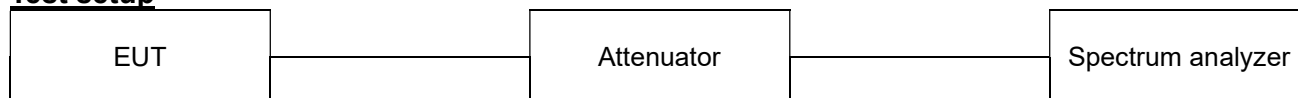


7.5. Conducted Spurious Emission

Test setup



Limit

According to §15.247(d) and RSS-247(5.5), In any 100 kHz 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 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 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 dBc

Test procedure

ANSI C63.10-2013 - Section 11.11.3

KDB 558074 D01 v05 - Section 8.5

KDB 662911 D01 v02r01 – section (E)(3)(b)

Test settings

Establish an emission level by using the following procedure:

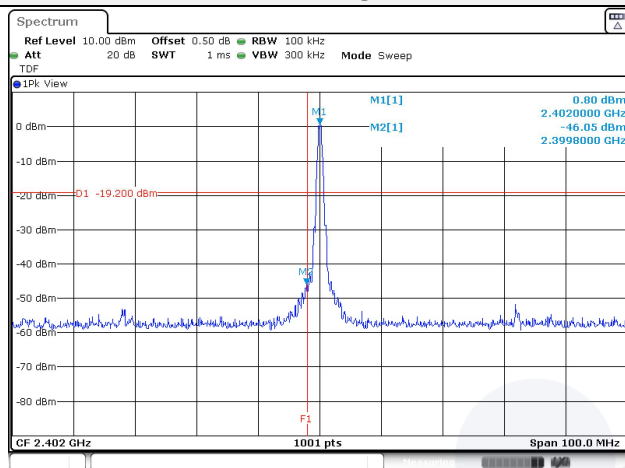
- 1) Set the center frequency and span to encompass frequency range to be measured.
- 2) Set the RBW = 100 kHz
- 3) Set the VBW $\geq [3 \times \text{RBW}]$
- 4) Detector = peak
- 5) Sweep time = auto couple
- 6) Trace mode = max hold
- 7) Allow trace to fully stabilize.
- 8) Use the peak marker function to determine the maximum amplitude level.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements specified in 11.11. Report the three highest emissions relative to the limit.

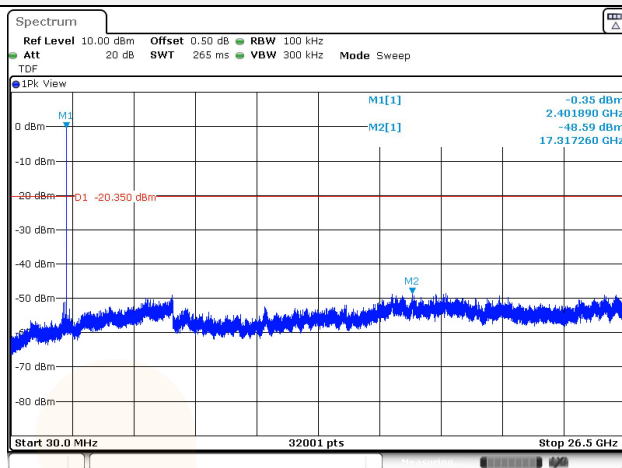
Test results

BLE_1 MBit/s(37 Bytes)

Conducted band-edge / 2 402 MHz



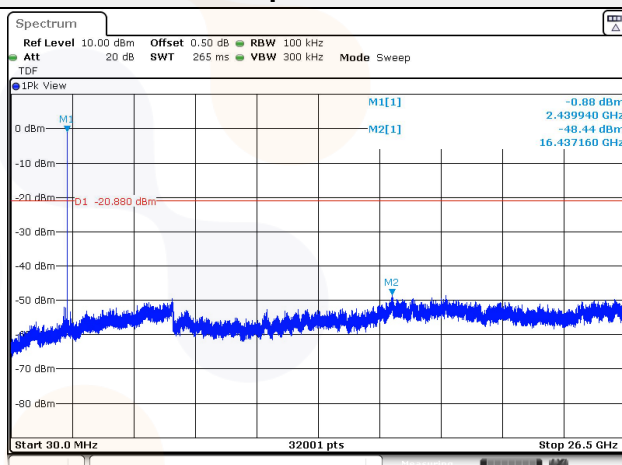
Conducted spurious / 2 402 MHz



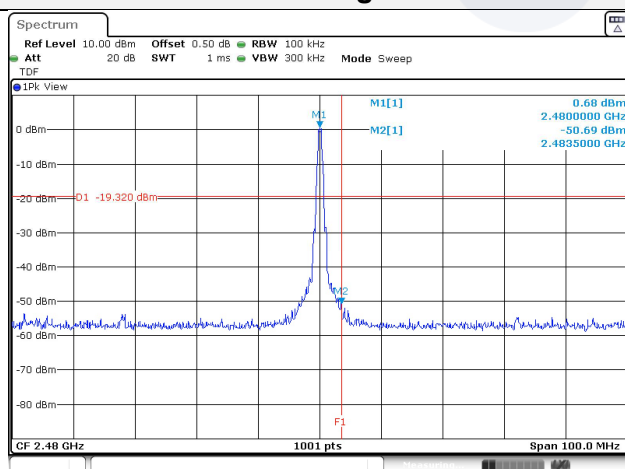
Conducted band-edge / 2 440 MHz

Blank

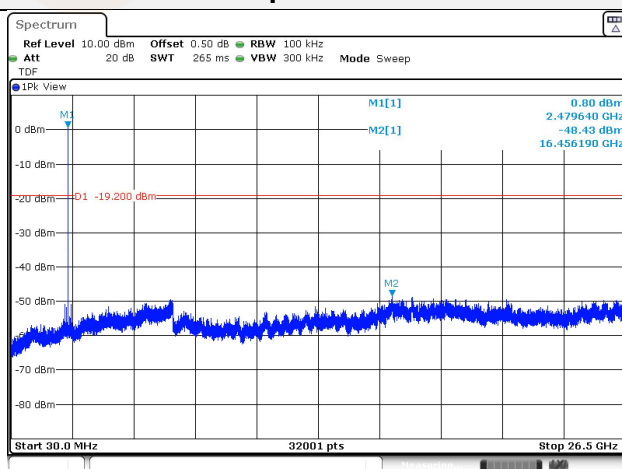
Conducted spurious / 2 440 MHz



Conducted band-edge / 2 480 MHz



Conducted spurious / 2 480 MHz



8. Measurement equipment

Equipment Name	Manufacturer	Model No.	Serial No.	Next Cal. Date
Spectrum Analyzer	R&S	FSV30	100732	25.07.02
Attenuator	HUBER+SUHNER	6610_SK-50-1/199_NE	ATT01	25.10.15
Power Sensor	R&S	NRP-Z81	1137.9009.02-106225-JM	25.04.24
Attenuator	R&S	DNF	0003	26.01.17
DC Power Supply	AGILENT	E3632A	KR73001026	26.01.16
Signal Generator	R&S	SMB100A	176206	26.01.17
Spectrum Analyzer	R&S	FSV40	100988	25.05.27
Broadband PreAmplifier	SCHWARZBECK	BBV9718D	53	26.01.16
Low Noise Amplifier	TESTEK	TK-PA18H	220123-L	25.10.11
Low Noise Amplifier	TESTEK	TK-PA1840H	220234-L	25.10.14
Horn Antenna	SCHWARZBECK	BBHA9120D	02764	25.10.24
Horn Antenna	SCHWARZBECK	BBHA9170	01266	25.10.15
High Pass Filter	Wainwright Instruments GmbH	WHKX12-2805-3000-18000-40SS	SN59	25.10.15
High Pass Filter	QOTANA TECHNOLOGIES	DBHF0508004000A	23041800061	25.06.24
Spectrum Analyzer	R&S	FSV40	100988	25.05.27
Spectrum Analyzer	AGILENT	E4440A	MY44303500	25.07.02
Amplifier	SONOMA INSTRUMENT	310N	421910	25.10.11
Bilog Antenna	ETS.LINDGREN	3143B	00228420	25.07.20
Attenuator	Qualwave Inc.	QFA1802-18-6-N	22375090	26.01.17
Loop Antenna	R&S	HFH2-Z2	100355	26.06.25
Controller	INNCO SYSTEMS	CO3000	1442/54370322/P	-
Antenna Mast	INNCO SYSTEMS	MA4640-XP-ET	-	-
Turn Device	INNCO SYSTEMS	DS1200-S-1t	-	-

End of test report