

## 5.5. Spurious RF Conducted Emissions

### Ambient condition

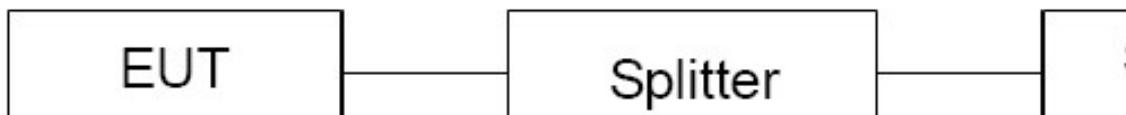
Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

### Method of Measurement

The EUT was connected to the spectrum analyzer with a known loss. The spectrum analyzer scans from 30MHz to the 10th harmonic of the carrier. The peak detector is used. Set RBW to 100 kHz and VBW to 300 kHz, Sweep is set to ATUO.

The test is in transmitting mode.

### Test setup



### Limits

Rule Part 15.247(d) specifies that "In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz 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 limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. "

Test Mode	Carrier frequency (MHz)	Reference value (dBm)	Limit
802.11b	2412	11.91	-18.09
	2437	10.72	-19.28
	2462	10.22	-19.78
802.11g	2412	8.32	-21.69
	2437	6.69	-23.31
	2462	7.11	-22.89
802.11n HT20	2412	7.80	-22.20
	2437	6.11	-23.90
	2462	5.23	-24.78
802.11n HT40	2422	5.11	-24.89
	2437	4.06	-25.95
	2452	4.08	-25.92



802.11ax HE20	2412	4.88	-25.12
	2437	3.82	-26.18
	2462	5.73	-24.27
802.11ax HE40	2422	4.25	-25.75
	2437	2.98	-27.02
	2452	2.17	-27.83
Bluetooth (Low Energy) (125K)	2402	13.94	-16.06
	2440	14.95	-15.05
	2480	11.87	-18.13
Bluetooth (Low Energy) (1M)	2402	13.97	-16.03
	2440	14.77	-15.23
	2480	11.83	-18.17
Bluetooth (Low Energy) (2M)	2402	14.29	-15.71
	2440	15.20	-14.80
	2480	11.85	-18.16

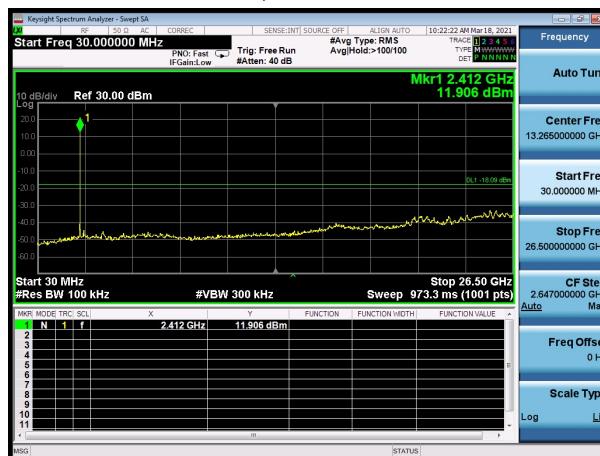
### Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor  $k = 1.96$ .

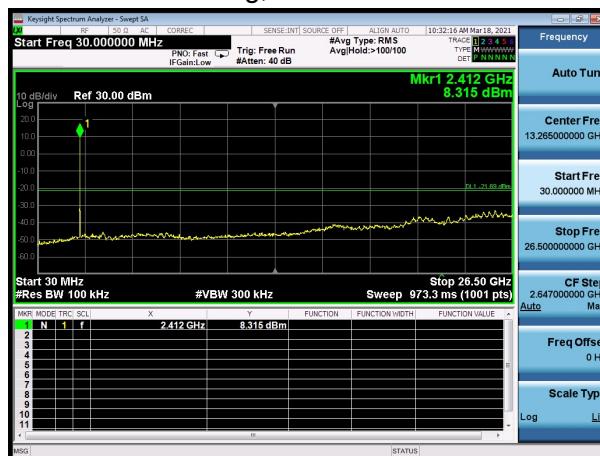
Frequency	Uncertainty
100kHz-2GHz	0.684 dB
2GHz-26GHz	1.407 dB

## Test Results:

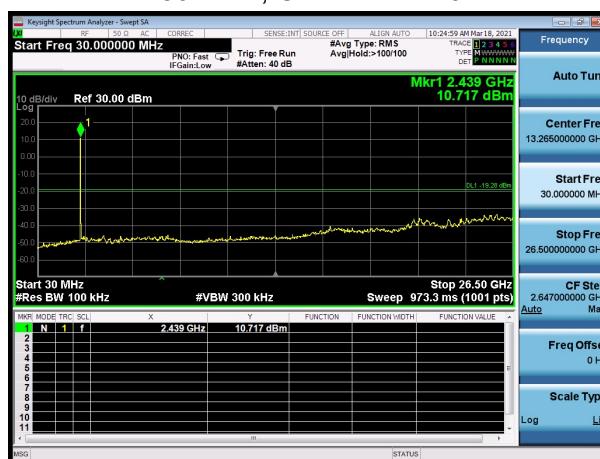
802.11b, Channel No.: 1



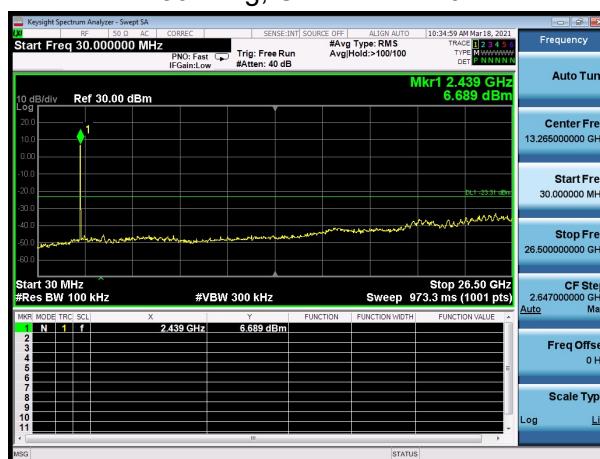
802.11g, Channel No.: 1



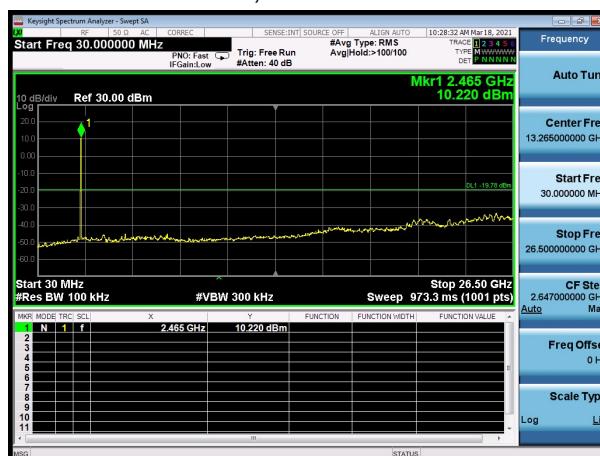
802.11b, Channel No.: 6



802.11g, Channel No.: 6



802.11b, Channel No.: 11



802.11g, Channel No.: 11

