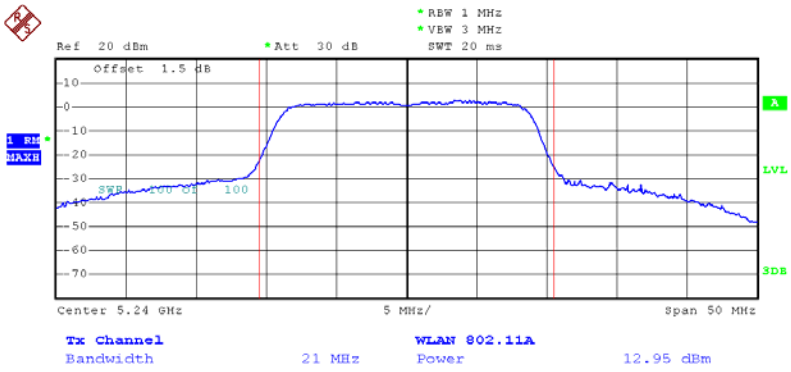
Date: 24.AUG.2013 17:03:36

CH40



Date: 24.AUG.2013 17:06:01

CH48



Date: 24.AUG.2013 17:10:44

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N20 Mode/CH36, CH40, CH48/Dipole Antenna with external cable		

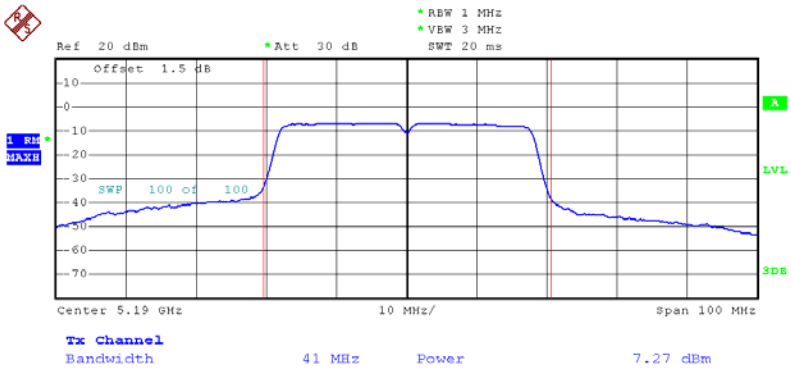
ANT 1+ANT 2				
Test Channel	Frequency (MHz)	Conducted Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH36	5180	15.66	17.00	0.0501
CH40	5200	15.81	17.00	0.0501
CH48	5240	15.95	17.00	0.0501

Note:The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers (2T2R). all transmit signals are completely uncorrelated, then, **Direction gain = G_{ANT}**, that is Directional gain=3.59 for Dipole antenna and Directional gain=3.0 for Integral Antenna.

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N40 Mode/CH38, CH46/Dipole Antenna with external cable		

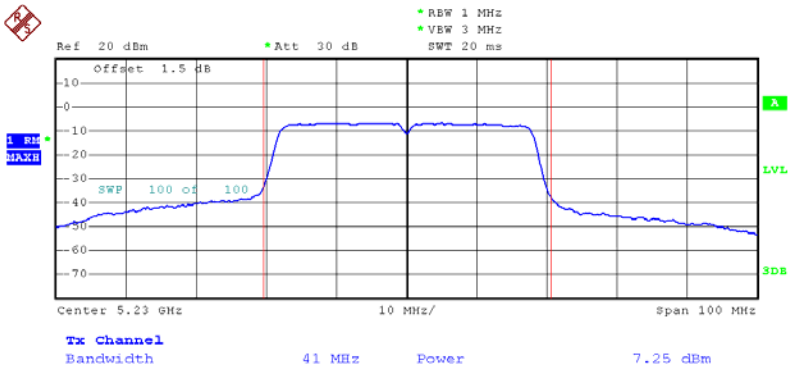
ANT 1				
Test Channel	Frequency (MHz)	Conducted Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH38	5190	7.27	17.00	0.0501
CH46	5230	7.25	17.00	0.0501

CH38



Date: 24.AUG.2013 17:38:25

CH46

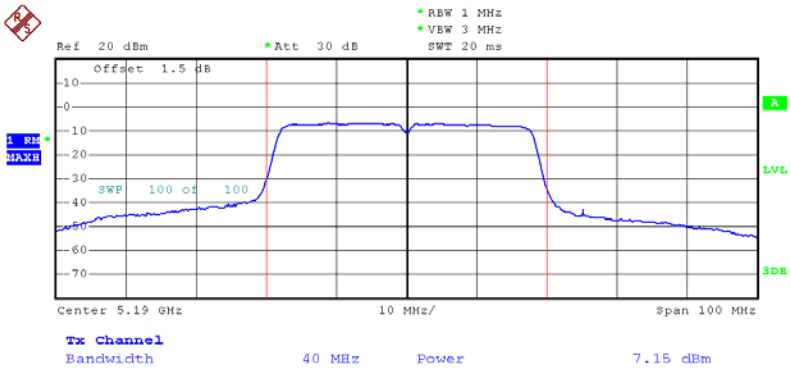


Date: 24.AUG.2013 17:47:43

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N40 Mode/CH38, CH46/Dipole Antenna with external cable		

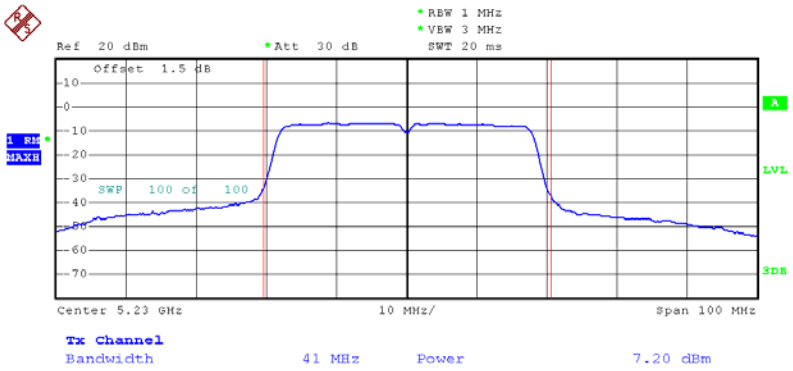
ANT 2				
Test Channel	Frequency (MHz)	Conducted Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH38	5190	7.15	17.00	0.0501
CH46	5230	7.20	17.00	0.0501

CH38



Date: 24.AUG.2013 17:36:54

CH46



Date: 24.AUG.2013 17:48:40

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N40 Mode/CH38, CH46/Dipole Antenna with external cable		

ANT 1+ANT 2				
Test Channel	Frequency (MHz)	Conducted Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH38	5190	10.22	17.00	0.0501
CH46	5230	10.24	17.00	0.0501

Note:The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers (2T2R). all transmit signals are completely uncorrelated, then, **Direction gain = G_{ANT}**, that is Directional gain=3.59 for Dipole antenna and Directional gain=3.0 for Integral Antenna.

7. ANTENNA CONDUCTED SPURIOUS EMISSION

7.1 APPLIED PROCEDURES / LIMIT

FCC Part15, Subpart E			
Test Item	Limit	Frequency Range (MHz)	Result
Antenna conducted Spurious Emission	-27 dBm/1MHz	5150 – 5250	PASS

7.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP_40	100129	Nov.26.2013

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 Parameter	Setting
Attenuation	Auto
RB	1000 kHz
VB	1000 kHz
Trace	Max Hold
Sweep Time	Auto

7.1.3 DEVIATION FROM STANDARD

No deviation.

7.1.4 TEST SETUP

7.1.5 EUT OPERATION CONDITIONS

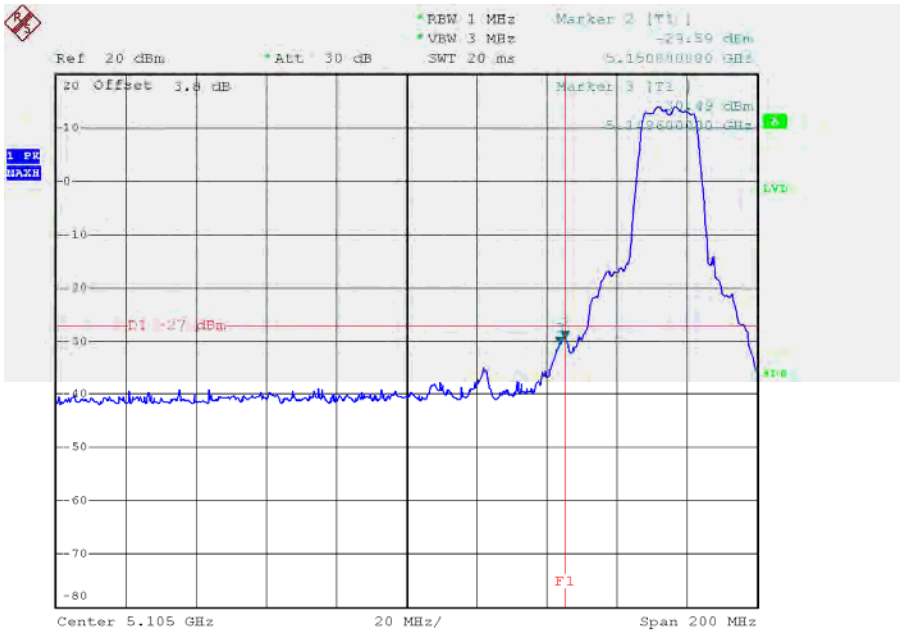
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

7.1.6 TEST RESULTS

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX A Mode/ CH36, CH40, CH48/ANT 1/Integral Antenna		

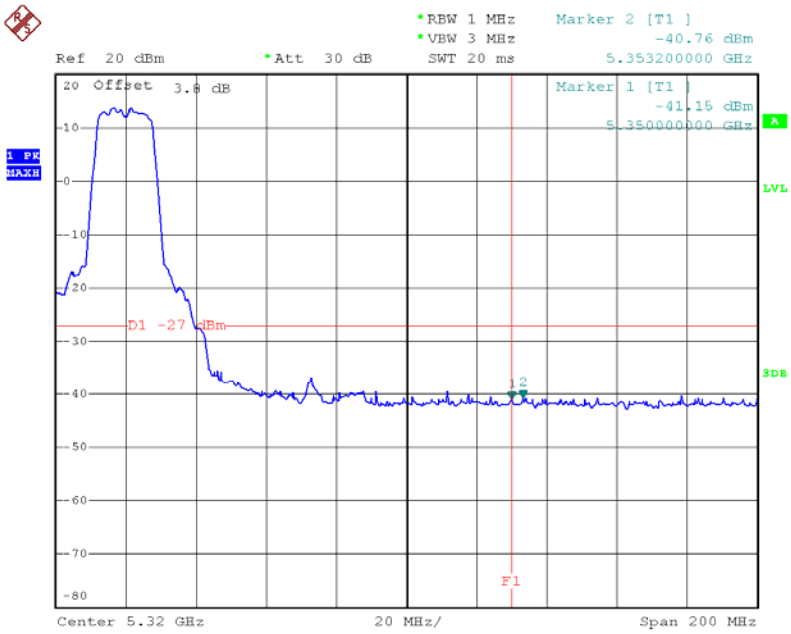
Channel of Worst Data: CH36			
The max. radio frequency power in any 1000kHz bandwidth outside the frequency band		The max. radio frequency power in any 1000kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5150.00	-29.59	5353.20	-40.76
Limit: -27 dBm/1MHz Result:PASS			
Measurement method: S.A Read value+Ant gain+cable loss			

TX mode CH36



Date: 6.SEP.2013 11:00:39

TX mode CH48

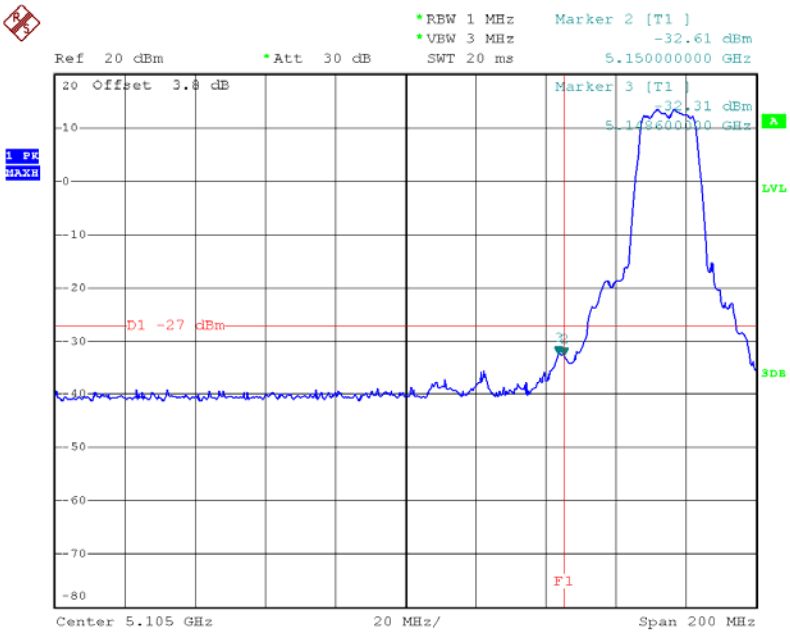


Date: 6.SEP.2013 11:14:25

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX A Mode/ CH36, CH40, CH48/ANT 2/Integral Antenna		

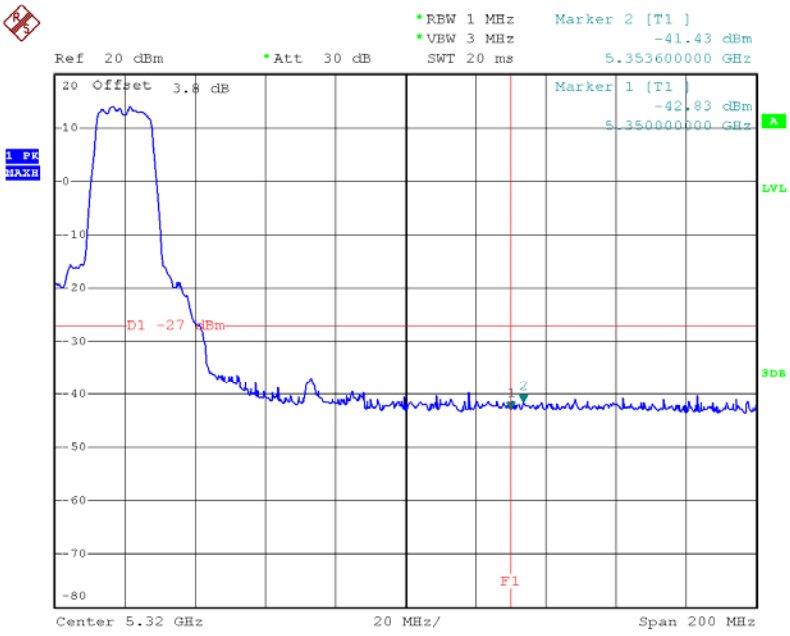
Channel of Worst Data: CH36			
The max. radio frequency power in any 1000kHz bandwidth outside the frequency band		The max. radio frequency power in any 1000kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5148.60	-32.31	5350.00	-41.43
Limit: -27 dBm/1MHz Result:PASS			
Measurement method: S.A Read value+Ant gain+cable loss			

TX mode CH36



Date: 6.SEP.2013 10:59:39

TX mode CH48

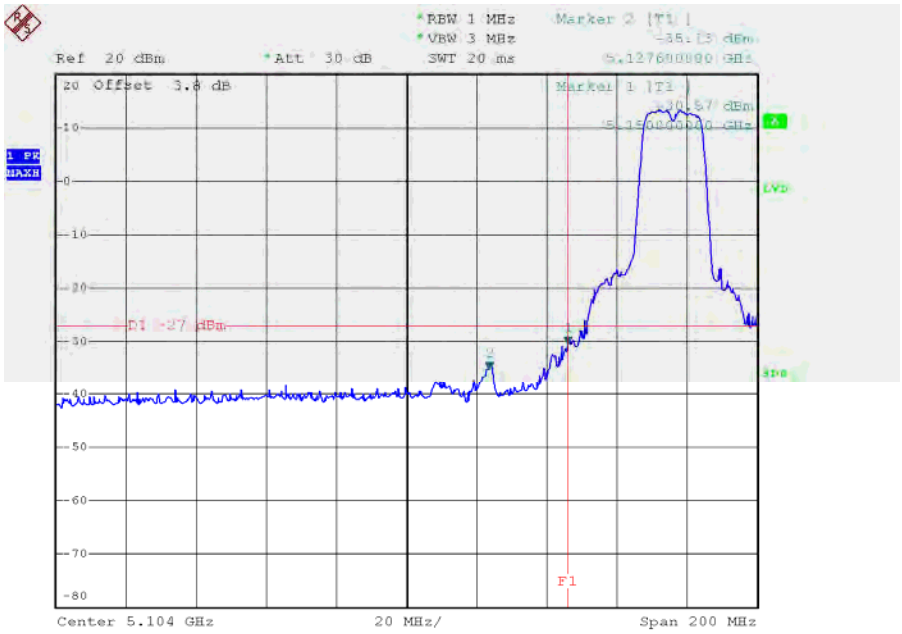


Date: 6.SEP.2013 11:14:49

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N20 Mode/ CH36, CH40 , CH48/ANT 1/Integral Antenna		

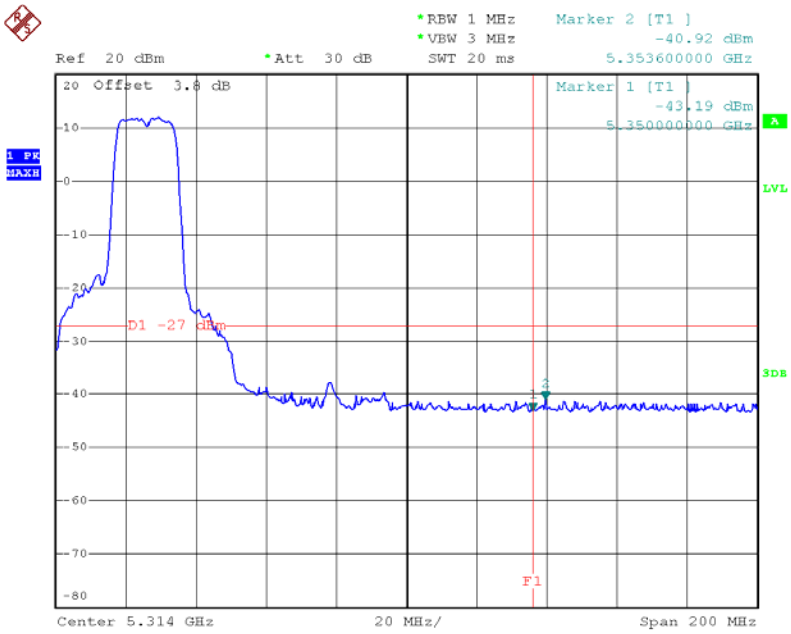
Channel of Worst Data: CH36			
The max. radio frequency power in any 1000kHz bandwidth outside the frequency band		The max. radio frequency power in any 1000kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5150.00	-30.57	5353.60	-40.92
Limit: -27 dBm/1MHz Result:PASS			
Measurement method: S.A Read value+Ant gain+cable loss			

TX mode CH36



Date: 28.AUG.2013 21:20:35

TX mode CH48

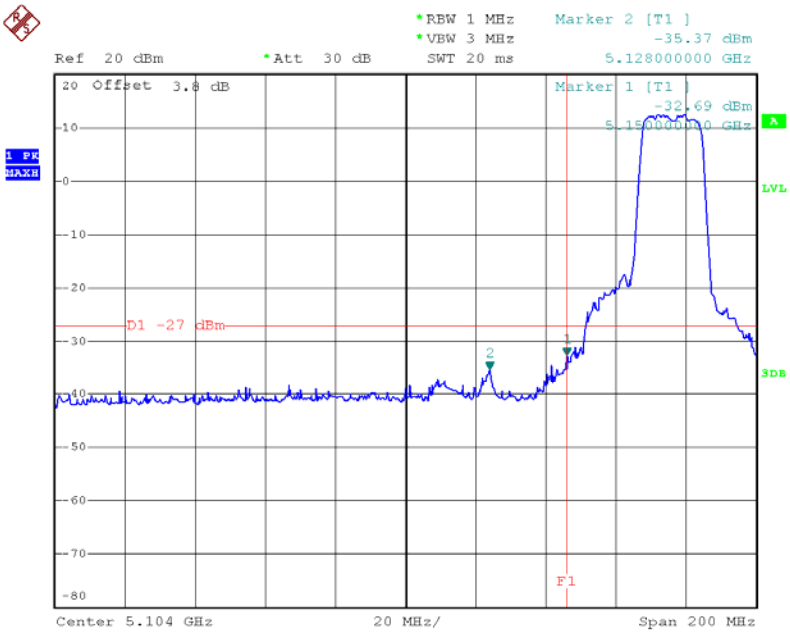


Date: 28.AUG.2013 21:18:48

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N20 Mode/ CH36, CH40 , CH48/ANT 2/Integral Antenna		

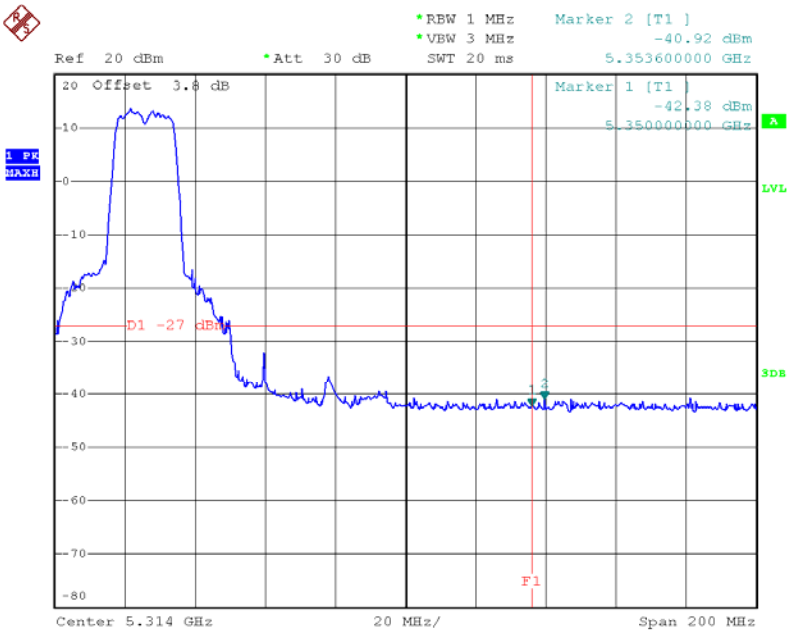
Channel of Worst Data: CH36			
The max. radio frequency power in any 1000kHz bandwidth outside the frequency band		The max. radio frequency power in any 1000kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5150.00	-32.69	5353.60	-40.92
Limit: -27 dBm/1MHz Result:PASS			
Measurement method: S.A Read value+Ant gain+cable loss			

TX mode CH36



Date: 28.AUG.2013 21:20:58

TX mode CH48

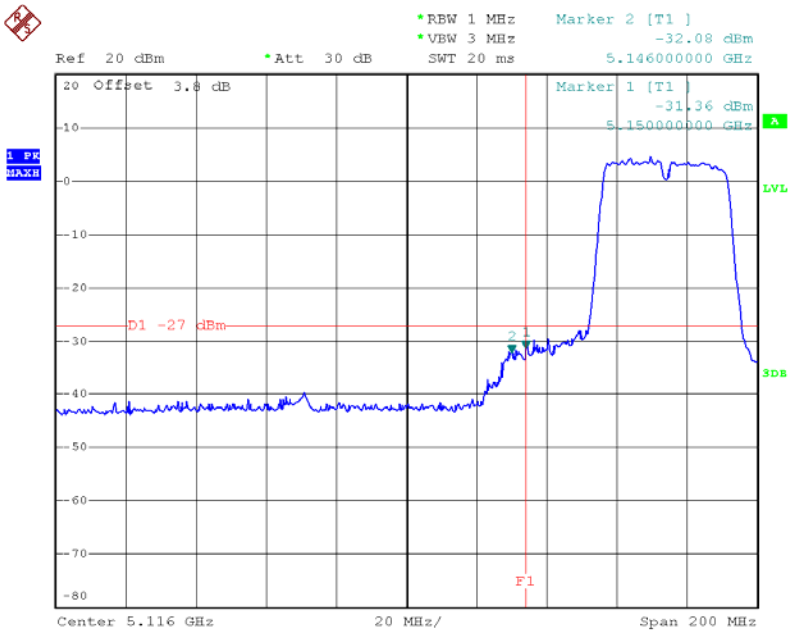


Date: 28.AUG.2013 21:19:05

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N40 Mode/ CH38, CH46/ANT 1/Integral Antenna		

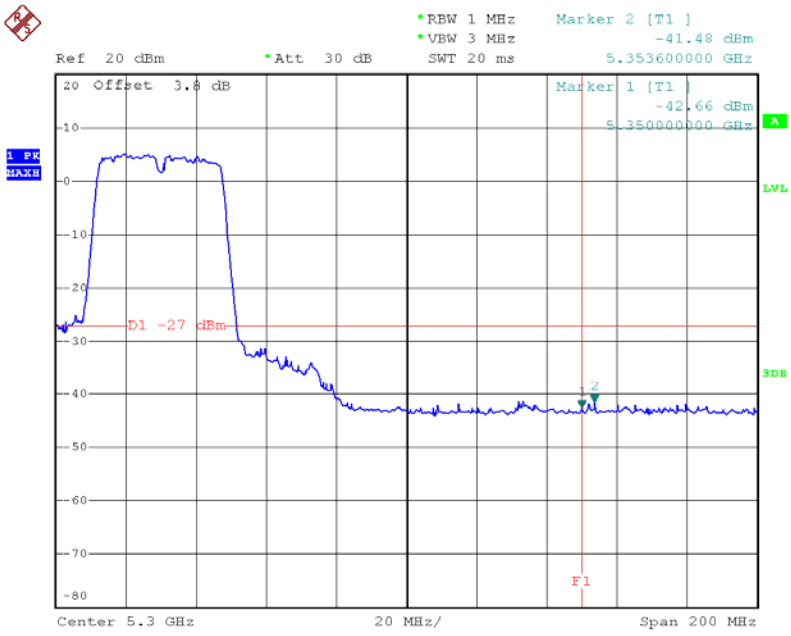
Channel of Worst Data: CH38			
The max. radio frequency power in any 1000kHz bandwidth outside the frequency band		The max. radio frequency power in any 1000kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5150.00	-31.36	5353.60	-41.48
Limit: -27 dBm/1MHz Result:PASS			
Measurement method: S.A Read value+Ant gain+cable loss			

TX mode CH38



Date: 28.AUG.2013 21:25:41

TX mode CH46

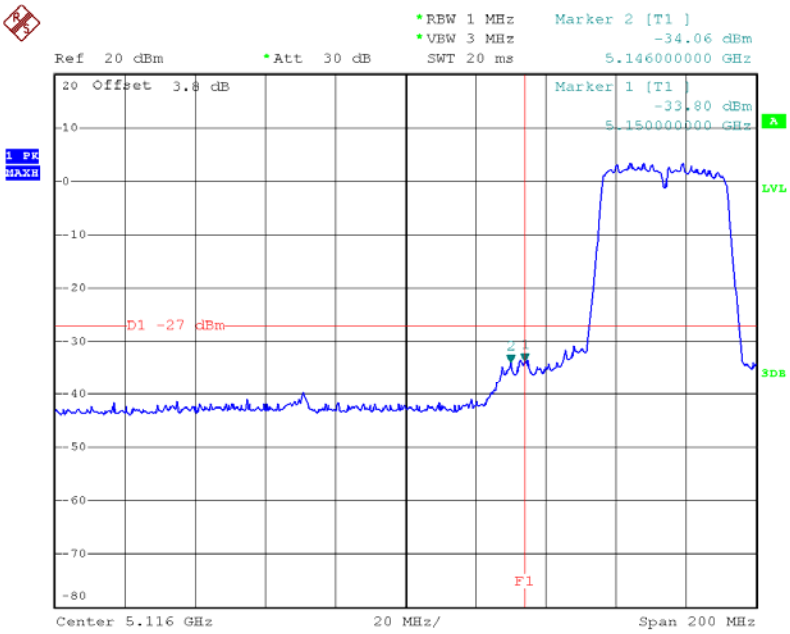


Date: 28.AUG.2013 21:32:21

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N40 Mode/ CH38, CH46/ANT 2/Integral Antenna		

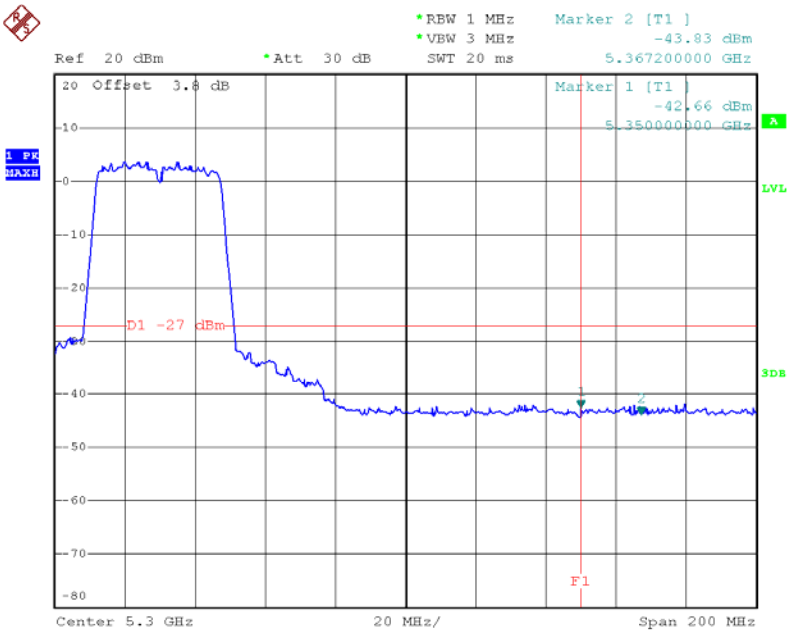
Channel of Worst Data: CH38			
The max. radio frequency power in any 1000kHz bandwidth outside the frequency band		The max. radio frequency power in any 1000kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5150.00	-33.80	5350.00	-42.66
Limit: -27 dBm/1MHz Result:PASS			
Measurement method: S.A Read value+Ant gain+cable loss			

TX mode CH38



Date: 28.AUG.2013 21:25:29

TX mode CH46

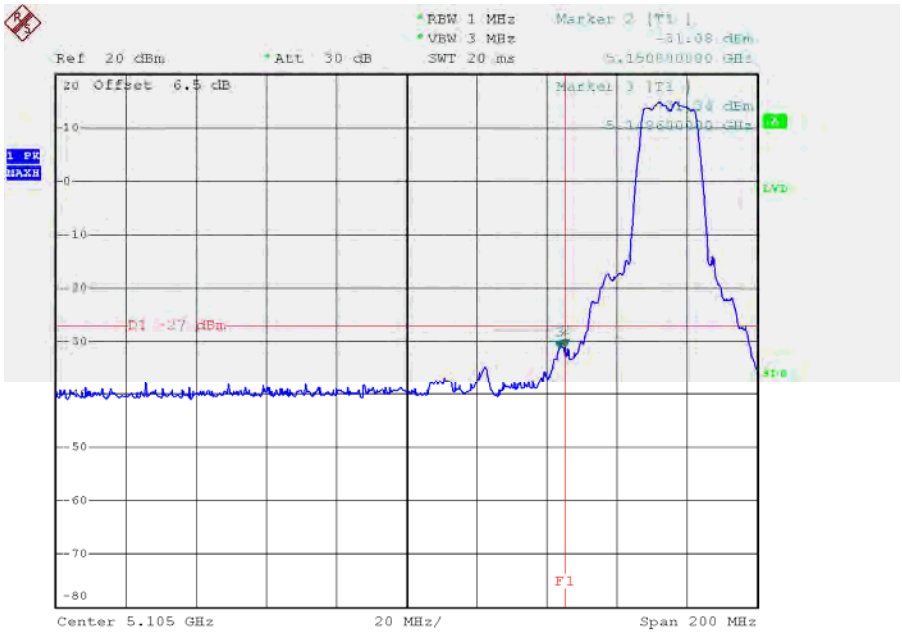


Date: 28.AUG.2013 21:32:03

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX A Mode/ CH36, CH40, CH48/ANT 1/Dipole Antenna with external cable		

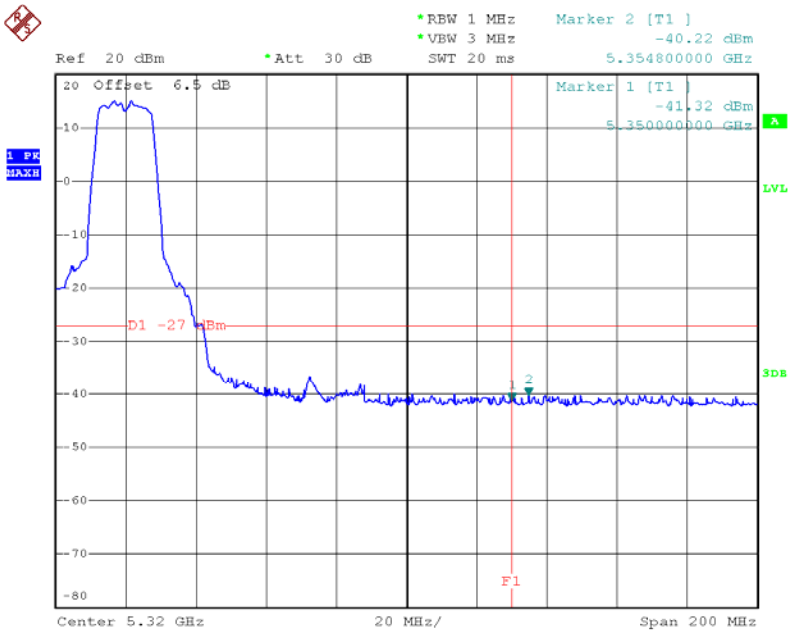
Channel of Worst Data: CH36			
The max. radio frequency power in any 1000kHz bandwidth outside the frequency band		The max. radio frequency power in any 1000kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5150.00	-31.09	5354.80	-40.22
Limit: -27 dBm/1MHz Result:PASS			
Measurement method: S.A Read value+Ant gain+cable loss			

TX mode CH36



Date: 6.SEP.2013 11:04:52

TX mode CH48

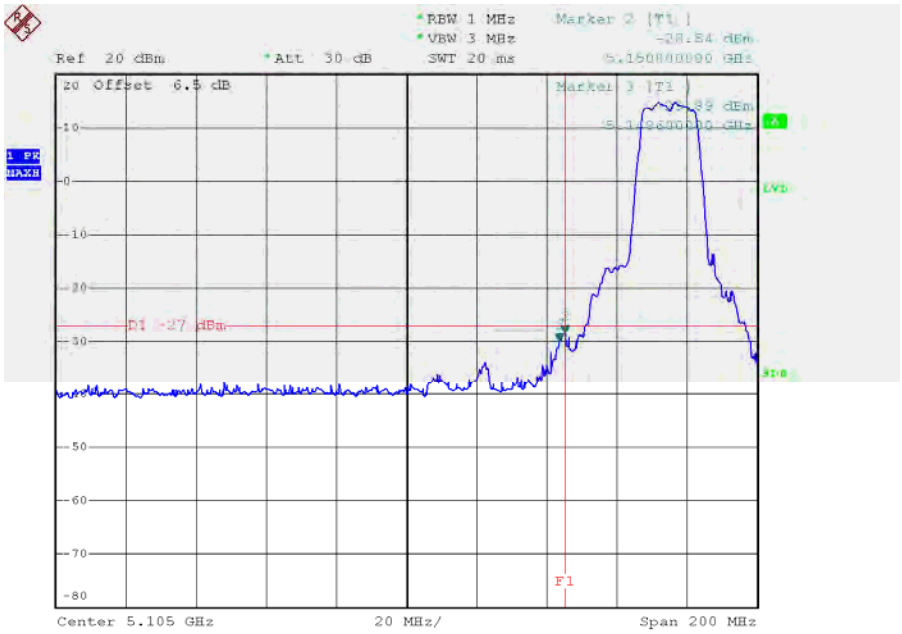


Date: 6.SEP.2013 11:15:56

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX A Mode/ CH36, CH40, CH48/ANT 2/Dipole Antenna with external cable		

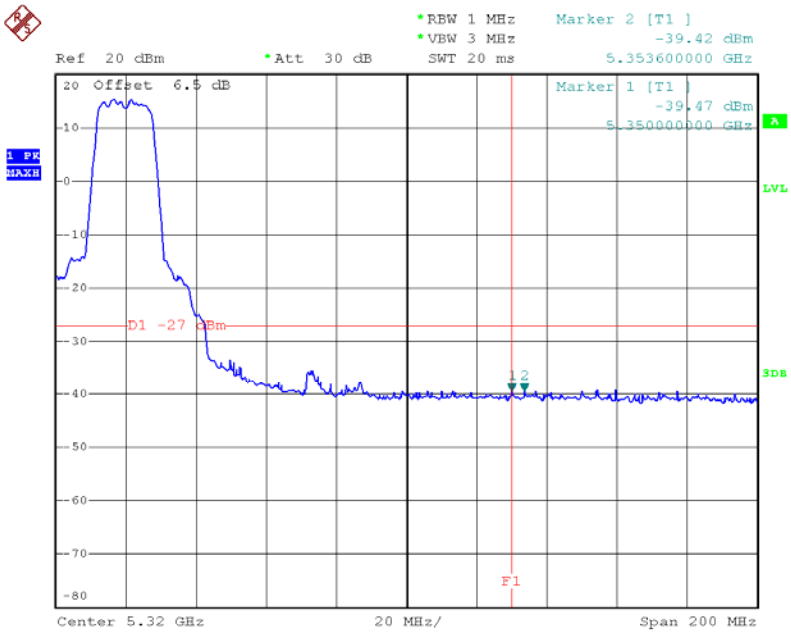
Channel of Worst Data: CH36			
The max. radio frequency power in any 1000kHz bandwidth outside the frequency band		The max. radio frequency power in any 1000kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5150.00	-28.54	5353.60	-39.42
Limit: -27 dBm/1MHz Result:PASS			
Measurement method: S.A Read value+Ant gain+cable loss			

TX mode CH36



Date: 6.SEP.2013 11:04:23

TX mode CH48

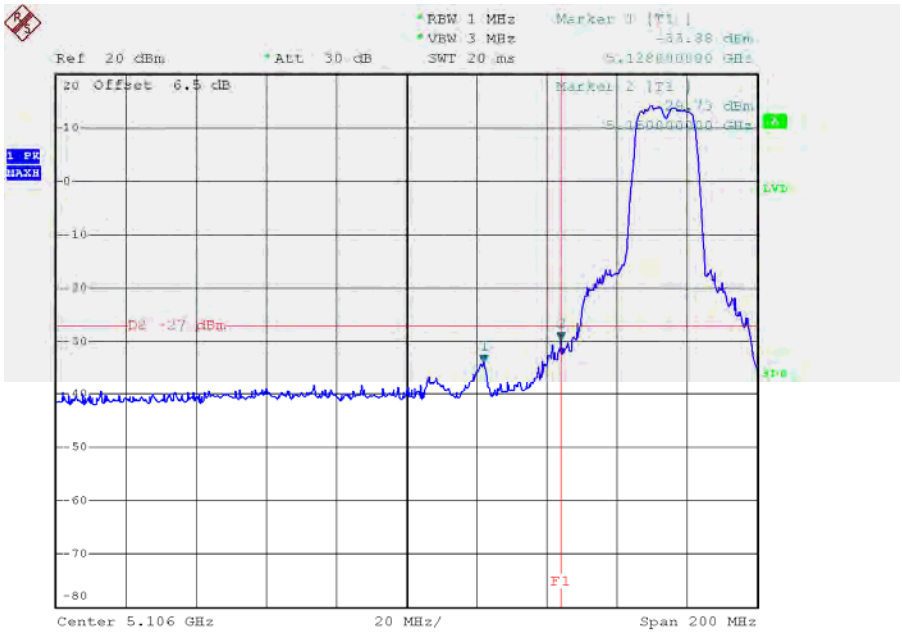


Date: 6.SEP.2013 11:15:36

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N20 Mode/ CH36, CH40 , CH48/ANT 1/Dipole Antenna with external cable		

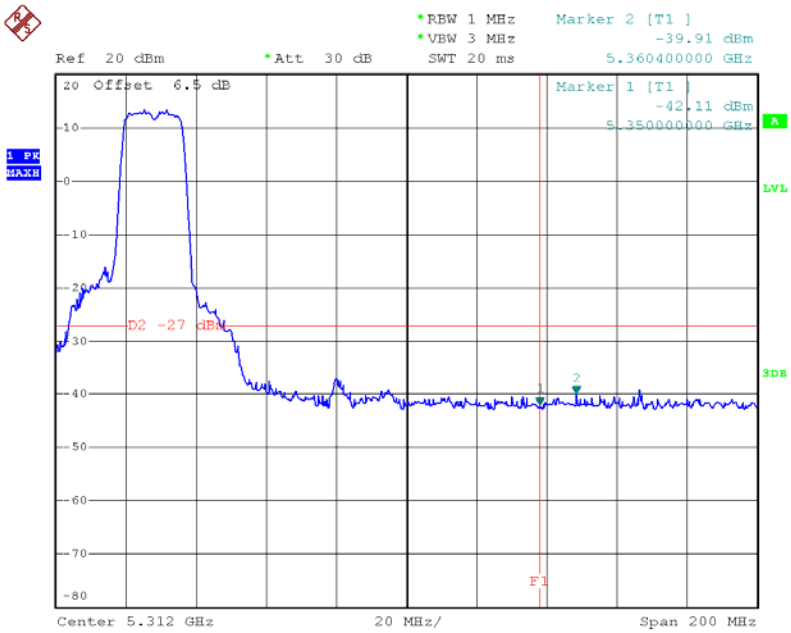
Channel of Worst Data: CH36			
The max. radio frequency power in any 1000kHz bandwidth outside the frequency band		The max. radio frequency power in any 1000kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5150.00	-29.73	5360.40	-42.11
Limit: -27 dBm/1MHz Result:PASS			
Measurement method: S.A Read value+Ant gain+cable loss			

TX mode CH36



Date: 28.AUG.2013 21:08:24

TX mode CH48

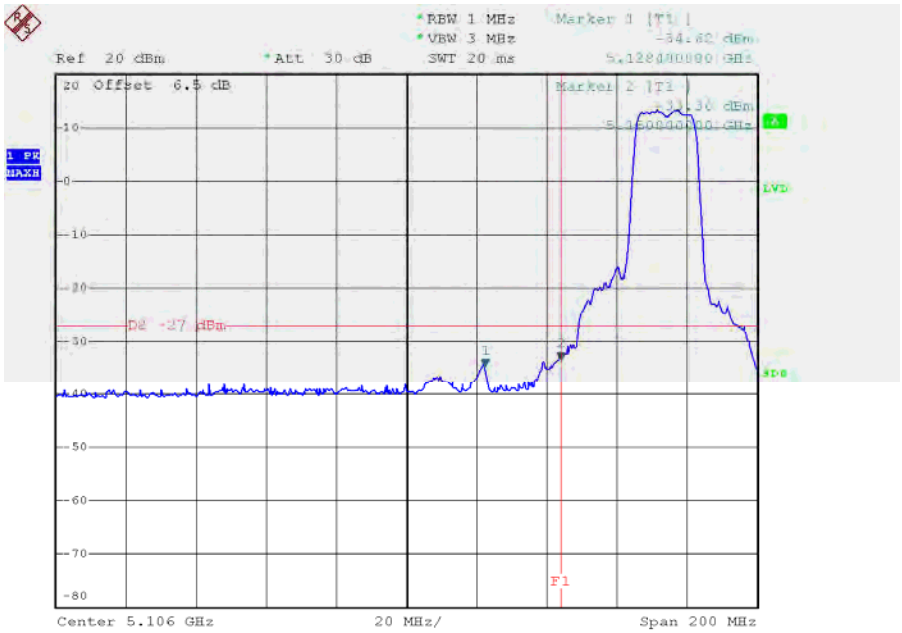


Date: 28.AUG.2013 21:14:35

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N20 Mode/ CH36, CH40 , CH48/ANT 2/Dipole Antenna with external cable		

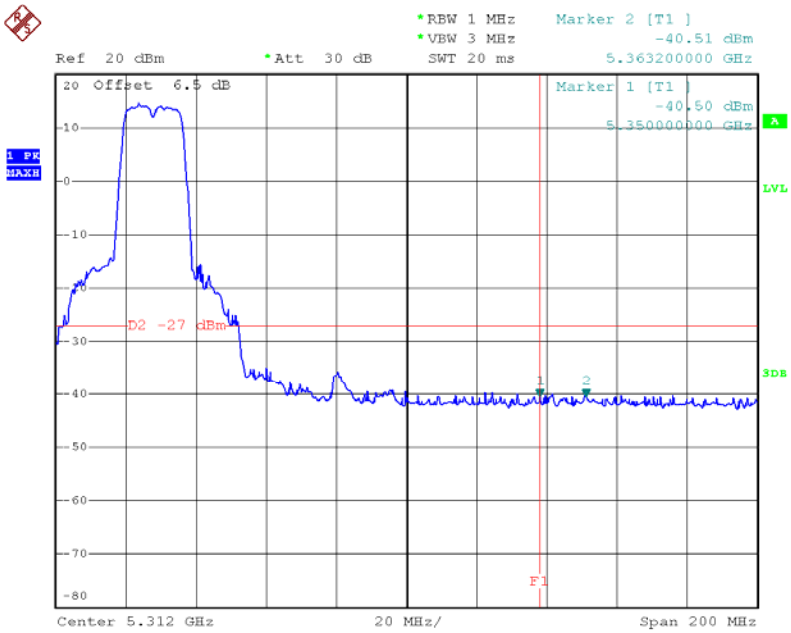
Channel of Worst Data: CH36			
The max. radio frequency power in any 1000kHz bandwidth outside the frequency band		The max. radio frequency power in any 1000kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5150.00	-33.36	5350.00	-40.50
Limit: -27 dBm/1MHz Result:PASS			
Measurement method: S.A Read value+Ant gain+cable loss			

TX mode CH36



Date: 28.AUG.2013 21:07:26

TX mode CH48

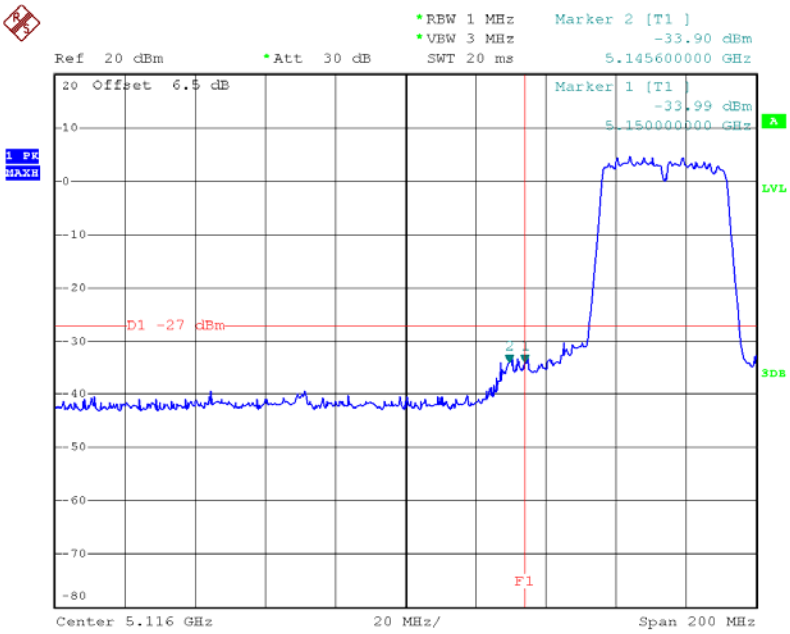


Date: 28.AUG.2013 21:14:18

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N40 Mode/ CH38, CH46/ANT 1/Dipole Antenna with external cable		

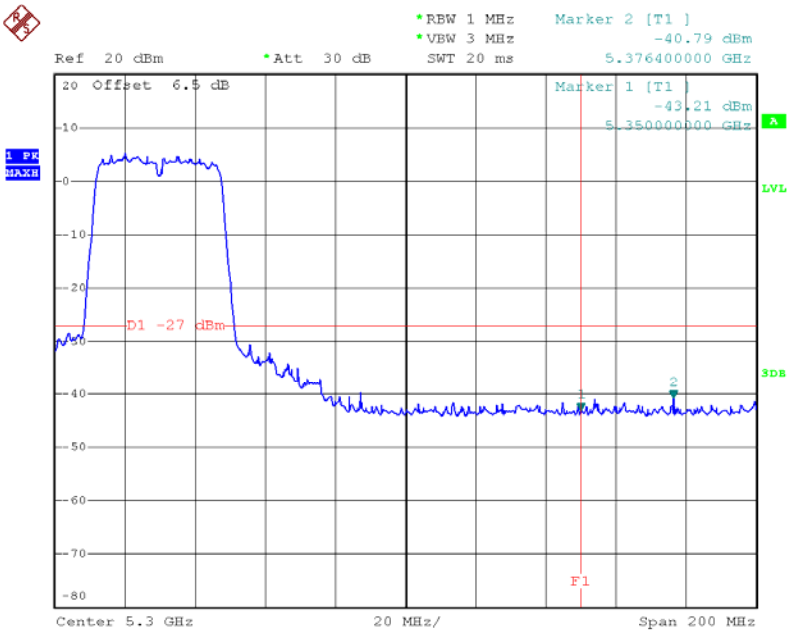
Channel of Worst Data: CH38			
The max. radio frequency power in any 1000kHz bandwidth outside the frequency band		The max. radio frequency power in any 1000kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5145.60	-33.90	5376.40	-40.79
Limit: -27 dBm/1MHz Result:PASS			
Measurement method: S.A Read value+Ant gain+cable loss			

TX mode CH38



Date: 28.AUG.2013 21:24:43

TX mode CH46

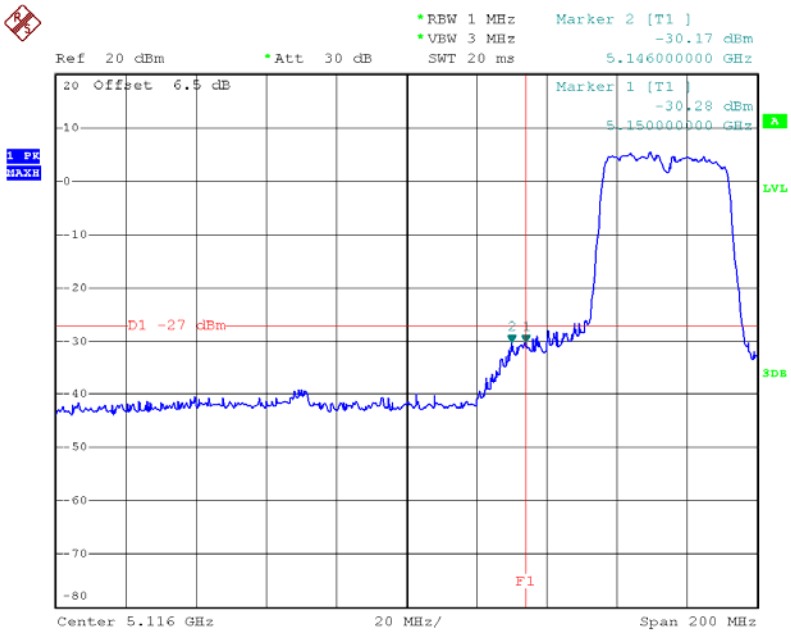


Date: 28.AUG.2013 21:33:12

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N40 Mode/ CH38, CH46/ANT 2/Dipole Antenna with external cable		

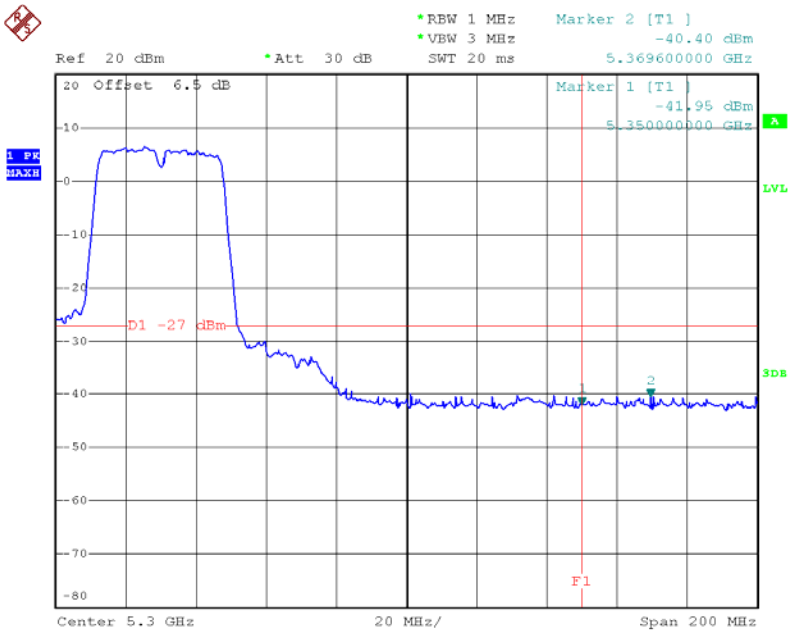
Channel of Worst Data: CH38			
The max. radio frequency power in any 1000kHz bandwidth outside the frequency band		The max. radio frequency power in any 1000kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5146.00	-30.17	5369.60	-40.40
Limit: -27 dBm/1MHz Result:PASS			
Measurement method: S.A Read value+Ant gain+cable loss			

TX mode CH38



Date: 28.AUG.2013 21:24:22

TX mode CH46



Date: 28.AUG.2013 21:32:55

8. POWER SPECTRAL DENSITY TEST

8.1 APPLIED PROCEDURES / LIMIT

FCC Part15, Subpart E			
Test Item	Limit	Frequency Range (MHz)	Result
Power Spectral Density	4 dBm	5150 - 5250	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	100129	Nov.26.2013

Remark: “N/A” denotes no model name, serial no. or calibration specified.

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,

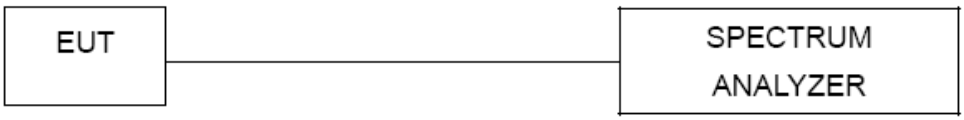
b.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RB	= 1 MHz.
VB	≥ 3 MHz.
Detector	RMS
Trace	Max Hold
Sweep Time	Auto

8.1.3 DEVIATION FROM STANDARD

No deviation.

8.1.4 TEST SETUP



8.1.5 EUT OPERATION CONDITIONS

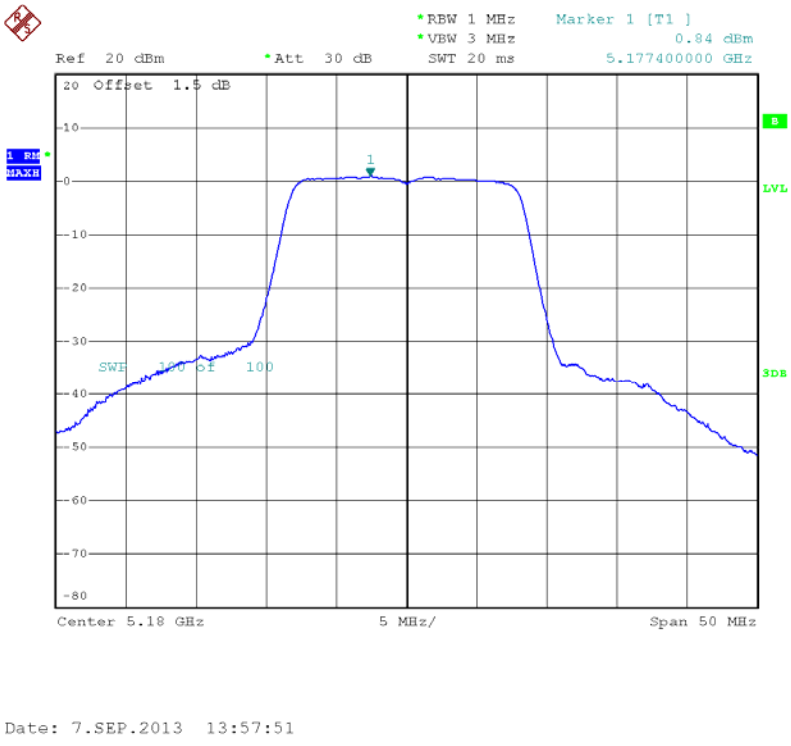
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

8.1.6 TEST RESULTS

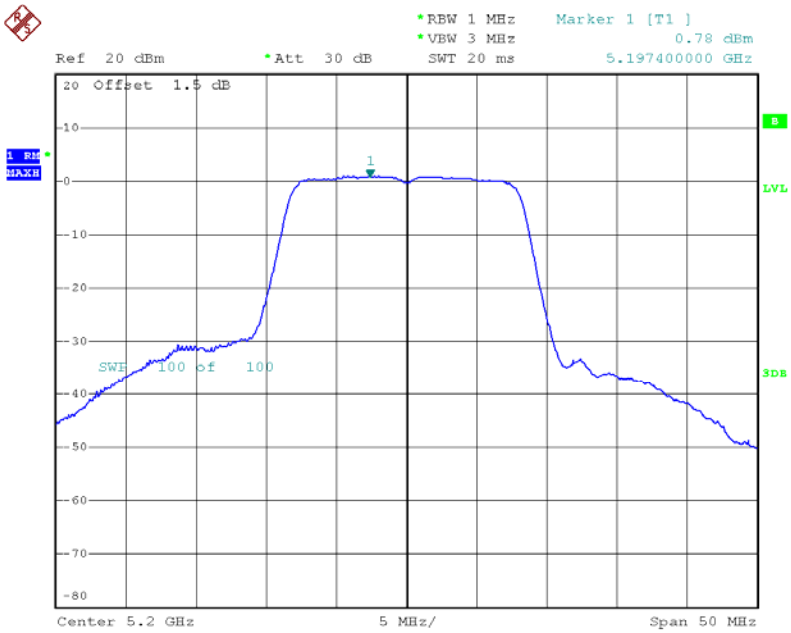
EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX A Mode/CH36, CH40, CH48/Integral Antenna		

ANT 1			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH36	5180	0.84	4.00
CH40	5200	0.78	4.00
CH48	5240	0.52	4.00

CH36

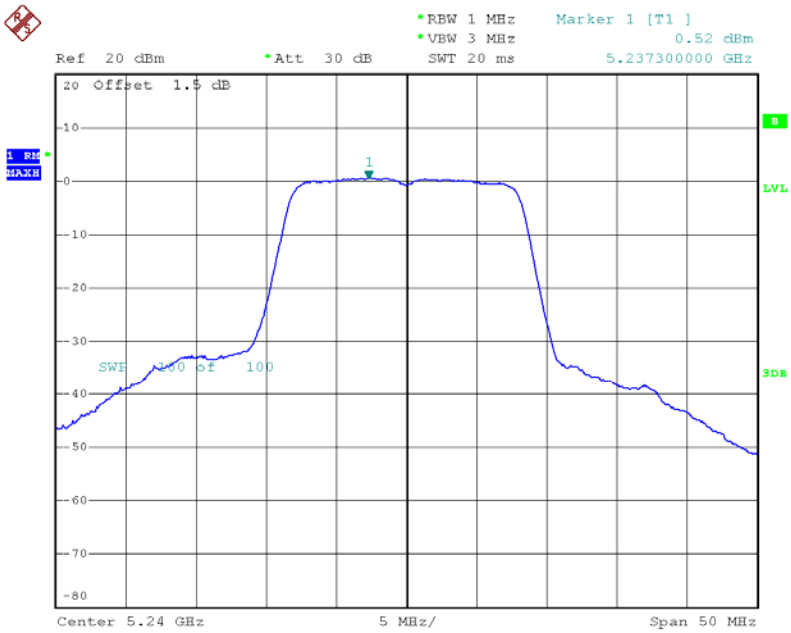


CH40



Date: 7.SEP.2013 14:00:59

CH48

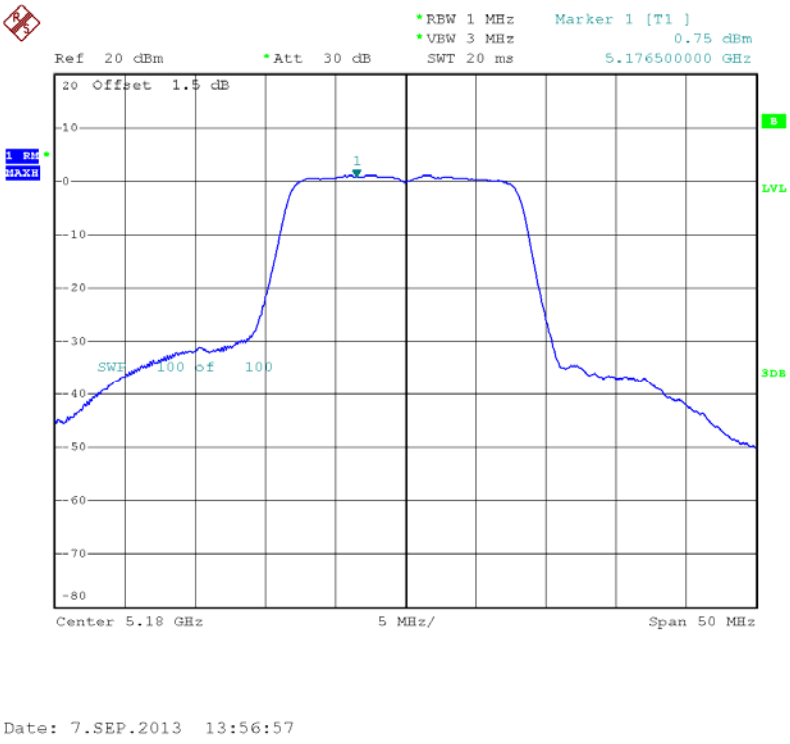


Date: 7.SEP.2013 14:04:24

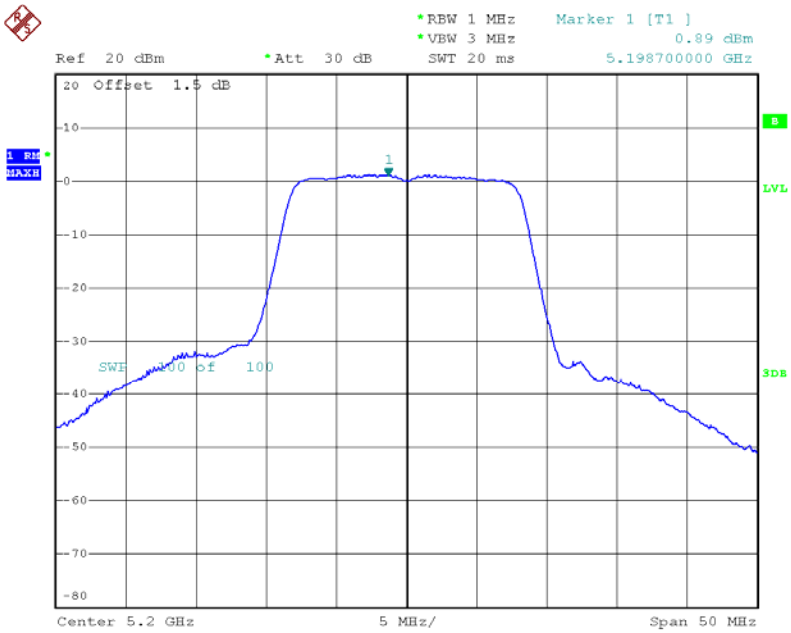
EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX A Mode/CH36, CH40, CH48/Integral Antenna		

ANT 2			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH36	5180	0.75	4.00
CH40	5200	0.89	4.00
CH48	5240	0.87	4.00

CH36

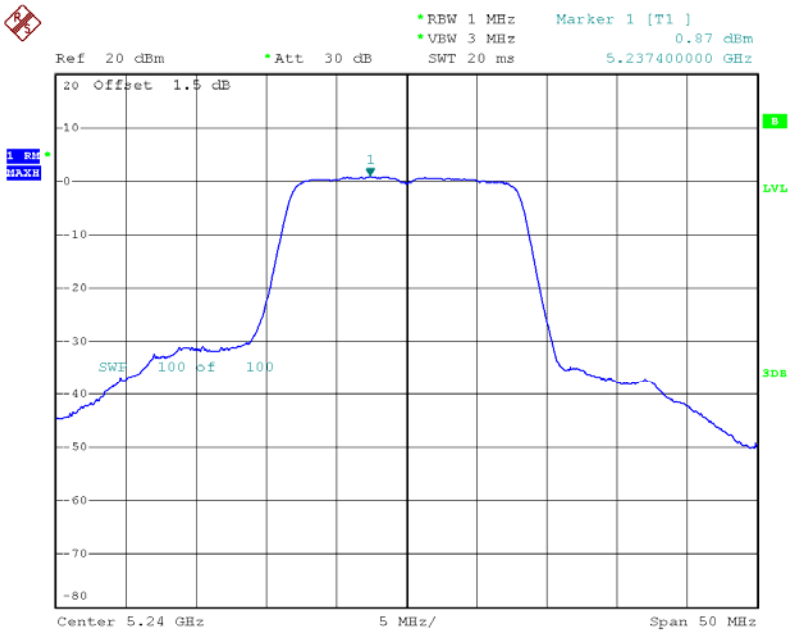


CH40



Date: 7.SEP.2013 14:00:17

CH48



Date: 7.SEP.2013 14:03:13

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX A Mode/CH36, CH40, CH48/Integral Antenna		

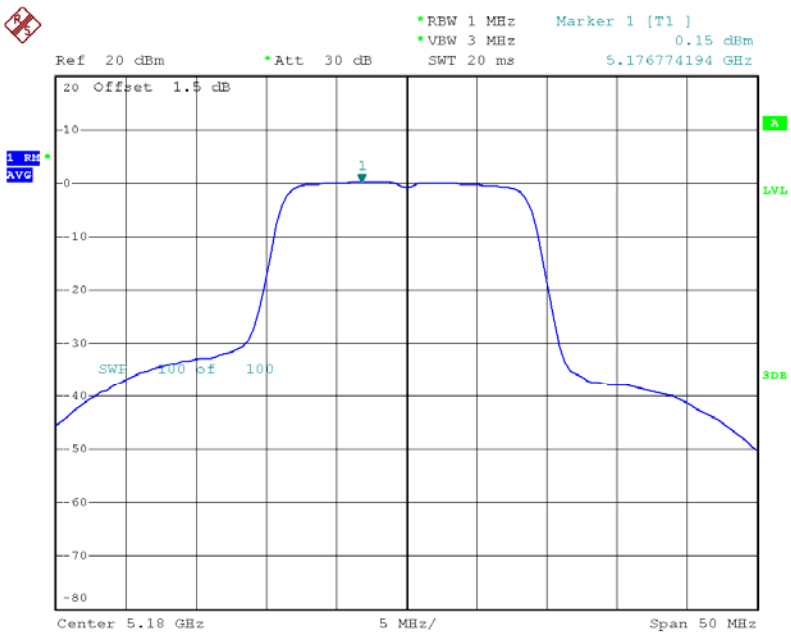
ANT 1+ANT 2			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH36	5180	3.81	4.00
CH40	5200	3.85	4.00
CH48	5240	3.71	4.00

Note:The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers (2T2R). all transmit signals are completely uncorrelated, then, **Direction gain = G_{ANT}**, that is Directional gain=3.59 for Dipole antenna and Directional gain=3.0 for Integral Antenna.

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N20 Mode/CH36, CH40, CH48/Integral Antenna		

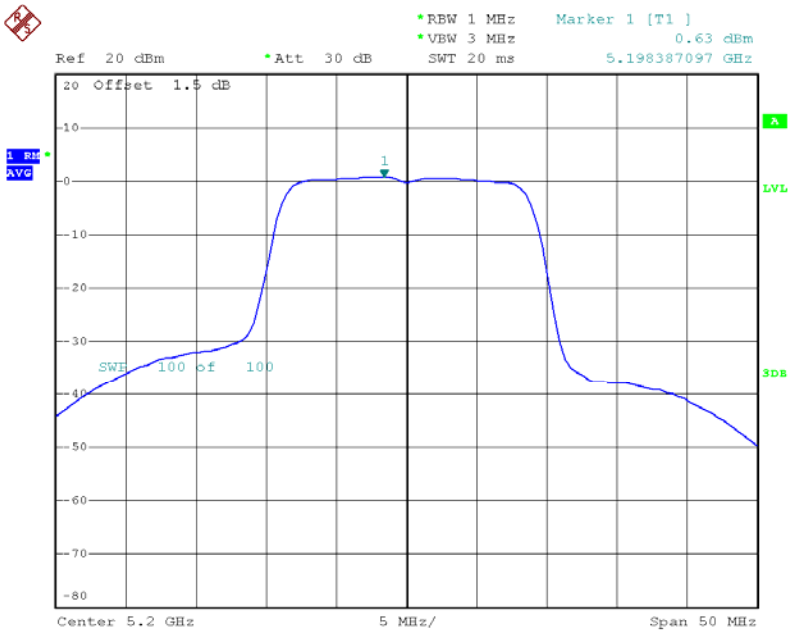
ANT 1			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH36	5180	0.15	4.00
CH40	5200	0.63	4.00
CH48	5240	-0.57	4.00

CH36



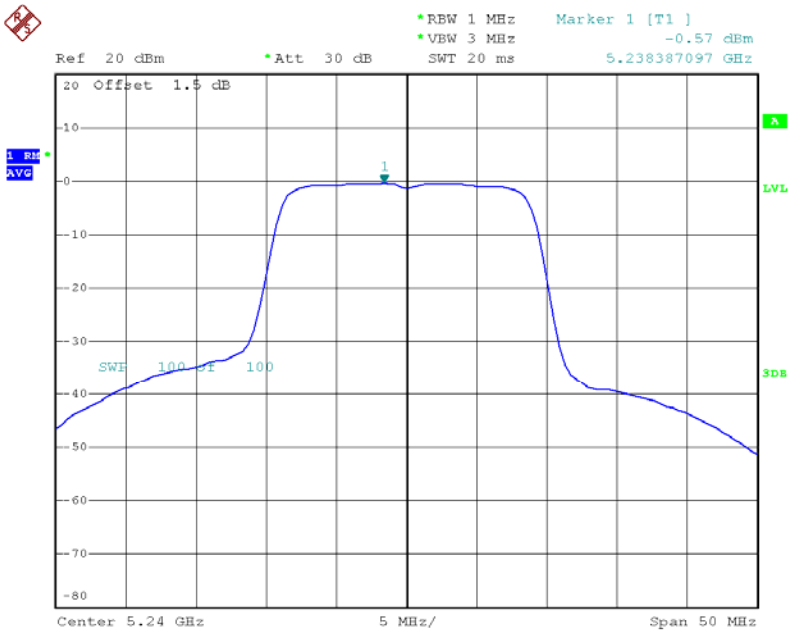
Date: 28.AUG.2013 20:35:52

CH40



Date: 28.AUG.2013 20:40:47

CH48

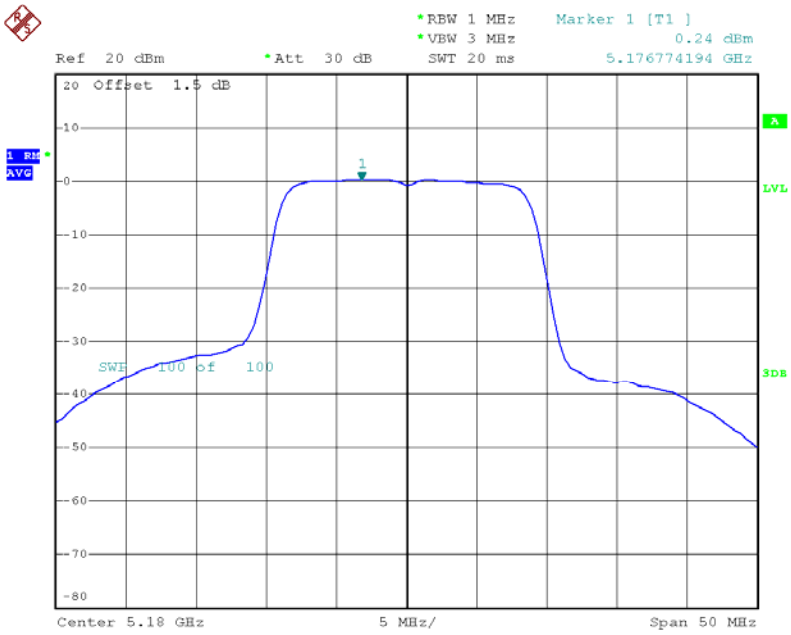


Date: 28.AUG.2013 20:55:20

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N20 Mode/CH36, CH40, CH48/Integral Antenna		

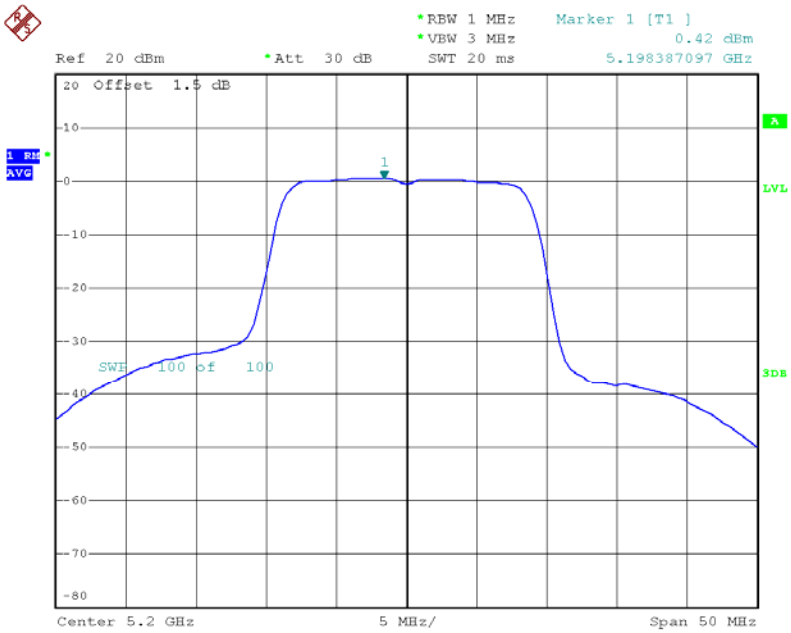
ANT 2			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH36	5180	0.24	4.00
CH40	5200	0.42	4.00
CH48	5240	-0.73	4.00

CH36



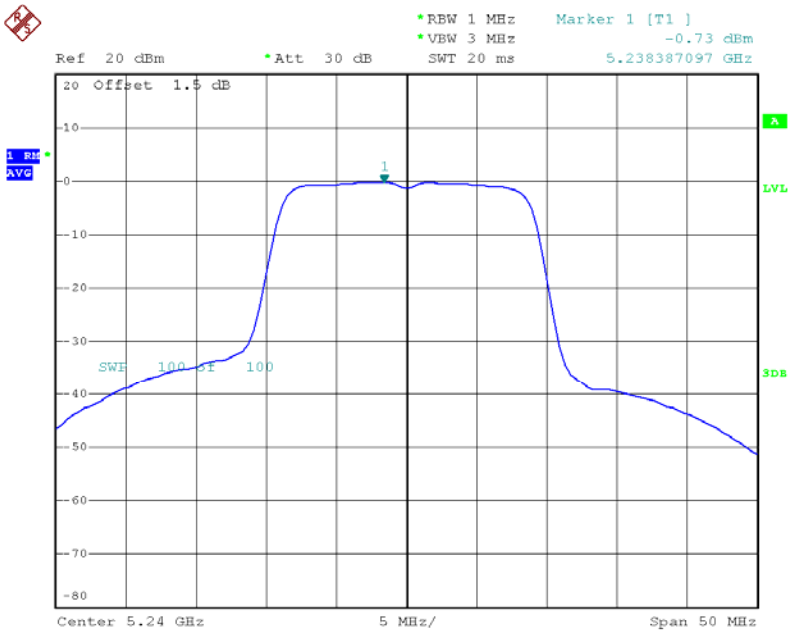
Date: 28.AUG.2013 20:36:26

CH40



Date: 28.AUG.2013 20:40:50

CH48



Date: 28.AUG.2013 20:55:28

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N20 Mode/CH36, CH40, CH48/Integral Antenna		

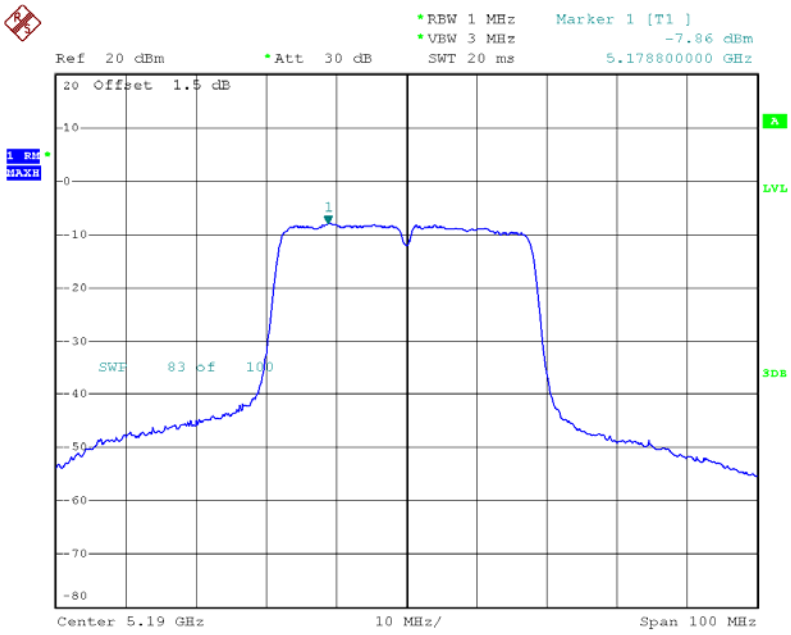
ANT 1+ANT 2			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH36	5180	3.21	4.00
CH40	5200	3.54	4.00
CH48	5240	2.36	4.00

Note:The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers (2T2R). all transmit signals are completely uncorrelated, then, **Direction gain = G_{ANT}**, that is Directional gain=3.59 for Dipole antenna and Directional gain=3.0 for Integral Antenna.

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N40 Mode/CH38, CH46/Integral Antenna		

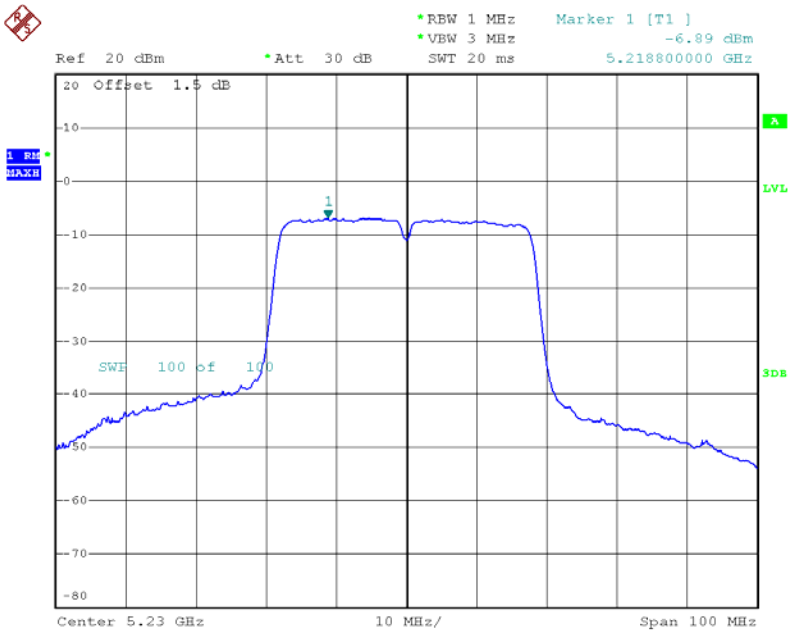
ANT 1			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH38	5190	-7.86	4.00
CH46	5230	-6.89	4.00

CH38



Date: 28.AUG.2013 21:37:08

CH46

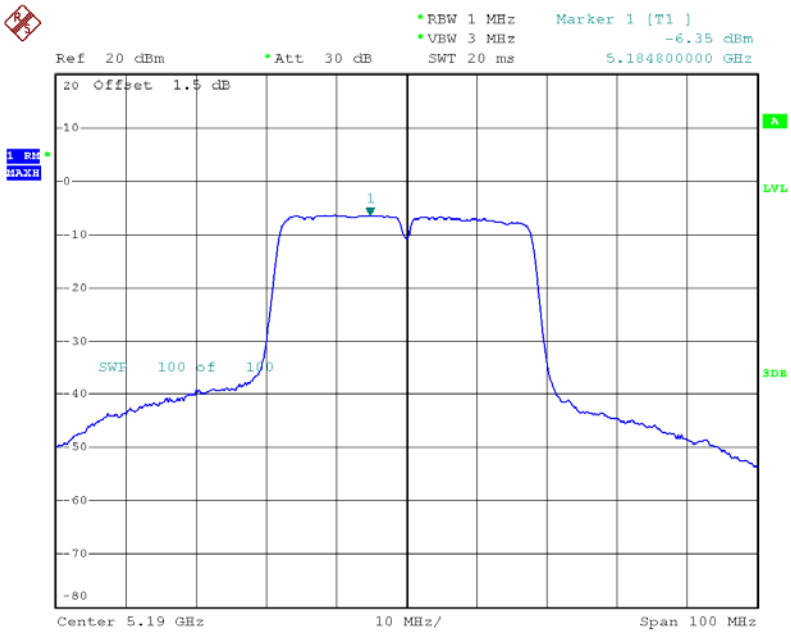


Date: 28.AUG.2013 21:35:39

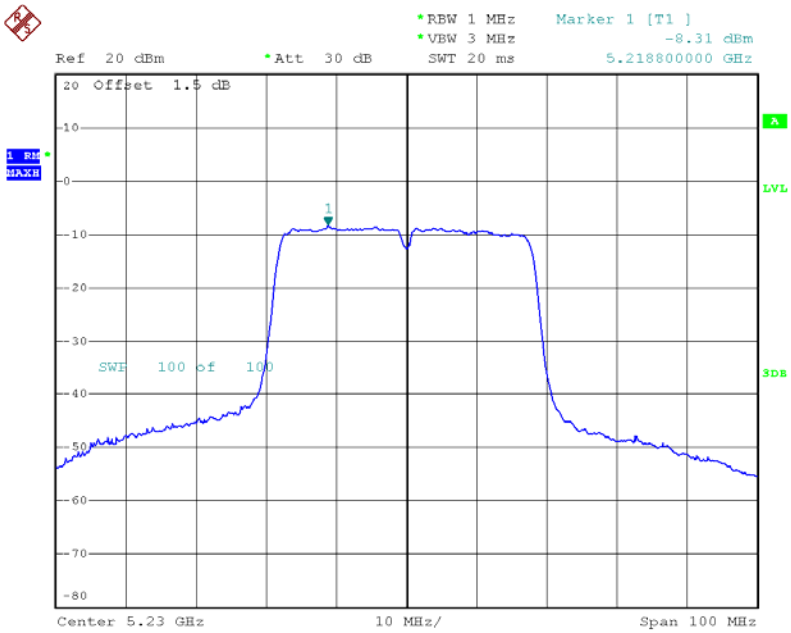
EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N40 Mode/CH38, CH46/Integral Antenna		

ANT 2			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH38	5190	-6.35	4.00
CH46	5230	-8.31	4.00

CH38



CH46



Date: 28.AUG.2013 21:35:11

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N40 Mode/CH38, CH46/Integral Antenna		

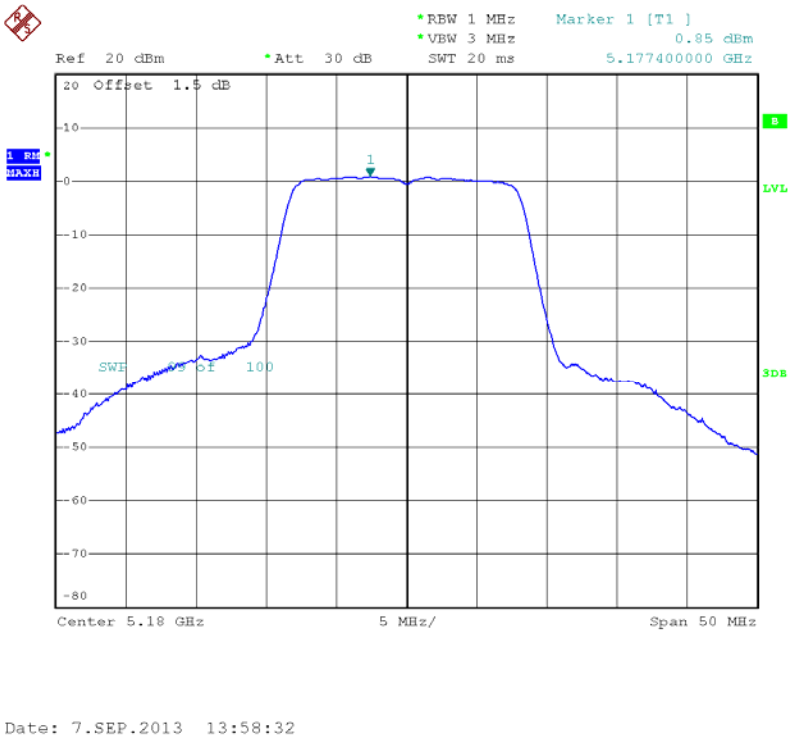
ANT 1+ANT 2			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH38	5190	-4.03	4.00
CH46	5230	-4.53	4.00

Note:The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers (2T2R). all transmit signals are completely uncorrelated, then, **Direction gain = G_{ANT}**, that is Directional gain=3.59 for Dipole antenna and Directional gain=3.0 for Integral Antenna.

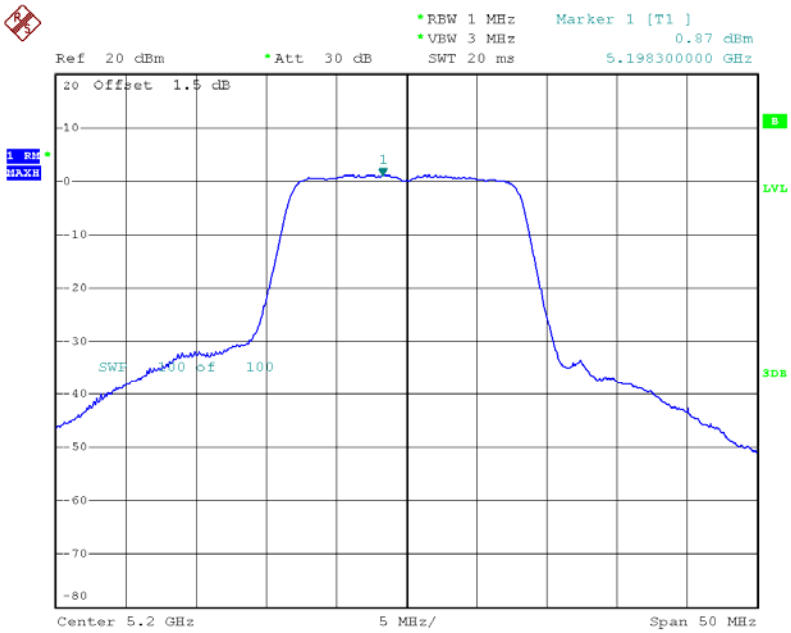
EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX A Mode/CH36, CH40, CH48/Dipole Antenna with external cable		

ANT 1			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH36	5180	0.85	4.00
CH40	5200	0.87	4.00
CH48	5240	0.55	4.00

CH36

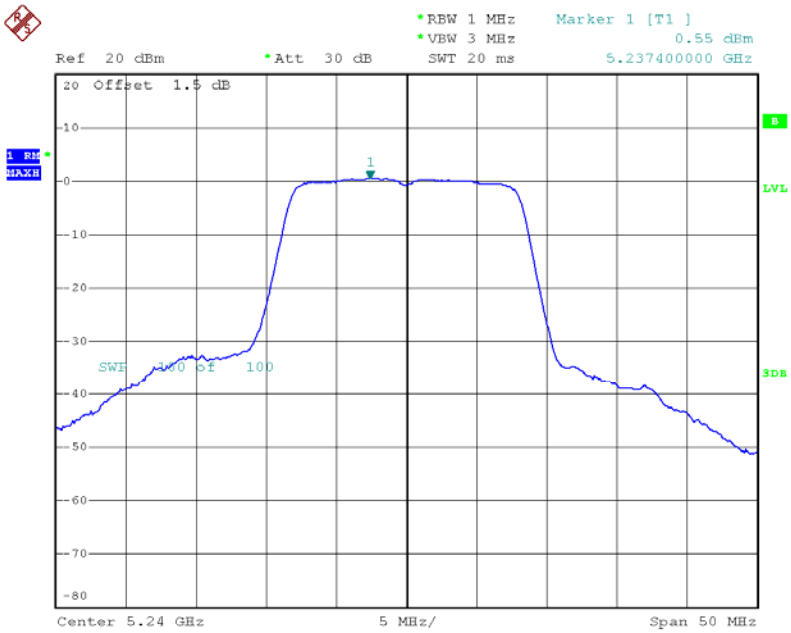


CH40



Date: 7.SEP.2013 14:00:33

CH48

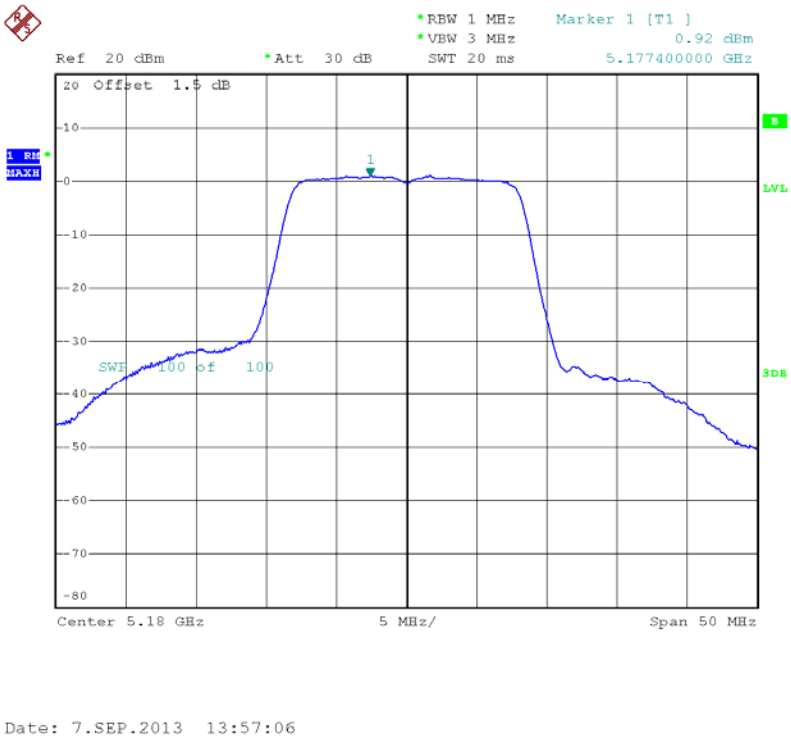


Date: 7.SEP.2013 14:04:34

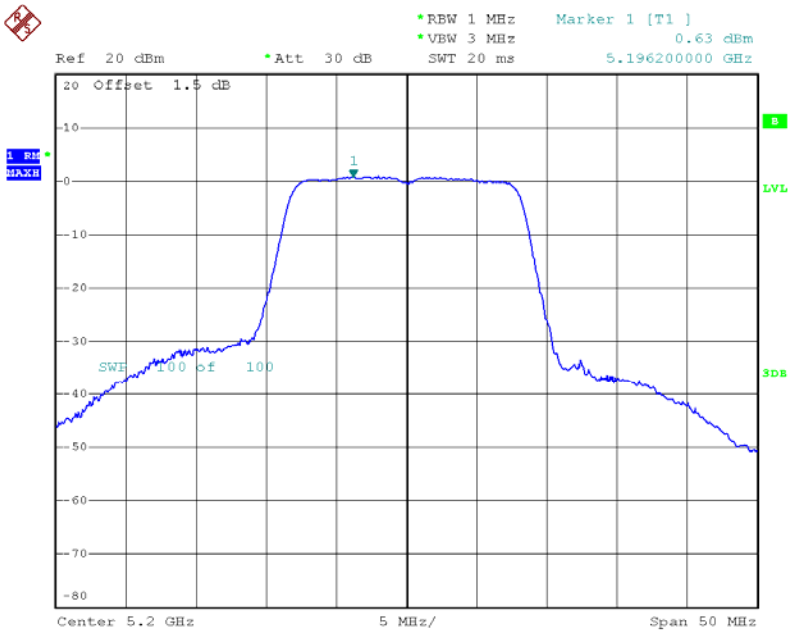
EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX A Mode/CH36, CH40, CH48/Dipole Antenna with external cable		

ANT 2			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH36	5180	0.92	4.00
CH40	5200	0.63	4.00
CH48	5240	0.77	4.00

CH36

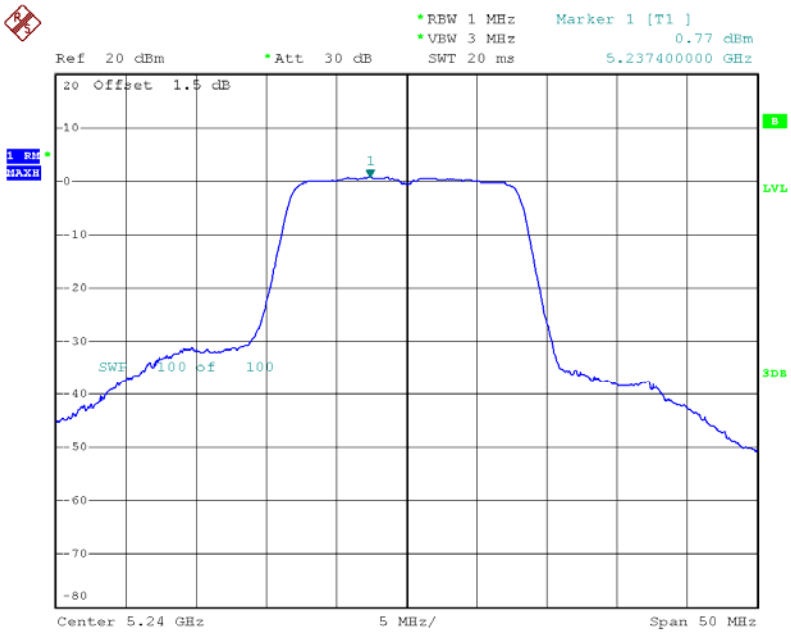


CH40



Date: 7.SEP.2013 14:01:26

CH48



Date: 7.SEP.2013 14:03:42

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX A Mode/CH36, CH40, CH48/Dipole Antenna with external cable		

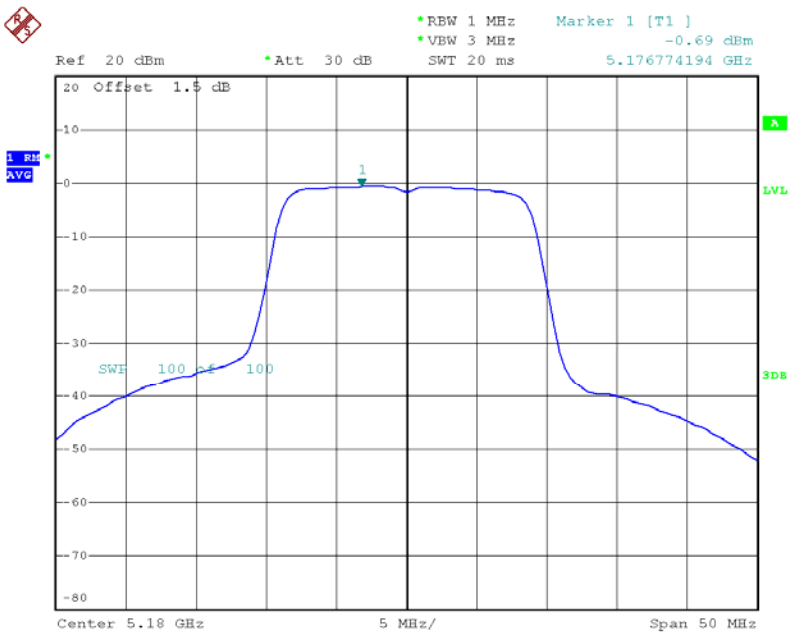
ANT 1+ANT 2			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH36	5180	3.90	4.00
CH40	5200	3.76	4.00
CH48	5240	3.67	4.00

Note:The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers (2T2R). all transmit signals are completely uncorrelated, then, **Direction gain = G_{ANT}**, that is Directional gain=3.59 for Dipole antenna and Directional gain=3.0 for Integral Antenna.

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N20 Mode/CH36, CH40, CH48/Dipole Antenna with external cable		

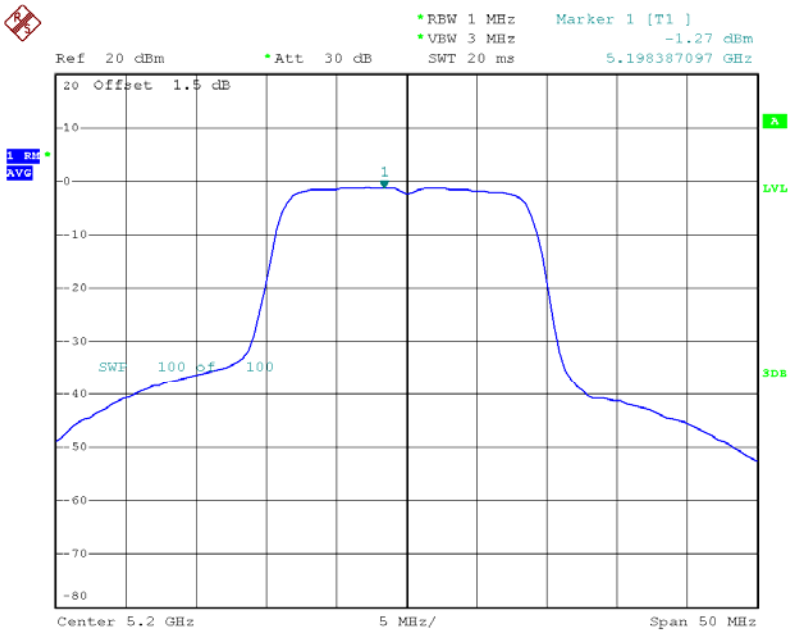
ANT 1			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH36	5180	-0.69	4.00
CH40	5200	-1.27	4.00
CH48	5240	0.50	4.00

CH36



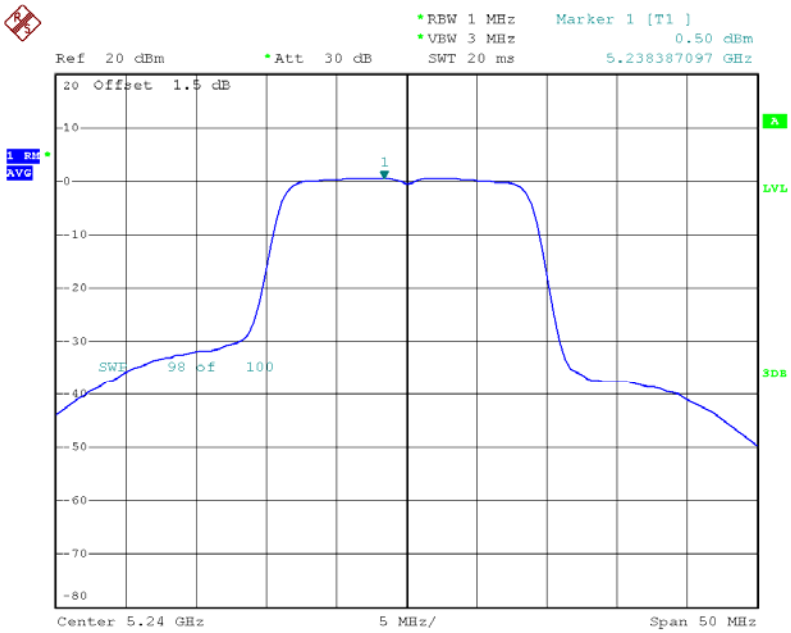
Date: 28.AUG.2013 20:35:13

CH40



Date: 28.AUG.2013 20:39:53

CH48

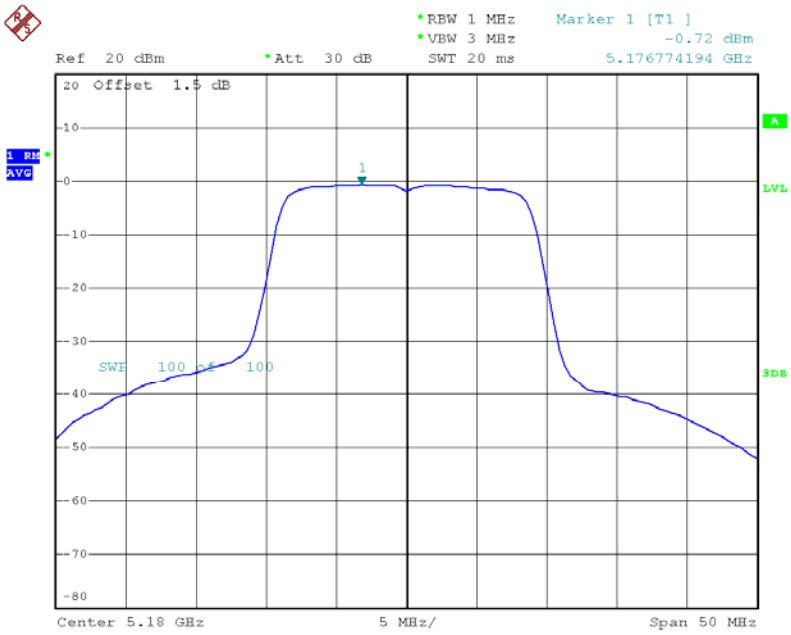


Date: 28.AUG.2013 20:54:42

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N20 Mode/CH36, CH40, CH48/Dipole Antenna with external cable		

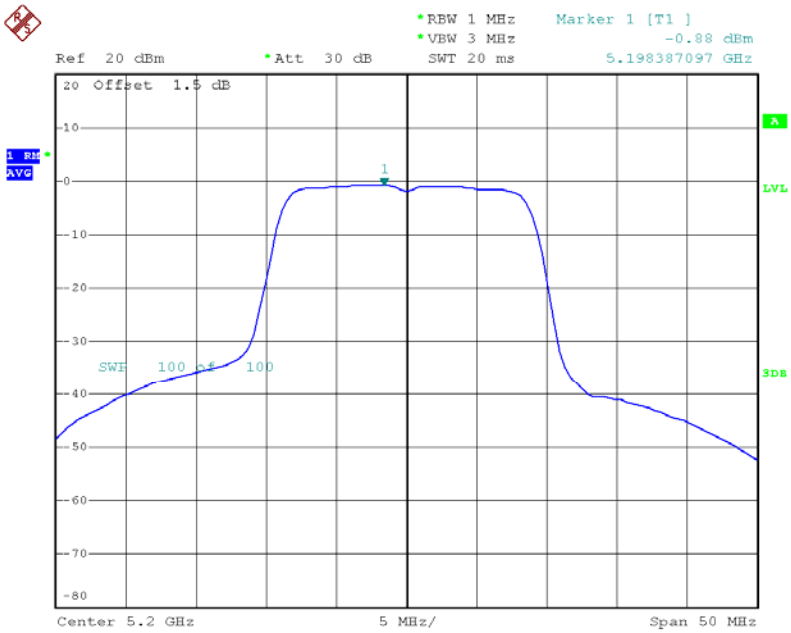
ANT 2			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH36	5180	-0.72	4.00
CH40	5200	-0.88	4.00
CH48	5240	0.44	4.00

CH36



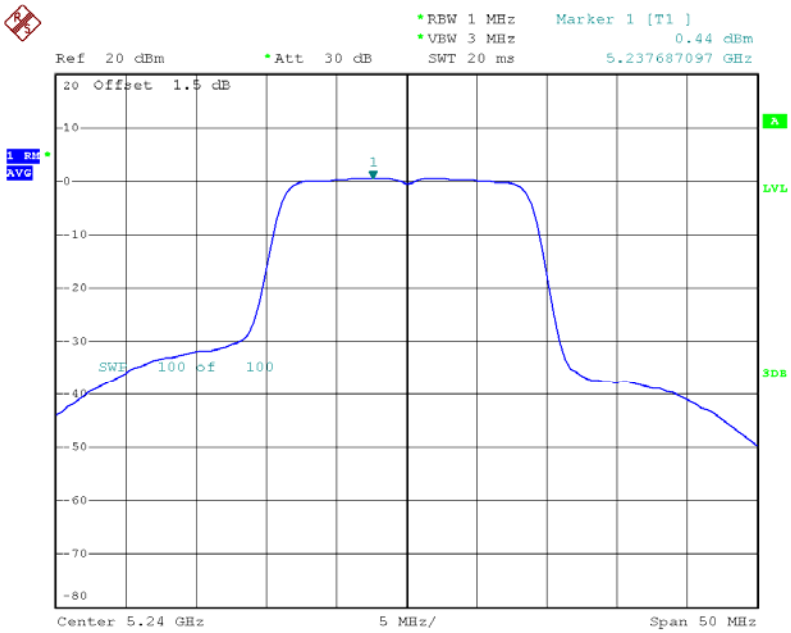
Date: 28.AUG.2013 20:37:09

CH40



Date: 28.AUG.2013 20:40:09

CH48



Date: 28.AUG.2013 20:54:53

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N20 Mode/CH36, CH40, CH48/Dipole Antenna with external cable		

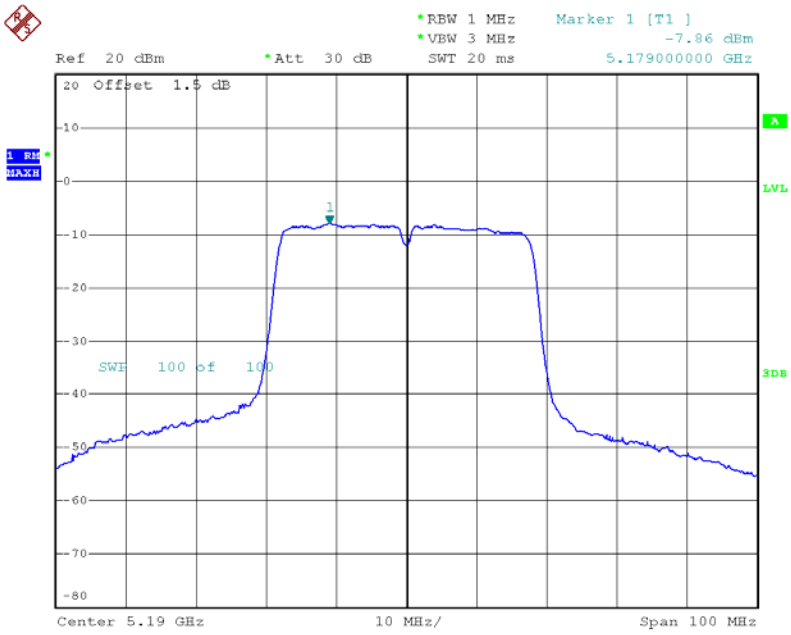
ANT 1+ANT 2			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH36	5180	2.31	4.00
CH40	5200	1.94	4.00
CH48	5240	3.48	4.00

Note:The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers (2T2R). all transmit signals are completely uncorrelated, then, **Direction gain = G_{ANT}**, that is Directional gain=3.59 for Dipole antenna and Directional gain=3.0 for Integral Antenna.

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N40 Mode/CH38, CH46/Dipole Antenna with external cable		

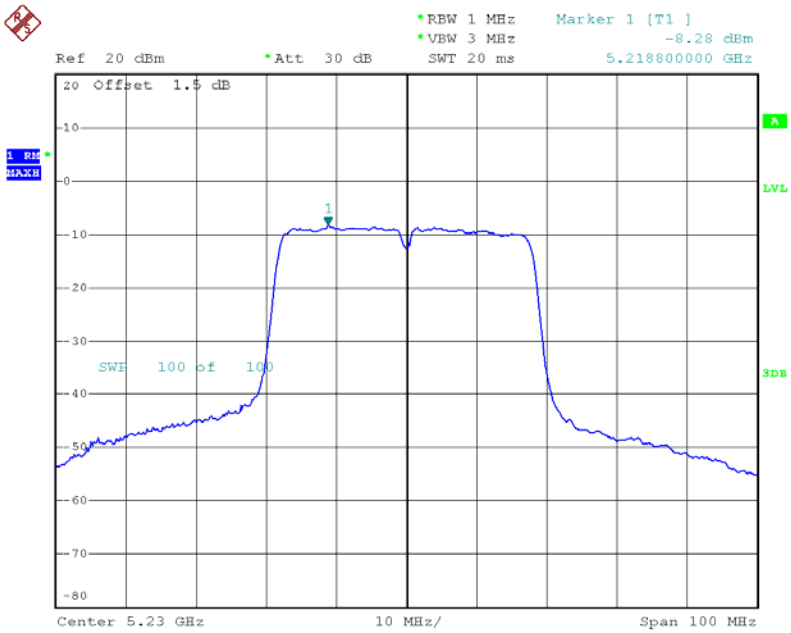
ANT 1			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH38	5190	-7.86	4.00
CH46	5230	-8.28	4.00

CH38



Date: 28.AUG.2013 21:37:01

CH46

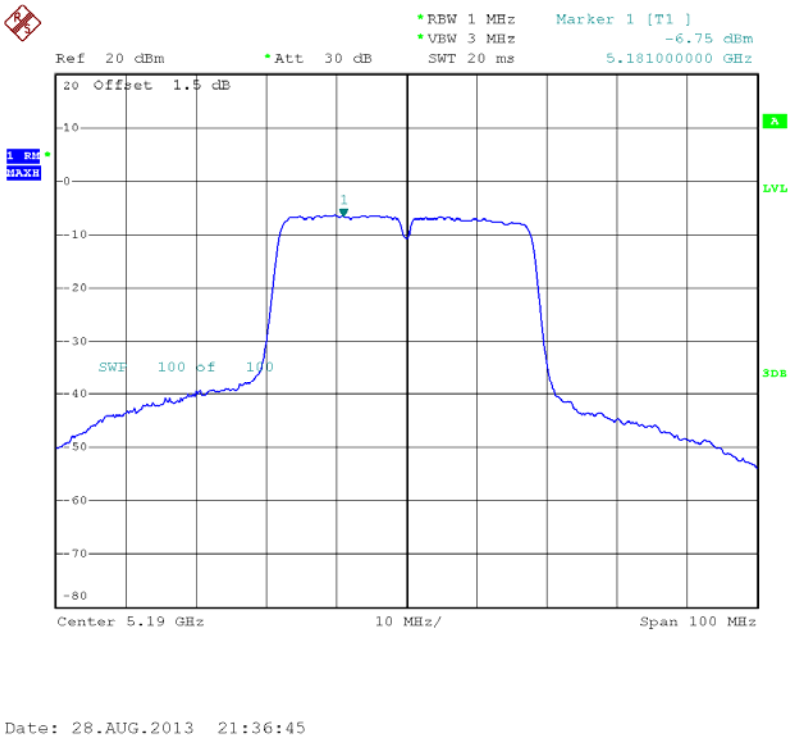


Date: 28.AUG.2013 21:34:58

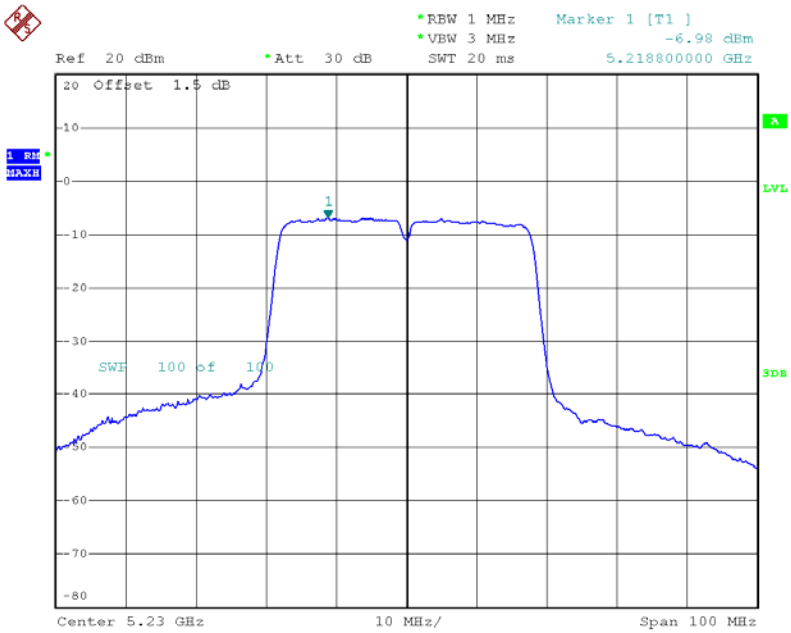
EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N40 Mode/CH38, CH46/Dipole Antenna with external cable		

ANT 2			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH38	5190	-6.75	4.00
CH46	5230	-6.98	4.00

CH38



CH46



Date: 28.AUG.2013 21:35:25

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N40 Mode/CH38, CH46/Dipole Antenna with external cable		

ANT 1+ANT 2			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH38	5190	-4.26	4.00
CH46	5230	-4.57	4.00

Note:The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers (2T2R). all transmit signals are completely uncorrelated, then, **Direction gain = G_{ANT}**, that is Directional gain=3.59 for Dipole antenna and Directional gain=3.0 for Integral Antenna.

9. PEAK EXCURSION MEASUREMENT

9.1 APPLIED PROCEDURES / LIMIT

FCC Part15, Subpart E			
Test Item	Limit	Frequency Range (MHz)	Result
Peak Excursion Measurement	13 dB	5150 - 5250	PASS

9.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP_40	100129	Nov.26.2013

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

9.1.2 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 Parameter	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RB	1000 kHz (Peak Trace) / 1000 kHz (Average Trace)
VB	3000 kHz (Peak Trace) / 3000 kHz (Average Trace)
Detector	Peak (Peak Trace) / RMS (Average Trace)
Trace	Max Hold
Sweep Time	60s

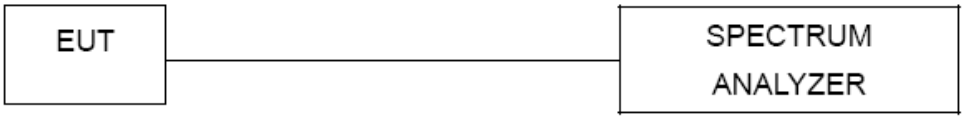
c. Peak Trace: Set RBW = 1 MHz, VBW ≥ 3 MHz with peak detector and maxhold settings.

d. Average Trace: set RBW = 1 MHz, VBW = 3 MHz with RMS detector and trace average across 100 traces in power averaging mode.

9.1.3 DEVIATION FROM STANDARD

No deviation.

9.1.4 TEST SETUP



9.1.5 EUT OPERATION CONDITIONS

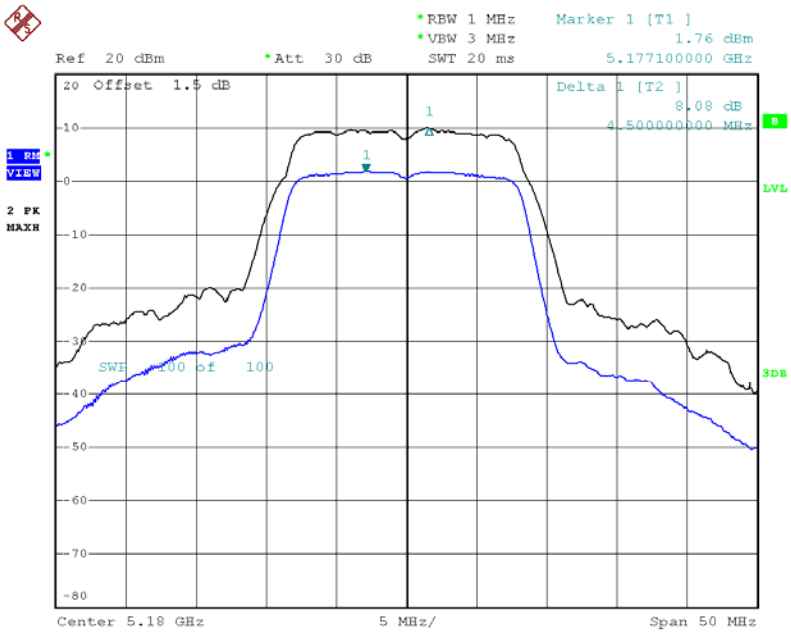
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

9.1.6 TEST RESULTS

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX A Mode/CH36, CH40, CH48/Integral Antenna		

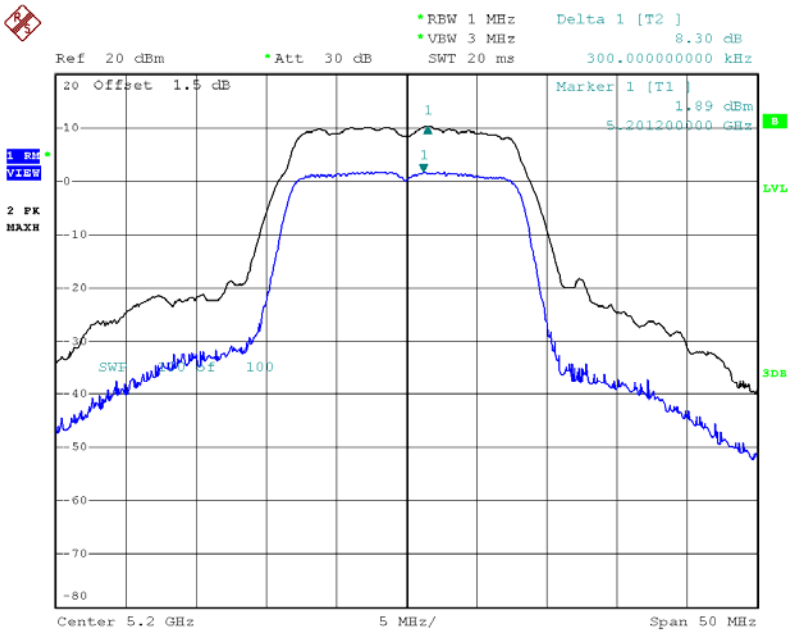
Test Channel	Frequency (MHz)	Peak Excursion (dB)	LIMIT (dB)
CH36	5180	8.08	13
CH40	5200	8.30	13
CH48	5240	8.34	13

CH36



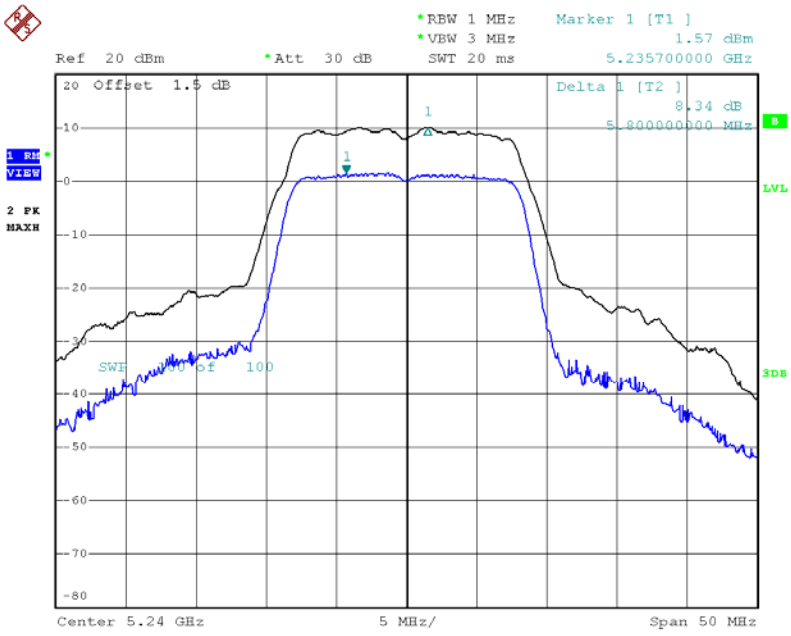
Date: 6.SEP.2013 10:47:47

CH40



Date: 6.SEP.2013 11:06:58

CH48

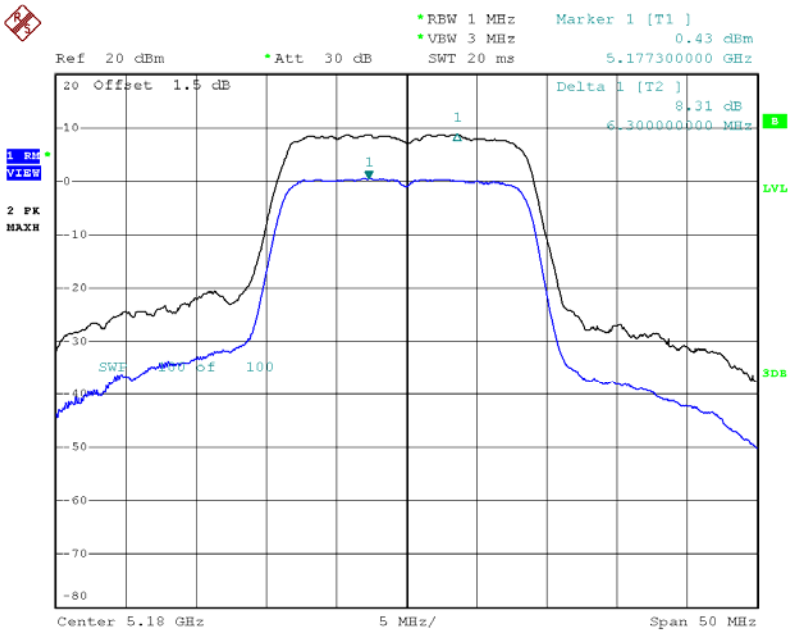


Date: 6.SEP.2013 11:11:58

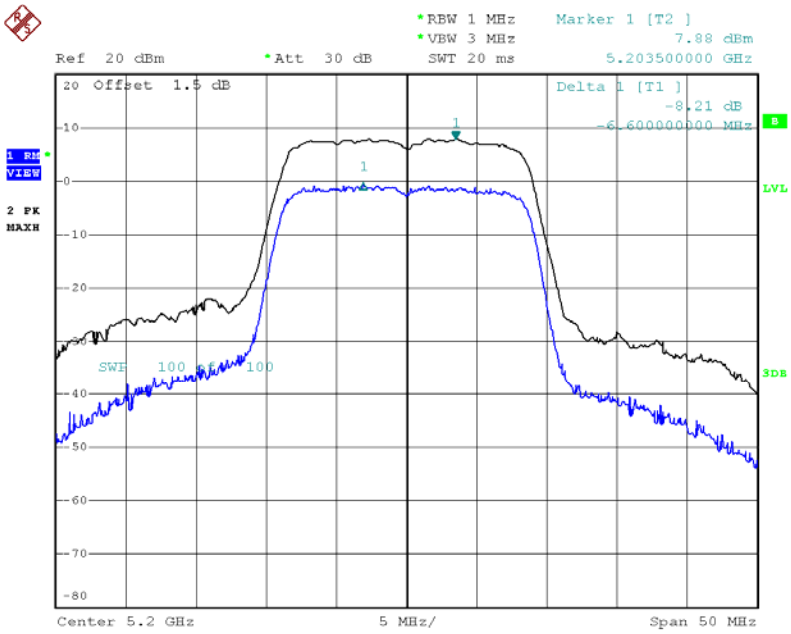
EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N20 Mode/CH36, CH40, CH48/Integral Antenna		

Test Channel	Frequency (MHz)	Peak Excursion (dB)	LIMIT (dB)
CH36	5180	8.31	13
CH40	5200	7.88	13
CH48	5240	10.42	13

CH36

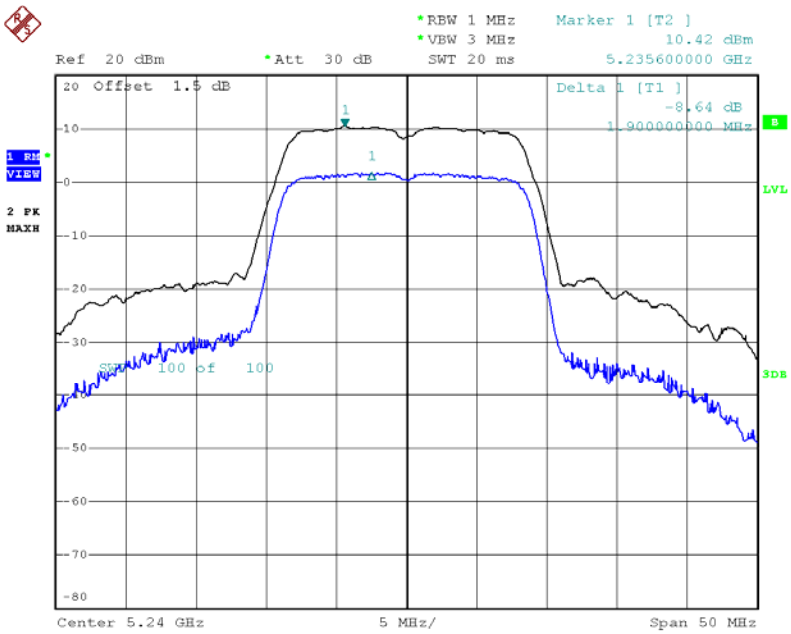


CH40



Date: 28.AUG.2013 20:39:37

CH48

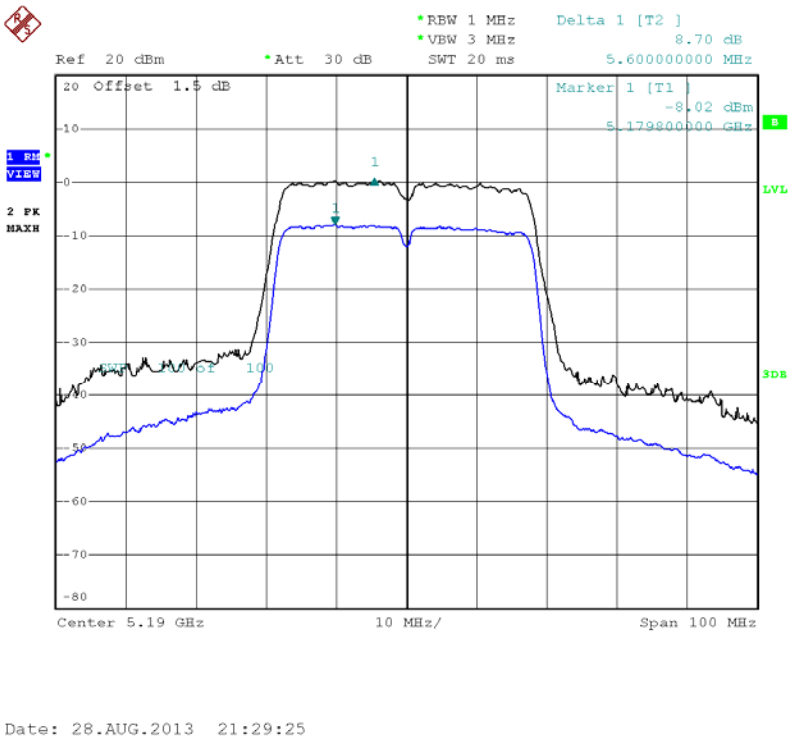


Date: 28.AUG.2013 20:53:58

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N40 Mode/CH38, CH46/Integral Antenna		

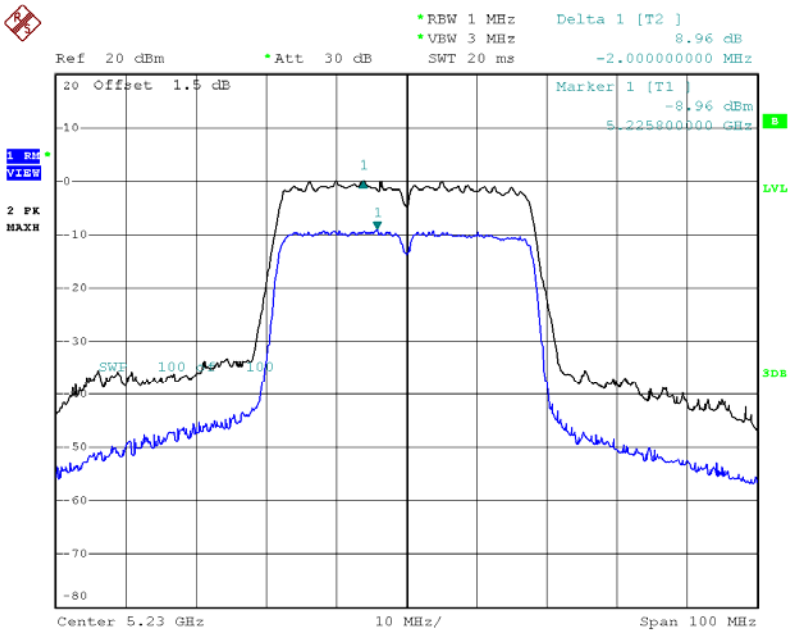
Test Channel	Frequency (MHz)	Peak Excursion (dB)	LIMIT (dB)
CH38	5190	8.70	13
CH46	5230	8.96	13

CH38



Date: 28.AUG.2013 21:29:25

CH46

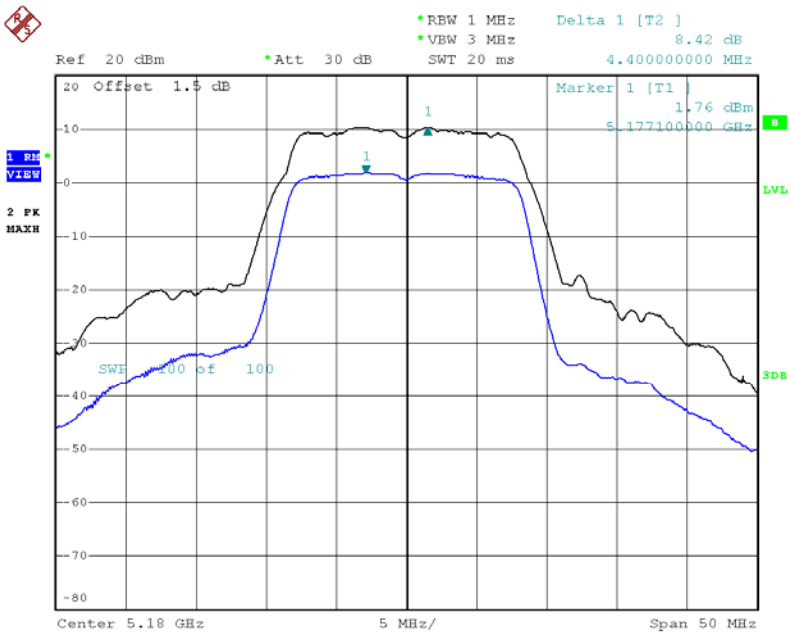


Date: 28.AUG.2013 21:30:16

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX A Mode/CH36, CH40, CH48/Dipole Antenna with external cable		

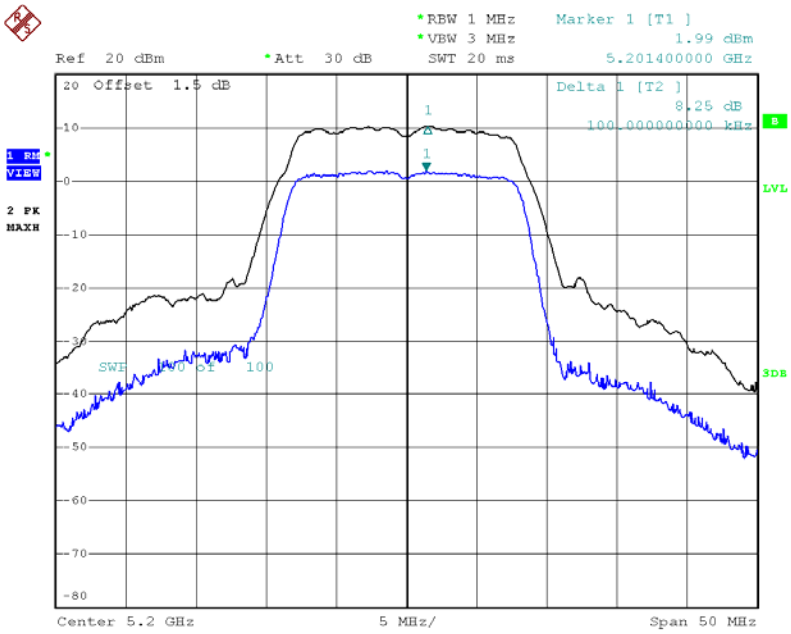
Test Channel	Frequency (MHz)	Peak Excursion (dB)	LIMIT (dB)
CH36	5180	8.42	13
CH40	5200	8.25	13
CH48	5240	8.32	13

CH36



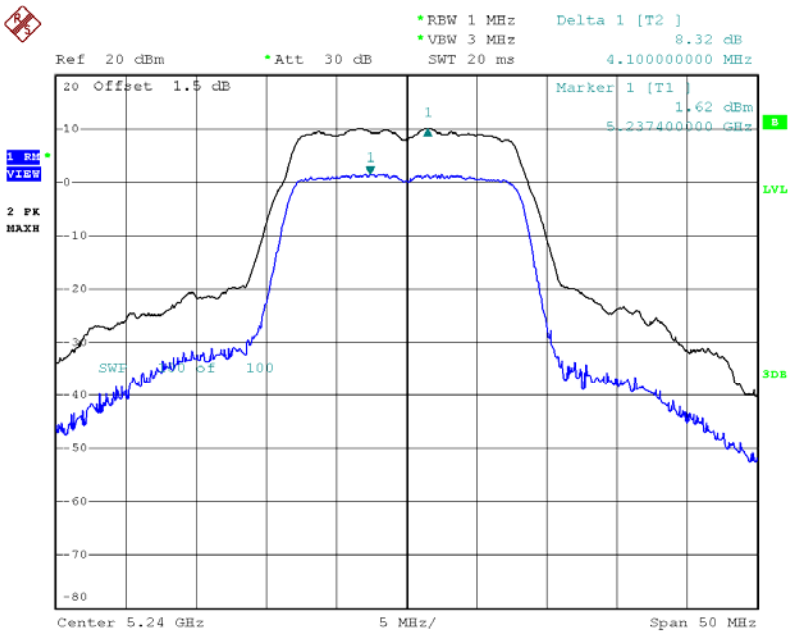
Date: 6.SEP.2013 10:52:37

CH40



Date: 6.SEP.2013 11:06:38

CH48

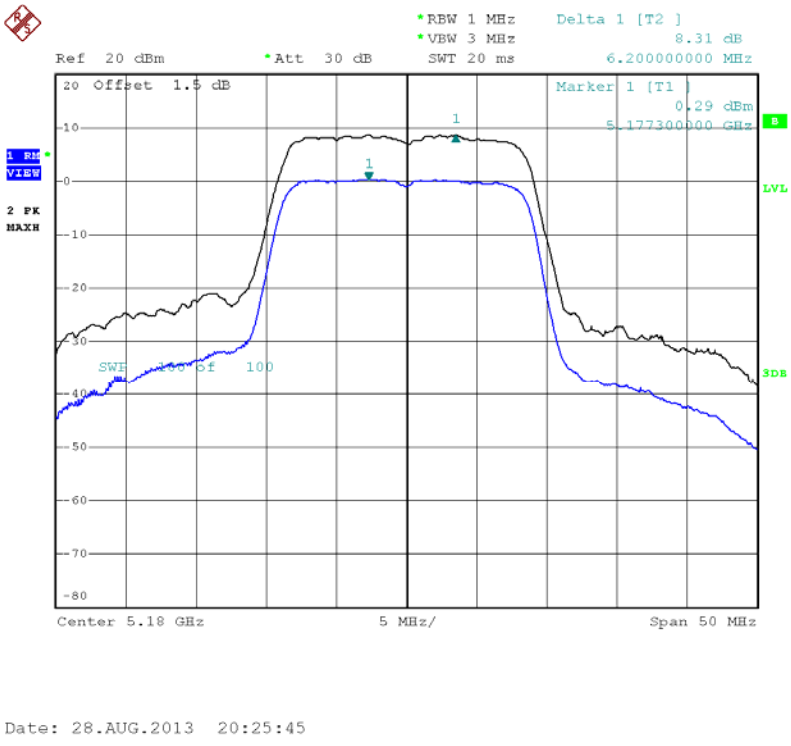


Date: 6.SEP.2013 11:12:10

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N20 Mode/CH36, CH40, CH48/Dipole Antenna with external cable		

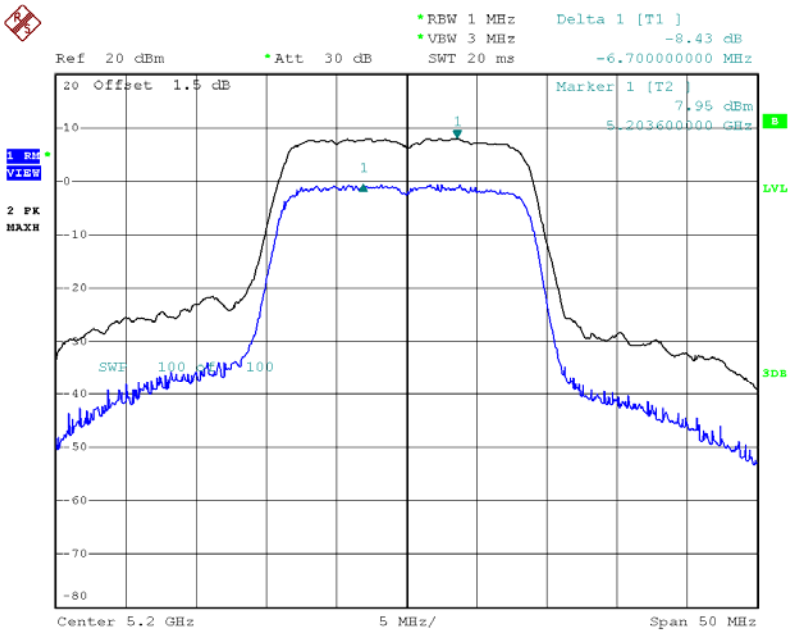
Test Channel	Frequency (MHz)	Peak Excursion (dB)	LIMIT (dB)
CH36	5180	8.31	13
CH40	5200	8.43	13
CH48	5240	8.54	13

CH36



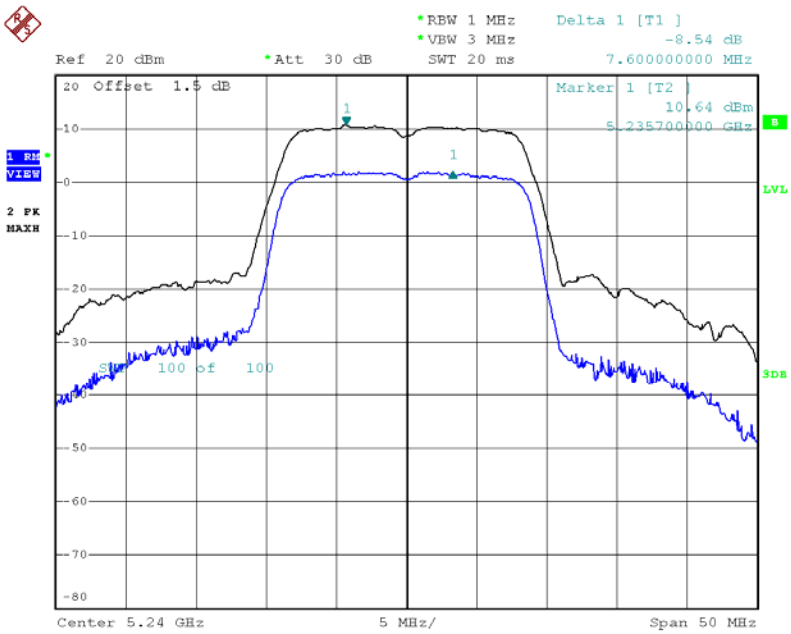
Date: 28.AUG.2013 20:25:45

CH40



Date: 28.AUG.2013 20:39:22

CH48

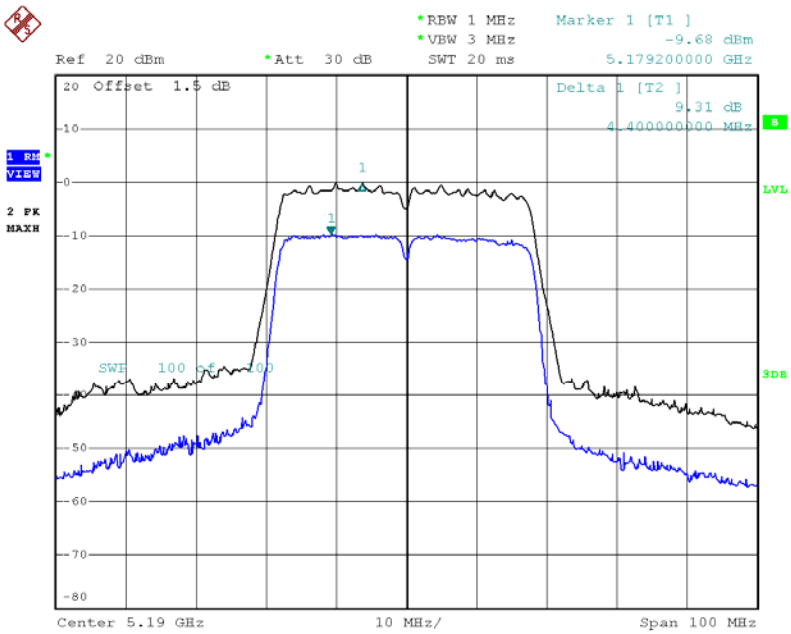


Date: 28.AUG.2013 20:53:19

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25˚C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N40 Mode/CH38, CH46/Dipole Antenna with external cable		

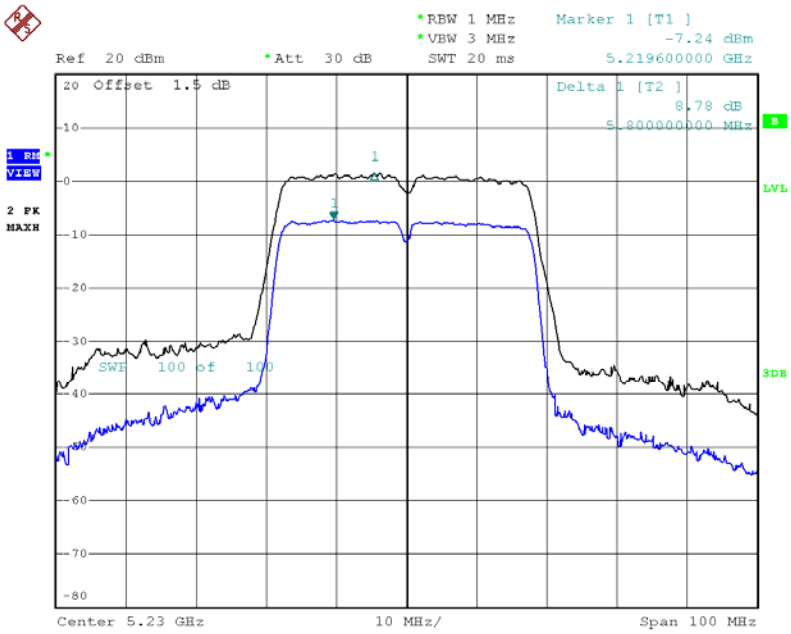
Test Channel	Frequency (MHz)	Peak Excursion (dB)	LIMIT (dB)
CH38	5190	9.31	13
CH46	5230	8.78	13

CH38



Date: 28.AUG.2013 21:29:07

CH46



Date: 28.AUG.2013 21:30:00

10. FREQUENCY STABILITY MEASUREMENT

10.1 APPLIED PROCEDURES / LIMIT

FCC Part15, Subpart E 15.407(g)			
Test Item	Limit	Frequency Range (MHz)	Result
Frequency Stability	specified in the user's manual	5150 – 5250	PASS

10.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP_40	100129	Nov. 26.2013
2	Precision Oven Tester	HOLINK	H-T-1F-D	BA03101701	May.25.2014

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

10.1.2 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 Parameter	Setting
Attenuation	Auto
Span Frequency	Entire absence of modulation emissions bandwidth
RB	10 kHz
VB	10 kHz
Sweep Time	Auto

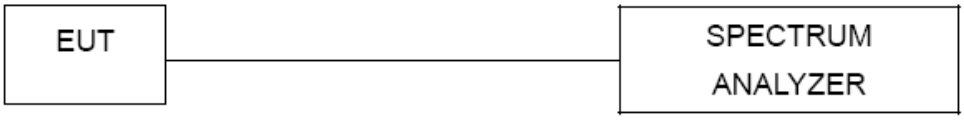
c. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value.

d. user manual temperature is 0°C~45°C.

10.1.3 DEVIATION FROM STANDARD

No deviation.

10.1.4 TEST SETUP



10.1.5 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.

10.1.6 TEST RESULTS

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX A Mode/Integral Antenna		

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)
(V)	5180
138	5179.983000
120	5179.986000
102	5179.985000
Max. Deviation (MHz)	0.017000
Max. Deviation (ppm)	3.28

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)
(℃)	5180
0	5179.987000
10	5179.985000
20	5179.982000
30	5179.985000
40	5179.982000
45	5179.985000
50	5179.987000
Max. Deviation (MHz)	0.018000
Max. Deviation (ppm)	3.47

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N20 Mode/Integral Antenna		

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)
(V)	5180
138	5179.982000
120	5179.981000
102	5179.987000
Max. Deviation (MHz)	0.019000
Max. Deviation (ppm)	3.67

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)
(℃)	5180
0	5179.989500
10	5179.988500
20	5179.986700
30	5179.988800
40	5179.987100
45	5179.988000
50	5179.986000
Max. Deviation (MHz)	0.014000
Max. Deviation (ppm)	2.70

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N40 Mode/Integral Antenna		

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)
(V)	5190
138	5189.986000
120	5189.985000
102	5189.983000
Max. Deviation (MHz)	0.017000
Max. Deviation (ppm)	3.28

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)
(℃)	5190
0	5189.980000
10	5189.984000
20	5189.982000
30	5189.981000
40	5189.983000
45	5189.980000
50	5189.981000
Max. Deviation (MHz)	0.020000
Max. Deviation (ppm)	3.85

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX A Mode/Dipole Antenna with external cable		

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)
(V)	5180
138	5179.982000
120	5179.983000
102	5179.987000
Max. Deviation (MHz)	0.018000
Max. Deviation (ppm)	3.47

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)
(℃)	5180
0	5179.986000
10	5179.983000
20	5179.982000
30	5179.984000
40	5179.983000
45	5179.988000
50	5179.986000
Max. Deviation (MHz)	0.018000
Max. Deviation (ppm)	3.47

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N20 Mode/Dipole Antenna with external cable		

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)
(V)	5180
138	5179.984000
120	5179.985000
102	5179.984000
Max. Deviation (MHz)	0.016000
Max. Deviation (ppm)	3.09

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)
(℃)	5180
0	5179.989400
10	5179.988300
20	5179.987200
30	5179.988100
40	5179.987500
45	5179.984000
50	5179.984000
Max. Deviation (MHz)	0.016000
Max. Deviation (ppm)	3.09

EUT:	Cisco Edge 340	Model Name :	CS-E340W
Temperature:	25°C	Relative Humidity:	58 %
Test Voltage:	AC 120V/60Hz		
Test Mode :	Band 1/TX N40 Mode/Dipole Antenna with external cable		

Voltage vs. Frequency Stability

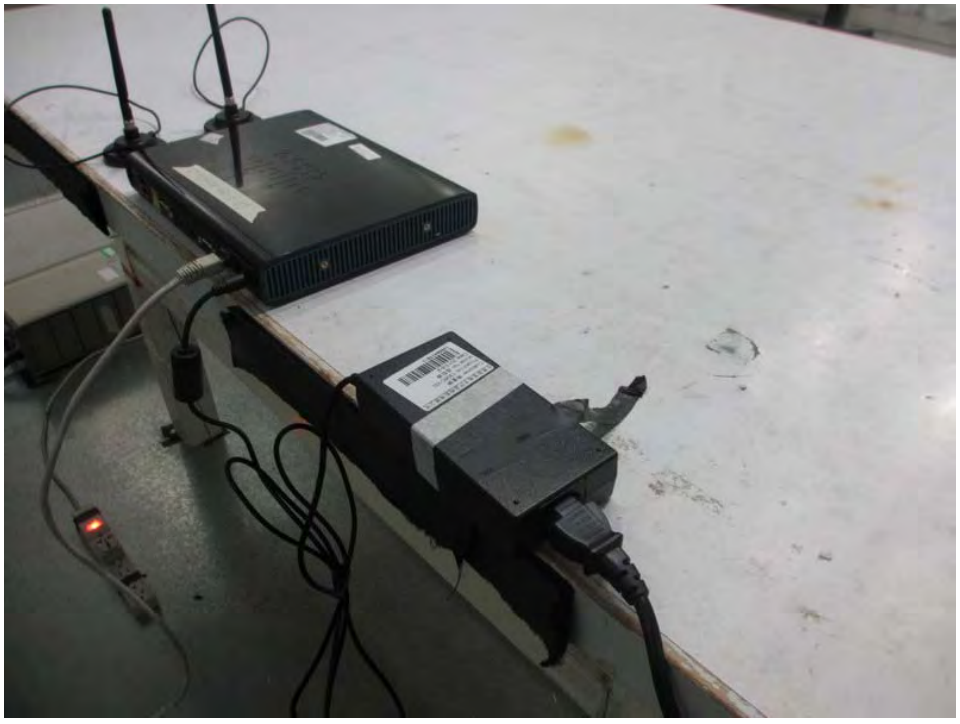
Voltage	Measurement Frequency (MHz)
(V)	5190
138	5189.983000
120	5189.987000
102	5189.985000
Max. Deviation (MHz)	0.017000
Max. Deviation (ppm)	3.28

Temperature vs. Frequency Stability

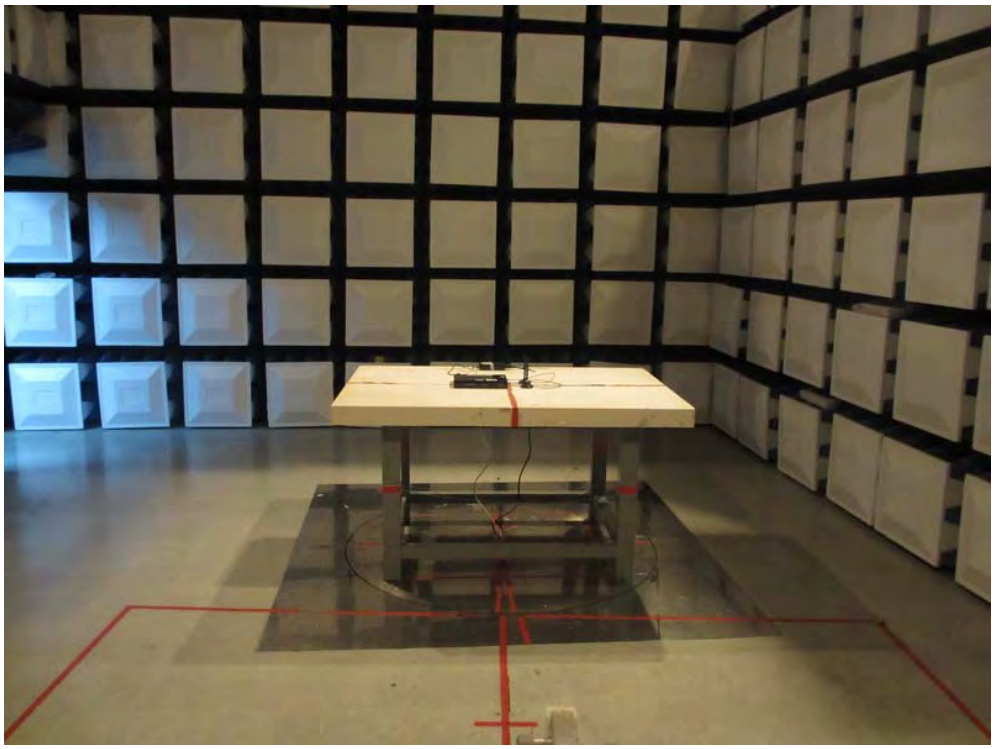
Temperature	Measurement Frequency (MHz)
(℃)	5190
0	5189.984000
10	5189.988000
20	5189.985000
30	5189.987000
40	5189.986000
45	5189.984000
50	5189.983000
Max. Deviation (MHz)	0.017000
Max. Deviation (ppm)	3.28

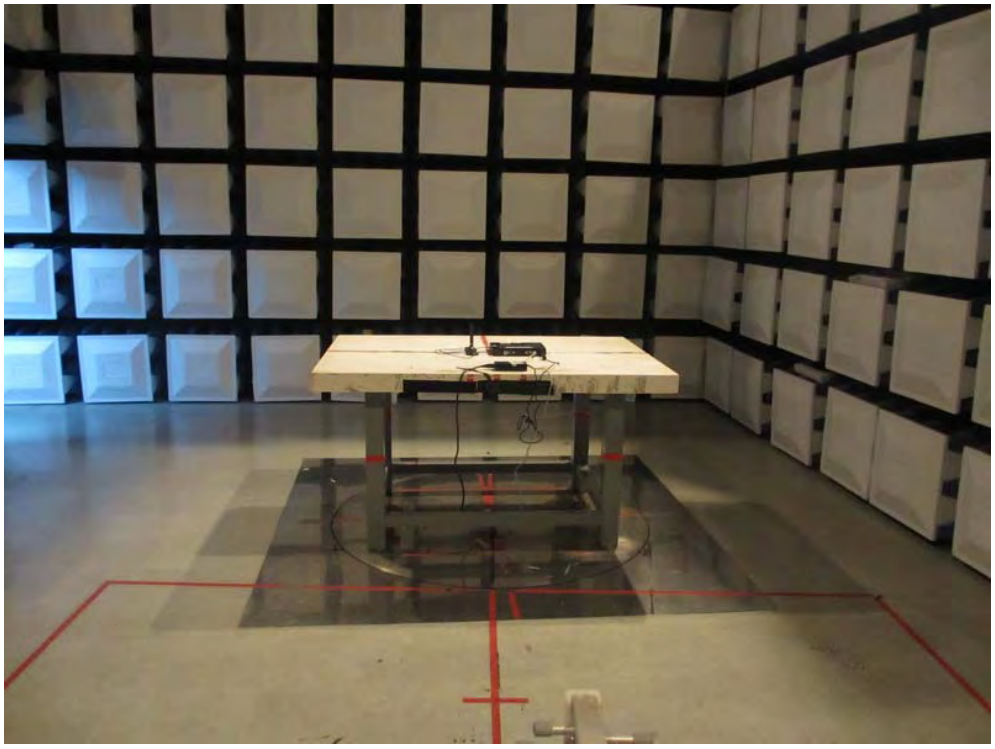
11. EUT TEST PHOTO

Conducted Measurement Photos



Radiated Measurement Photos
30~1000MHz





Radiated Measurement Photos
Above 1000MHz