



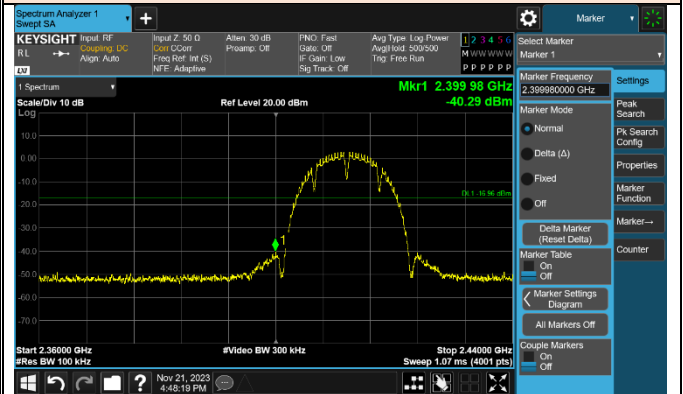
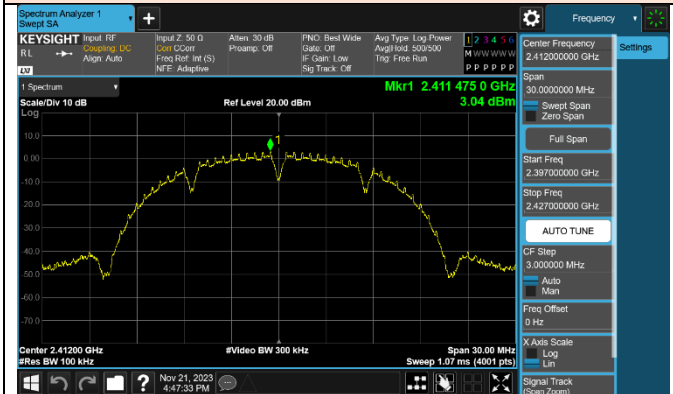
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[24 V Spurious Emission]

TM 1

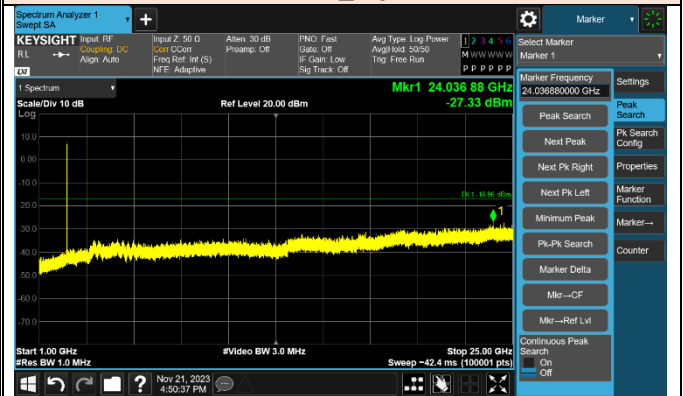
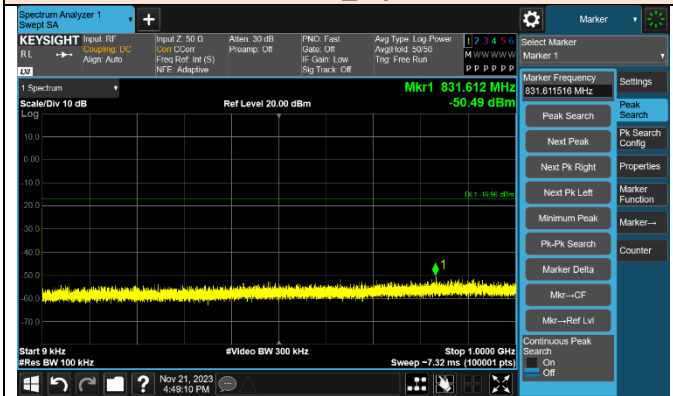
2 412 MHz _ Ref.

2 412 MHz _ Band edge



2 412 MHz _ Spurious

2 412 MHz _ Spurious



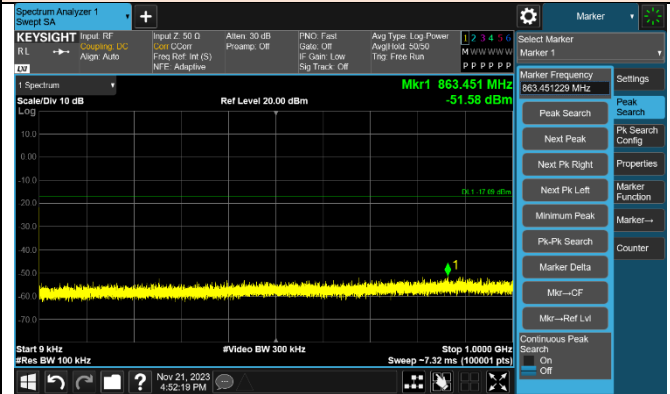


TM 1

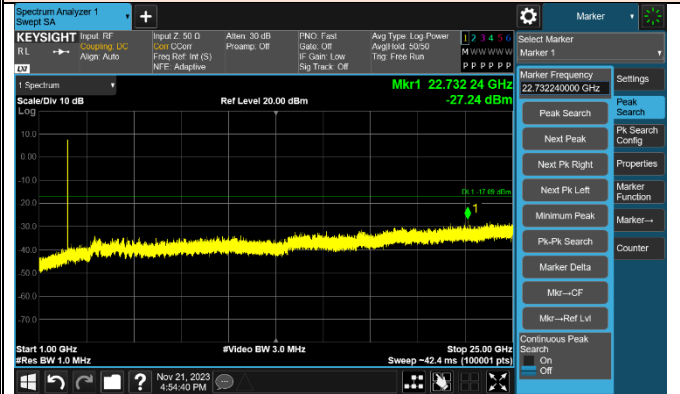
2 437 MHz _ Ref.



2 437 MHz _ Spurious



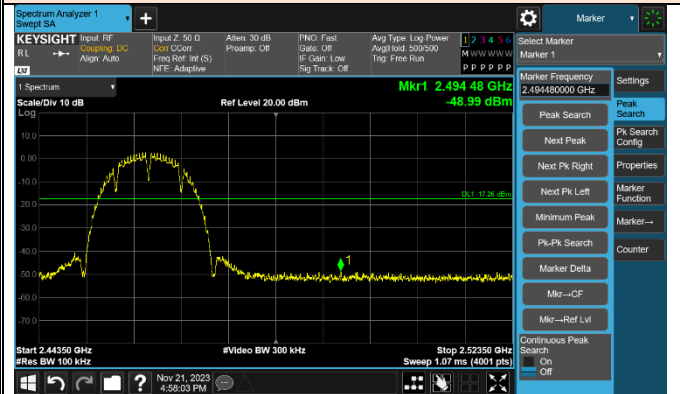
2 437 MHz _ Spurious



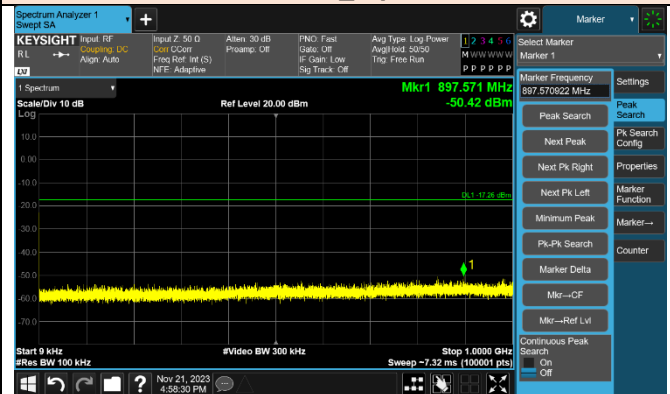
2 462 MHz _ Ref



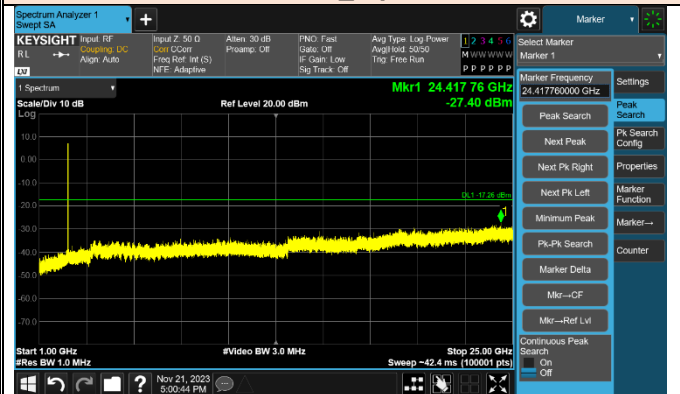
2 462 MHz _ Band edge



2 462 MHz _ Spurious



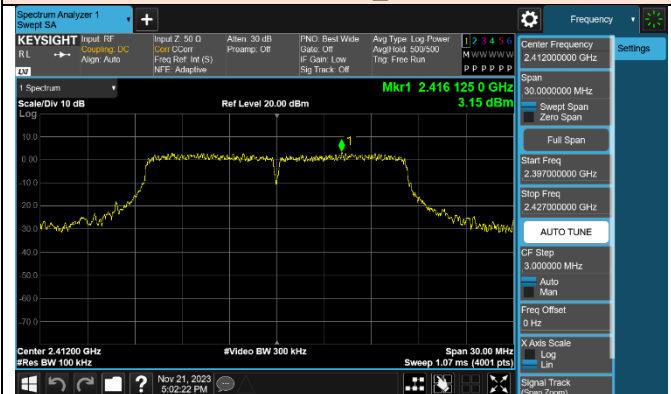
2 462 MHz _ Spurious



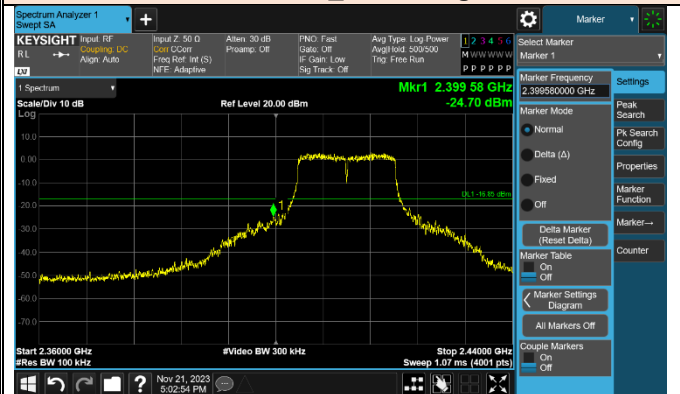


TM 2

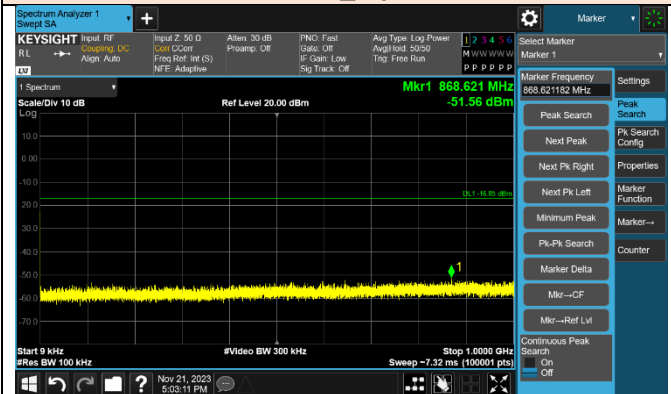
2 412 MHz _ Ref.



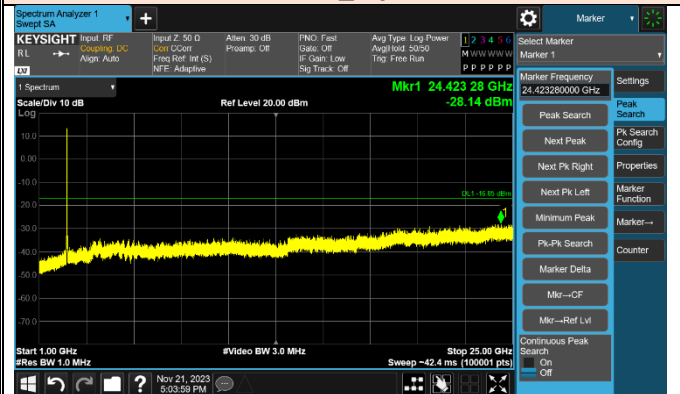
2 412 MHz _ Band edge



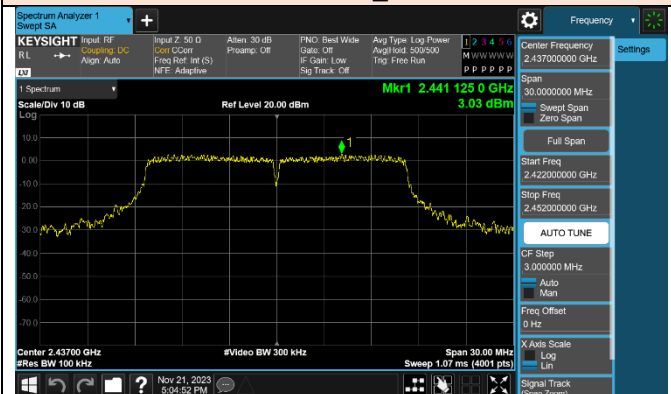
2 412 MHz _ Spurious



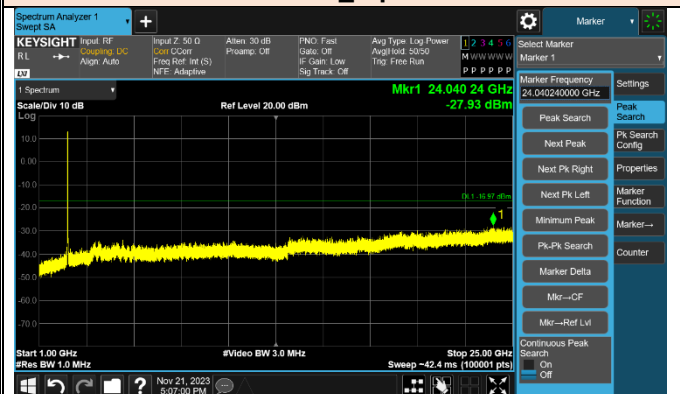
2 412 MHz _ Spurious



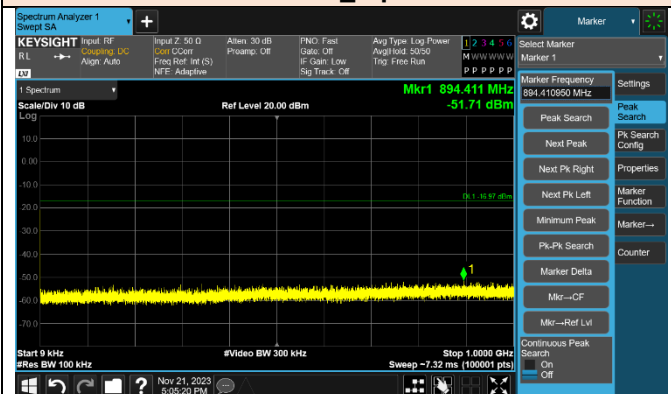
2 437 MHz _ Ref.



2 437 MHz _ Spurious



2 437 MHz _ Spurious

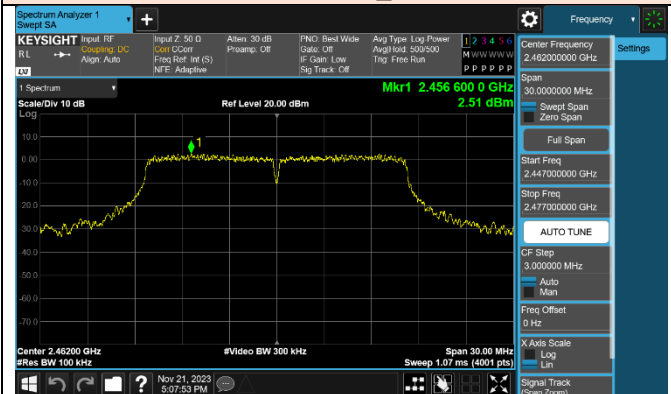




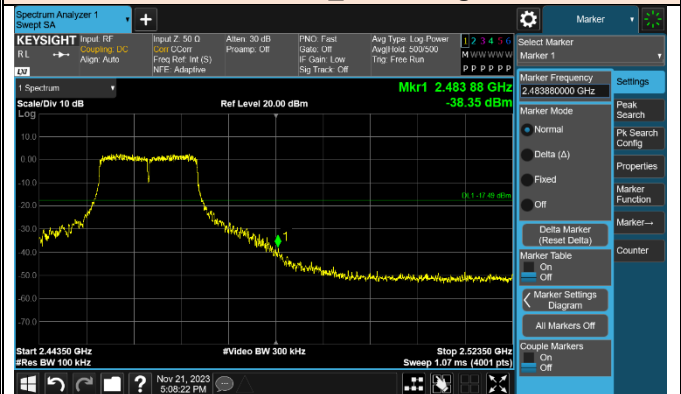
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TM 2

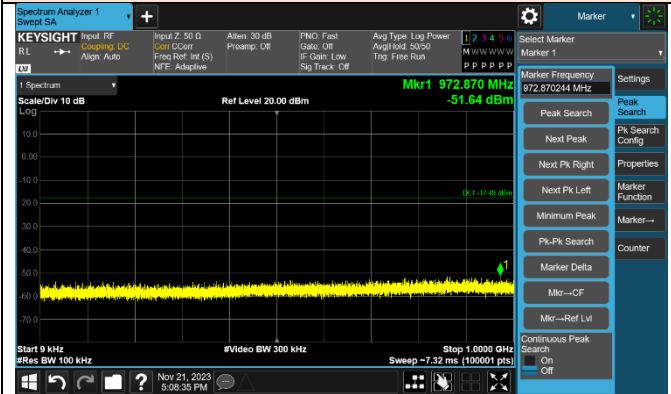
2 462 MHz _ Ref



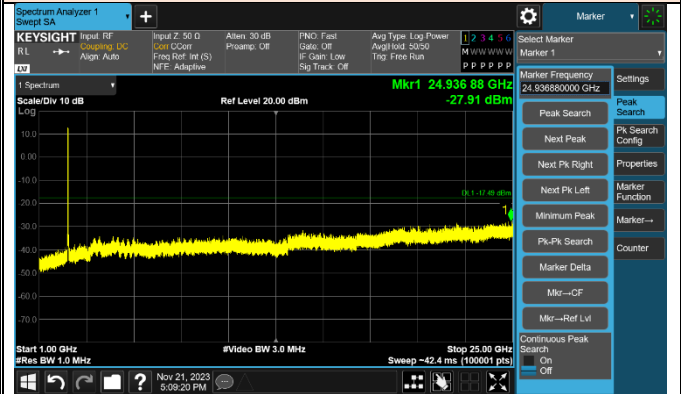
2 462 MHz _ Band edge



2 462 MHz _ Spurious



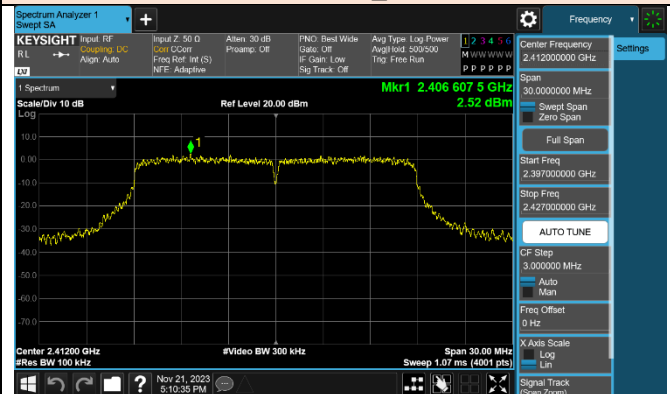
2 462 MHz _ Spurious



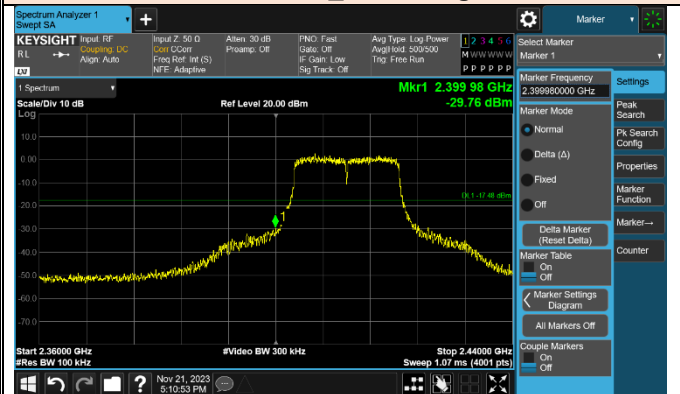


TM 3

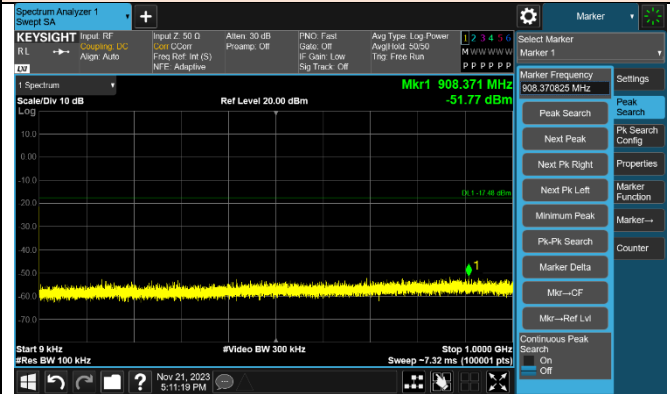
2 412 MHz _ Ref.



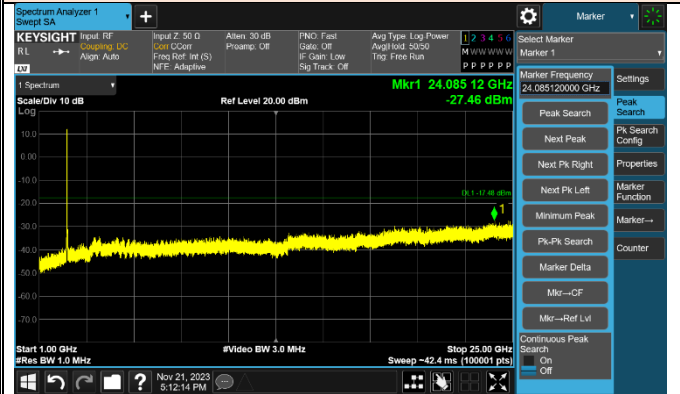
2 412 MHz _ Band edge



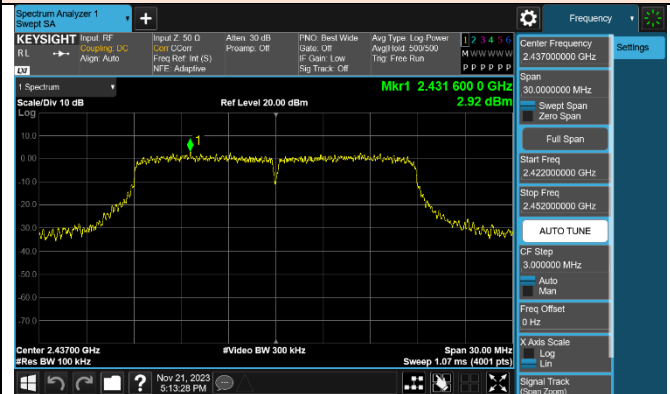
2 412 MHz _ Spurious



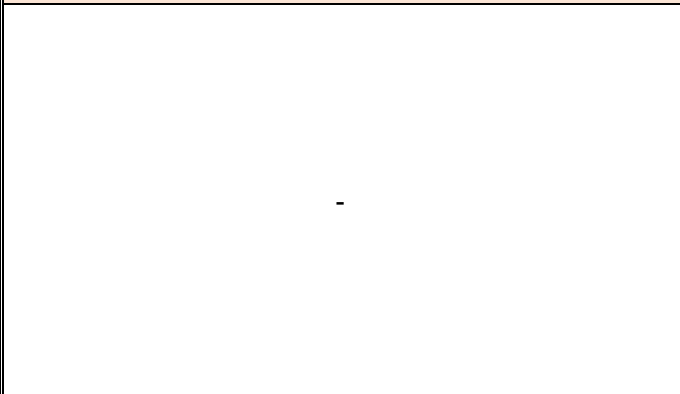
2 412 MHz _ Spurious



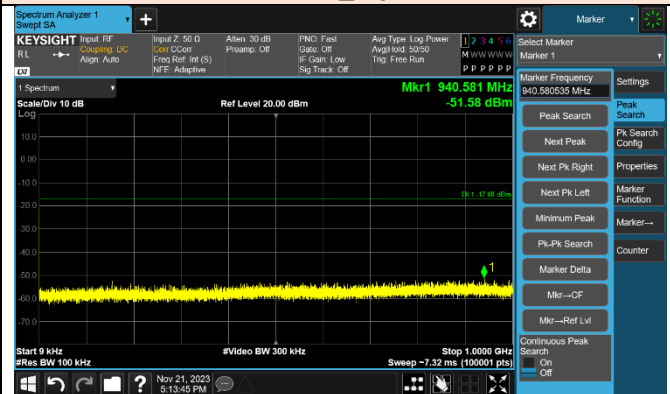
2 437 MHz _ Ref.



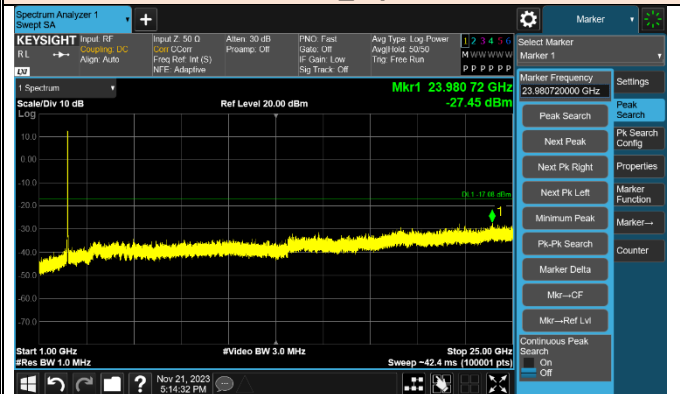
-



2 437 MHz _ Spurious



2 437 MHz _ Spurious

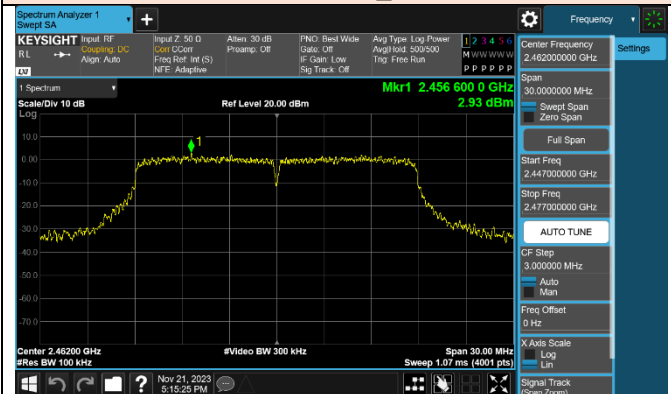




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TM 3

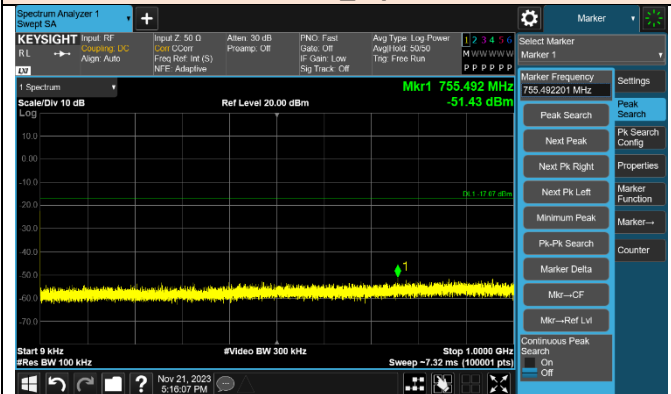
2 462 MHz _ Ref



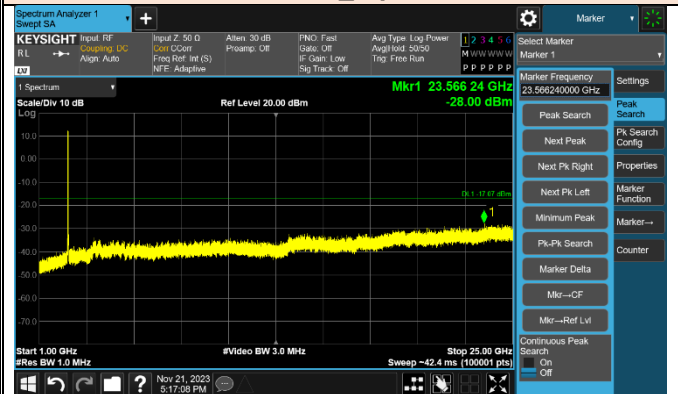
2 462 MHz _ Band edge



2 462 MHz _ Spurious



2 462 MHz _ Spurious

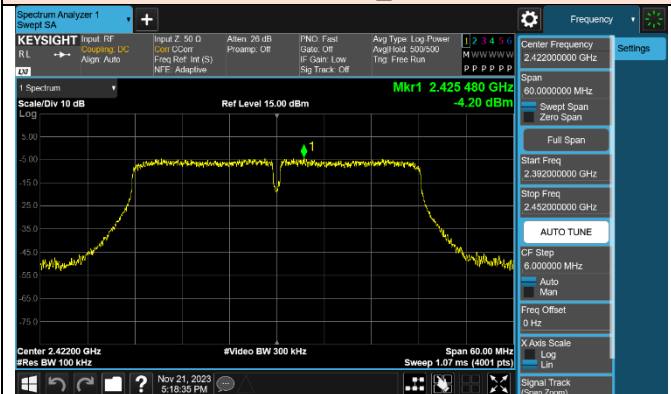




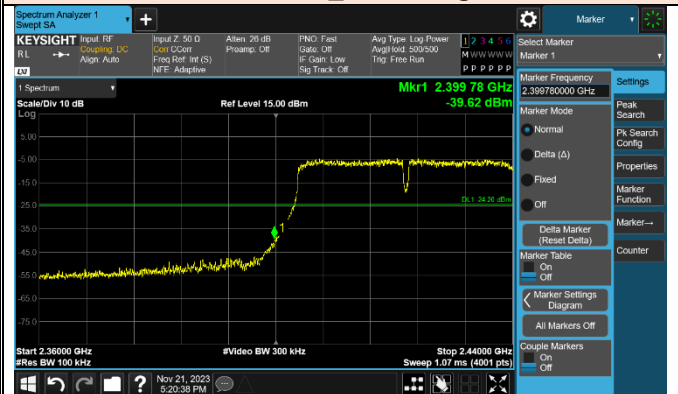
BUREAU VERITAS

TM 4

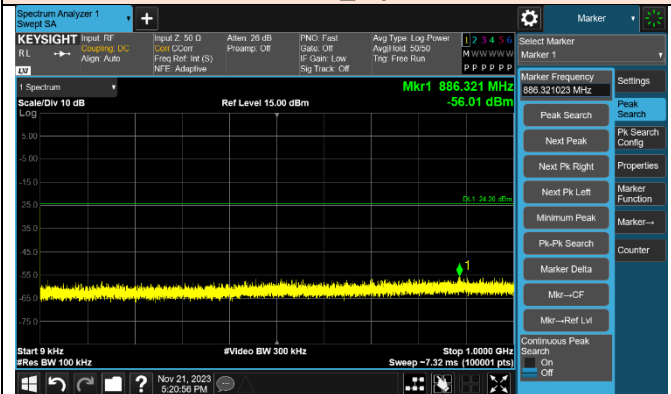
2 422 MHz _ Ref



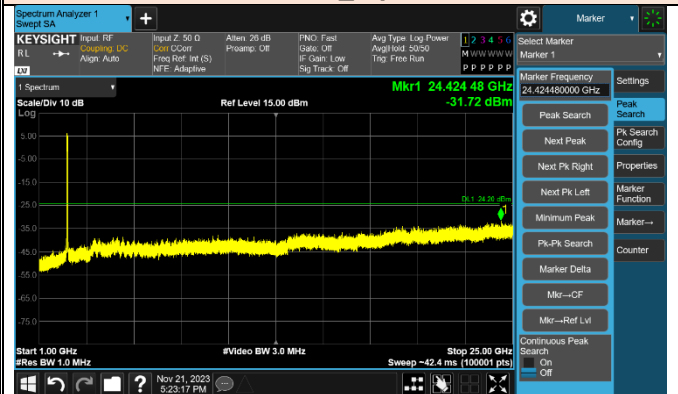
2 422 MHz _ Band edge



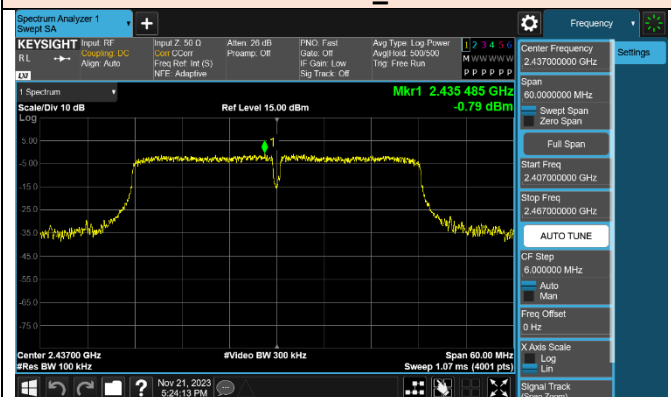
2 422 MHz _ Spurious



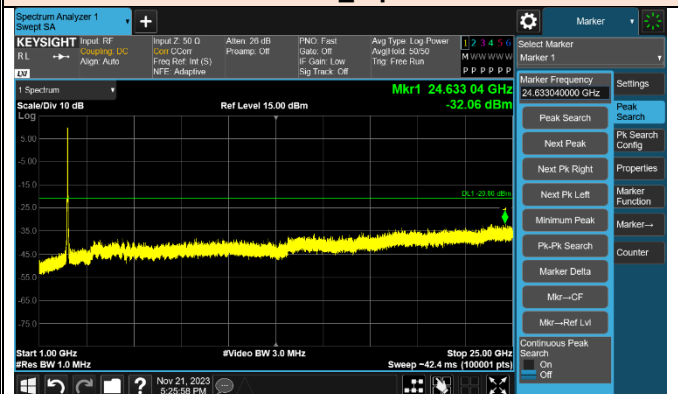
2 422 MHz _ Spurious



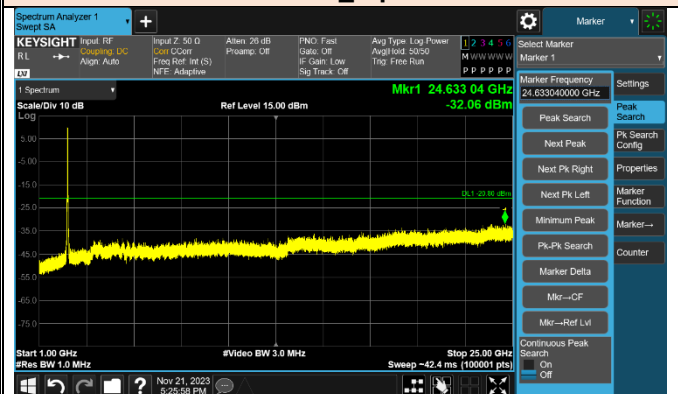
2 437 MHz _ Ref.



2 437 MHz _ Spurious



2 437 MHz _ Spurious

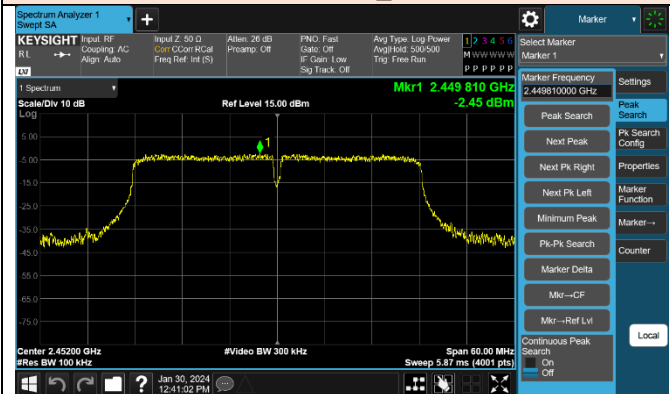




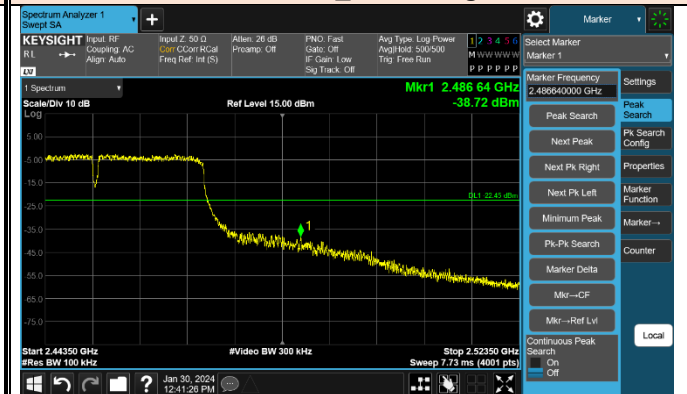
BUREAU VERITAS

TM 4

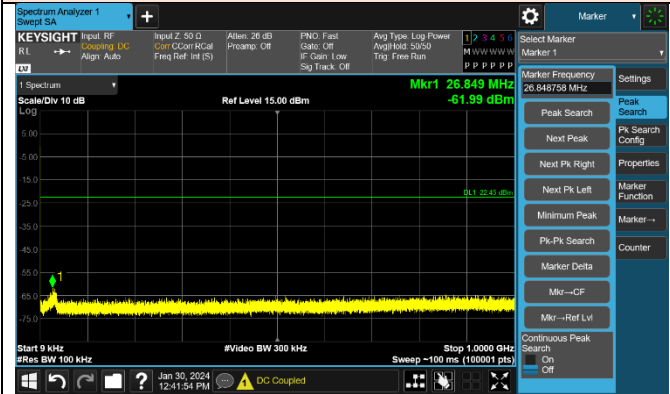
2 452 MHz _ Ref



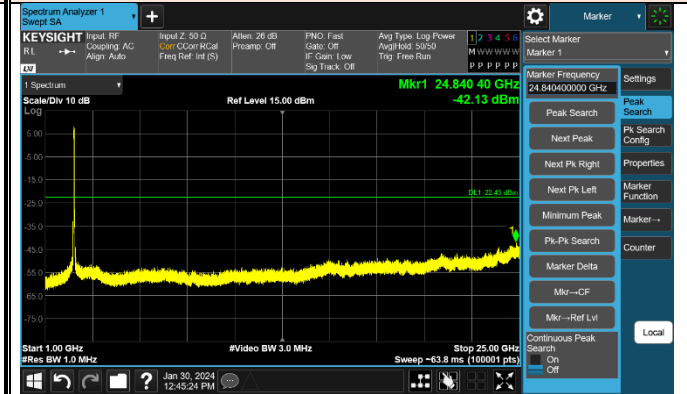
2 452 MHz _ Band edge



2 452 MHz _ Spurious



2 452 MHz _ Spurious



3.6 AC Conducted Emissions (150 kHz to 30 MHz)

3.6.1 Regulation

§15.207(a) : Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency of emission (MHz)	Conducted limit (dB μ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

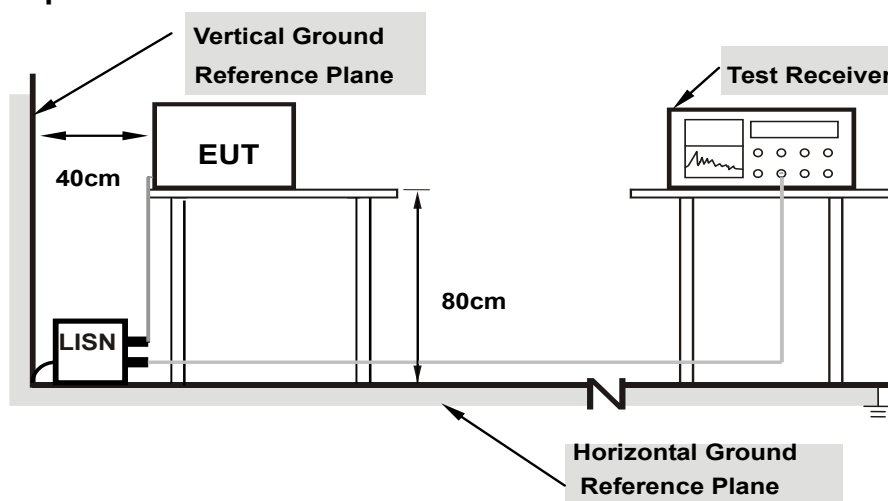
* Decreases with the logarithm of the frequency.

3.6.2 Test Procedure

- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm / 50 μ H of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

Remark : The resolution bandwidth and video bandwidth of test receiver is 9 kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15 MHz – 30 MHz.

3.6.3 Test Setup



3.6.4 Test Result

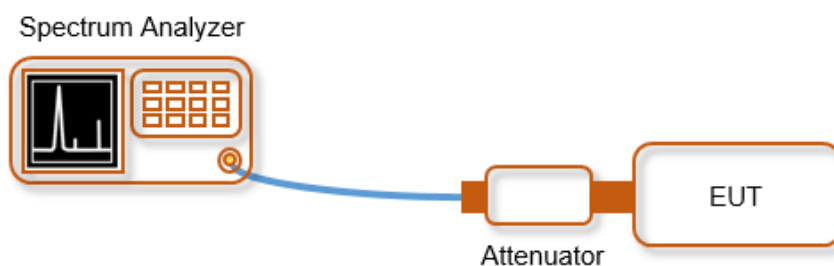
- N/A

3.7 Duty Cycle

3.7.1 Test Procedure

- The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the on and off times of the transmitted signal.
- Set the center frequency of the instrument to the center frequency of the transmission. Set $RBW \geq OBW$ if possible; otherwise, set RBW to the largest available value. Set $VBW \geq RBW$. Set detector = peak or average.
- The zero-span measurement method shall not be used unless both RBW and VBW are $> 50/T$ and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring duty cycle shall not be used if $T \leq 16.7$ microseconds.)

3.7.2 Test Setup



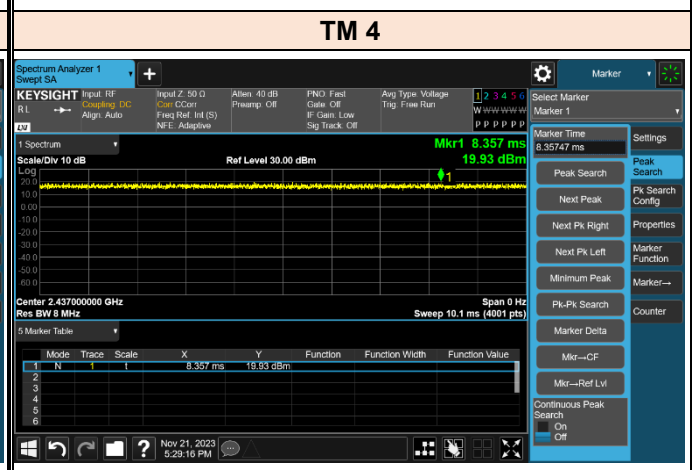
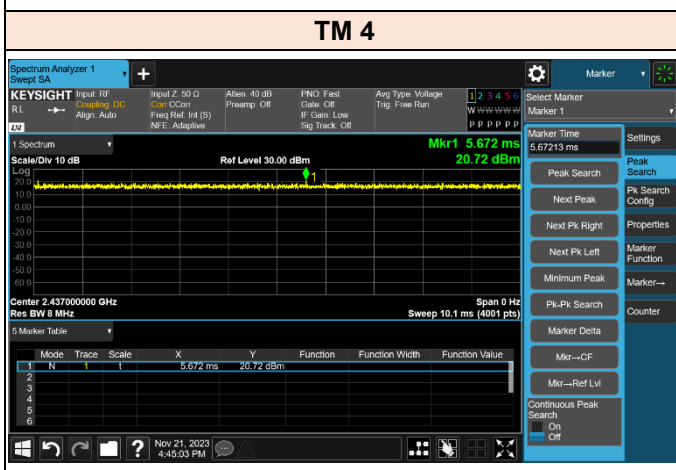
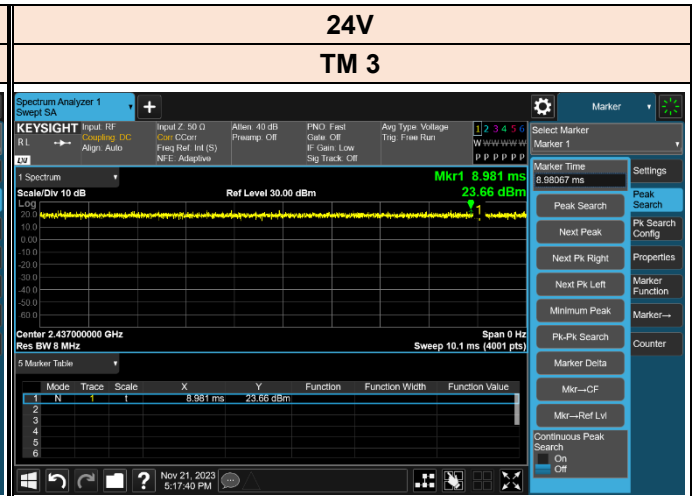
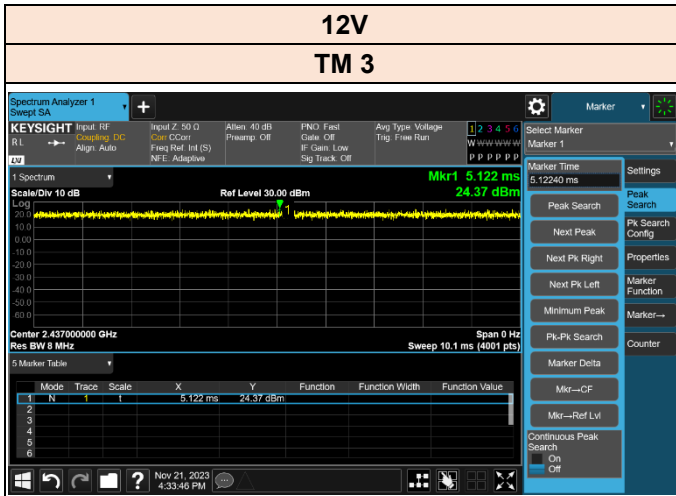
3.7.3 Test Result

Test Mode	On Time [ms]	Period [ms]	Duty Cycle [X]	Duty Cycle [D]	DCCF [dB]
TM 1	1	1	1.000	100.00	0.00
TM 2	1	1	1.000	100.00	0.00
TM 3	1	1	1.000	100.00	0.00
TM 4	1	1	1.000	100.00	0.00



[Test Plot of Duty Cycle]







Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services Korea. Our laboratories are FCC recognized accredited test firms and accredited and approved according to ISO/IEC 17025.

Test Firm Name : BV CPS ADT Korea Ltd.

Address : Innoplex No.2 106, Sinwon-ro 306, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675 KOREA

FCC

Designation Number : KR0158

Test Firm Registration Number : 666061

ISED

Designation Number : KR0158

Test Firm Registration Number : 25944

If you have any comments, please feel free to contact us at the following:

Email: Meyer.Shin@bureauveritas.com

Web Site: www.bureauveritas.co.kr/cps/eaw

The address and road map of all our labs can be found in our web site also.

- End of report -