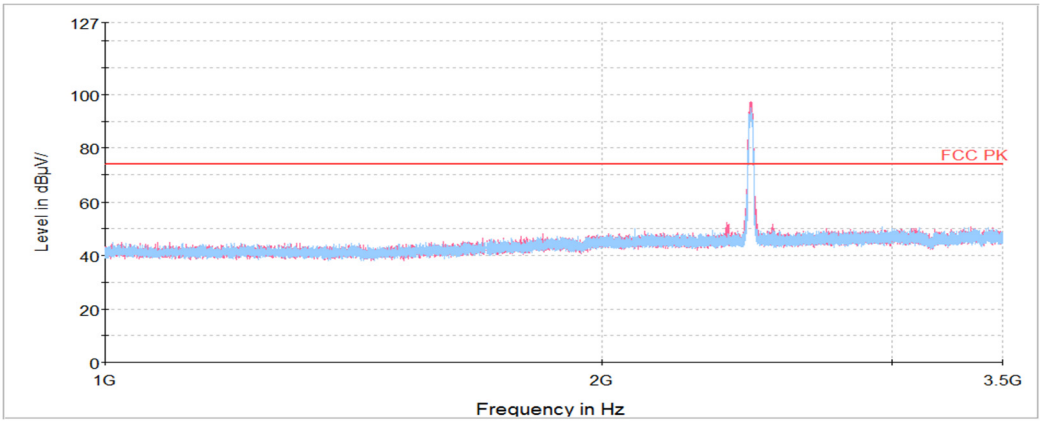
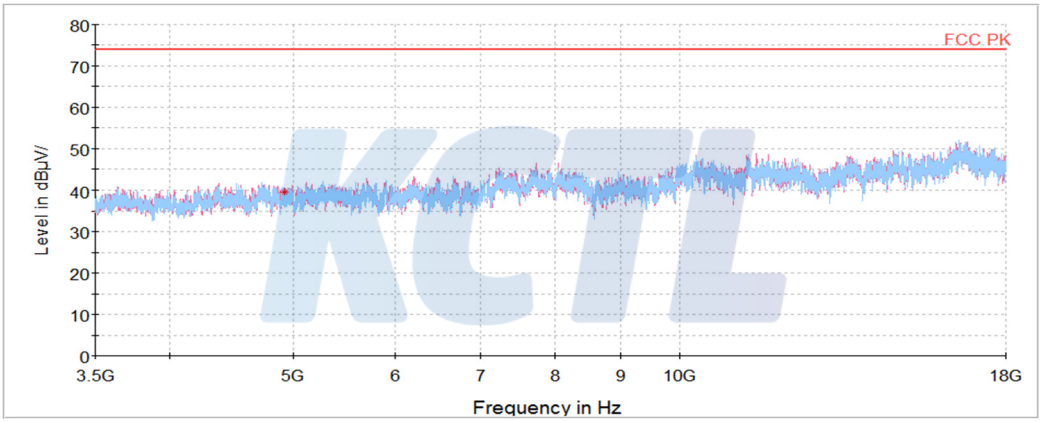
Horizontal/Vertical for 1 ㎓ ~ 3.5 ㎓



Horizontal/Vertical for 3.5 ㎓ ~ 18 ㎓



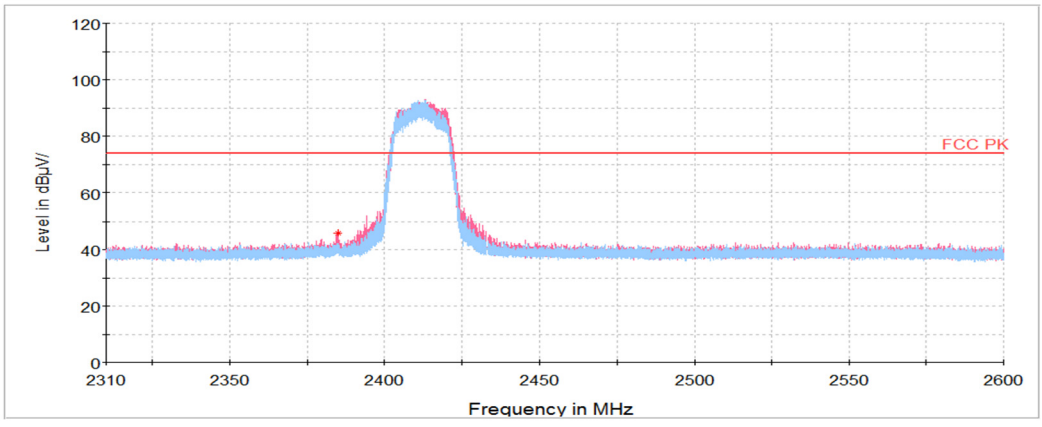
Horizontal/Vertical for 18 ㎓ ~ 26.5 ㎓

802.11n HT20

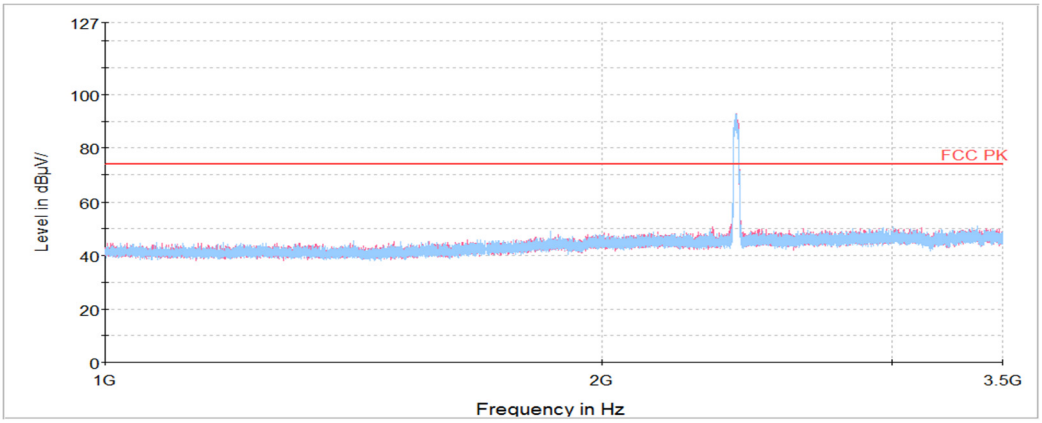
Lowest Channel

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
2 384.78[1)]	V	42.77	32.01	-29.07	-	45.71	74.00	28.29
4 824.48[1)]	H	60.29	33.79	-53.51	-	40.57	74.00	33.43
Average Data								
2 384.78[1)]	V	31.08	32.01	-29.07	0.35	34.37	54.00	19.63

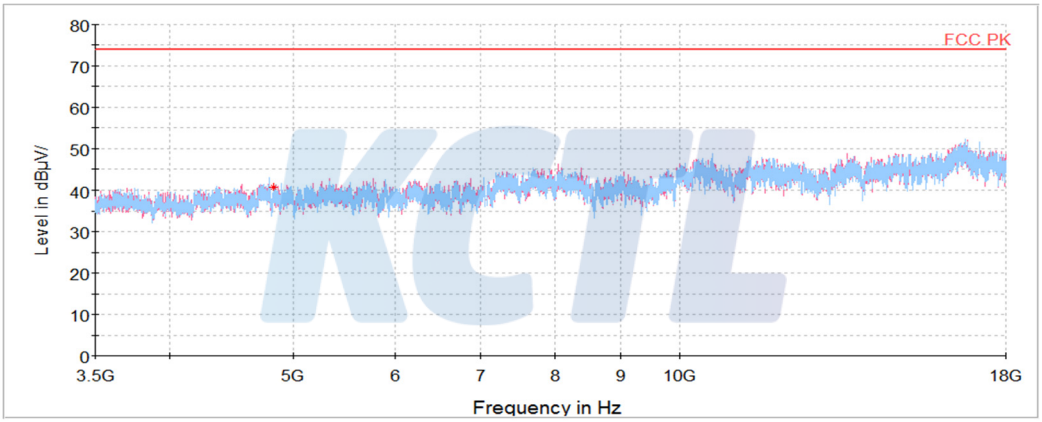
Average data	Average data
	Blank

Horizontal/Vertical for Band-edge


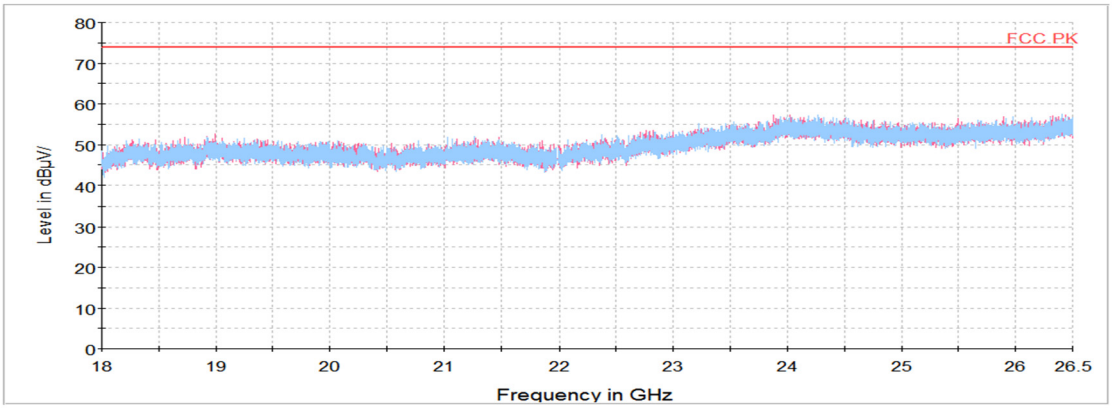
Horizontal/Vertical for 1 ㎓ ~ 3.5 ㎓



Horizontal/Vertical for 3.5 ㎓ ~ 18 ㎓



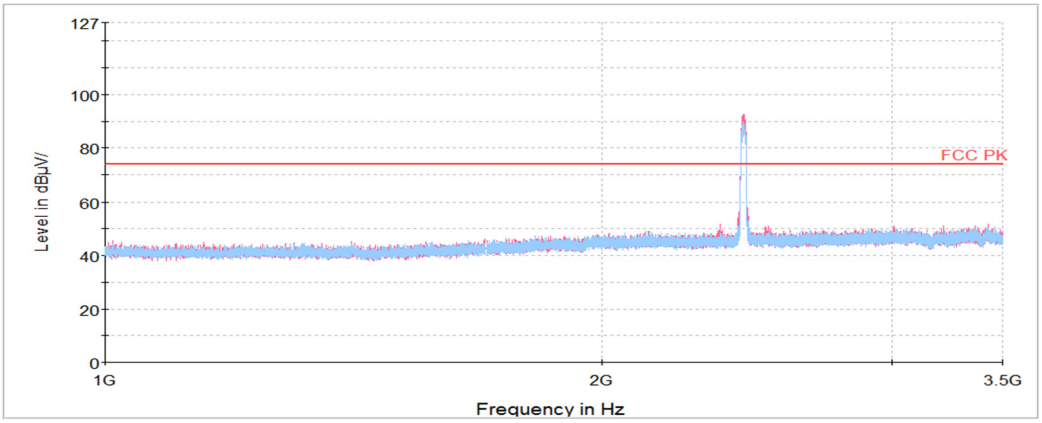
Horizontal/Vertical for 18 ㎓ ~ 26.5 ㎓



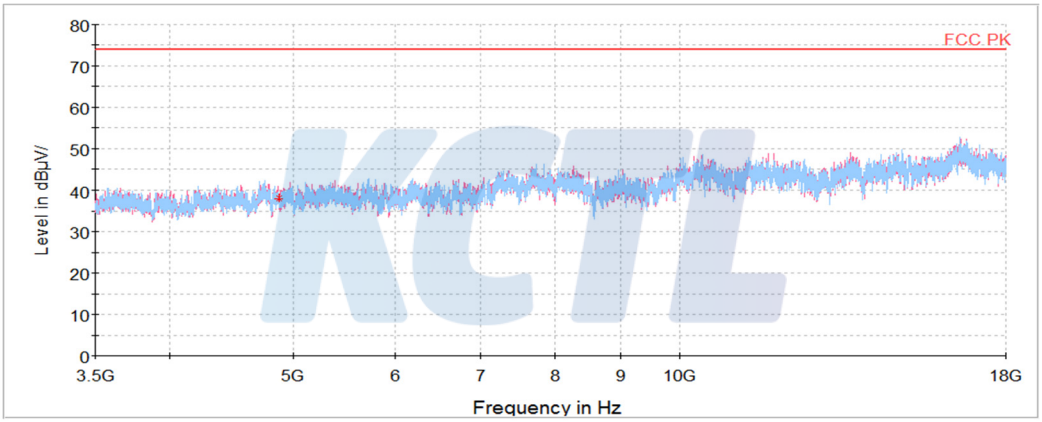
Middle Channel

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
4 875.23[1)]	H	58.54	33.83	-54.47	-	37.90	74.00	36.10
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

Horizontal/Vertical for 1 ㎓ ~ 3.5 ㎓



Horizontal/Vertical for 3.5 ㎓ ~ 18 ㎓

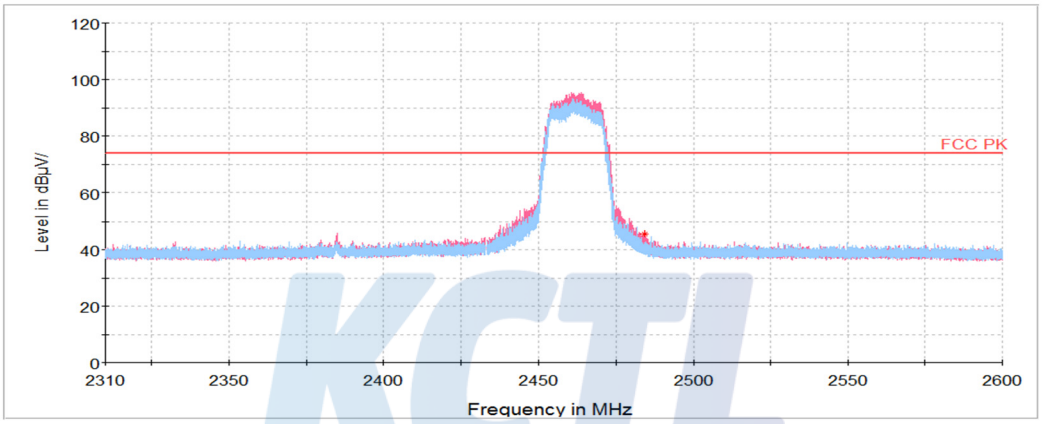


Horizontal/Vertical for 18 ㎓ ~ 26.5 ㎓

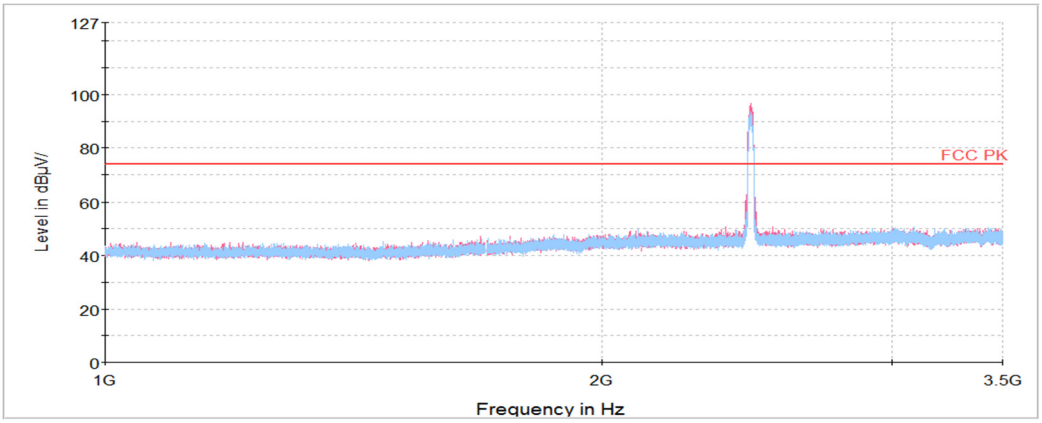
Highest Channel

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
2 484.17[1)]	V	42.77	32.09	-29.22	-	45.64	74.00	28.36
4 924.63[1)]	H	58.84	33.85	-54.79	-	37.90	74.00	36.10
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

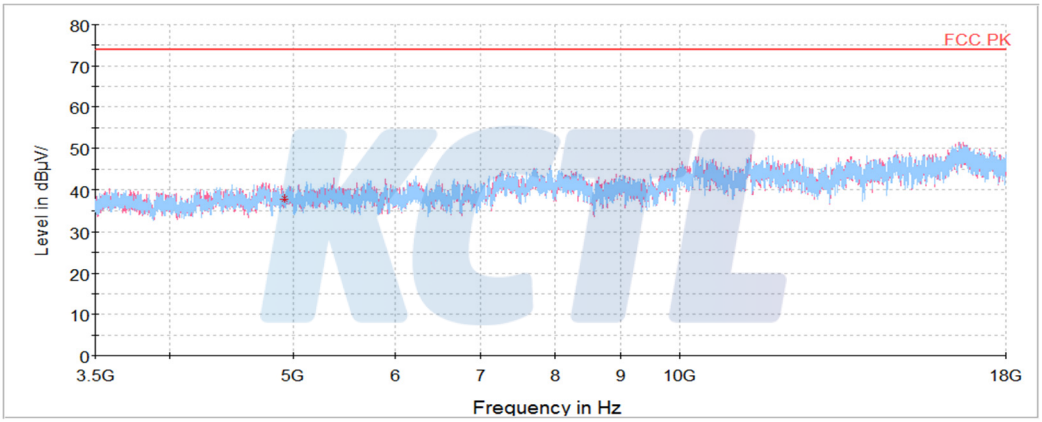
Horizontal/Vertical for Band-edge



Horizontal/Vertical for 1 ㎓ ~ 3.5 ㎓



Horizontal/Vertical for 3.5 ㎓ ~ 18 ㎓

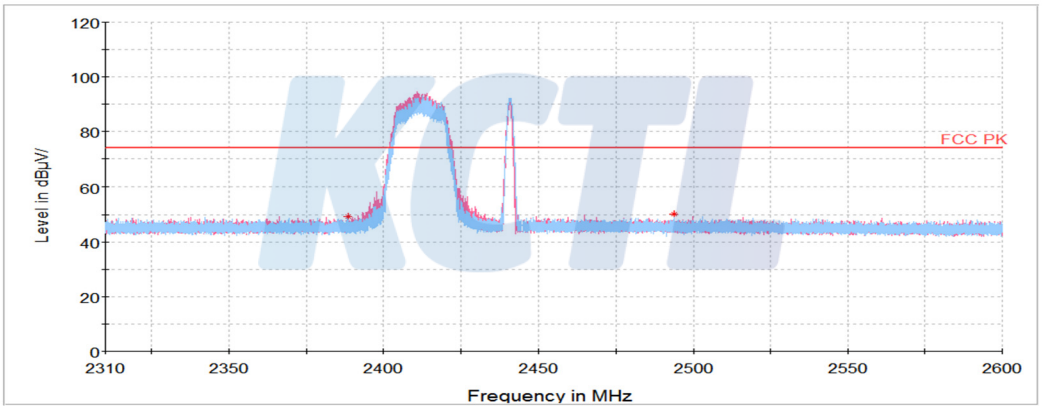


Horizontal/Vertical for 18 ㎓ ~ 26.5 ㎓

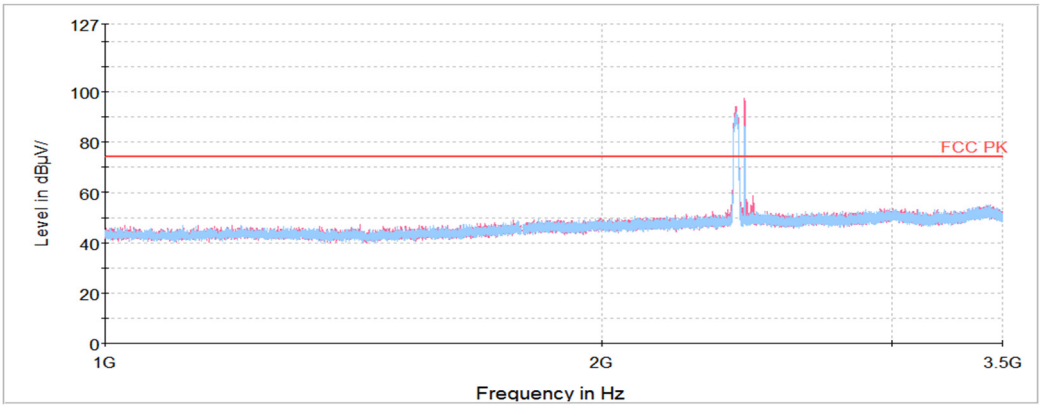
Simultaneously_802.11g (2 412 ㎒) + BT,GFSK(2 441 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
2 388.46[1)]	H	46.50	31.88	-29.05	-	49.33	74.00	24.67
2 493.82[1)]	H	47.21	32.09	-29.24	-	50.06	74.00	23.94
4 824.03[1)]	V	60.38	33.93	-52.83	-	41.48	74.00	32.52
4 880.22[1)]	V	60.52	33.95	-54.38	-	40.09	74.00	33.91
7 236.47	V	60.61	35.40	-51.87	-	44.14	74.00	29.86
7 319.84[1)]	V	59.75	35.40	-51.46	-	43.69	74.00	30.31
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

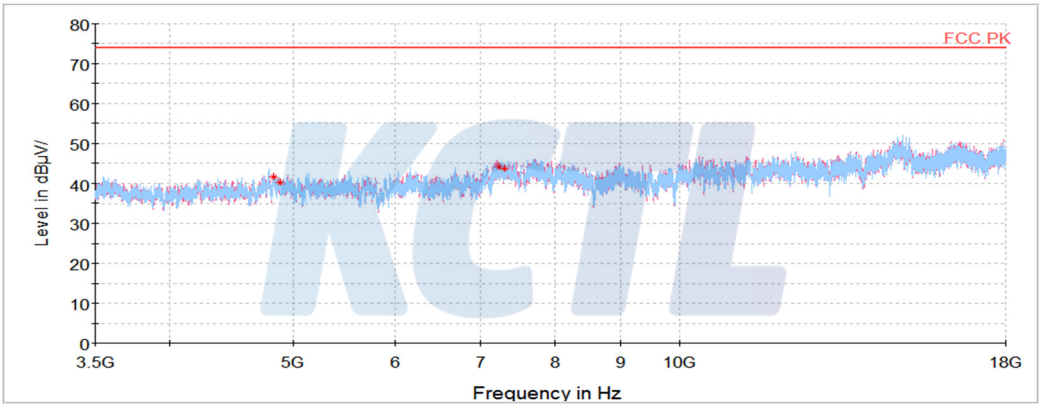
Horizontal/Vertical for Band-edge



Horizontal/Vertical for 1 ㎓ ~ 3.5 ㎓

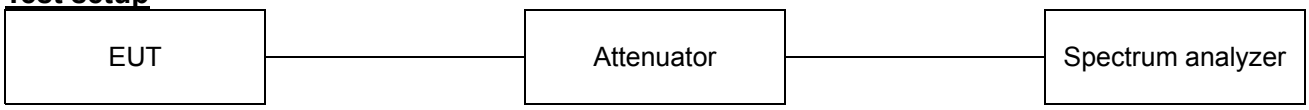


Horizontal/Vertical for 3.5 ㎓ ~ 18 ㎓



7.5. Conducted Spurious Emission

Test setup



Limit

According to §15.247(d), In any 100 ㎑ bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operation, the radio frequency power that is produced by the intentional radiator shall be at least 20 ㏈ below that in the 100 ㎑ bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation specified in §15.209(a) is not required. In addition, radiated emission limits specified in §15.209(a) (see §15.205(c)).
Limit : 20 ㏈c

Test procedure

ANSI C63.10-2013 - Section 11.11.3

Test settings

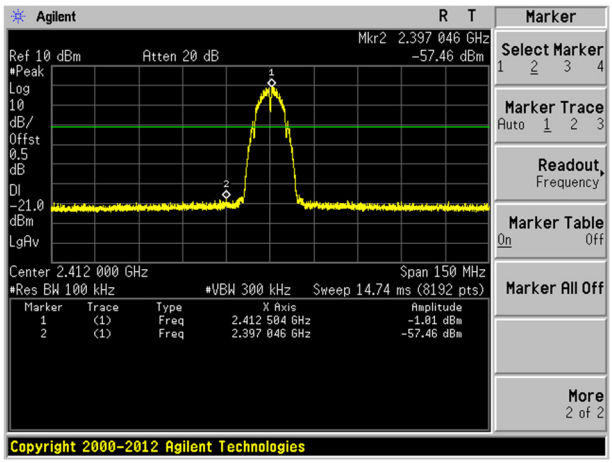
Set the spectrum analyzer as follows:

1) Span = wide enough to capture the peak level of the in-band emission and all spurious emissions (e.g., harmonics) from the lowest frequency generated in the EUT up through the 10th harmonic.
   Typically, several plots are required to cover this entire span.
2) RBW = 100 ㎑
3) VBW ≥ RBW
4) Sweep = auto
5) Detector function = peak
6) Trace = max hold
7) Allow the trace to stabilize. Set the marker on the peak of any spurious emission recorded.
8) Each frequency found during preliminary measurements was re-examined and investigated. The test-receiver system was set up to average, peak, and quasi-peak detector function with specified bandwidth.

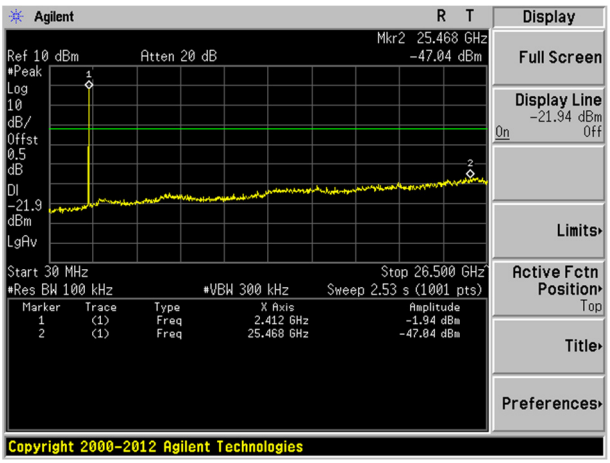
Test results

802.11b

Conducted band-edge / Low ch.

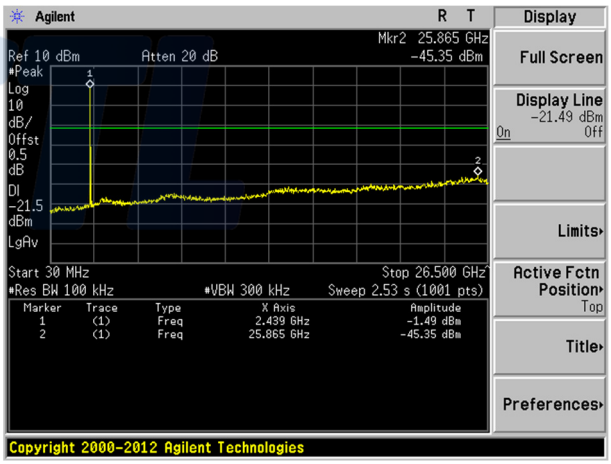


Conducted spurious / Low ch.

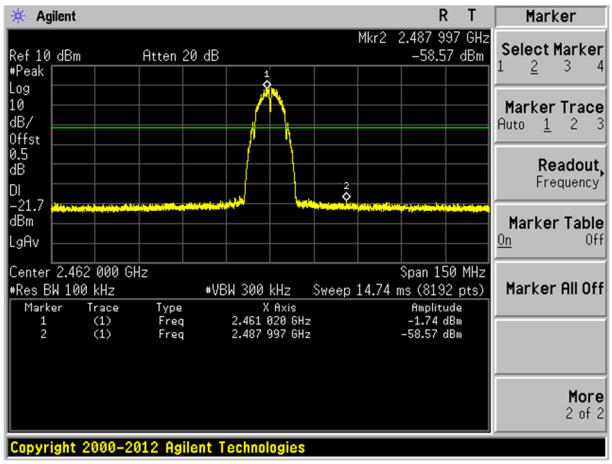


Conducted spurious / Mid ch.

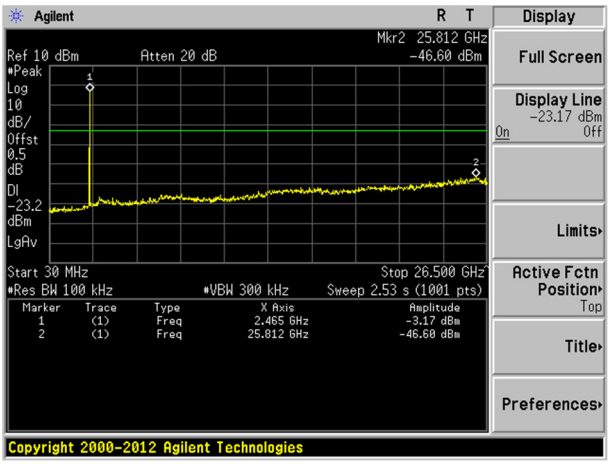
Blank



Conducted band-edge / High ch.

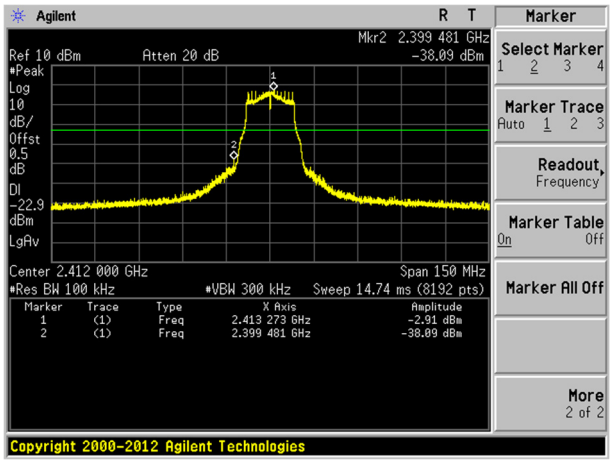


Conducted spurious / High ch.

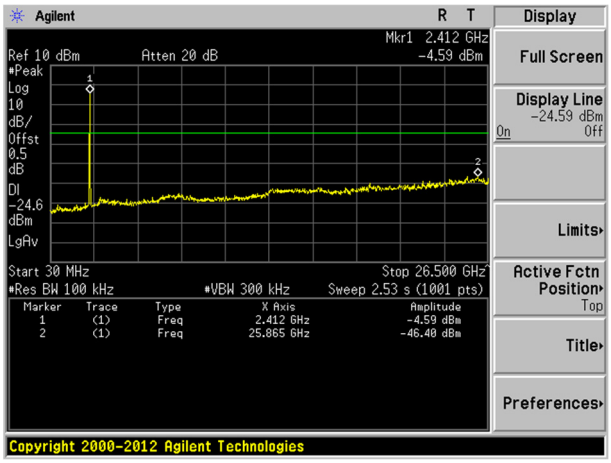


802.11g

Conducted band-edge / Low ch.

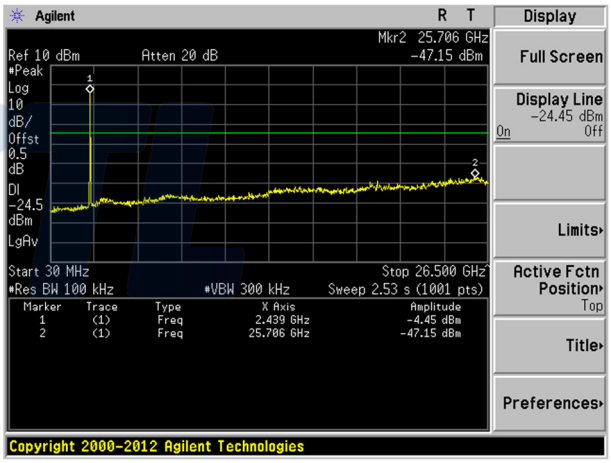


Conducted spurious / Low ch.

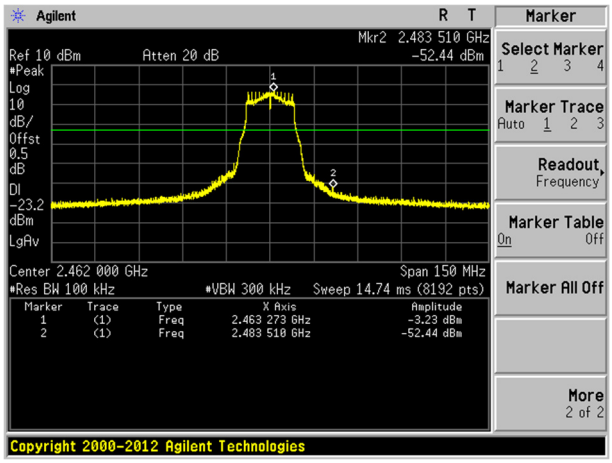


Conducted spurious / Mid ch.

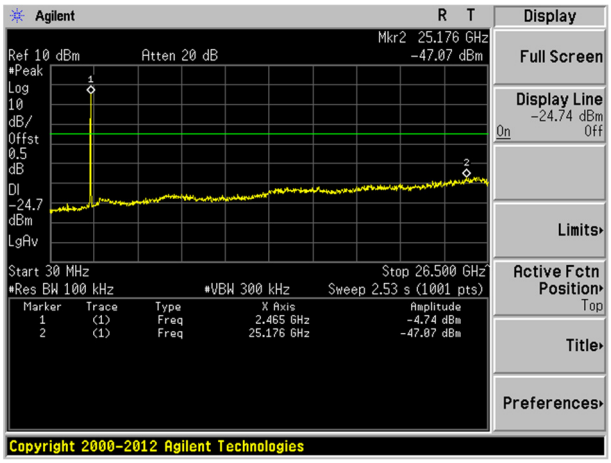
Blank



Conducted band-edge / High ch.

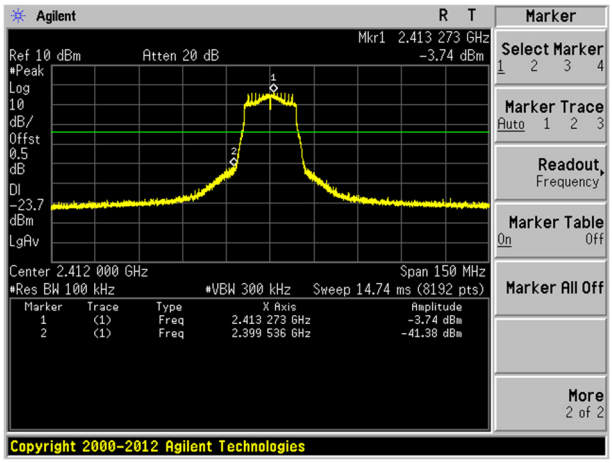


Conducted spurious / High ch.

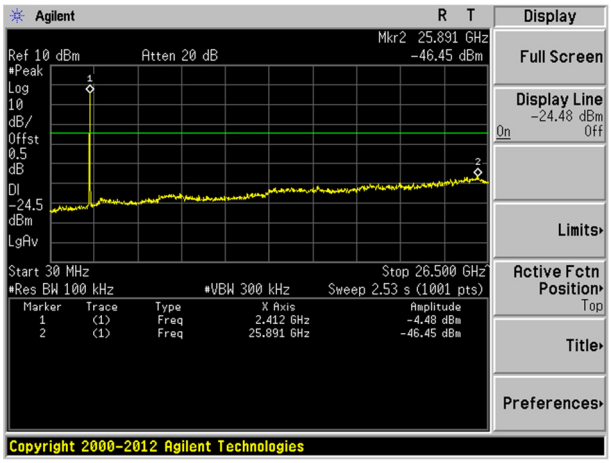


802.11n HT20

Conducted band-edge / Low ch.

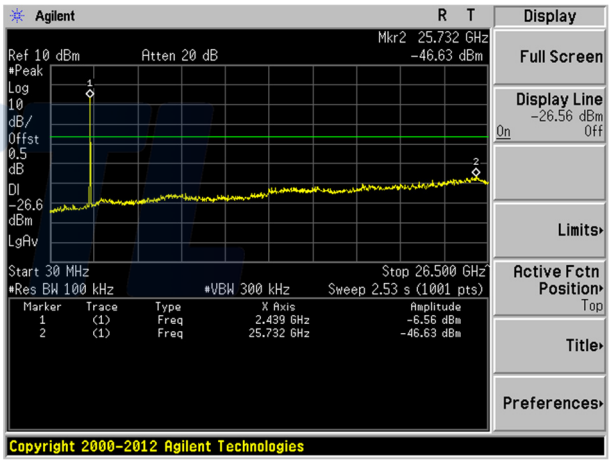


Conducted spurious / Low ch.

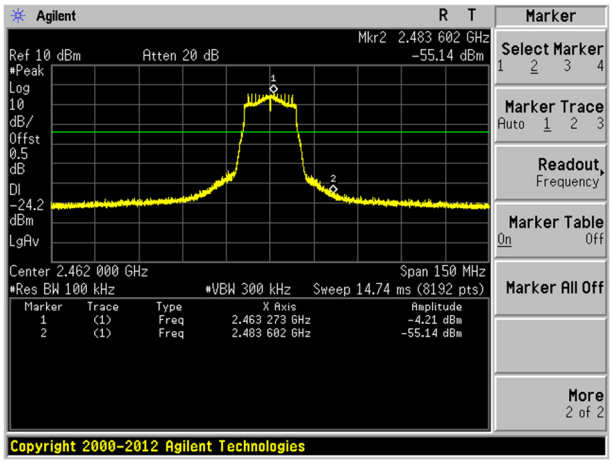


Conducted spurious / Mid ch.

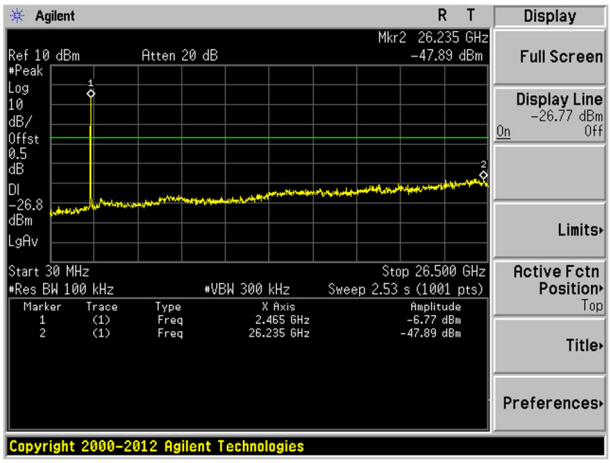
Blank



Conducted band-edge / High ch.



Conducted spurious / High ch.



8. Measurement equipment

Equipment Name	Manufacturer	Model No.	Serial No.	Next Cal. Date
Spectrum Analyzer	AGILENT	E4440A	MY46186407	20.07.30
Spectrum Analyzer	R&S	FSV40	100988	20.01.04
Vector Signal Generator	R&S	SMBV100A	257566	20.01.04
Wideband Power Sensor	R&S	NRP-Z81	102398	20.01.25
Signal Generator	R&S	SMR40	100007	20.05.13
EMI TEST RECEIVER	R&S	ESCI7	100732	20.08.22
Bi-Log Antenna	SCHWARZBECK	VULB 9168	583	20.05.04
Amplifier	SONOMA INSTRUMENT	310N	284608	20.08.22
COAXIAL FIXED ATTENUATOR	Agilent	8491B-003	2708A18758	20.05.04
Horn antenna	ETS.lindgren	3116	00086632	20.02.15
Horn antenna	ETS.lindgren	3117	155787	20.10.24
Attenuator	API Inmet	40AH2W-10	17	20.05.15
Attenuator	API Inmet	40AH2W-10	12	20.05.15
Broadband PreAmplifier	SCHWARZBECK	BBV9718	216	20.07.30
AMPLIFIER	L-3 Narda-MITEQ	AMF-7D-01001800 -22-10P	2031196	20.02.21
AMPLIFIER	L-3 Narda-MITEQ	JS44-18004000-33-8P	2000996	20.01.28
LOOP Antenna	R&S	HFH2-Z2	100355	20.08.24
Antenna Mast	Innco Systems	MA4640-XP-ET	-	-
Turn Table	Innco Systems	DT2000	79	-
Antenna Mast	Innco Systems	MA4000-EP	303	-
Turn Table	Innco Systems	DT2000	79	-
Highpass Filter	WT	WT-A1698-HS	WT160411001	20.05.14

End of test report