

Product Name: Smart Phone	Report No: ITEZA2-202400192RF4
Product Model: S118, V31, V31 GT, S110, S110 GT, V31 Plus, V31 Ultra, S118 Pro, S118 S, S118 E, S118 SE, S118 Plus, S118 Max, S118 Ultra	Security Classification: Open
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TIRT Testing Report

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RF TEST REPORT

FCC ID: 2AX4YS118

According to

FCC CFR Title 47 Part 2
FCC CFR Title 47 Part 22 Subpart H
FCC CFR Title 47 Part 24 Subpart E
FCC CFR Title 47 Part 27

Applicant:	Shenzhen DOOGEE Hengtong Technology CO.,LTD
Address:	B, 2/F, Building A4, Silicon Valley Power Digital Industrial Park, No. 22, Longhua New District, Shenzhen, China
Manufacturer:	Shenzhen DOOGEE Hengtong Technology CO.,LTD
Address:	B, 2/F, Building A4, Silicon Valley Power Digital Industrial Park, No. 22, Longhua New District, Shenzhen, China
Sample No:	1000036597
Product Name:	Smart Phone
Brand Name:	DOOGEE
Model No.:	S118, V31, V31 GT, S110, S110 GT, V31 Plus, V31 Ultra, S118 Pro, S118 S, S118 E, S118 SE, S118 Plus, S118 Max, S118 Ultra
Test No.:	S118

Date of Receipt:	2024/06/13
Date of Test:	2024/06/13~2024/06/25
Issued Date:	2024/06/30
Testing Lab:	TIRT

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History of this test report

Original Report Issue Date: 2024.06.30

- No additional attachment
- Additional attachments were issued following record

Attachment No.	Issue Date	Description

1 Test Summary

Test Item	Section in CFR 47	Result
RF Exposure (SAR)	Part 1.1307 Part 2.1093	Pass* (Please refer to SAR Report)
RF Output Power	Part 2.1046 Part 22.913 (a)(2) Part 24.232 (c) Part 27.50(d)	Pass
Peak-to-Average Ratio	Part 2.1046 Part 24.232 (d) Part 27.50(d)	Pass
Modulation Characteristics	Part 2.1047	Pass
99% & -26 dB Occupied Bandwidth	Part 2.1049 Part 22.917 Part 24.238	Pass
Spurious Emissions at Antenna Terminal	Part 2.1051 Part 22.917 (a) Part 24.238 (a) Part 27.53(g)	Pass
Field Strength of Spurious Radiation	Part 2.1053 Part 22.917 (a) Part 24.238 (a) Part 27.53(g)	Pass
Out of band emission, Band Edge	Part 22.917 (a) Part 24.238 (a) Part 27.53(g)	Pass
Frequency stability vs. temperature	Part 2.1055(a)(1)(b) Part 27.54	Pass
Frequency stability vs. voltage	Part 2.1055(d)(1)(2) Part 27.54	Pass

Note: 1.Pass: The EUT complies with the essential requirements in the standard.

2. The conclusion of this test report is judged by actual test data without considering measurement uncertainty.

2 General Information

2.1 General Description of EUT

EUT Name	: Smart Phone
Model No.	: S118, V31, V31 GT, S110, S110 GT, V31 Plus, V31 Ultra, S118 Pro, S118 S, S118 E, S118 SE, S118 Plus, S118 Max, S118 Ultra
DIFF.	: There is no difference except the name of the model. All tests are made with the S118 model.
Power supply	: DC 3.85V from battery or DC 11V from adapter

Support Networks	: GSM, GPRS, EGPRS, WCDMA
Support Bands	: GSM850, PCS1900, WCDMA Band V, WCDMA Band IV, WCDMA Band II
TX Frequency	: GSM850: 824.20MHz-848.80MHz PCS1900: 1850.20MHz-1909.80MHz WCDMA Band V: 826.40MHz -846.60MHz WCDMA Band II: 1852.40MHz -1907.60MHz WCDMA Band IV:1712.4MHz -1752.6MHz
GPRS Class	: 12
EGPRS Class	: 12
Modulation type	: GSM/GPRS: GMSK EGPRS: GMSK/8PSK WCDMA Band II/IV/V: QPSK, 16QAM
Antenna type	: PIFA antenna Maximum Gain is -2.7dBi for GSM 850 Maximum Gain is 1.8dBi for PCS1900 Maximum Gain is -2.7dBi for WCDMA Band V
Antenna gain	: Maximum Gain is 1dBi for WCDMA Band IV Maximum Gain is 1.8dBi for WCDMA Band II Antenna information is provided by applicant. There is WWAN diversity antenna inside the product, which is only for receiving function.
Software version	: DOOGEE-S118-EEA-Android14.0-20240427
Hardware version	: M116-MUB-V1

Remark: 1.The worst-case simultaneous transmission configuration was evaluated with no non-compliance found. Results in this report are only for 2G and 3G function, and there is no other transmitter involved.

Operation Frequency List:

GSM 850		PCS1900		WCDMA Band V		WCDMA Band II	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
128	824.20	512	1850.20	4132	826.40	9262	1852.40
129	824.40	513	1850.40	4133	826.60	9263	1852.60
· ∴	· ∴	· ∴	· ∴	· ∴	· ∴	· ∴	· ∴
189	836.40	660	1879.80	4181	836.20	9399	1879.80
190	836.60	661	1880.00	4182	836.40	9400	1880.00
191	836.80	662	1880.20	4183	836.60	9401	1880.20
· ∴	· ∴	· ∴	· ∴	· ∴	· ∴	· ∴	· ∴
250	848.60	809	1909.60	4232	846.40	9537	1907.40
251	848.80	810	1909.80	4233	846.60	9538	1907.60

Regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Final test channel:

GSM 850		PCS1900		WCDMA Band V		WCDMA Band II	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
128	824.20	512	1850.20	4132	826.40	9262	1852.40
190	836.60	661	1880.00	4183	836.60	9400	1880.00
251	848.80	810	1909.80	4233	846.60	9538	1907.60
WCDMA Band IV							
Channel		Frequency (MHz)					
1312		1712.4					
1450		1740.0					
1513		1752.6					

2.2 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is filing to comply with Section Part 22 subpart H and Part 24 subpart E of the FCC CFR 47 Rules.

2.3 Test Methodology

Both conducted and radiated testing were performed according to the procedures document on TIA/EIA 603 and FCC CFR 47.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055 and 2.1057

2.4 Test Facility

Company:	Beijing TIRT Technology Service Co.,Ltd Shenzhen
Address:	104 Building C, Xinmingsheng Industrial Park No.132, Zhangge Old Village East Zone, Zhangge Community, Fucheng Street, Longhua District, Shenzhen, Guangdong, P. R. China
CNAS Registration Number:	CNAS L14158
A2LA Registration Number:	6049.01
FCC Accredited Lab.Designation Number:	CN1366
FCC Test Firm Registration Number:	820690
Telephone:	+86-0755-27087573

2.5 Measurement Uncertainty

Uncertainty	
Parameter	Uncertainty
Occupied Channel Bandwidth	± 142.12 KHz
RF power conducted	± 0.74 dB
RF power radiated	± 3.25 dB
Spurious emissions, conducted	± 1.78 dB
Spurious emissions, radiated (9KHz~30MHz)	± 2.56 dB
Spurious emissions, radiated (30MHz~1GHz)	± 4.6 dB
Spurious emissions, radiated (Above 1GHz)	± 4.9 dB
Conduction Emissions(150kHz~30MHz)	± 3.1 dB
Humidity	$\pm 4.6\%$
Temperature	$\pm 0.7^{\circ}\text{C}$
Time	$\pm 1.25\%$

2.6 Accessories of Device (EUT)

Accessories	Adapter
Manufacturer	/
Model	TP303C-US
Ratings	Input: AC100-240V~ 50/60Hz 0.7A Max
	Output: USB-C: 5.0V=3.0A 15.0W; 9.0V=3.0A 27.0W; 12.0V=2.5A 30.0W; 15.0V=2.0A 30.0W, 20.0V=1.5A 30.0W
	PPS: 5.0V-11.0V=3.0A 33.0W
	Power: 33.0W

3 Test Instruments list

Name of Equipment	Manufacturer	Model Number	Serial Number	Last Calibration	Due Calibration
EMI Receiver	Rohde&Schwarz	ESIB 40	YH-TIRT-SAC-966-20220911	2024/01/05	2025/01/04
Integral Antenna	Schwarzbeck	VULB 9163	01314	2022.12.11	2024.12.10
Integral Antenna	Rohde&Schwarz	HF907	RSM2991424	2022.12.11	2024.12.10
Preamplifier	Emtrace	RP01A	'02017	2024/01/05	2025/01/04
Preamplifier	Schwarzbeck	BBV9744	00143	2024/01/05	2025/01/04
Loop Antenna	ZHINAN	ZN30900A	12024	2024/01/05	2025/01/04
Exposure Level Tester	narda	ELT-400	N-0925	2024/01/05	2025/01/04
Horn Antenna	Schwarzbeck	BBHA9170	00956	2024/01/05	2025/01/04
RF Cable	/	LMR400UF-NMNM-7.0M	/	2024/01/05	2025/01/04
RF Cable	/	SFT2050PUR-NMNM-7.0M	/	2024/01/05	2025/01/04
EMI Receiver	Rohde&Schwarz	ESR7	1316.3003K07-102611-mk	2023/11/02	2024/11/01
LISN	Rohde&Schwarz	ENV216	3560.655.12-102915-Bp	2023/11/02	2024/11/01
ISN	Schwarzbeck	ENY81	1309.8510.03	2024/01/05	2025/01/04
ISN	Schwarzbeck	ENY81-CAT6	1309.8526.03-101976-kh	2024/01/05	2025/01/04
RF Cable	\	SFT2050PUR-NMNM-2.0M	\	2024/01/05	2025/01/04
CMW500	ROHDE&SCHWARZ	CMW500	120434	2024/01/05	2025/01/04
Spectrum analyzer	ROHDE&SCHWARZ	FSU26	200732	2024/01/05	2025/01/04
Spectrum analyzer	ROHDE&SCHWARZ	FSV40-N	101722	2024/01/05	2025/01/04
vector Signal Generator	KEYSIGHT	N5182B	MY56200458	2024/01/05	2025/01/04
vector Signal Generator	HEWLETT PACKARD	83752A	3610A02458	2024/01/05	2025/01/04
Filter	HEWLETT PACKARD	JS0806-F	19K8060209	2024/01/05	2025/01/04
Wireless comprehensive tester	ANRISTU	MT8821C	SN6262170409	2024/01/05	2025/01/04

Wireless comprehensive tester	ANRISTU	MT8000A	SN6262166782	2024/01/05	2025/01/04
ROB ANT	Hubei world for communication Co., LTD	SW-700/2700XP-4	/	/	/

4 System test configuration

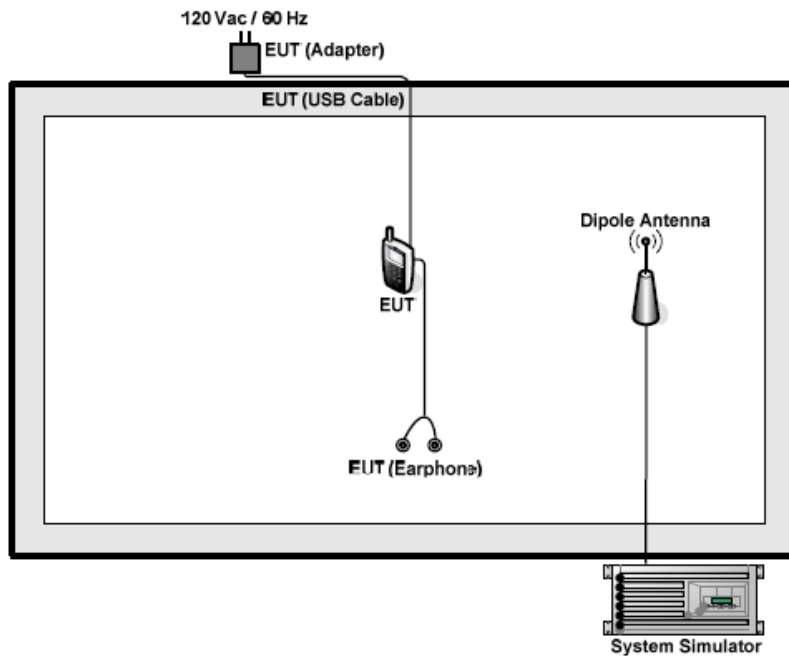
4.1 Test mode

During all testing, EUT is in link mode with base station emulator at maximum power level. The spurious emission measurements were carried out in semi-anechoic chamber with 3-meter test range, and EUT is rotated on three test planes to find out the worst emission.

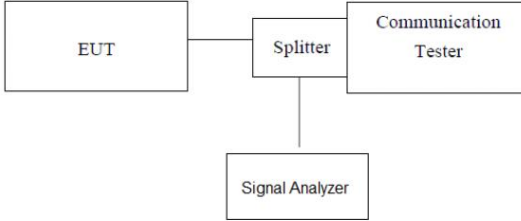
Test modes		
Band	Radiated	Conducted
GSM 850	■ GSM link ■ GPRS 1 link ■ EPRS 1 link	■ GSM link ■ GPRS 1 link ■ EGPRS 1 link
PCS 1900	■ GSM link ■ GPRS 1 link ■ EGPRS 1 link	■ GSM link ■ GPRS 1 link ■ EGPRS 1 link
WCDMA II	■ RMC 12.2Kbps link	■ RMC 12.2Kbps link
WCDMA Band IV	■ RMC 12.2Kbps link	■ RMC 12.2Kbps link
WCDMA Band V	■ RMC 12.2Kbps link	■ RMC 12.2Kbps link

Note: The maximum power levels are GSM mode for GMSK link, GPRS multi-slot class 8 mode for GMSK link, EGPRS multi-slot class 8 mode for 8PSK link, RMC12.2Kbps mode for WCDMA Band V/II. Only these modes were used for all tests.

4.2 Configuration of Tested System



4.3 Conducted AV Output Power

Test Requirement:	FCC part22.913(a) and FCC part24.232(b),FCC part 27.50 (d)(4)
Test Method:	FCC part2.1046
Limit:	GSM850, WCDMA Band V: 7W(38.45dbm) PCS1900, WCDMA Band II: 2W(33.01dbm) WCDMA Band IV: 1W(30.00dbm)
Test setup:	 <i>Note: Measurement setup for testing on Antenna connector</i>
Test Procedure:	1. The transmitter output port was connected to base station. 2. The RF output of EUT was connected to the Signal Analyzer by RF cable and attenuator, the path loss was compensated to the results for each measurement. 3. Set EUT at maximum power through base station. 4. Select lowest, middle, and highest channels for each band and different modulation. 5. Measure the maximum burst average power.
Test Instruments:	Refer to section 3 for details
Test mode:	Refer to section 4.1 for details
Test results:	Pass

Measurement Data

Band	Channel	ERP/EIRP(dBm)	Limit(dBm)	Verdict
GSM850	128	31.83	38.45	PASS
GSM850	190	32.12	38.45	PASS
GSM850	251	32.27	38.45	PASS

Band	Channel	Up Slot Num	Power(dBm)	Limit(dBm)	Verdict
GPRS850	128	1	31.82	38.45	PASS
GPRS850	128	2	29.83	38.45	PASS
GPRS850	128	3	27.55	38.45	PASS
GPRS850	128	4	25.42	38.45	PASS
GPRS850	190	1	32.04	38.45	PASS
GPRS850	190	2	29.73	38.45	PASS
GPRS850	190	3	27.45	38.45	PASS
GPRS850	190	4	25.29	38.45	PASS
GPRS850	251	1	32.14	38.45	PASS
GPRS850	251	2	29.67	38.45	PASS
GPRS850	251	3	27.46	38.45	PASS
GPRS850	251	4	25.22	38.45	PASS

Band	Channel	Up Slot Num	Power(dBm)	Limit(dBm)	Verdict
EGPRS850	128	1	26.15	38.45	PASS
EGPRS850	128	2	24.71	38.45	PASS
EGPRS850	128	3	22.07	38.45	PASS
EGPRS850	128	4	19.48	38.45	PASS
EGPRS850	190	1	25.99	38.45	PASS
EGPRS850	190	2	24.64	38.45	PASS
EGPRS850	190	3	22.09	38.45	PASS
EGPRS850	190	4	19.47	38.45	PASS
EGPRS850	251	1	25.94	38.45	PASS
EGPRS850	251	2	24.60	38.45	PASS
EGPRS850	251	3	22.10	38.45	PASS
EGPRS850	251	4	19.46	38.45	PASS

Band	Channel	ERP/EIRP(dBm)	Limit(dBm)	Verdict
GSM1900	512	28.58	33	PASS
GSM1900	661	28.54	33	PASS
GSM1900	810	28.19	33	PASS

Band	Channel	Up Slot Num	Power(dBm)	Limit(dBm)	Verdict
GPRS1900	512	1	28.56	33	PASS
GPRS1900	512	2	26.41	33	PASS
GPRS1900	512	3	24.84	33	PASS
GPRS1900	512	4	22.60	33	PASS
GPRS1900	661	1	28.45	33	PASS
GPRS1900	661	2	25.91	33	PASS
GPRS1900	661	3	24.35	33	PASS
GPRS1900	661	4	22.06	33	PASS
GPRS1900	810	1	28.06	33	PASS
GPRS1900	810	2	25.09	33	PASS
GPRS1900	810	3	23.57	33	PASS
GPRS1900	810	4	21.30	33	PASS

Band	Channel	Up Slot Num	Power(dBm)	Limit(dBm)	Verdict
EGPRS1900	512	1	26.28	33	PASS
EGPRS1900	512	2	24.53	33	PASS
EGPRS1900	512	3	22.34	33	PASS
EGPRS1900	512	4	20.16	33	PASS
EGPRS1900	661	1	26.16	33	PASS
EGPRS1900	661	2	24.59	33	PASS
EGPRS1900	661	3	22.44	33	PASS
EGPRS1900	661	4	20.32	33	PASS
EGPRS1900	810	1	25.70	33	PASS
EGPRS1900	810	2	24.18	33	PASS
EGPRS1900	810	3	22.00	33	PASS
EGPRS1900	810	4	20.01	33	PASS

Band	Channel	Power(dBm)	Limit(dBm)	Verdict
Band2	9262	22.09	33	PASS
Band2	9400	22.02	33	PASS
Band2	9538	21.61	33	PASS

Band	Channel	SubTest	Power(dBm)	Limit(dBm)	Verdict
Band2	9262	1	22.21	33	PASS
Band2	9400	1	22.31	33	PASS
Band2	9538	1	21.72	33	PASS
Band2	9262	2	21.95	33	PASS
Band2	9400	2	22.04	33	PASS
Band2	9538	2	21.47	33	PASS
Band2	9262	3	21.75	33	PASS
Band2	9400	3	21.86	33	PASS
Band2	9538	3	21.30	33	PASS
Band2	9262	4	21.77	33	PASS
Band2	9400	4	21.89	33	PASS
Band2	9538	4	21.34	33	PASS

Band	Channel	SubTest	Power(dBm)	Limit(dBm)	Verdict
Band2	9262	1	20.09	33	PASS
Band2	9400	1	20.06	33	PASS
Band2	9538	1	19.27	33	PASS
Band2	9262	2	20.18	33	PASS
Band2	9400	2	20.28	33	PASS
Band2	9538	2	19.90	33	PASS
Band2	9262	3	20.63	33	PASS
Band2	9400	3	20.25	33	PASS
Band2	9538	3	19.86	33	PASS
Band2	9262	4	20.65	33	PASS
Band2	9400	4	20.55	33	PASS
Band2	9538	4	20.12	33	PASS
Band2	9262	5	22.24	33	PASS
Band2	9400	5	22.31	33	PASS
Band2	9538	5	21.73	33	PASS

Band	Channel	Power(dBm)	Limit(dBm)	Verdict
Band4	1312	22.31	30	PASS
Band4	1413	22.08	30	PASS
Band4	1513	22.24	30	PASS

Band	Channel	SubTest	Power(dBm)	Limit(dBm)	Verdict
Band4	1312	1	22.07	30	PASS
Band4	1413	1	22.71	30	PASS
Band4	1513	1	22.08	30	PASS
Band4	1312	2	22.15	30	PASS
Band4	1413	2	22.76	30	PASS
Band4	1513	2	22.20	30	PASS
Band4	1312	3	22.14	30	PASS
Band4	1413	3	22.69	30	PASS
Band4	1513	3	22.17	30	PASS
Band4	1312	4	22.16	30	PASS
Band4	1413	4	22.70	30	PASS
Band4	1513	4	22.14	30	PASS

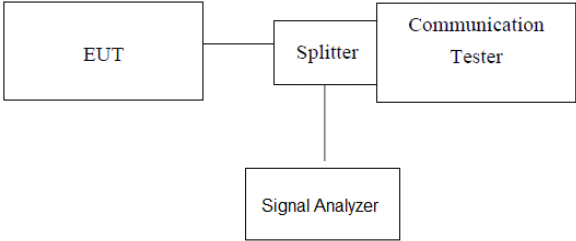
Band	Channel	SubTest	Power(dBm)	Limit(dBm)	Verdict
Band4	1312	1	21.97	30	PASS
Band4	1413	1	22.78	30	PASS
Band4	1513	1	22.17	30	PASS
Band4	1312	2	21.84	30	PASS
Band4	1413	2	22.19	30	PASS
Band4	1513	2	21.74	30	PASS
Band4	1312	3	22.18	30	PASS
Band4	1413	3	22.68	30	PASS
Band4	1513	3	22.20	30	PASS
Band4	1312	4	22.26	30	PASS
Band4	1413	4	22.74	30	PASS
Band4	1513	4	22.29	30	PASS
Band4	1312	5	22.18	30	PASS
Band4	1413	5	22.75	30	PASS
Band4	1513	5	22.12	30	PASS

Band	Channel	Power(dBm)	Limit(dBm)	Verdict
Band5	4132	23.70	38.45	PASS
Band5	4182	23.67	38.45	PASS
Band5	4233	23.58	38.45	PASS

Band	Channel	SubTest	Power(dBm)	Limit(dBm)	Verdict
Band5	4132	1	22.01	38.45	PASS
Band5	4182	1	22.53	38.45	PASS
Band5	4233	1	22.01	38.45	PASS
Band5	4132	2	21.86	38.45	PASS
Band5	4182	2	22.31	38.45	PASS
Band5	4233	2	21.76	38.45	PASS
Band5	4132	3	21.45	38.45	PASS
Band5	4182	3	21.90	38.45	PASS
Band5	4233	3	21.26	38.45	PASS
Band5	4132	4	21.49	38.45	PASS
Band5	4182	4	21.91	38.45	PASS
Band5	4233	4	21.27	38.45	PASS

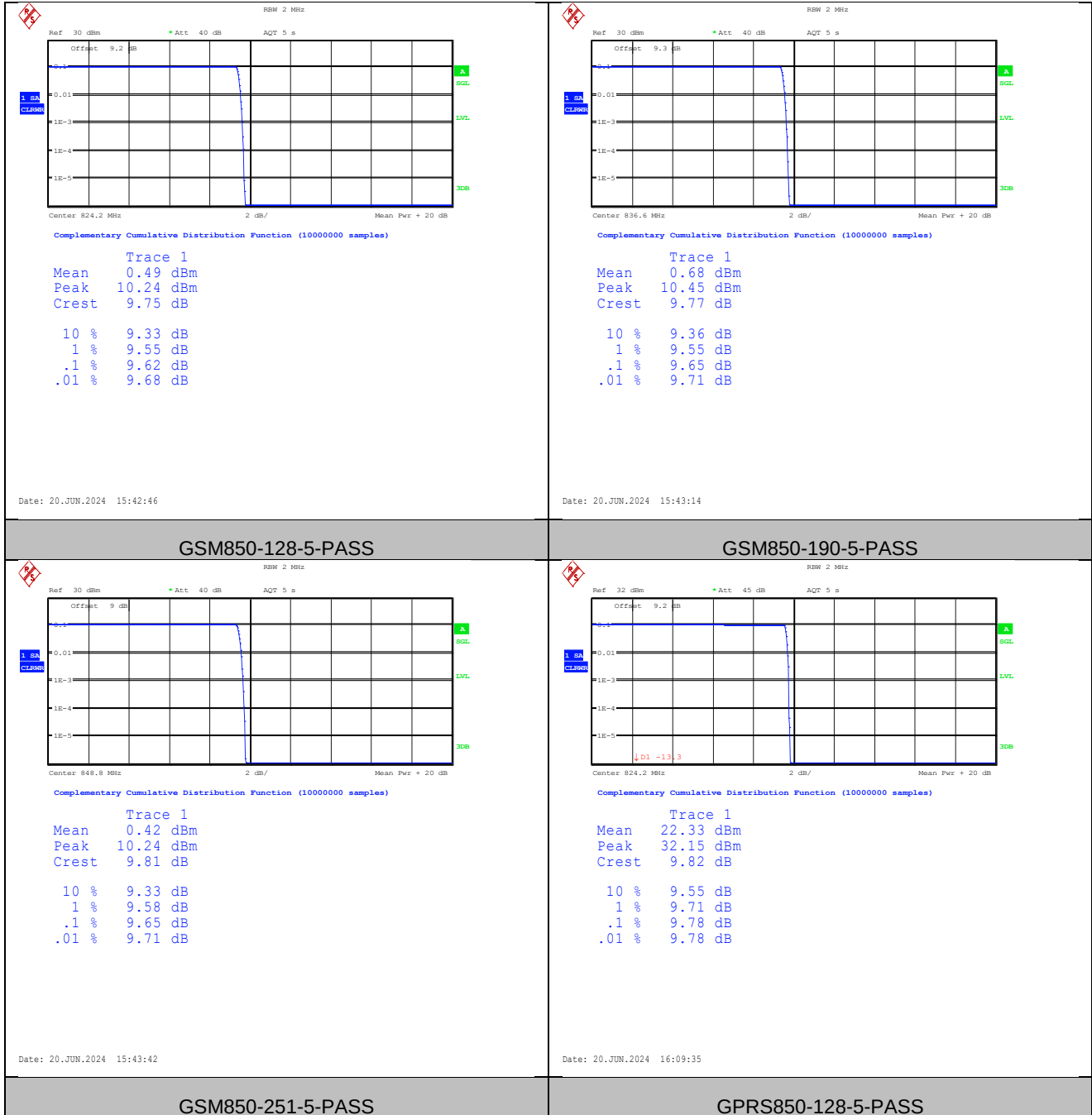
Band	Channel	SubTest	Power(dBm)	Limit(dBm)	Verdict
Band5	4132	1	20.04	38.45	PASS
Band5	4182	1	20.55	38.45	PASS
Band5	4233	1	20.12	38.45	PASS
Band5	4132	2	20.83	38.45	PASS
Band5	4182	2	20.93	38.45	PASS
Band5	4233	2	20.49	38.45	PASS
Band5	4132	3	20.35	38.45	PASS
Band5	4182	3	20.89	38.45	PASS
Band5	4233	3	20.44	38.45	PASS
Band5	4132	4	20.01	38.45	PASS
Band5	4182	4	20.70	38.45	PASS
Band5	4233	4	20.27	38.45	PASS
Band5	4132	5	22.34	38.45	PASS
Band5	4182	5	22.82	38.45	PASS
Band5	4233	5	22.26	38.45	PASS

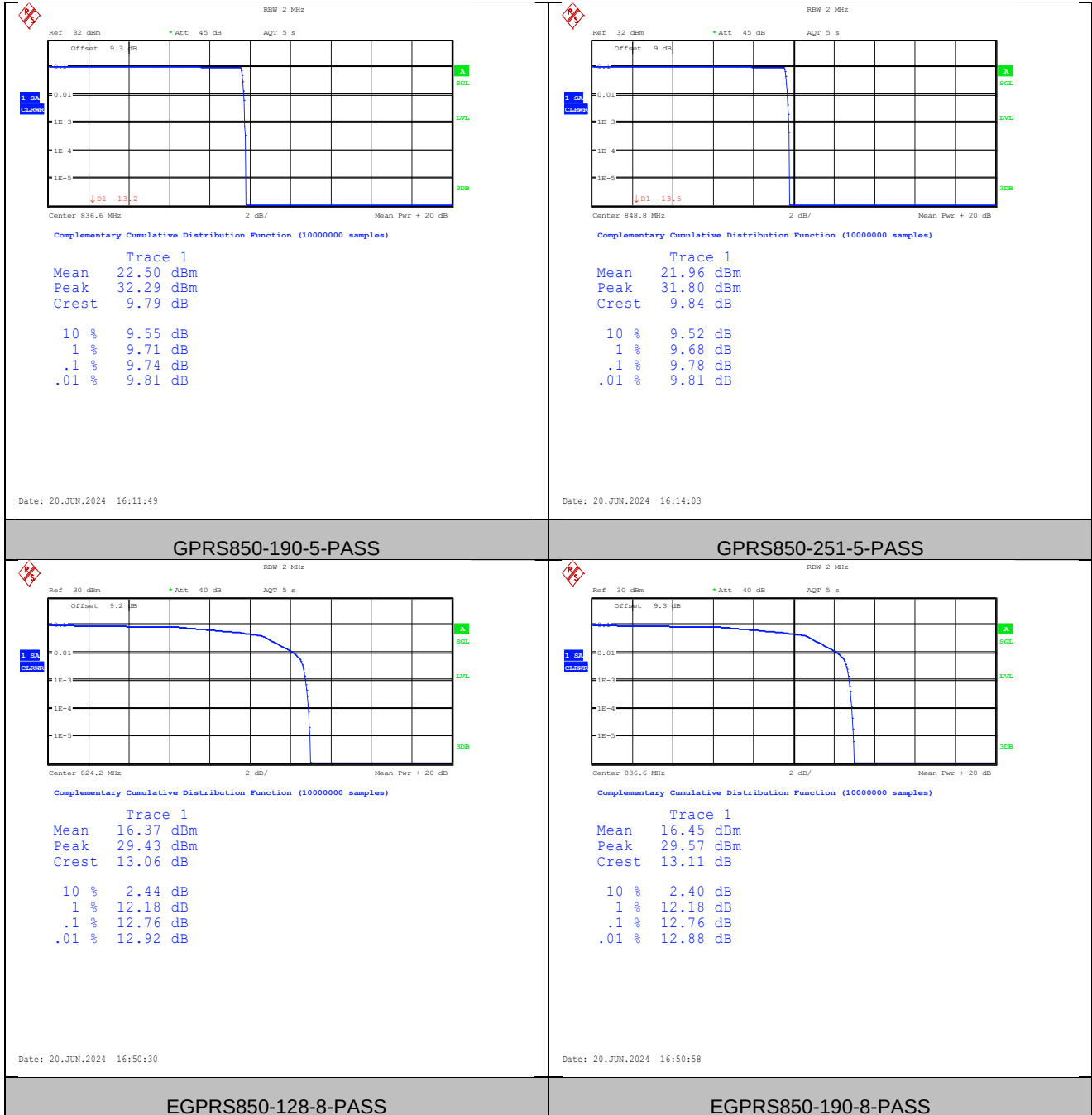
4.4 Peak-to-Average Ratio

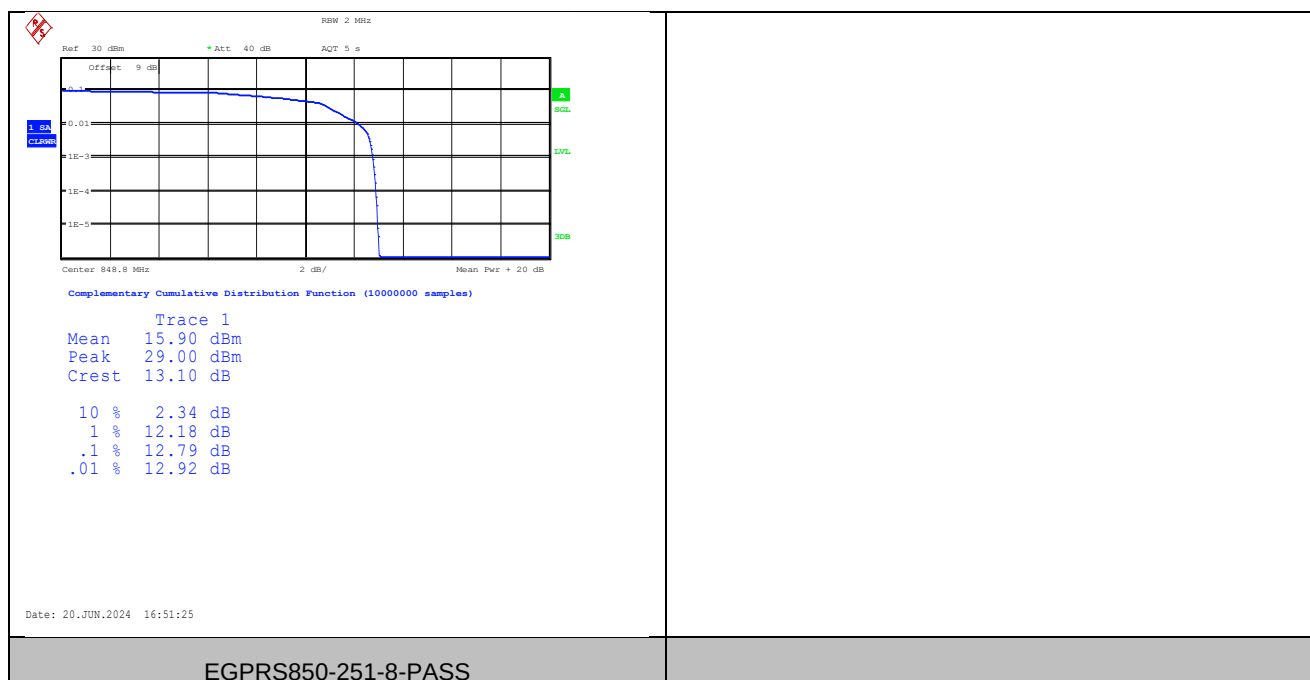
Test Requirement:	FCC part22.913(d), FCC part24.232(d), FCC part27.50(a)
Test Method:	FCC part2.1046
Limit:	13db
Test setup:	 <i>Note: Measurement setup for testing on Antenna connector</i>
Test Procedure:	1. The transmitter output port was connected to base station. 2. The RF output of EUT was connected to the Signal Analyzer by RF cable and attenuator, the path loss was compensated to the results for each measurement. 3. Set EUT at maximum power through base station. 4. Select lowest, middle, and highest channels for each band and different modulation. 5. Measure the maximum burst average power. 6. Record the maximum peak-to-average ratio value.
Test Instruments:	Refer to section 3 for details
Test mode:	Refer to section 4.1 for details
Test results:	Pass

Measurement data

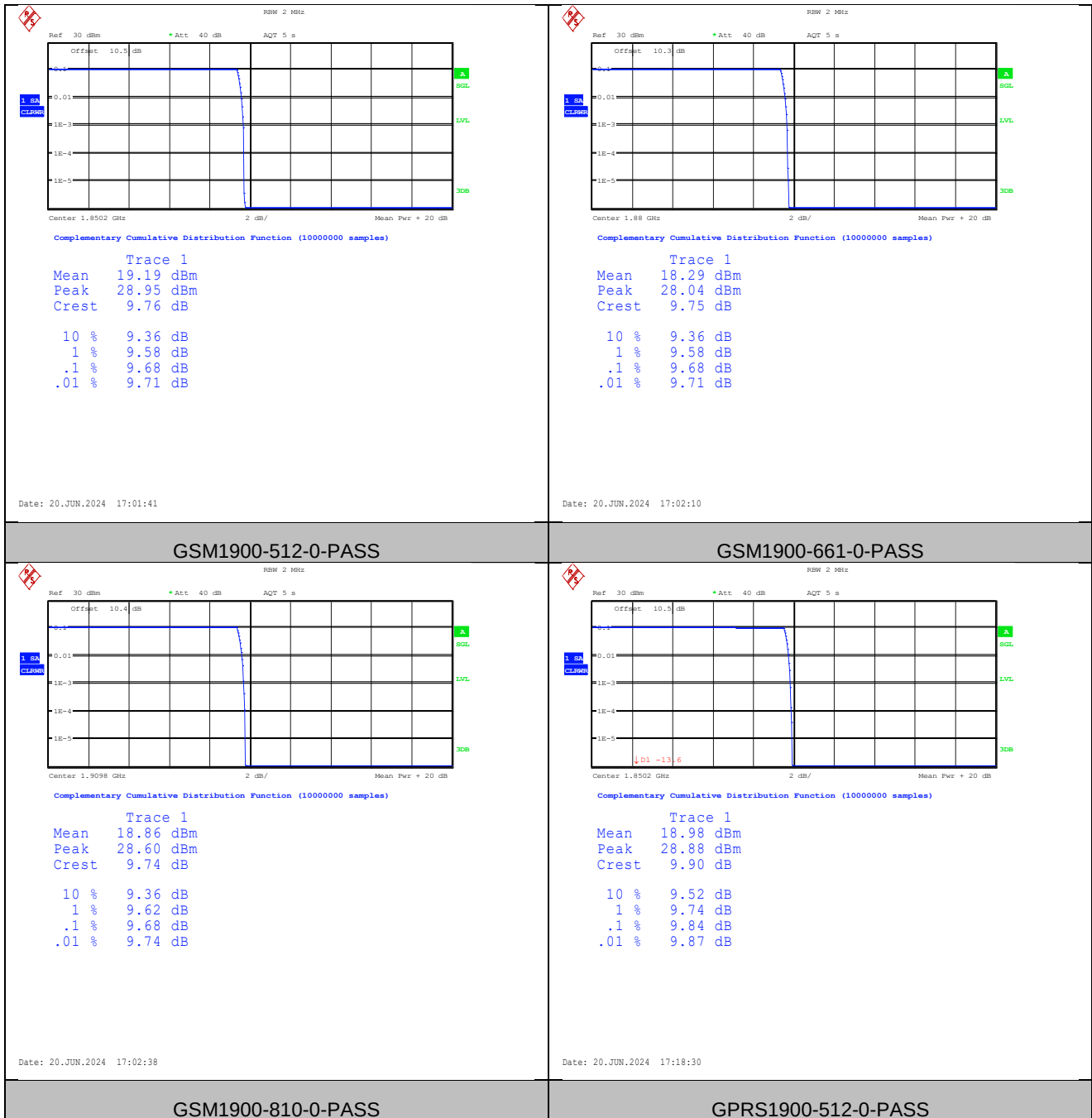
Band	Channel	Result(dB)	Limit(dB)	Verdict
GSM850	128	9.62	13	PASS
GSM850	190	9.65	13	PASS
GSM850	251	9.65	13	PASS
GPRS850	128	9.78	13	PASS
GPRS850	190	9.74	13	PASS
GPRS850	251	9.78	13	PASS
EGPRS850	128	12.76	13	PASS
EGPRS850	190	12.76	13	PASS
EGPRS850	251	12.79	13	PASS

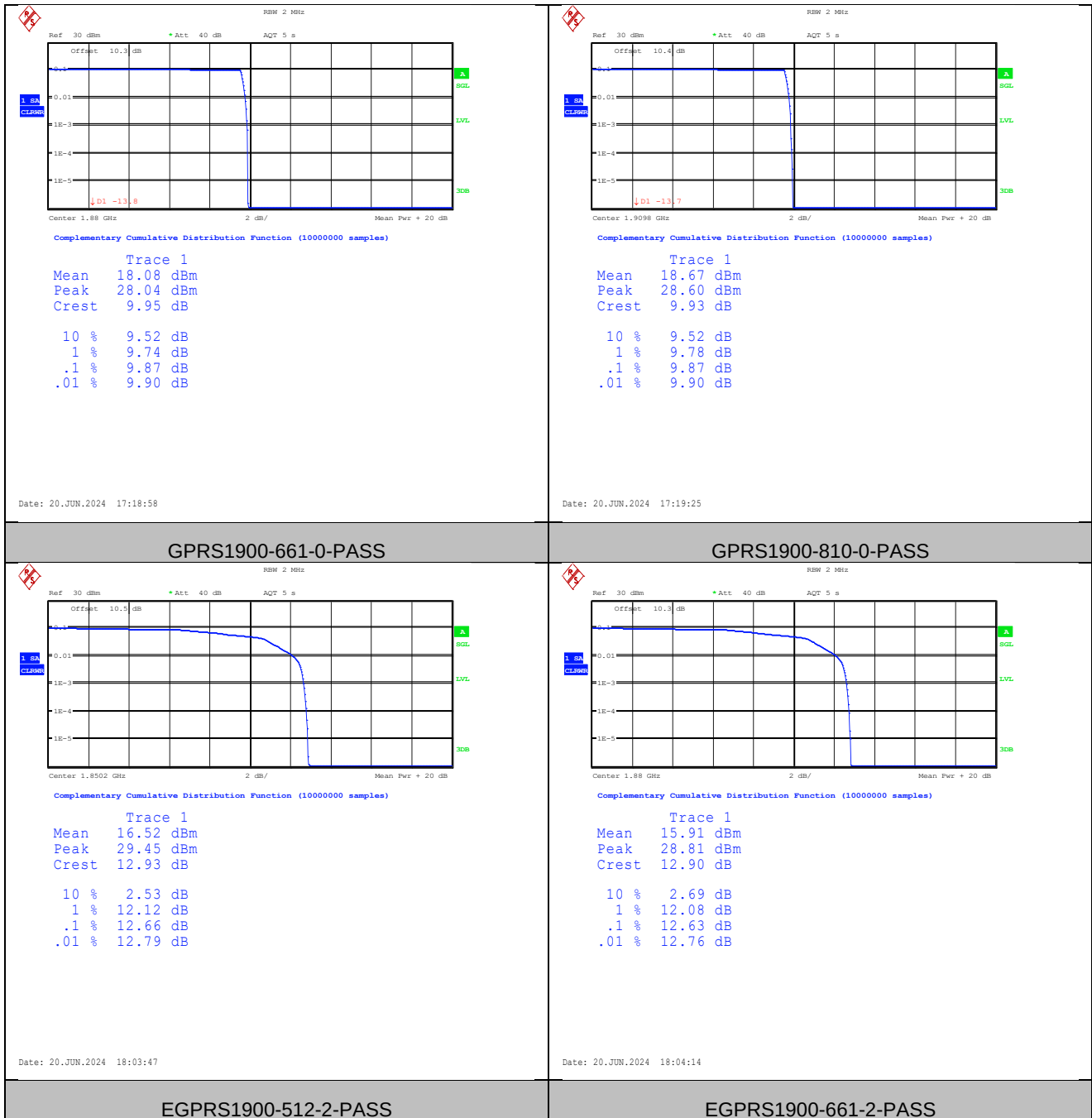


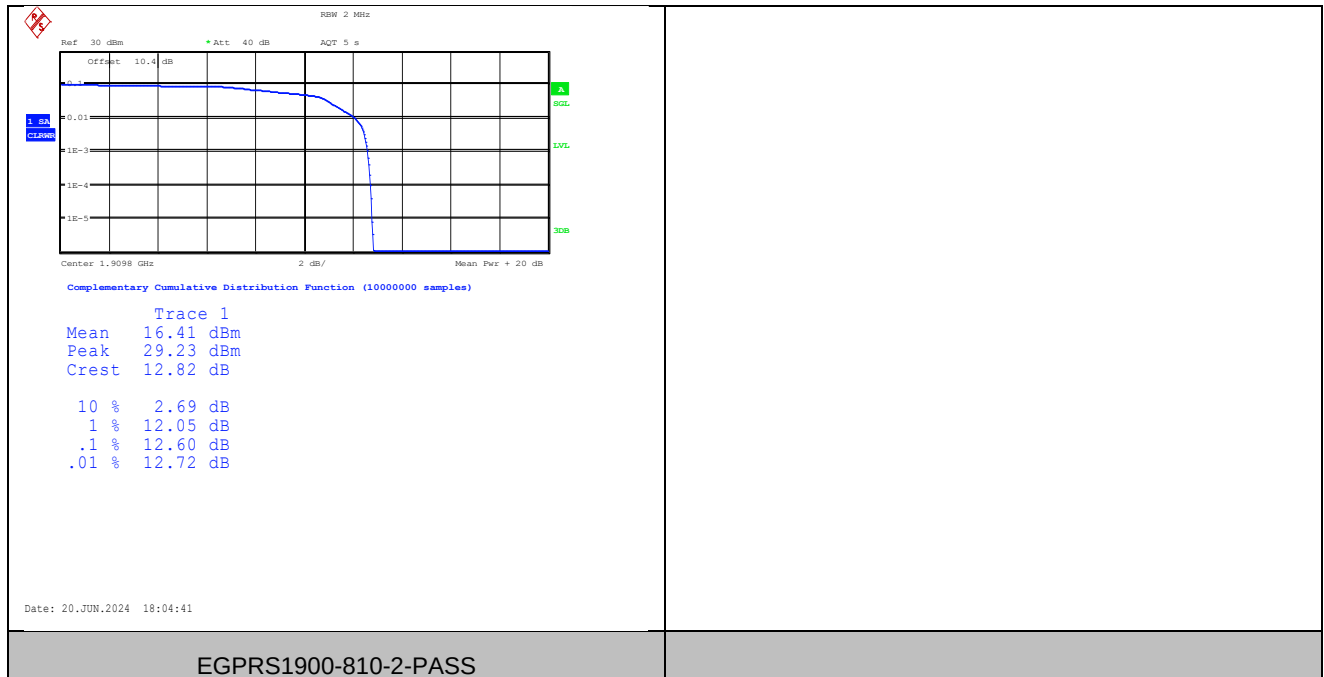




Band	Channel	Result(dB)	Limit(dB)	Verdict
GSM1900	512	9.68	13	PASS
GSM1900	661	9.68	13	PASS
GSM1900	810	9.68	13	PASS
GPRS1900	512	9.84	13	PASS
GPRS1900	661	9.87	13	PASS
GPRS1900	810	9.87	13	PASS
EGPRS1900	512	12.66	13	PASS
EGPRS1900	661	12.63	13	PASS
EGPRS1900	810	12.60	13	PASS



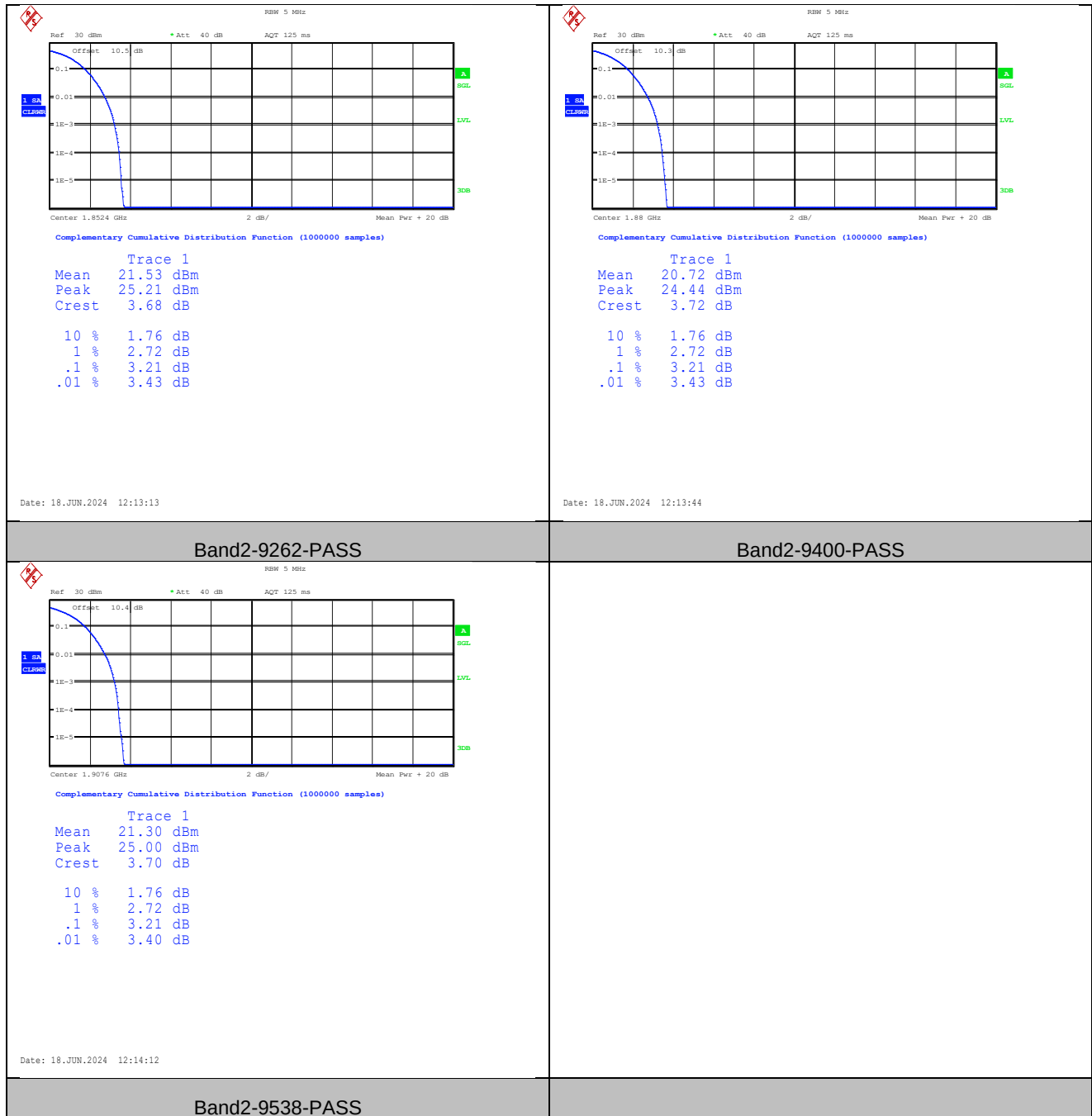


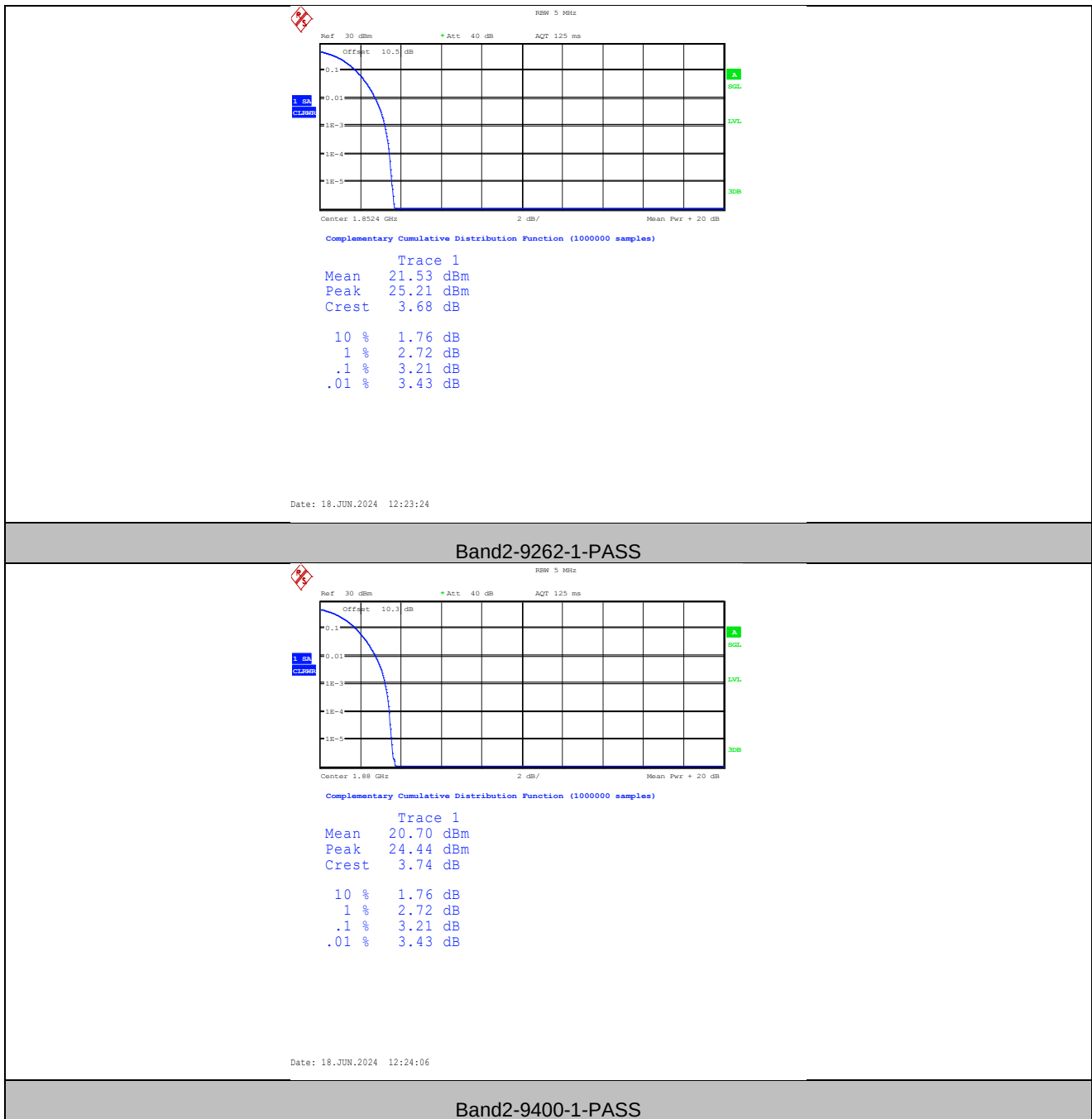


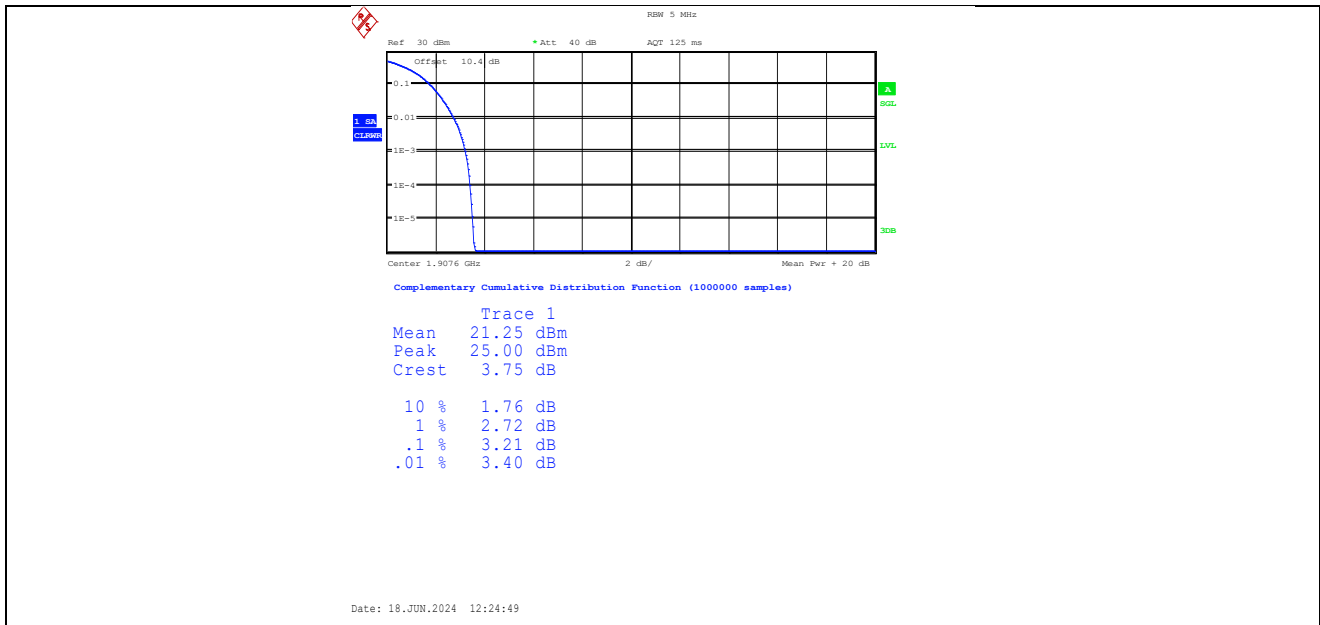
Band	Channel	Peak-to-Average Ratio(dB)	Limit(dB)	Verdict
Band2	9262	3.21	13	PASS
Band2	9400	3.21	13	PASS
Band2	9538	3.21	13	PASS

Band	Channel	SubTest	Peak-to-Average Ratio(dB)	Limit(dB)	Verdict
Band2	9262	1	3.21	13	PASS
Band2	9400	1	3.21	13	PASS
Band2	9538	1	3.21	13	PASS
Band2	9262	2	3.21	13	PASS
Band2	9400	2	3.24	13	PASS
Band2	9538	2	3.21	13	PASS
Band2	9262	3	3.21	13	PASS
Band2	9400	3	3.21	13	PASS
Band2	9538	3	3.21	13	PASS
Band2	9262	4	3.21	13	PASS
Band2	9400	4	3.21	13	PASS
Band2	9538	4	3.21	13	PASS

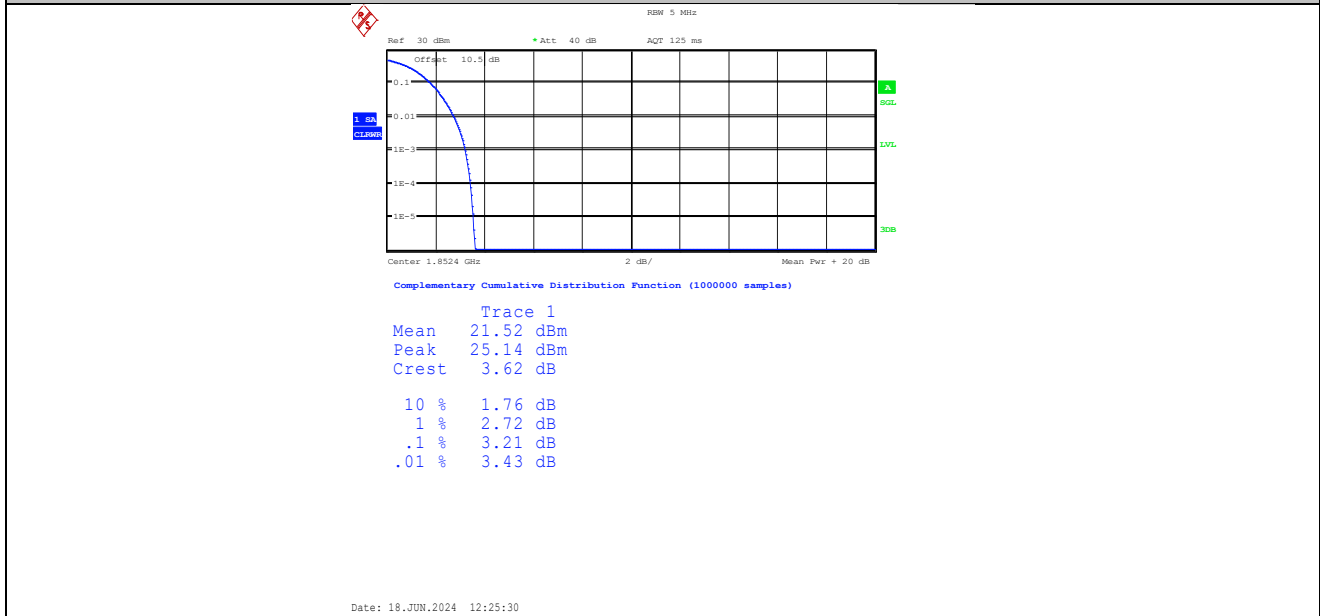
Band	Channel	SubTest	Peak-to-Average Ratio(dB)	Limit(dB)	Verdict
Band2	9262	1	4.42	13	PASS
Band2	9400	1	4.33	13	PASS
Band2	9538	1	4.39	13	PASS
Band2	9262	2	5.45	13	PASS
Band2	9400	2	5.29	13	PASS
Band2	9538	2	5.38	13	PASS
Band2	9262	3	5.06	13	PASS
Band2	9400	3	4.87	13	PASS
Band2	9538	3	5.03	13	PASS
Band2	9262	4	5.51	13	PASS
Band2	9400	4	5.26	13	PASS
Band2	9538	4	5.45	13	PASS
Band2	9262	5	4.36	13	PASS
Band2	9400	5	4.13	13	PASS
Band2	9538	5	4.29	13	PASS



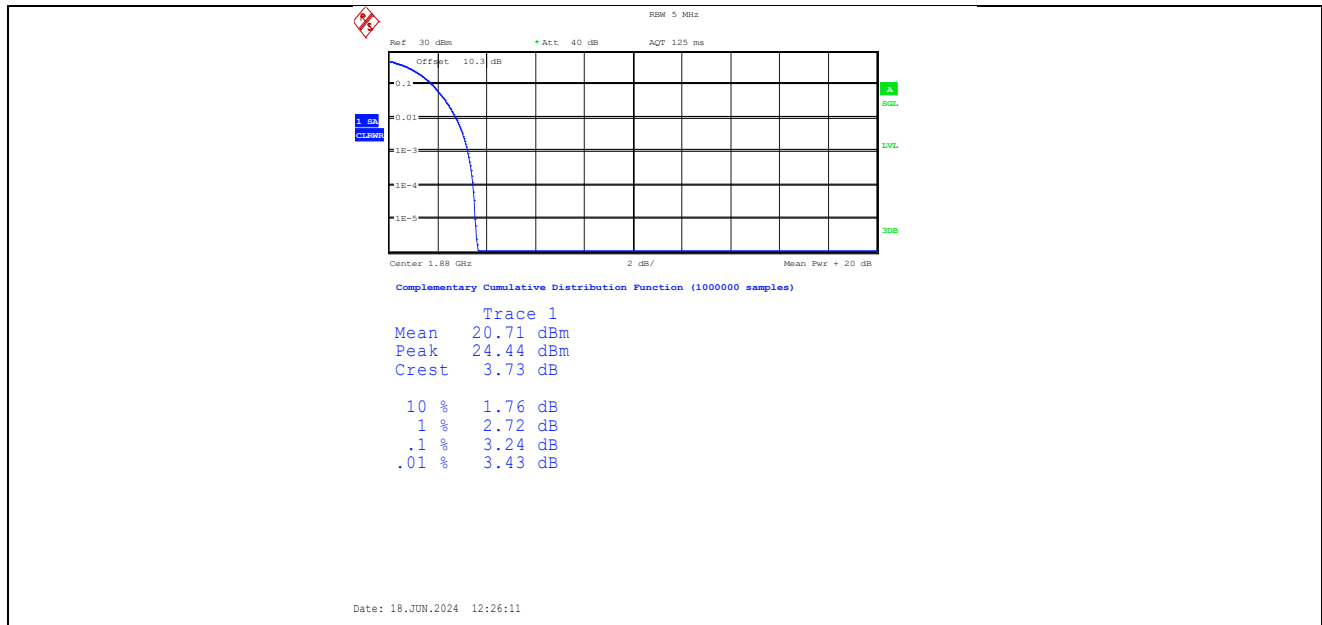




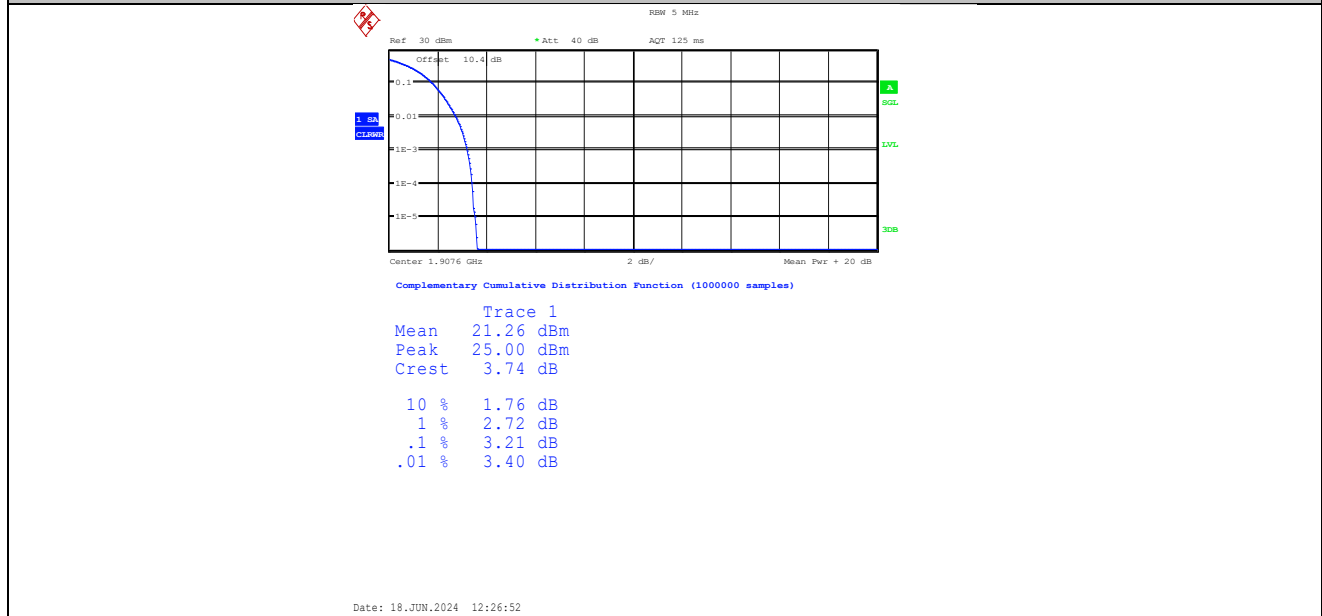
Band2-9538-1-PASS



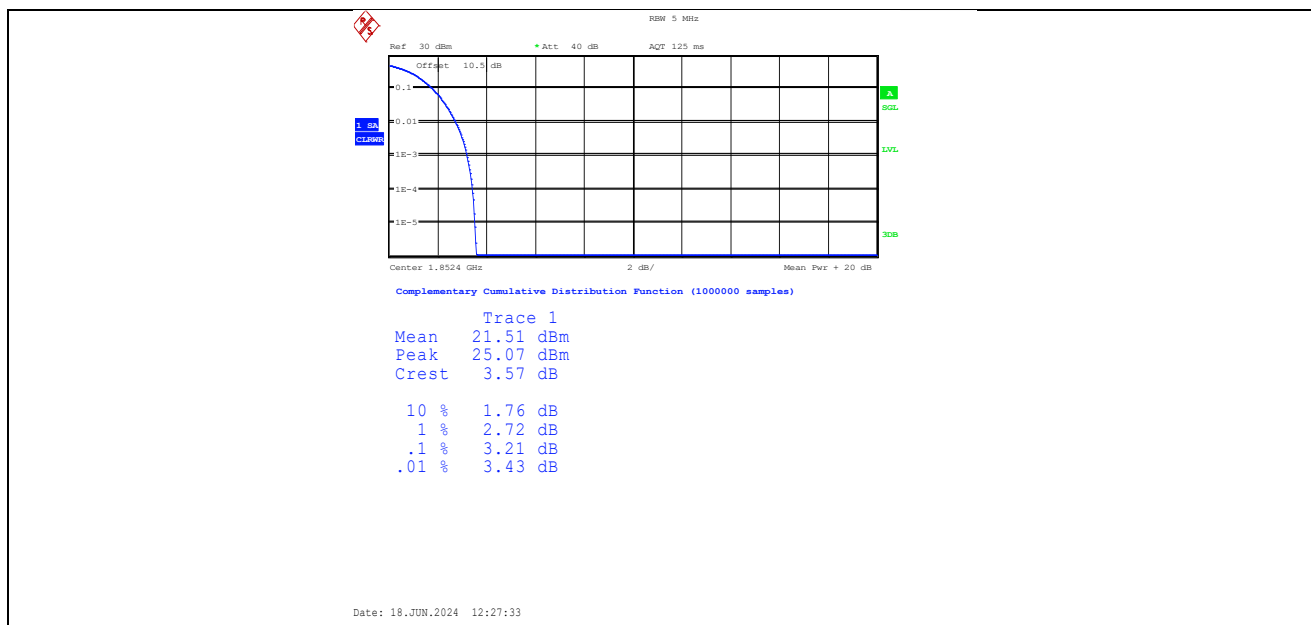
Band2-9262-2-PASS



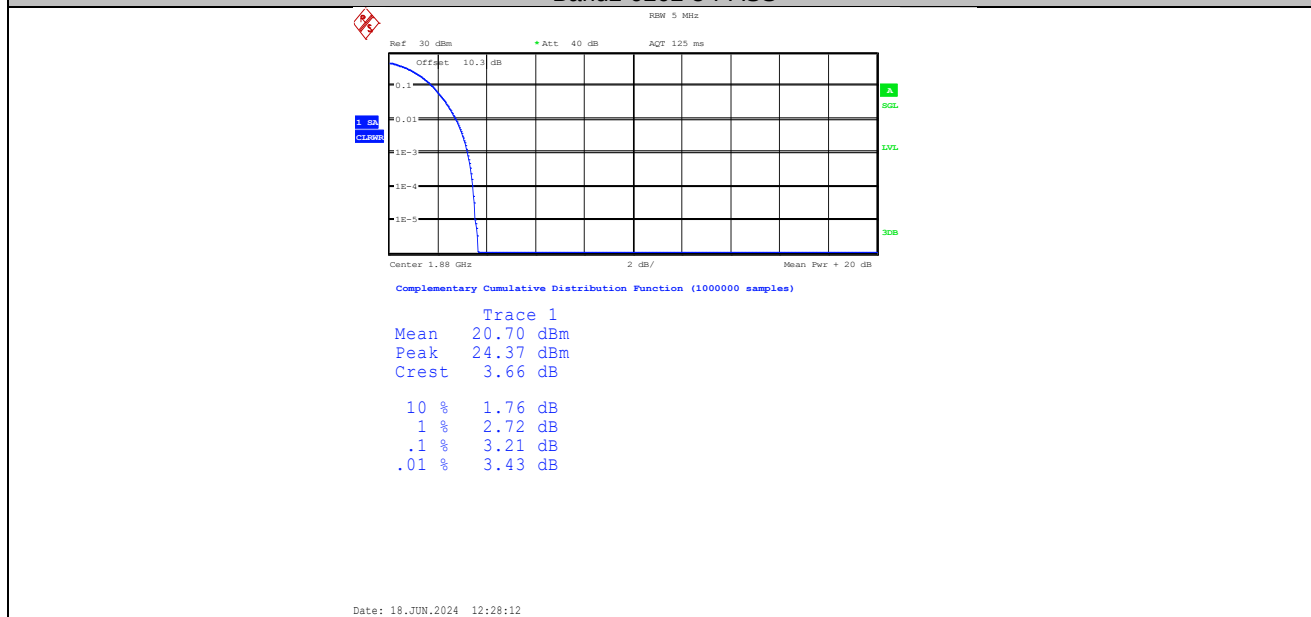
Band2-9400-2-PASS



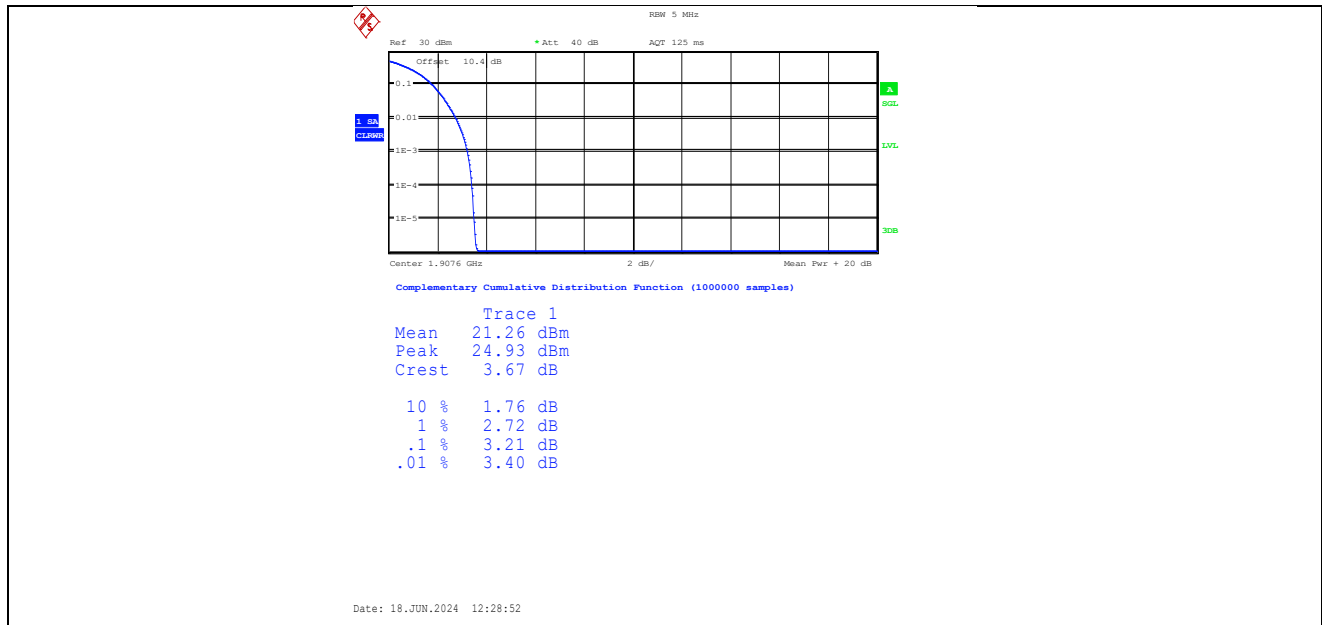
Band2-9538-2-PASS



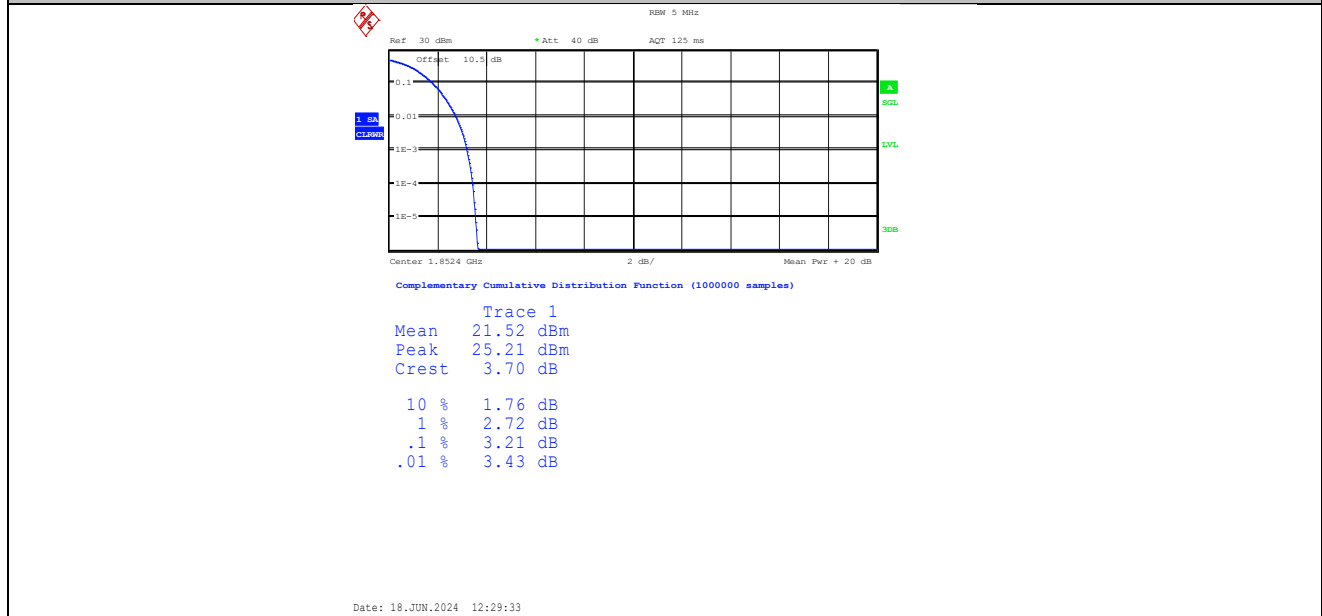
Band2-9262-3-PASS



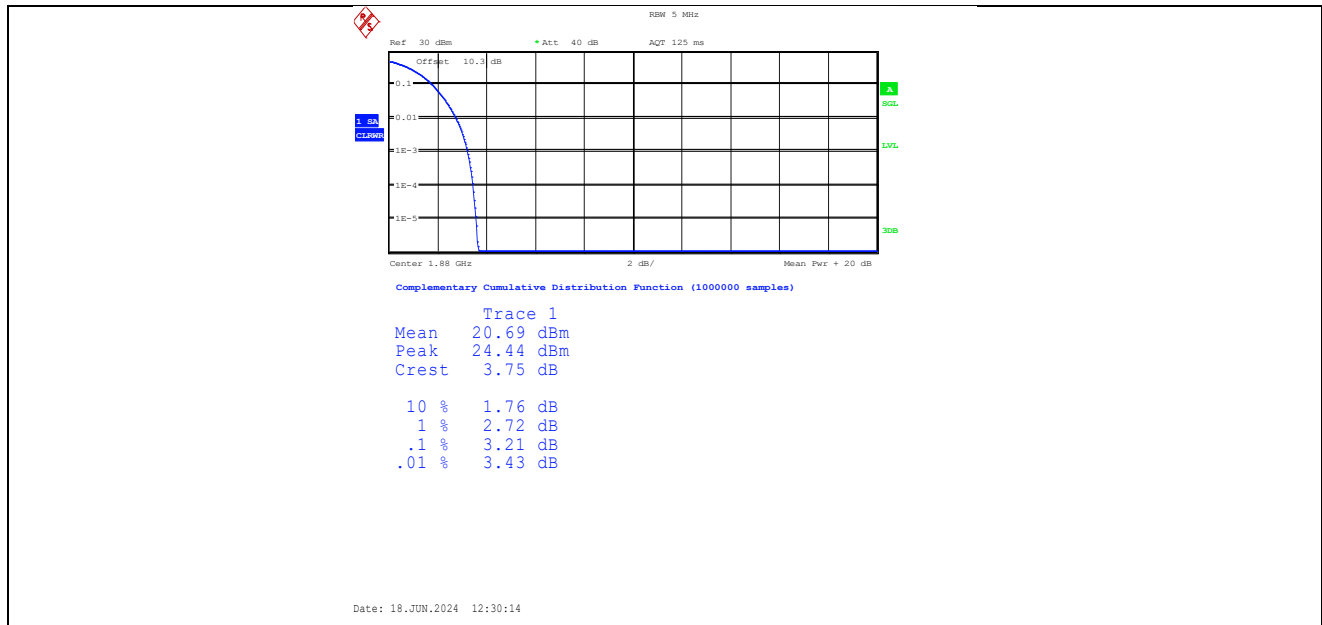
Band2-9400-3-PASS



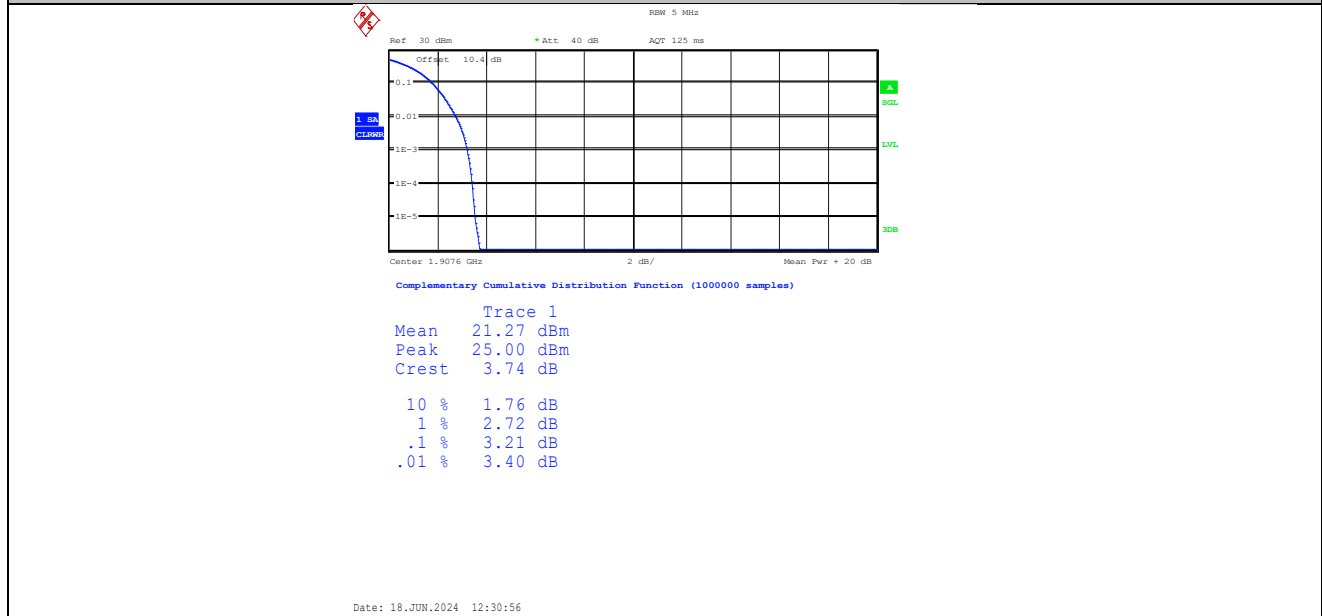
Band2-9538-3-PASS



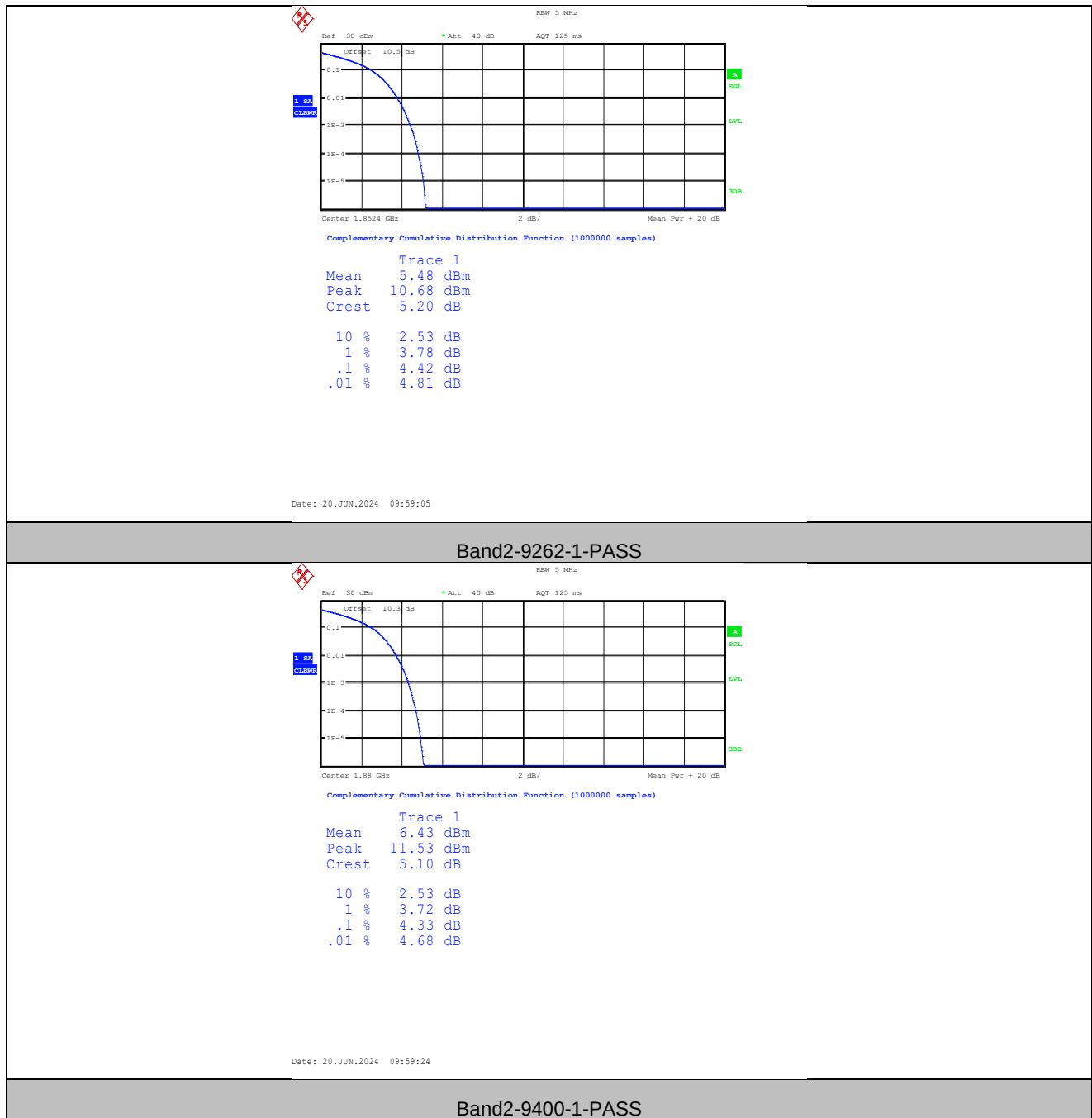
Band2-9262-4-PASS

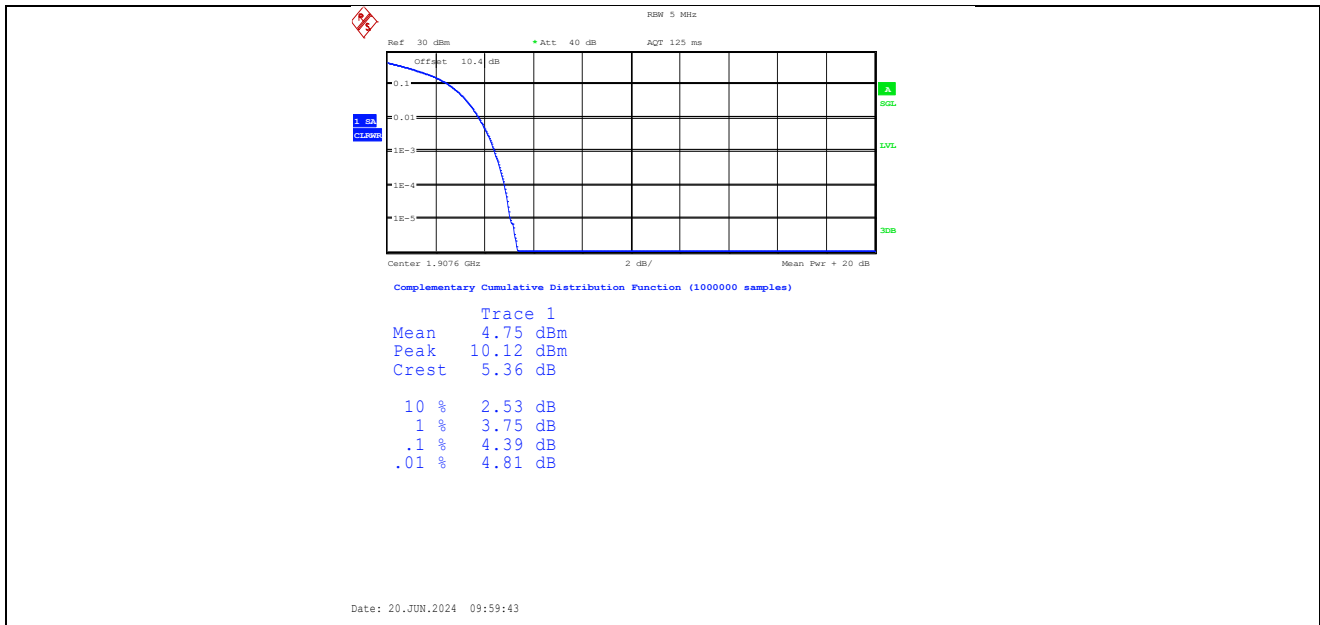


Band2-9400-4-PASS

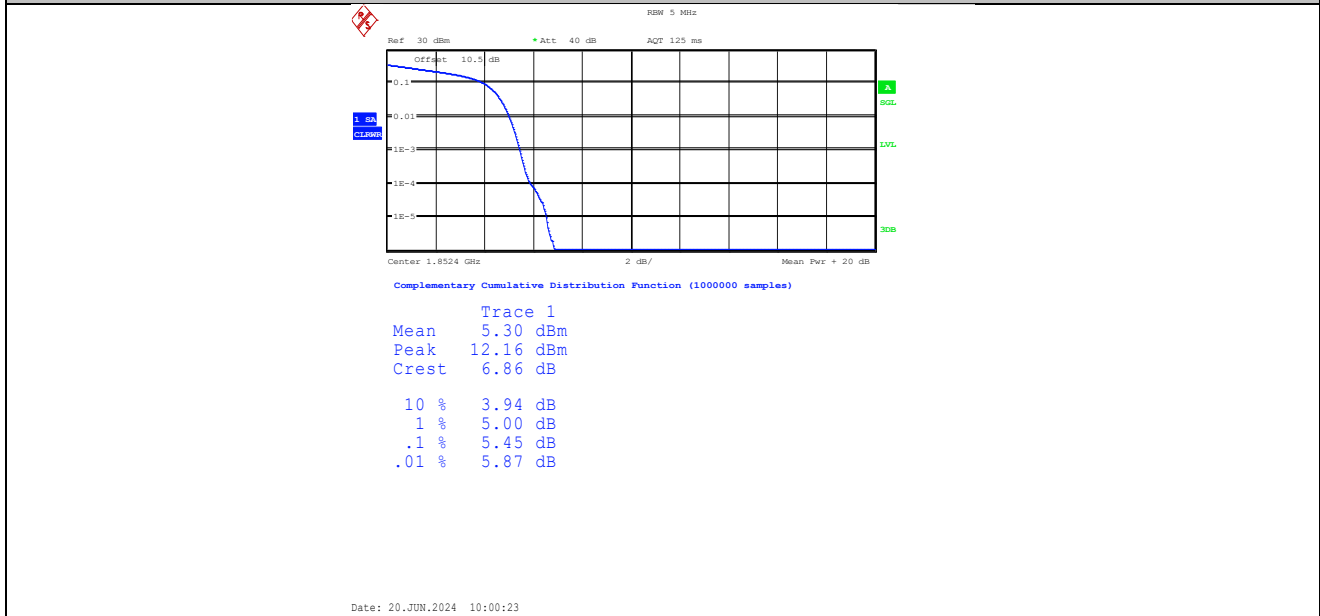


Band2-9538-4-PASS

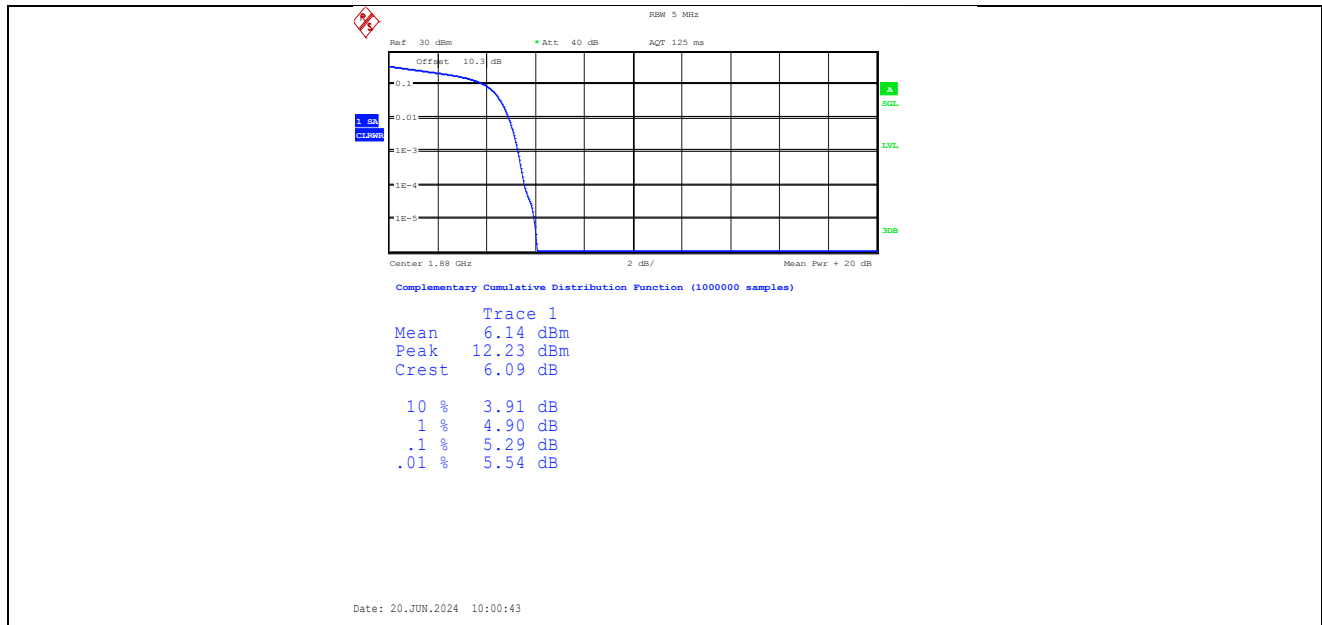




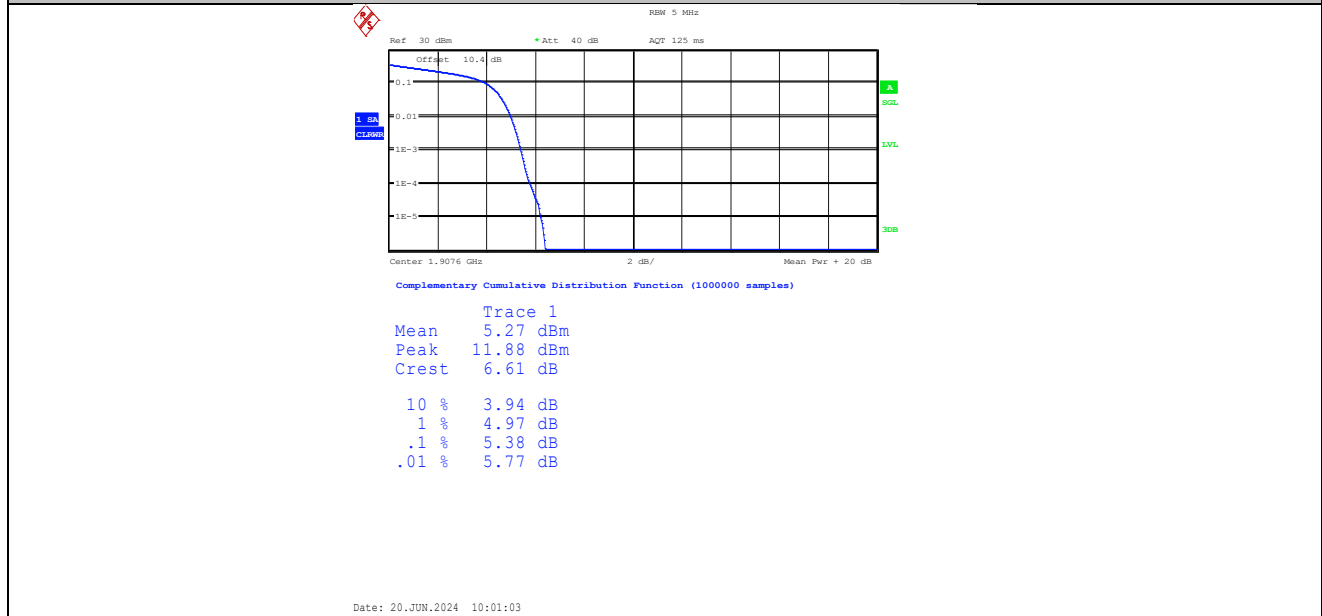
Band2-9538-1-PASS



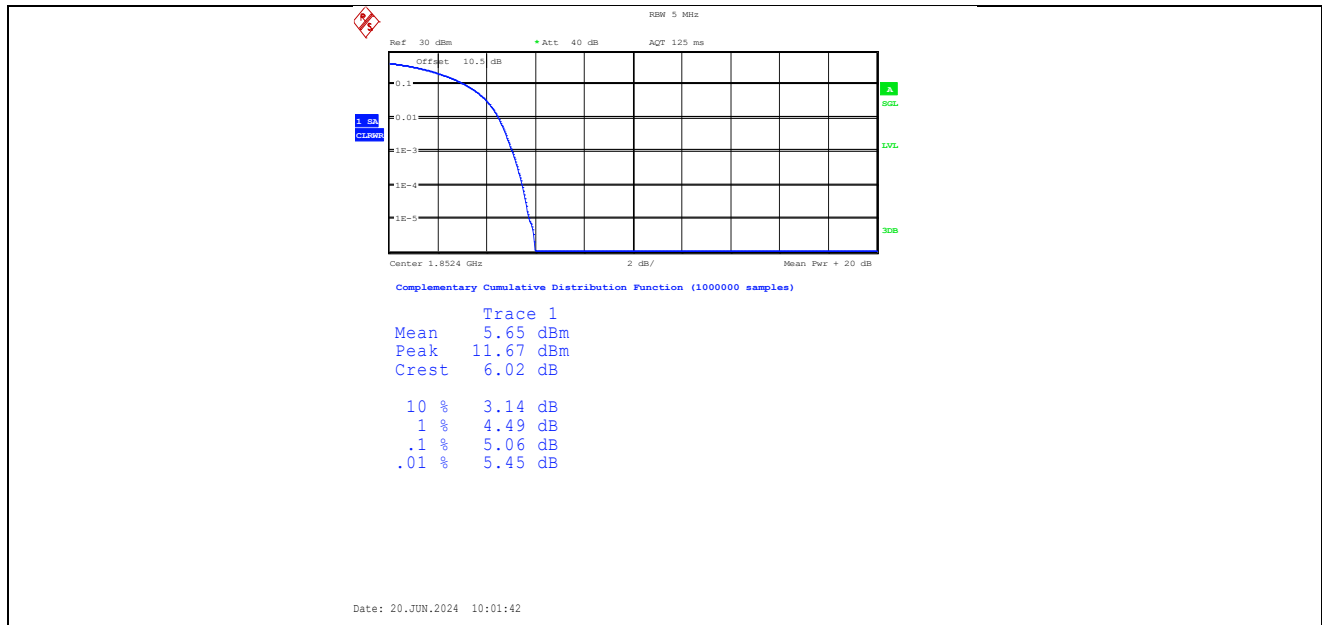
Band2-9262-2-PASS



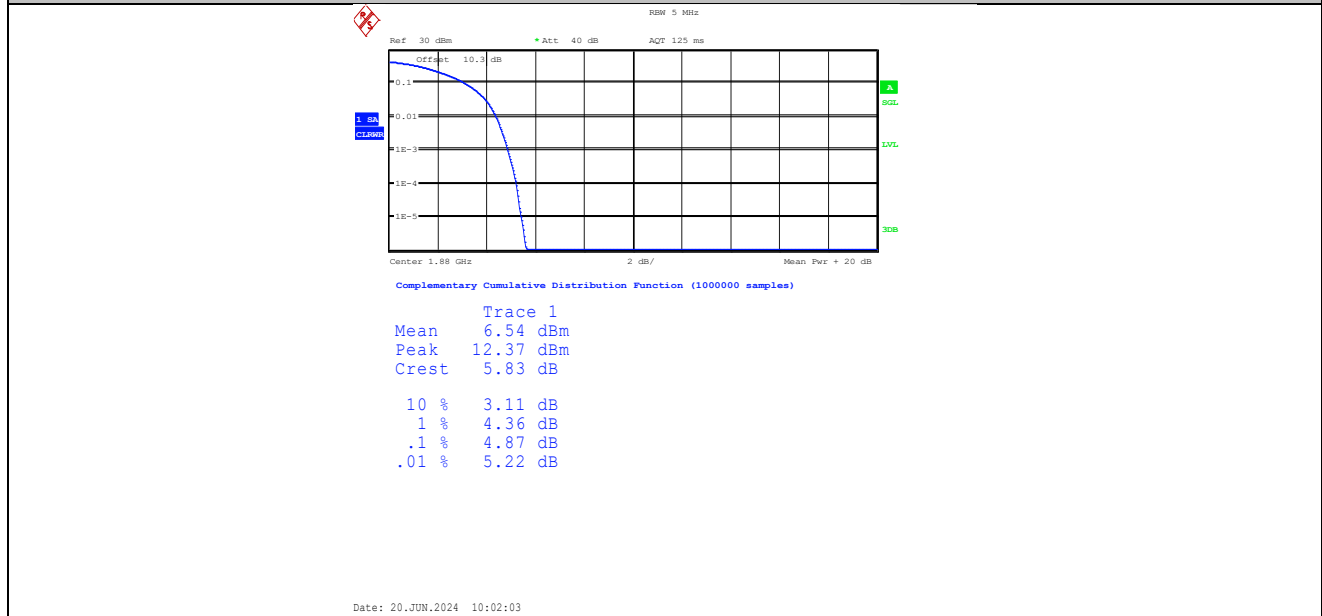
Band2-9400-2-PASS



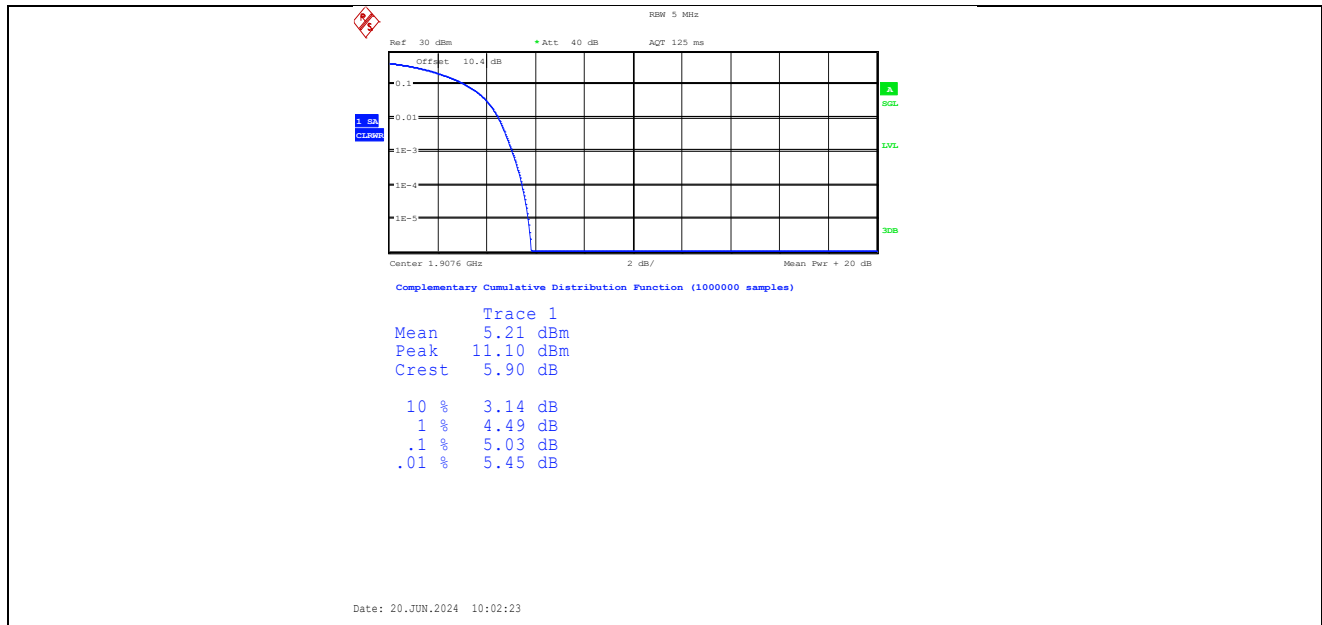
Band2-9538-2-PASS



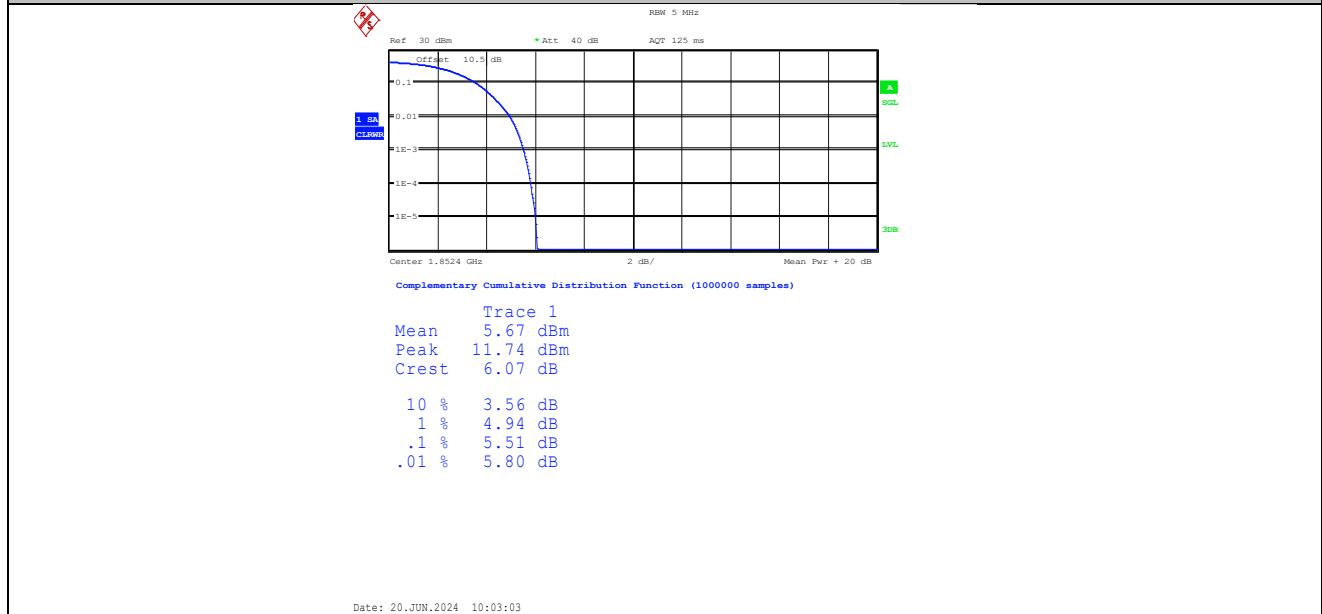
Band2-9262-3-PASS



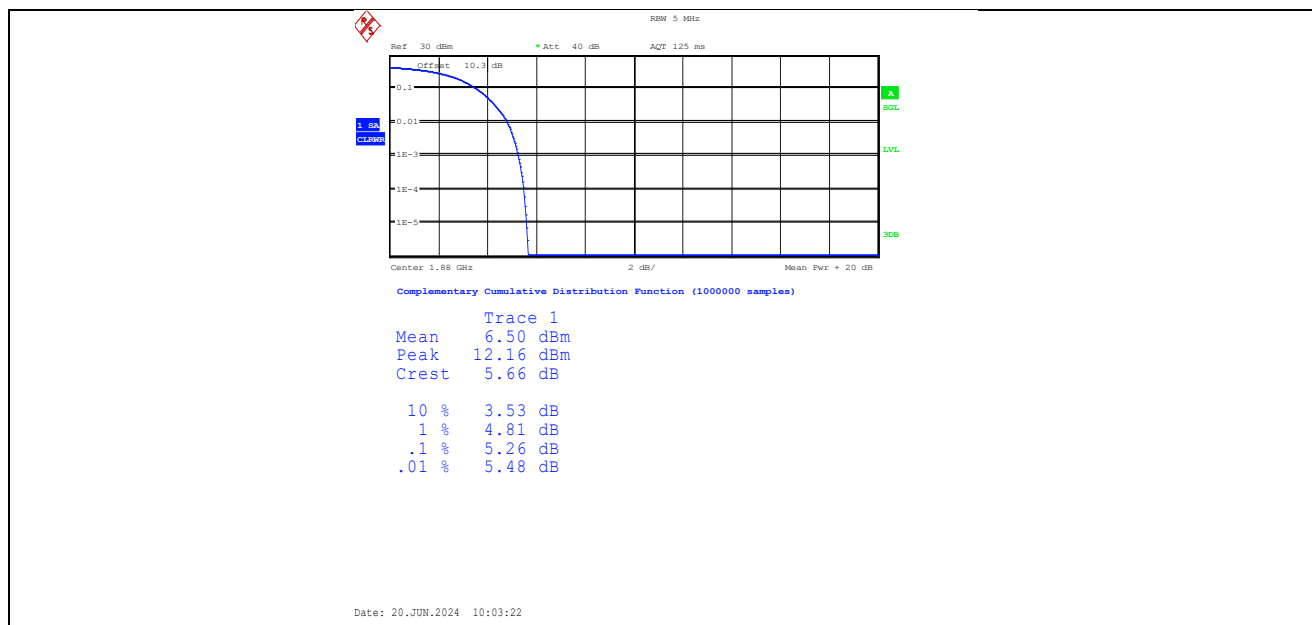
Band2-9400-3-PASS



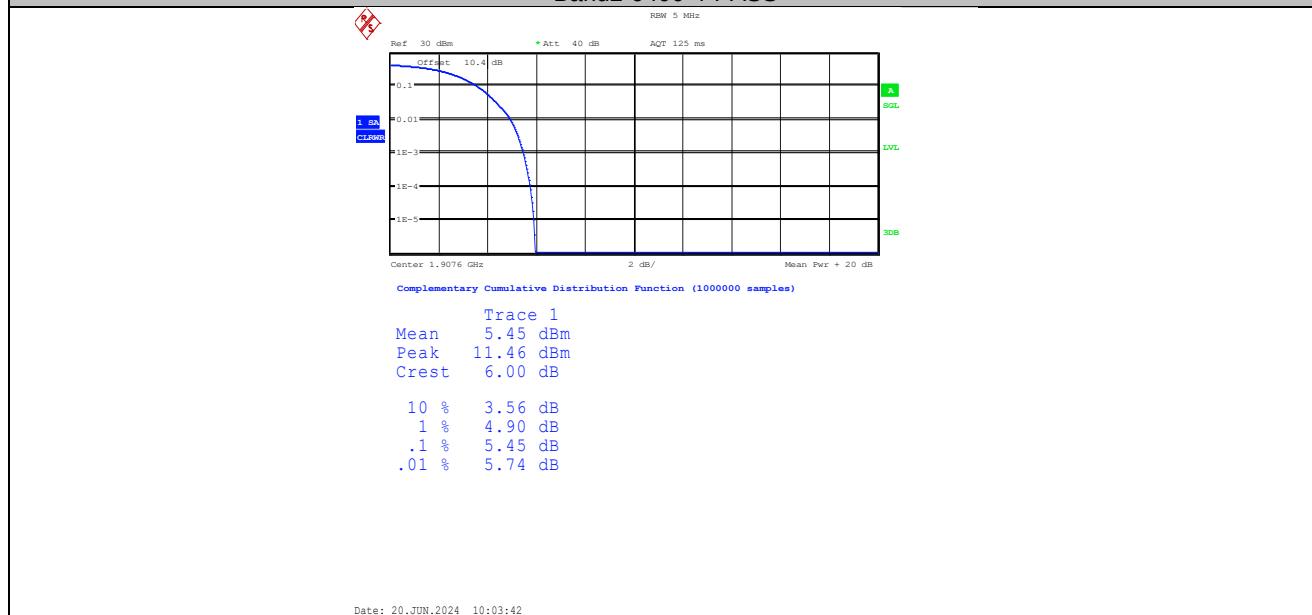
Band2-9538-3-PASS



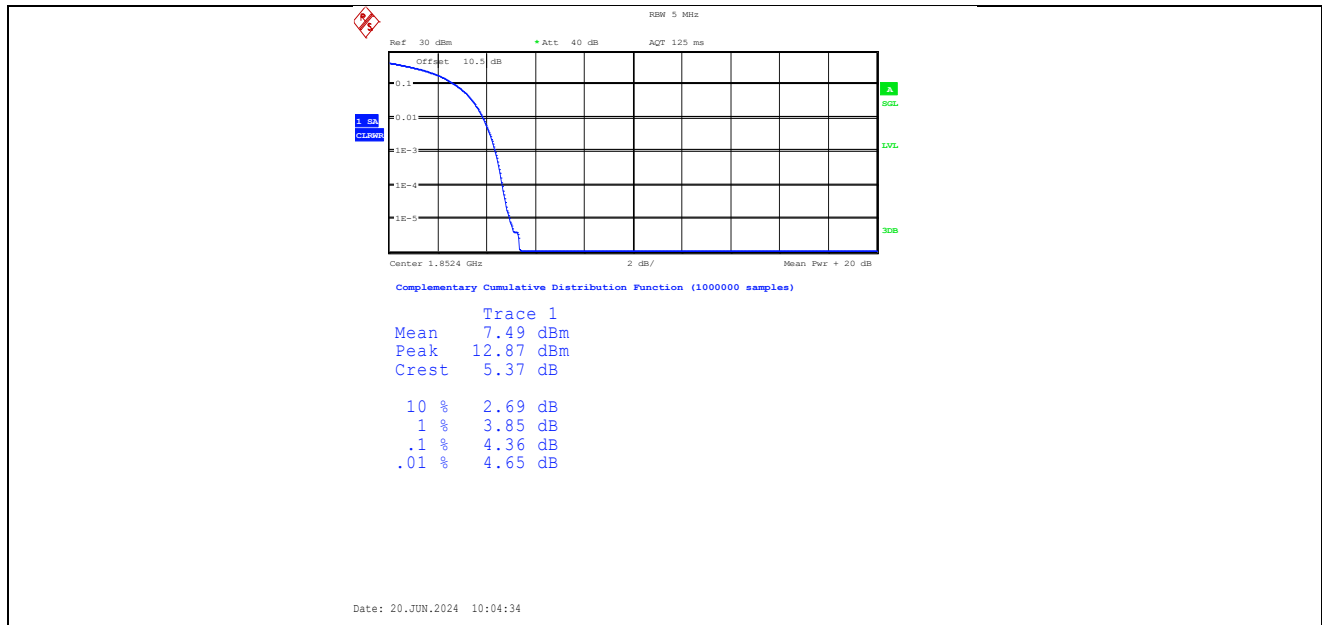
Band2-9262-4-PASS



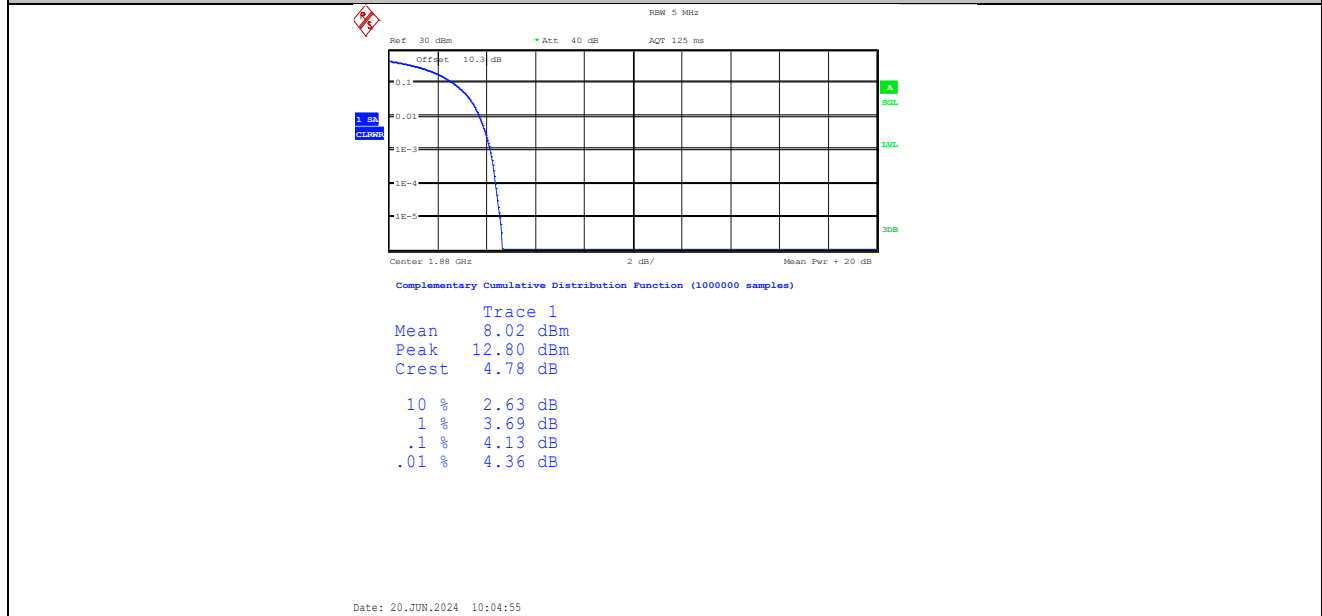
Band2-9400-4-PASS



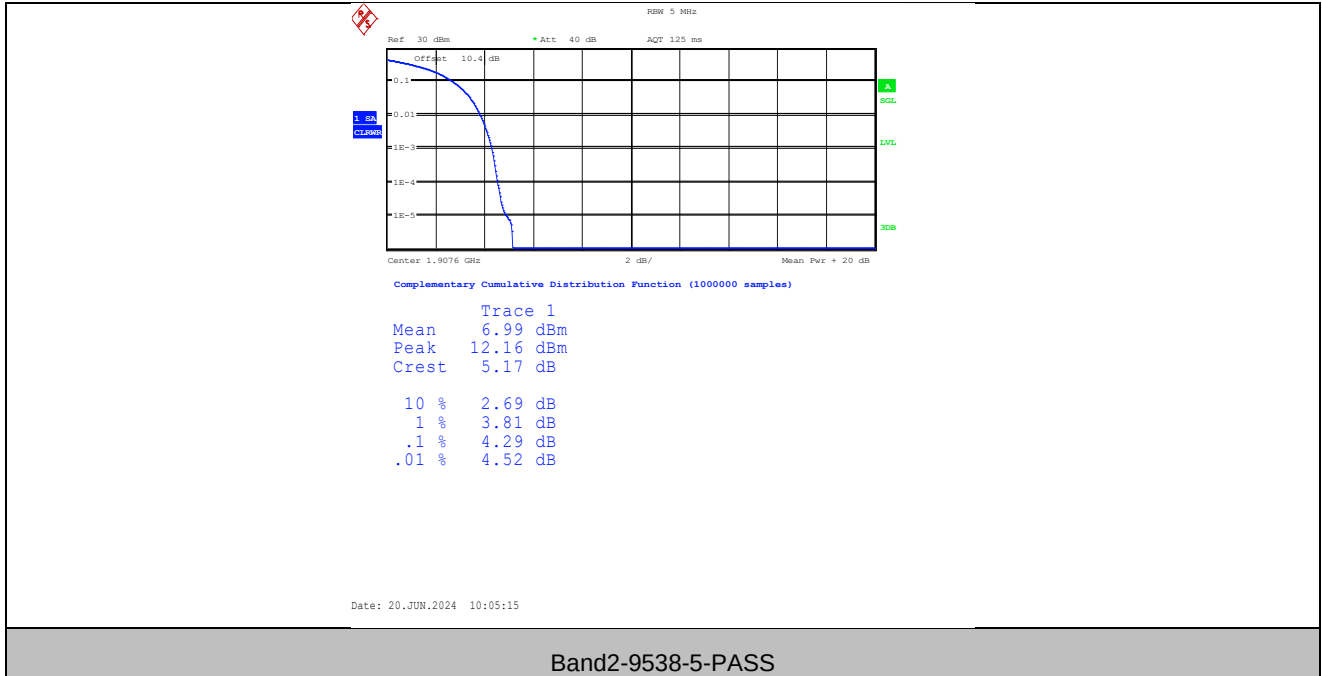
Band2-9538-4-PASS



Band2-9262-5-PASS



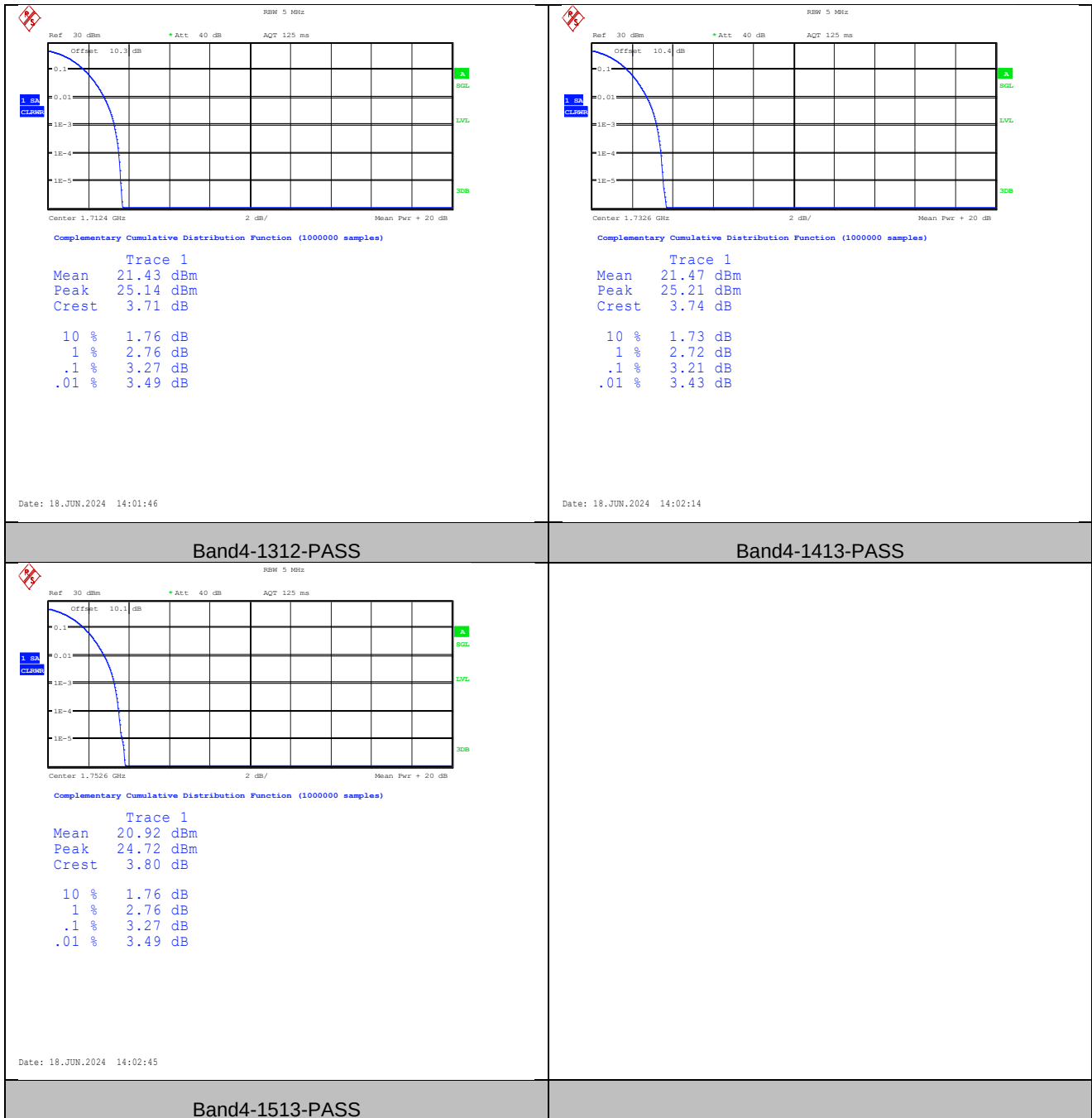
Band2-9400-5-PASS

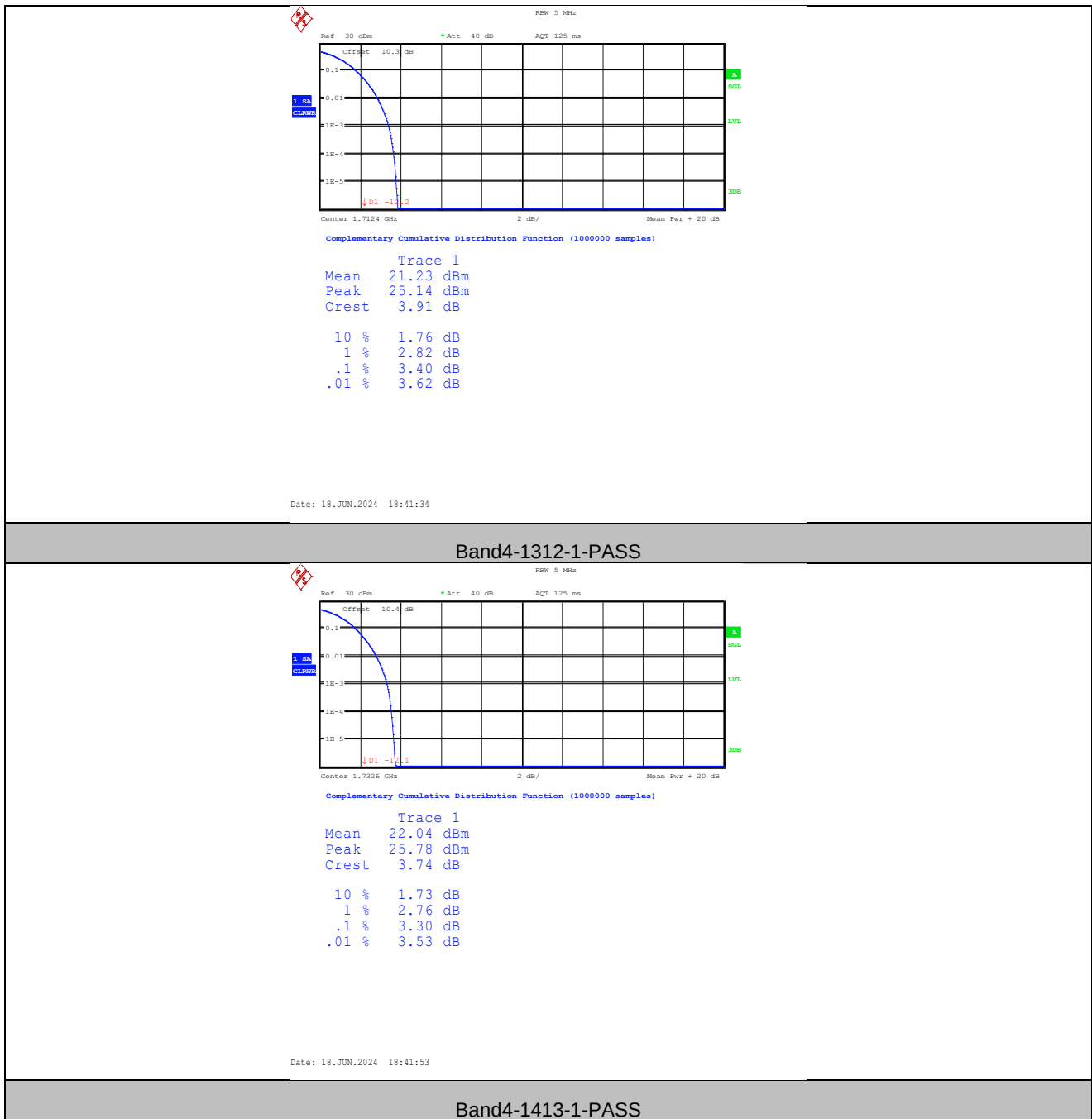


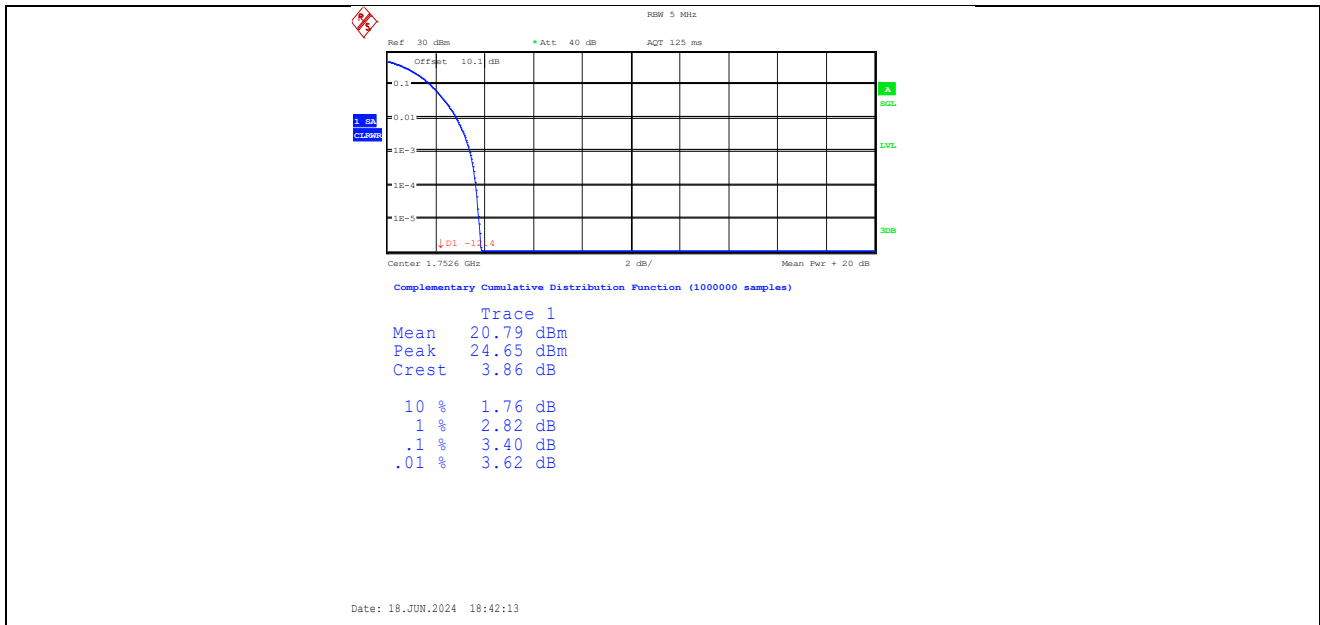
Band	Channel	Peak-to-Average Ratio(dB)	Limit(dB)	Verdict
Band4	1312	3.27	13	PASS
Band4	1413	3.21	13	PASS
Band4	1513	3.27	13	PASS

Band	Channel	SubTest	Peak-to-Average Ratio(dB)	Limit(dB)	Verdict
Band4	1312	1	3.4	13	PASS
Band4	1413	1	3.3	13	PASS
Band4	1513	1	3.4	13	PASS
Band4	1312	2	3.81	13	PASS
Band4	1413	2	3.72	13	PASS
Band4	1513	2	3.78	13	PASS
Band4	1312	3	4.04	13	PASS
Band4	1413	3	3.91	13	PASS
Band4	1513	3	4.01	13	PASS
Band4	1312	4	4.07	13	PASS
Band4	1413	4	3.94	13	PASS
Band4	1513	4	4.04	13	PASS

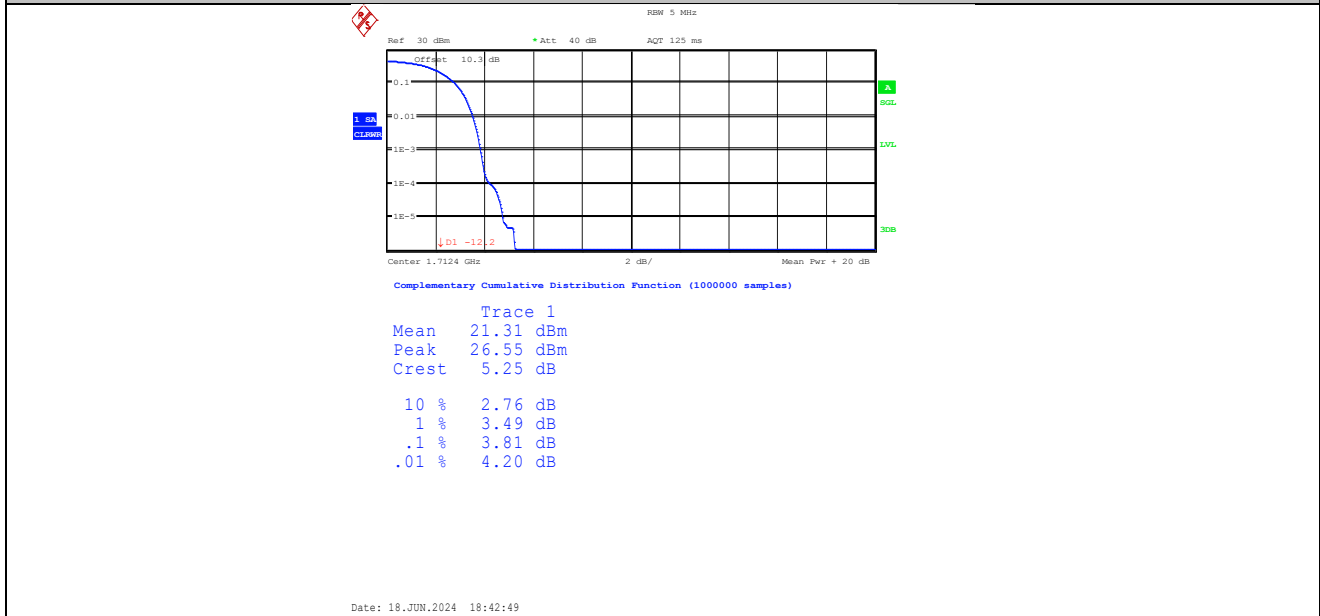
Band	Channel	SubTest	Peak-to-Average Ratio(dB)	Limit(dB)	Verdict
Band4	1312	1	4.49	13	PASS
Band4	1413	1	4.26	13	PASS
Band4	1513	1	4.49	13	PASS
Band4	1312	2	5.51	13	PASS
Band4	1413	2	5.26	13	PASS
Band4	1513	2	5.48	13	PASS
Band4	1312	3	5.13	13	PASS
Band4	1413	3	4.81	13	PASS
Band4	1513	3	5.1	13	PASS
Band4	1312	4	5.54	13	PASS
Band4	1413	4	5.13	13	PASS
Band4	1513	4	5.51	13	PASS
Band4	1312	5	4.42	13	PASS
Band4	1413	5	4.23	13	PASS
Band4	1513	5	4.42	13	PASS



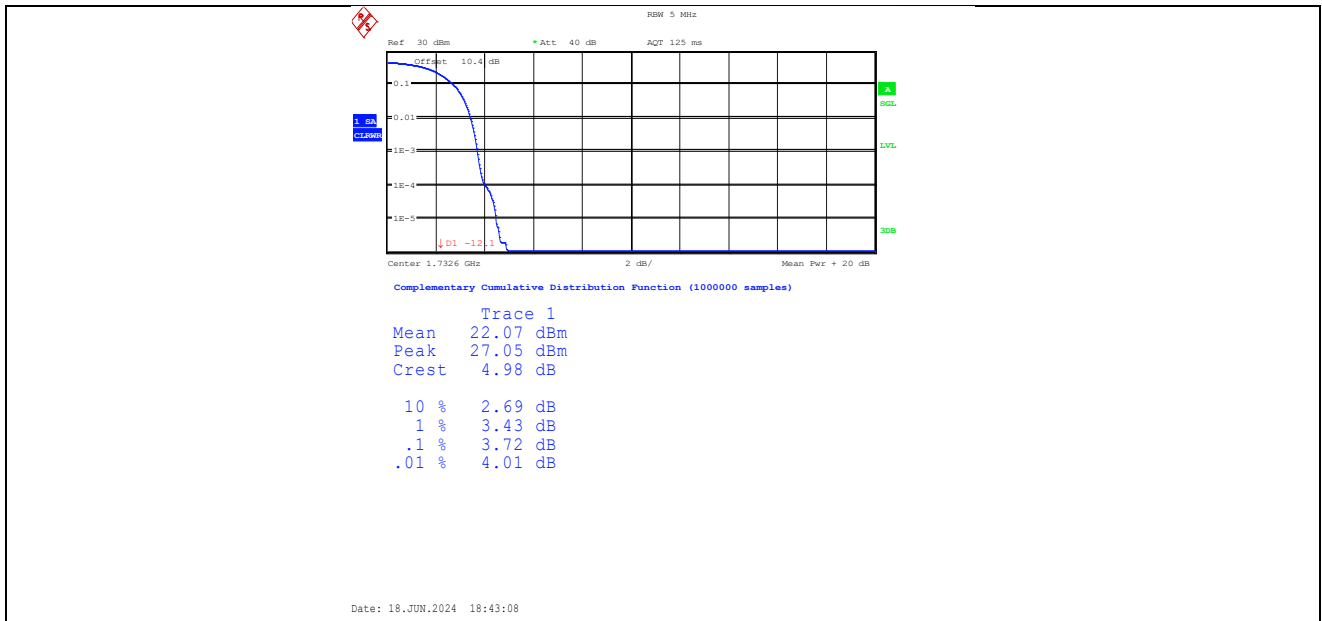




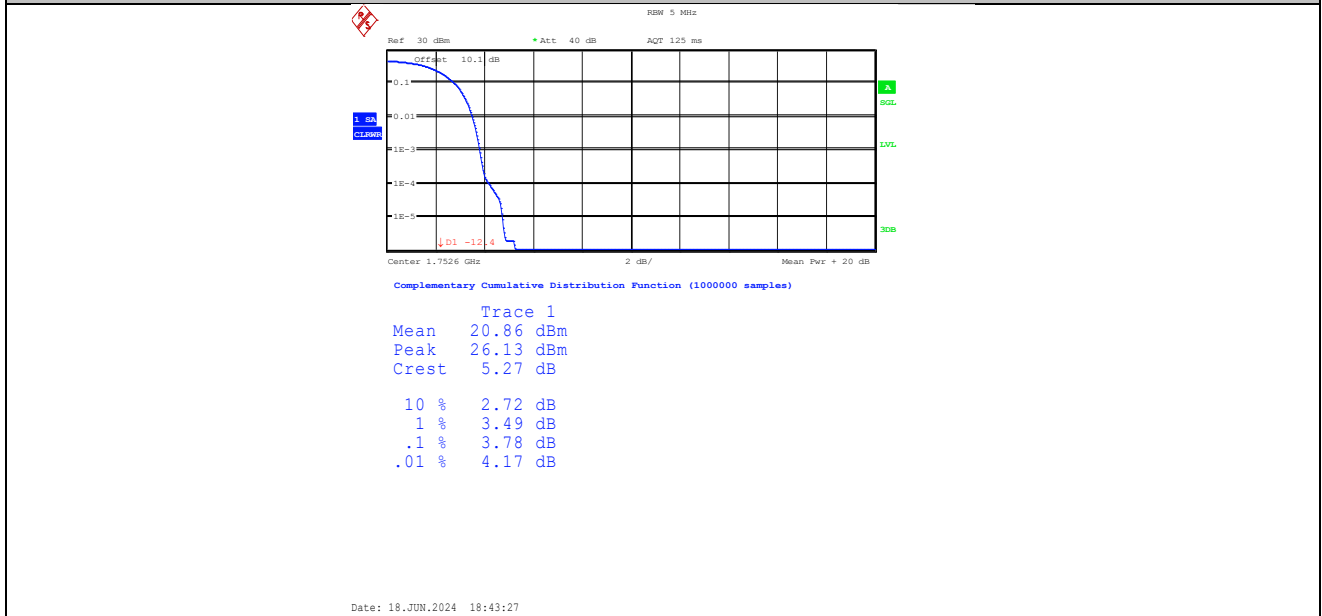
Band4-1513-1-PASS



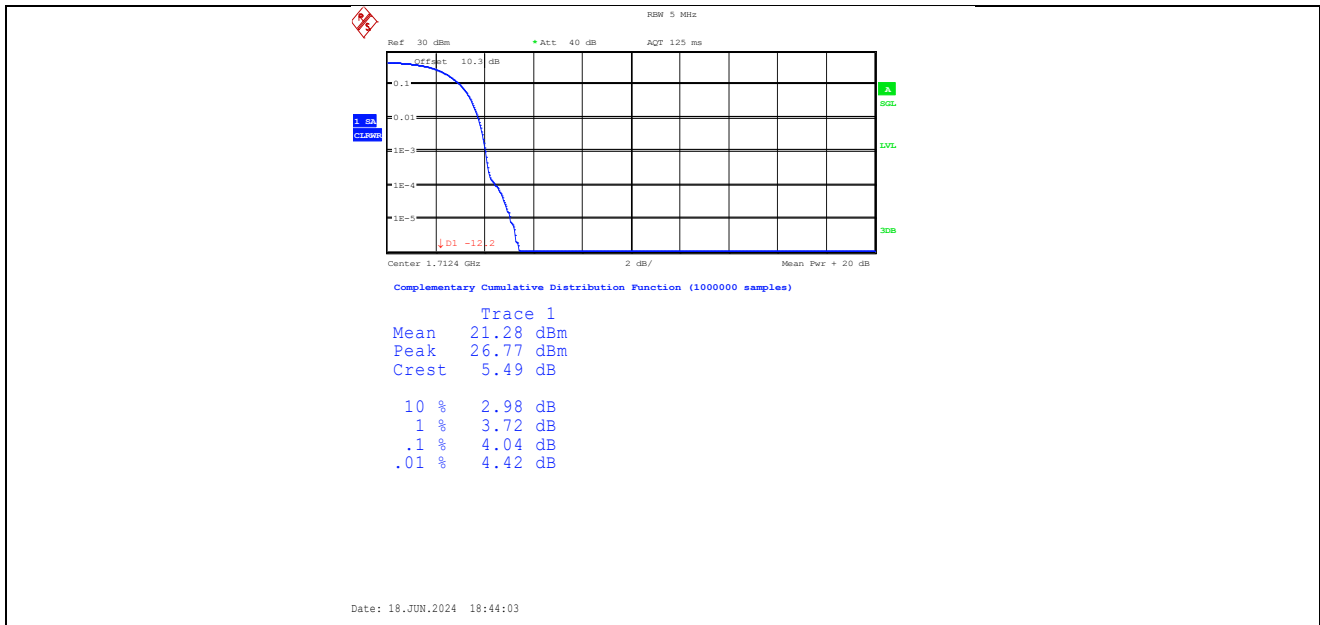
Band4-1312-2-PASS



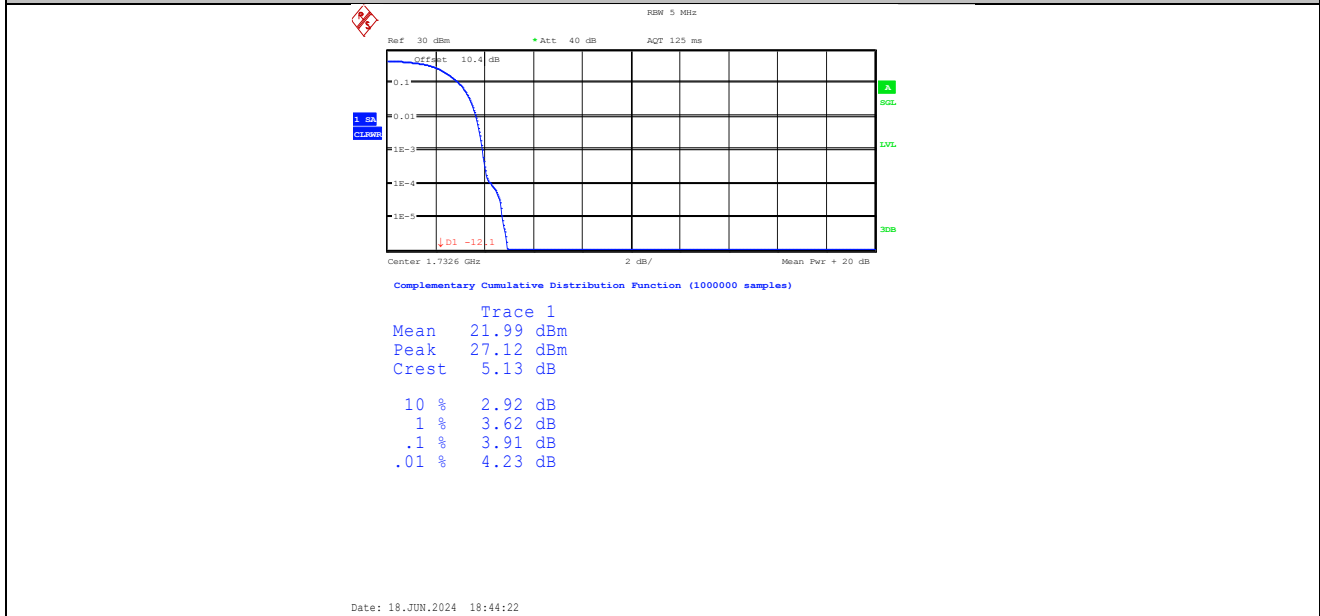
Band4-1413-2-PASS



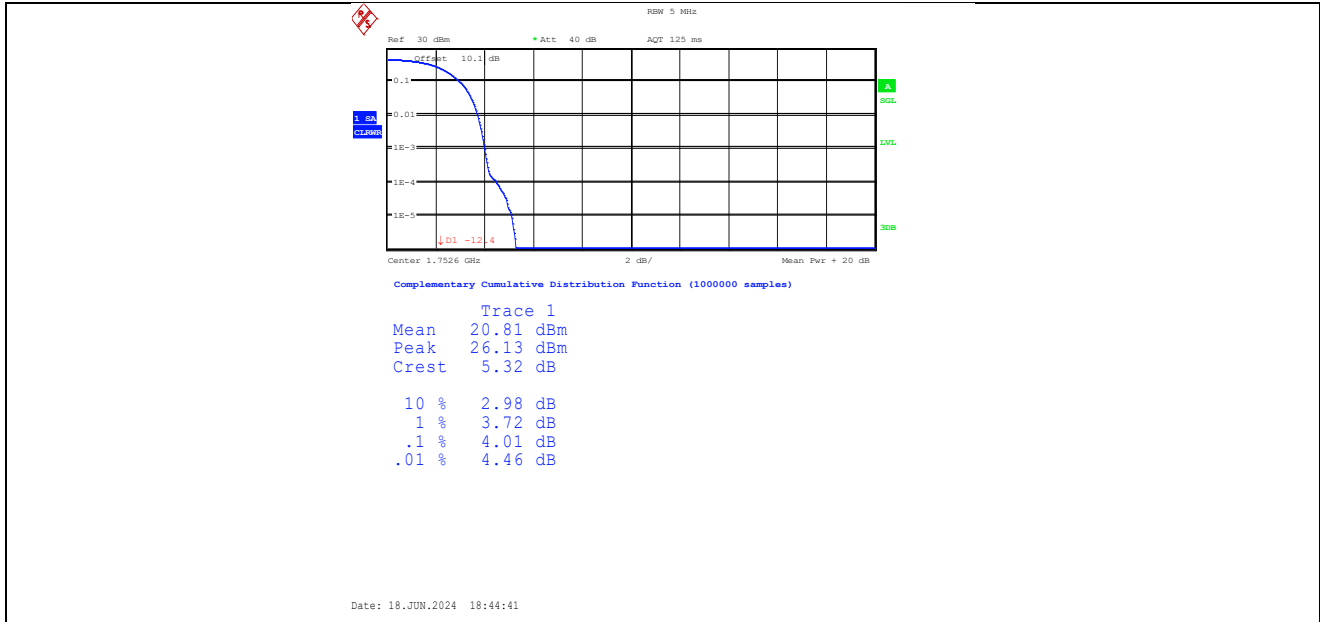
Band4-1513-2-PASS



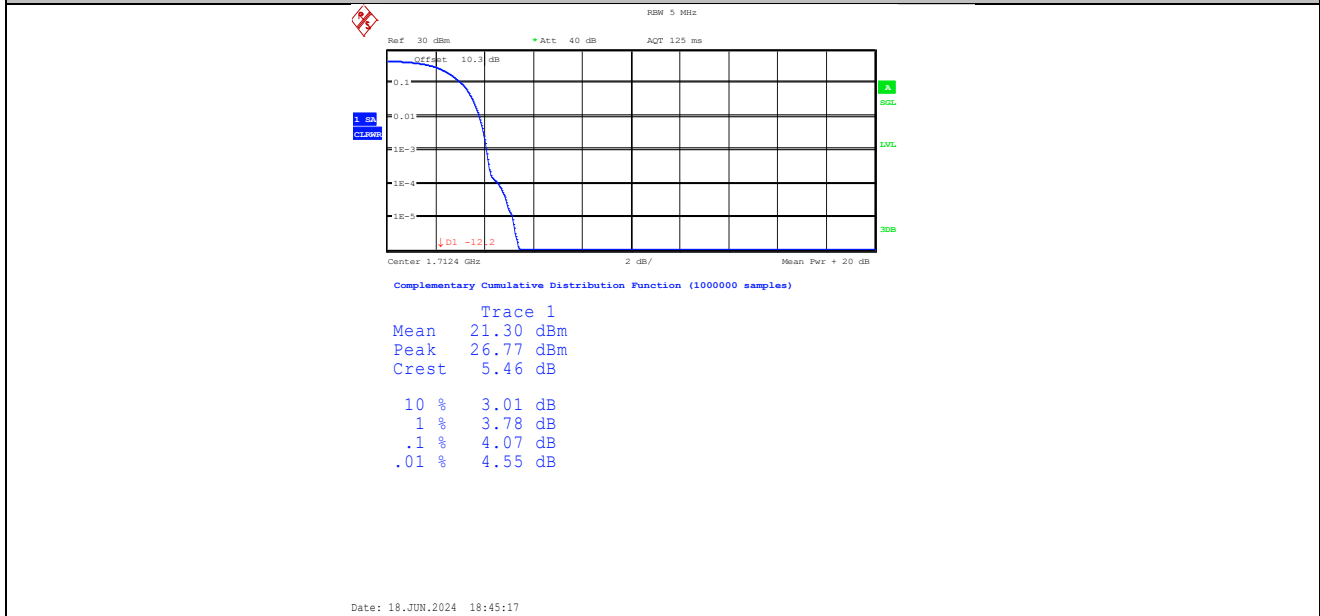
Band4-1312-3-PASS



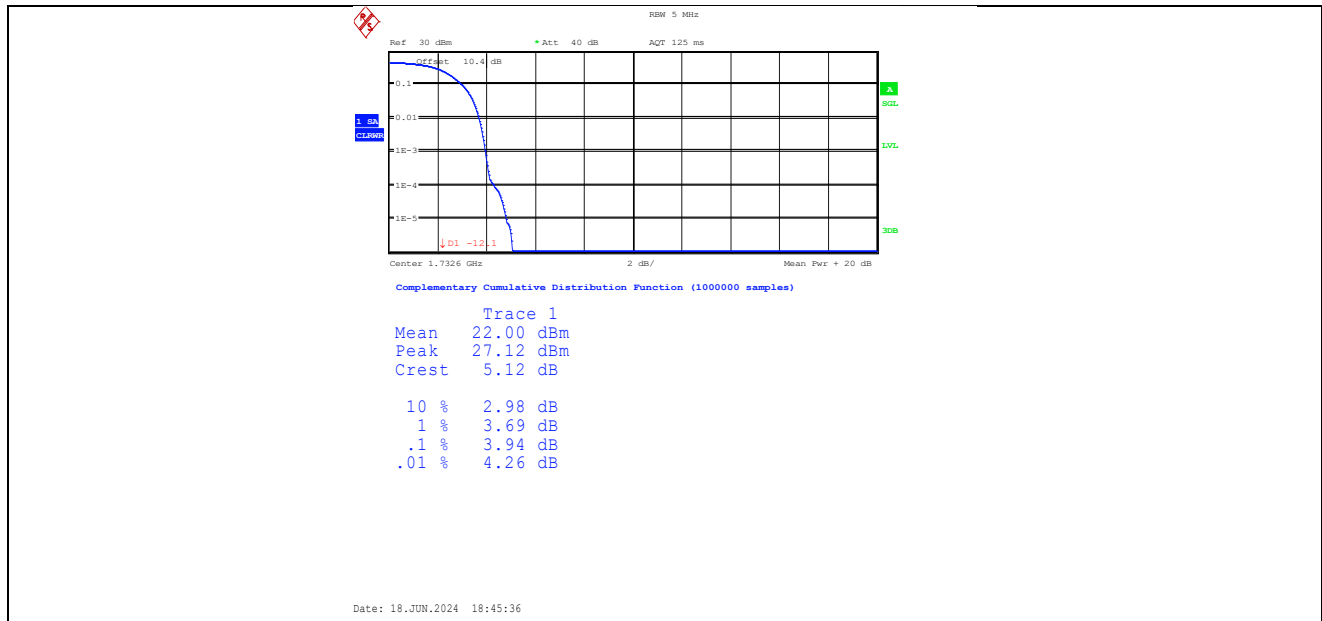
Band4-1413-3-PASS



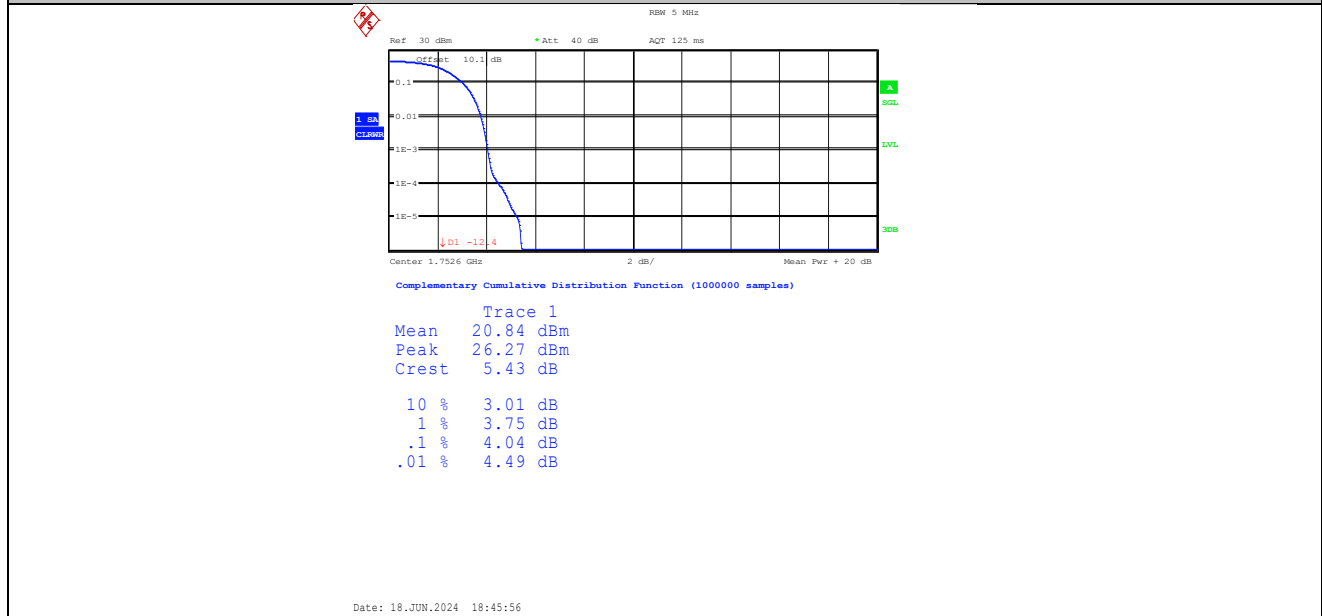
Band4-1513-3-PASS



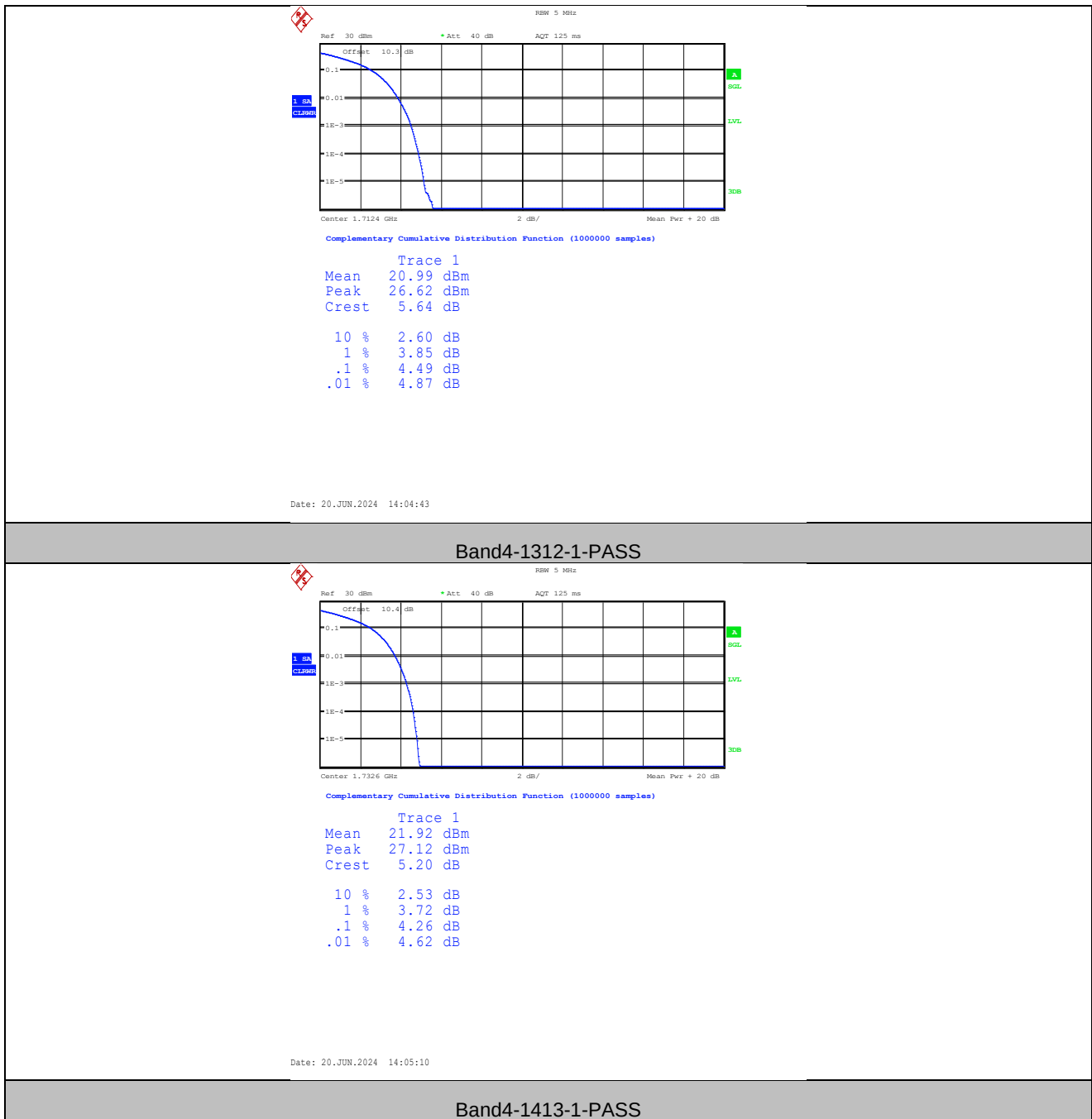
Band4-1312-4-PASS

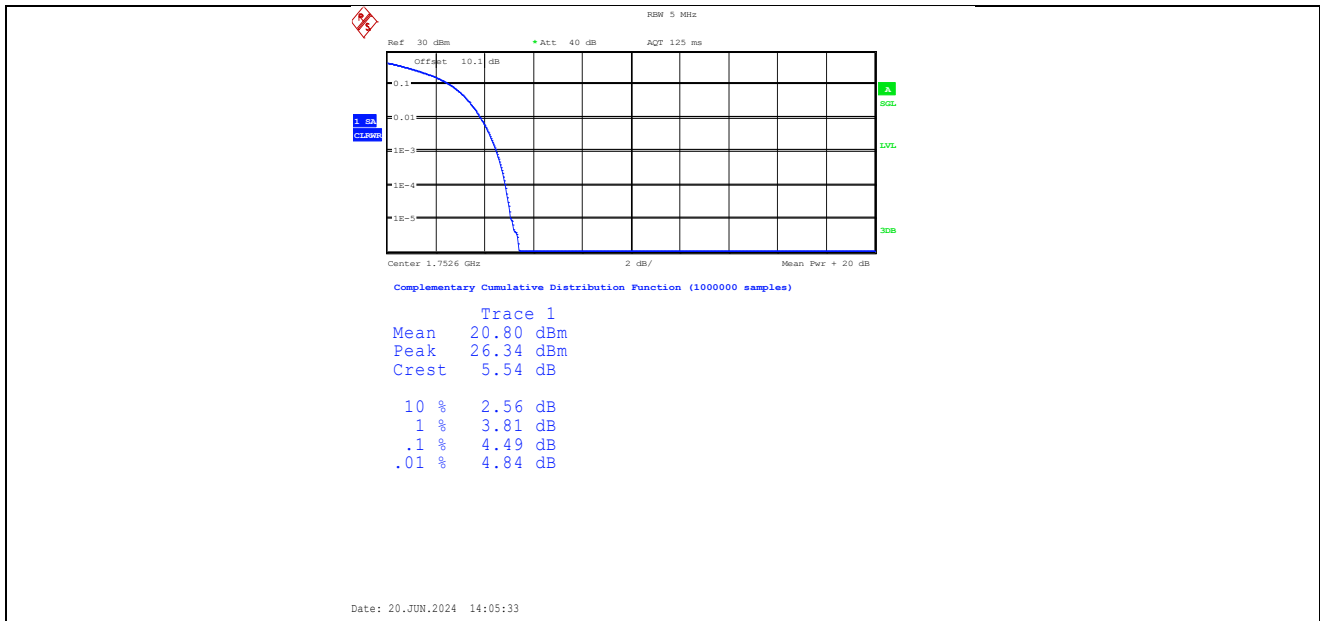


Band4-1413-4-PASS

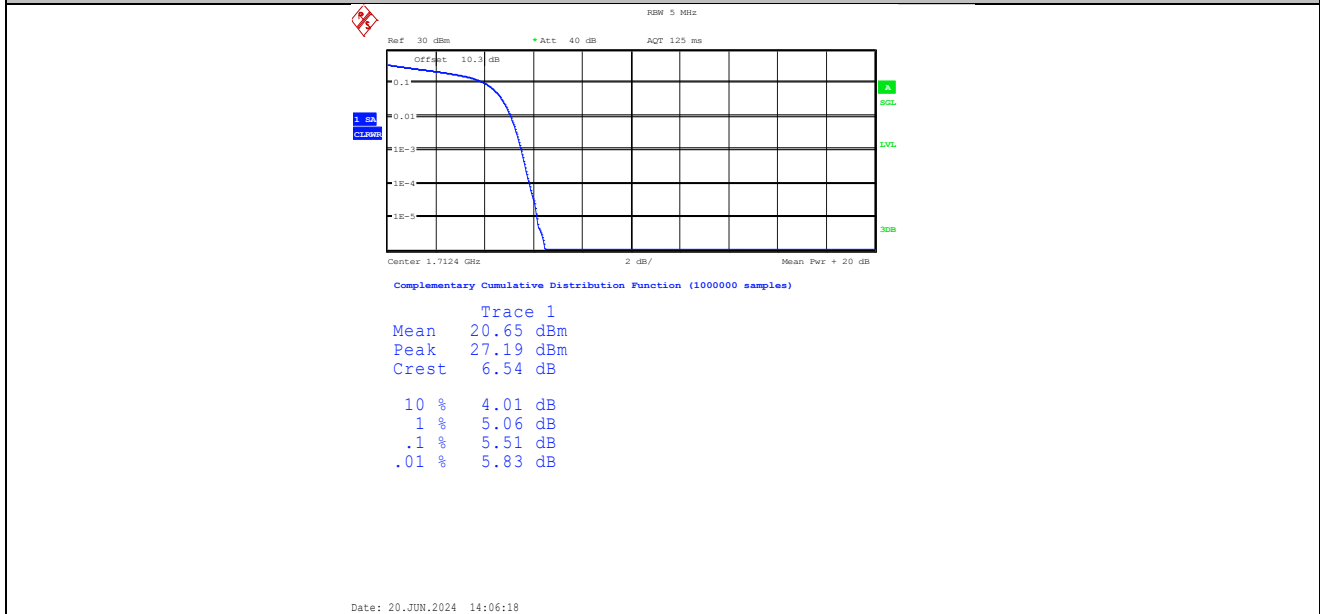


Band4-1513-4-PASS

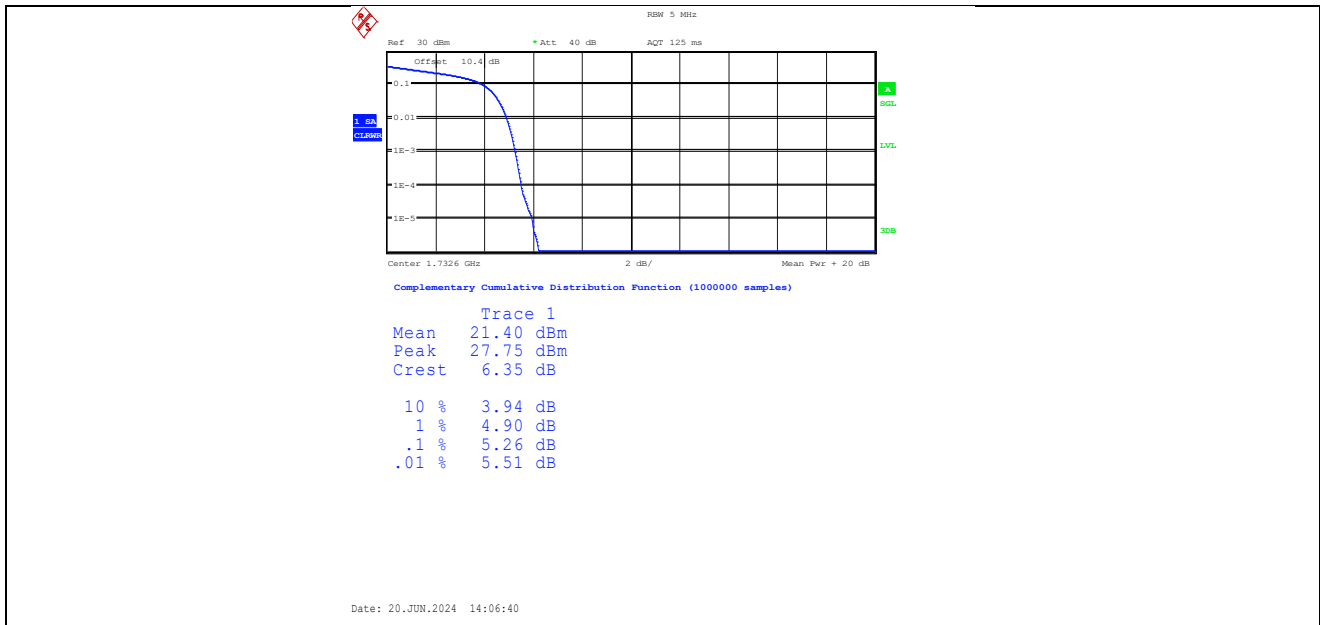




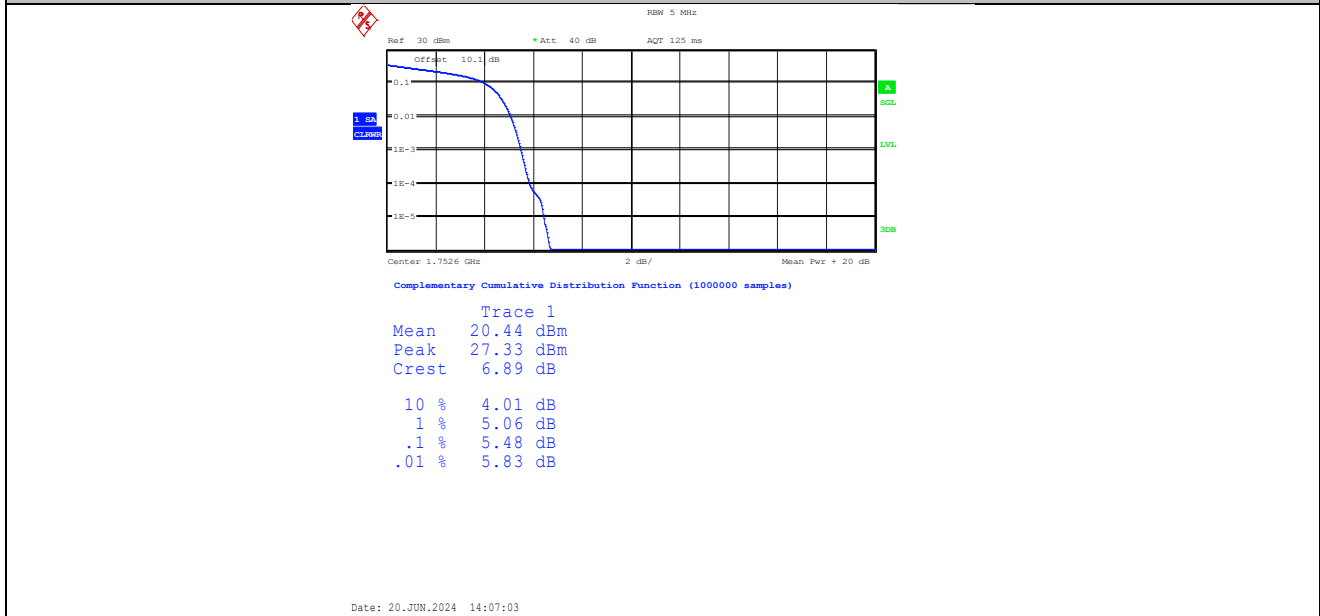
Band4-1513-1-PASS



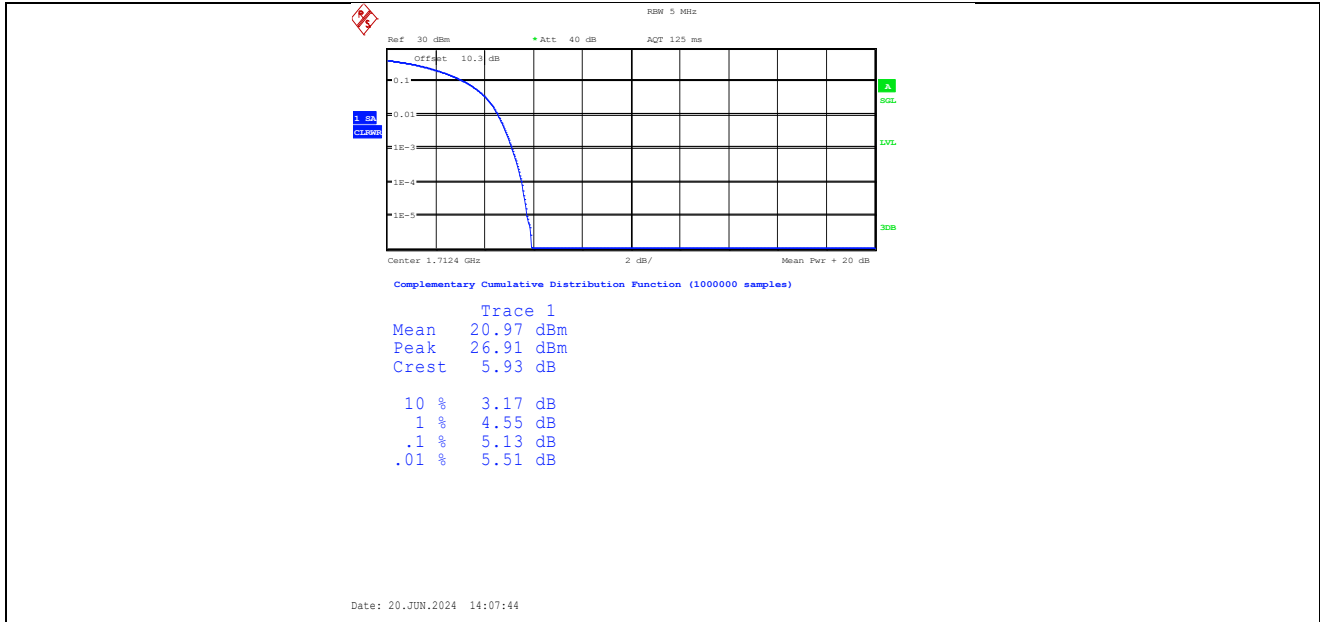
Band4-1312-2-PASS



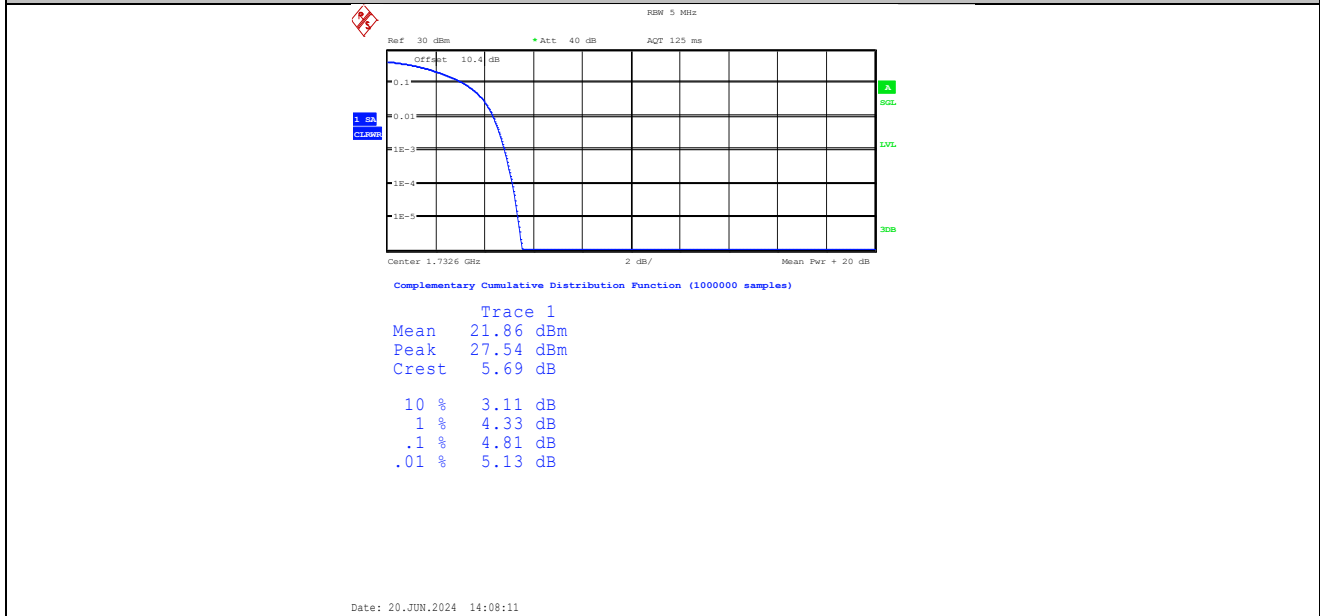
Band4-1413-2-PASS



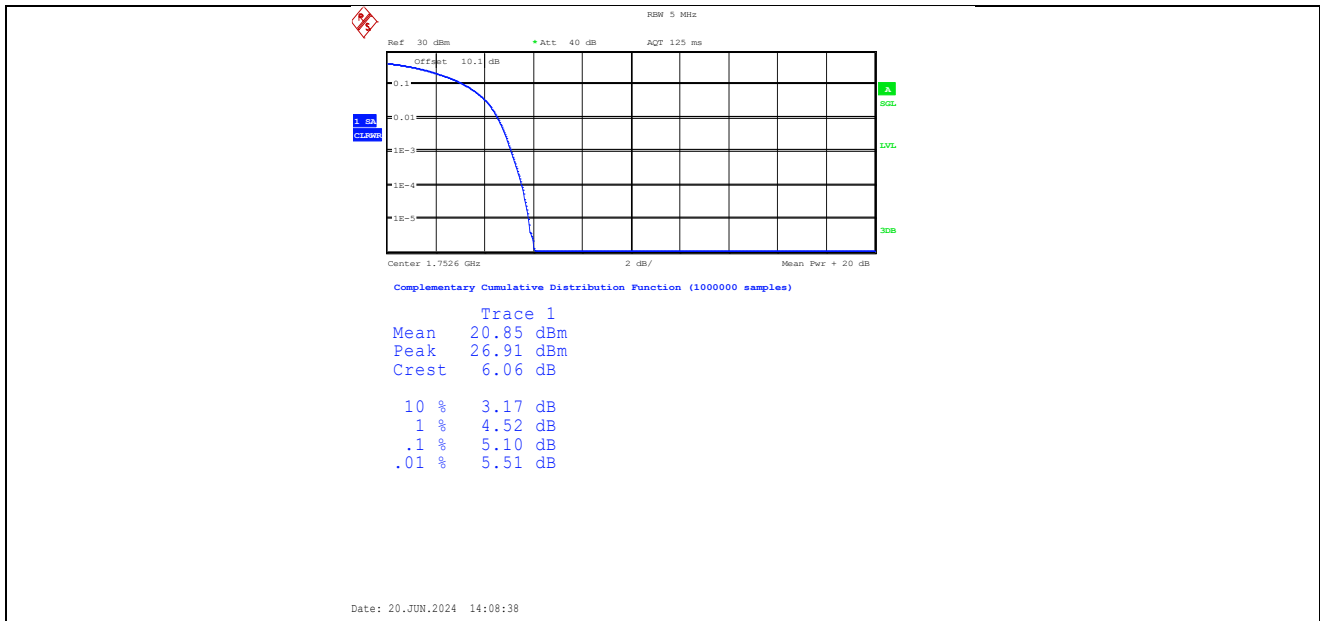
Band4-1513-2-PASS



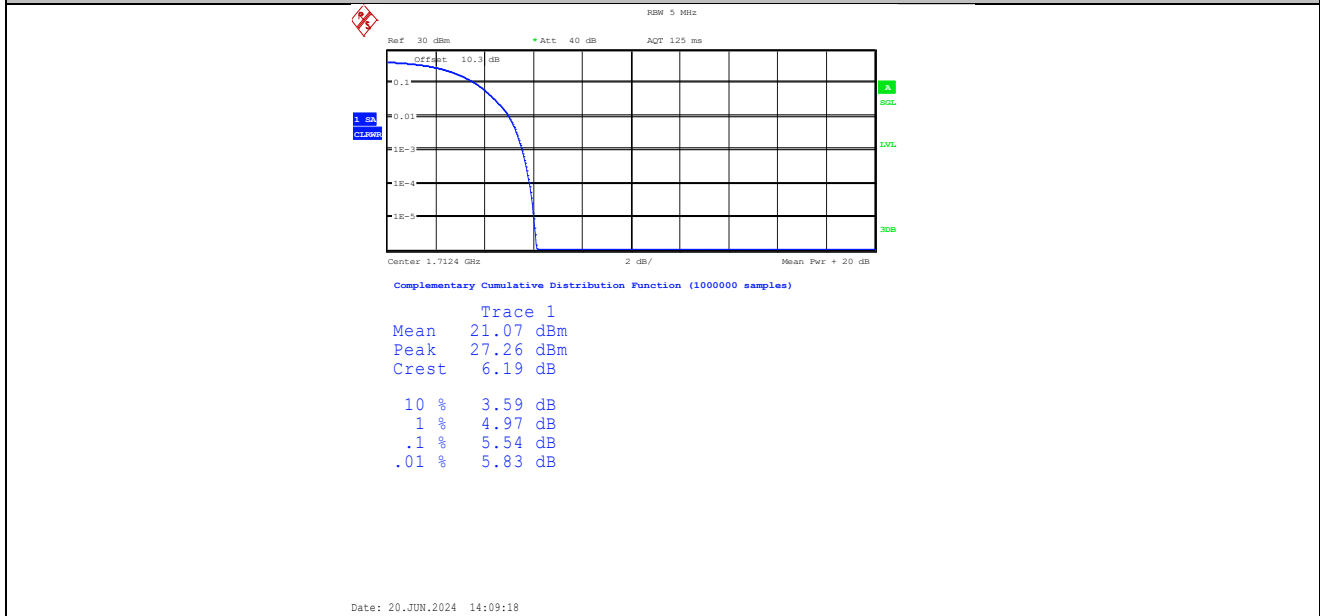
Band4-1312-3-PASS



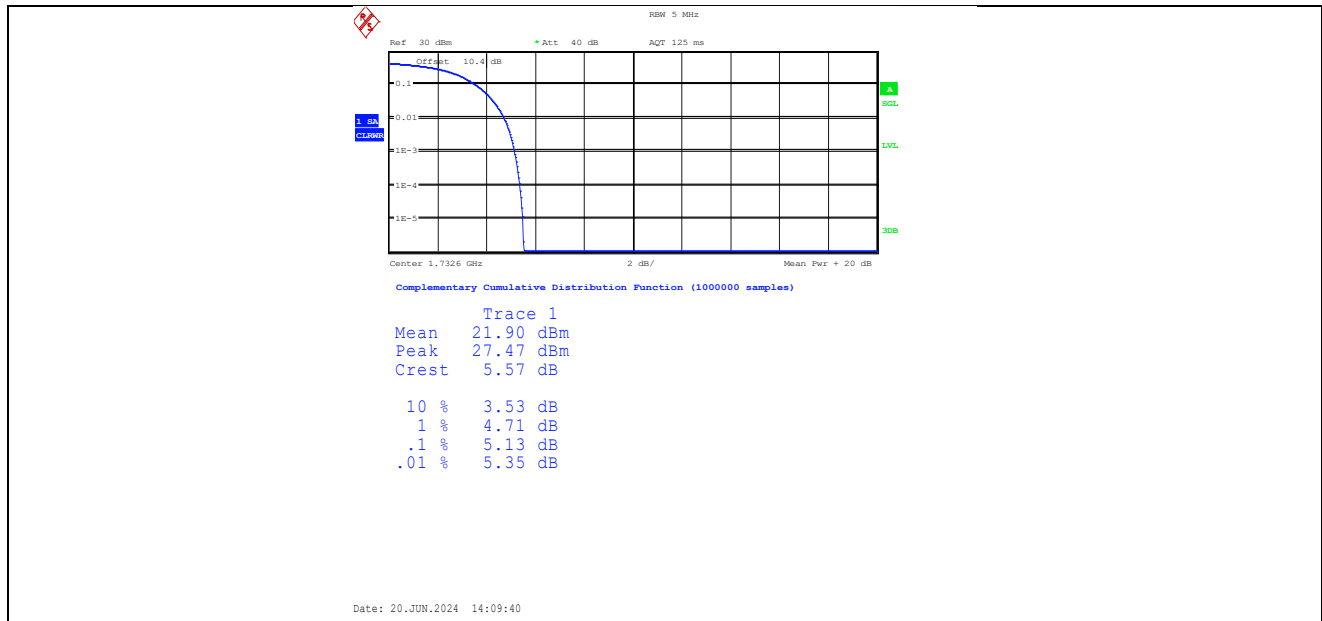
Band4-1413-3-PASS



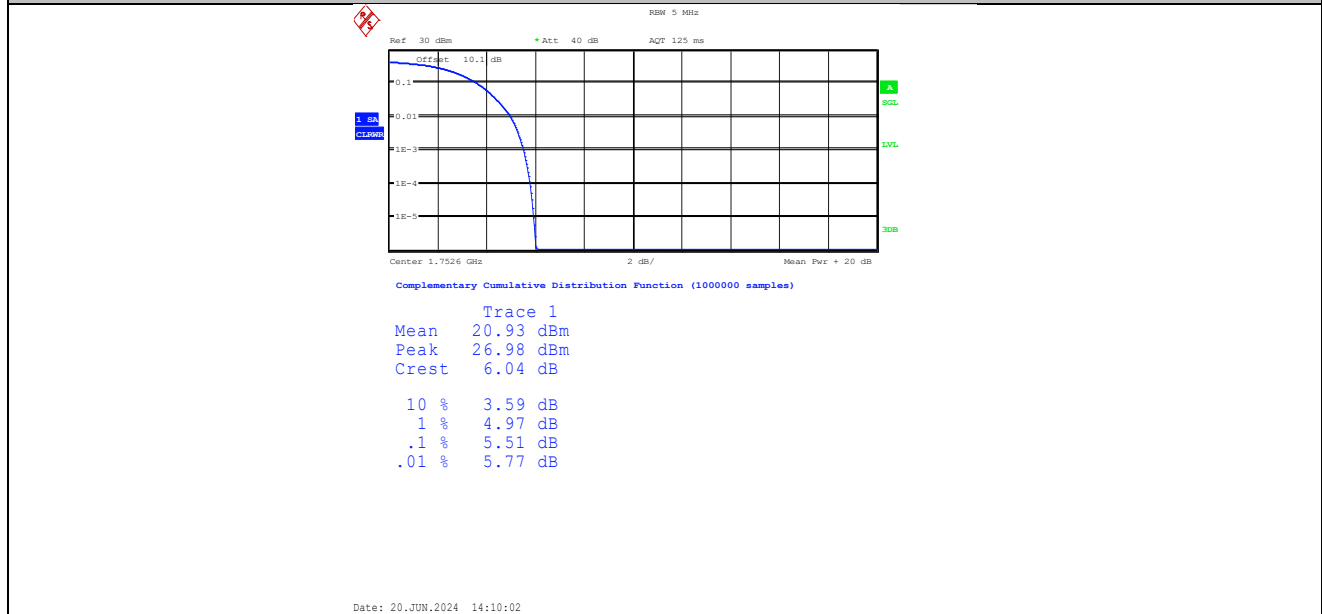
Band4-1513-3-PASS



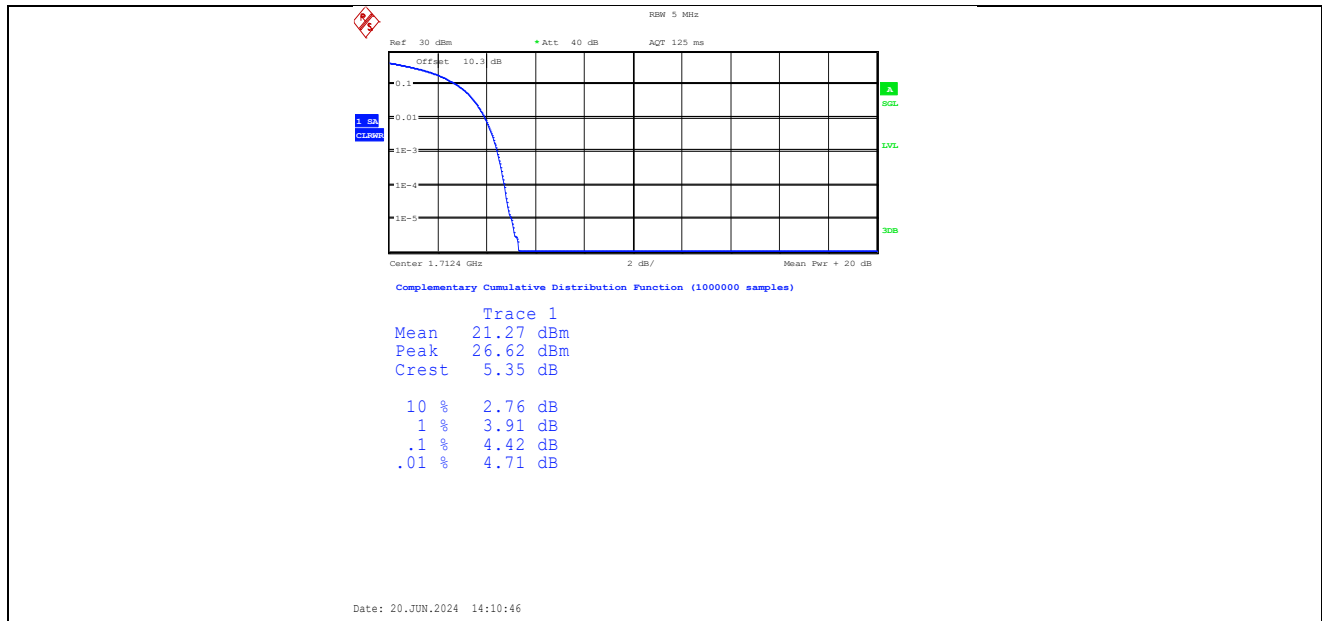
Band4-1312-4-PASS



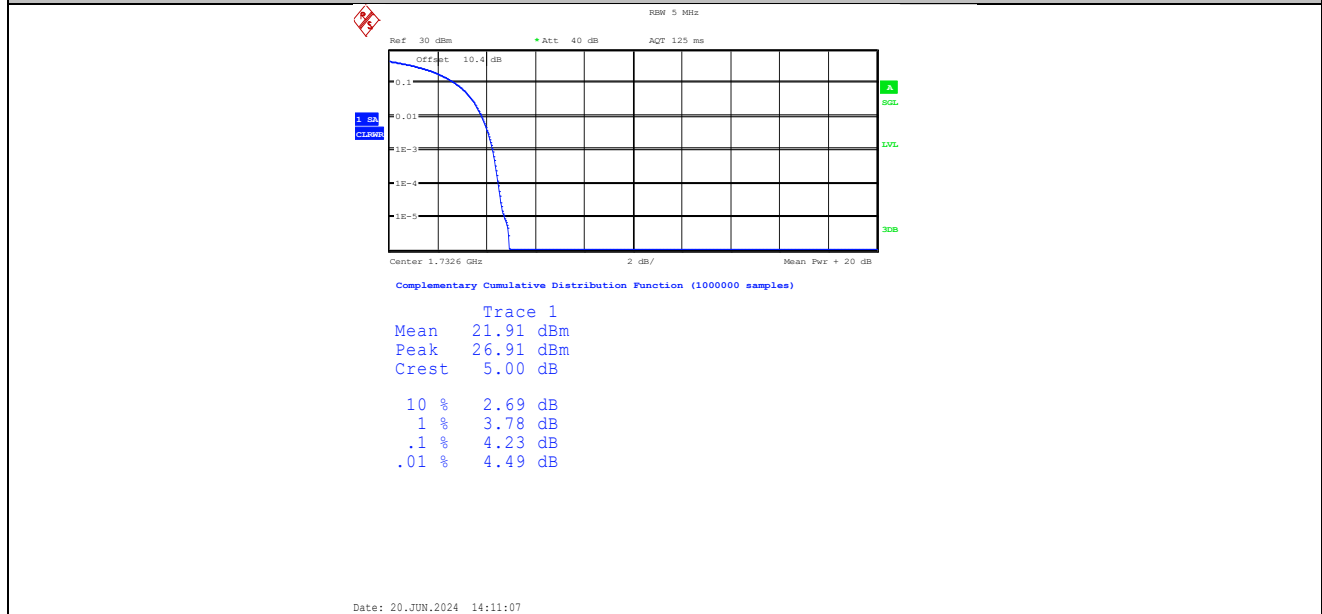
Band4-1413-4-PASS



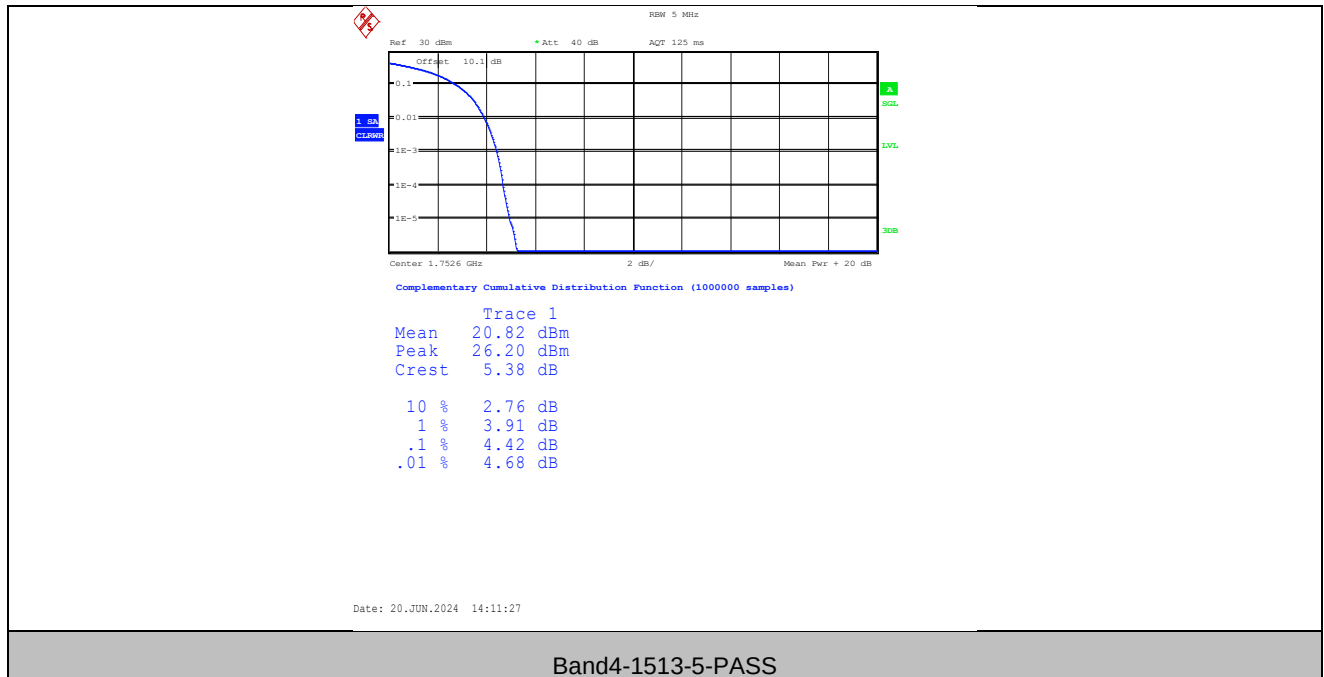
Band4-1513-4-PASS



Band4-1312-5-PASS



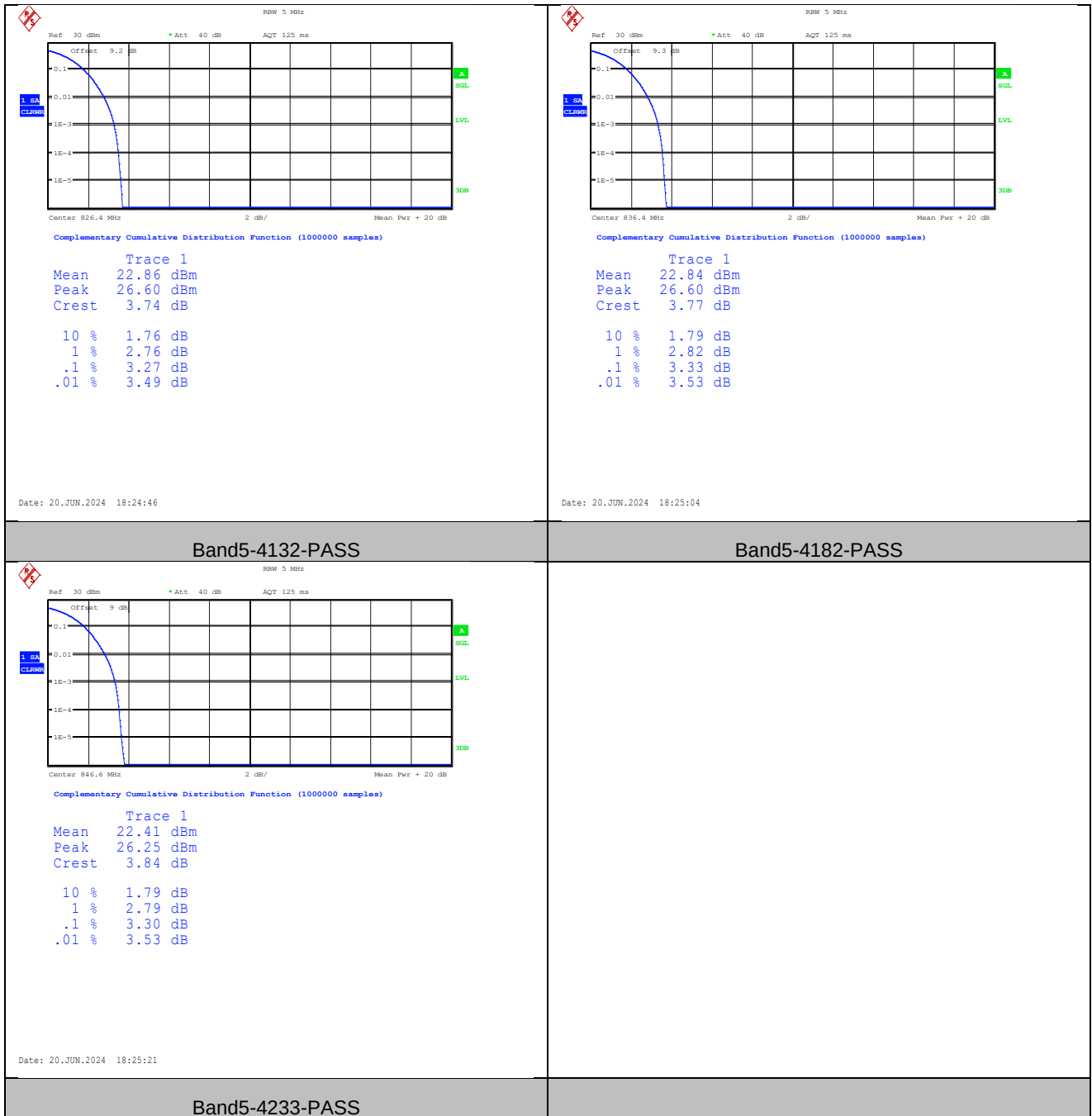
Band4-1413-5-PASS

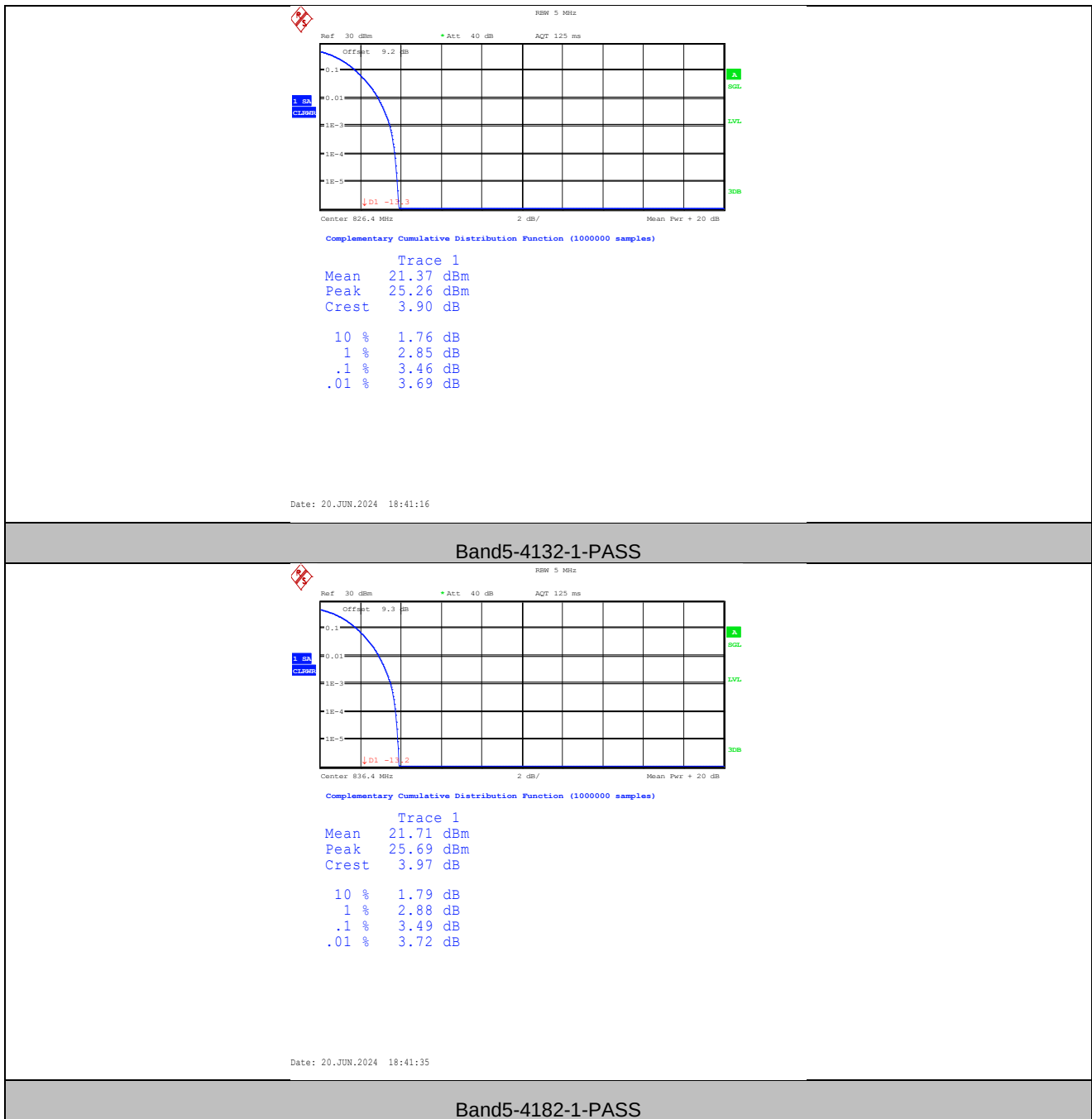


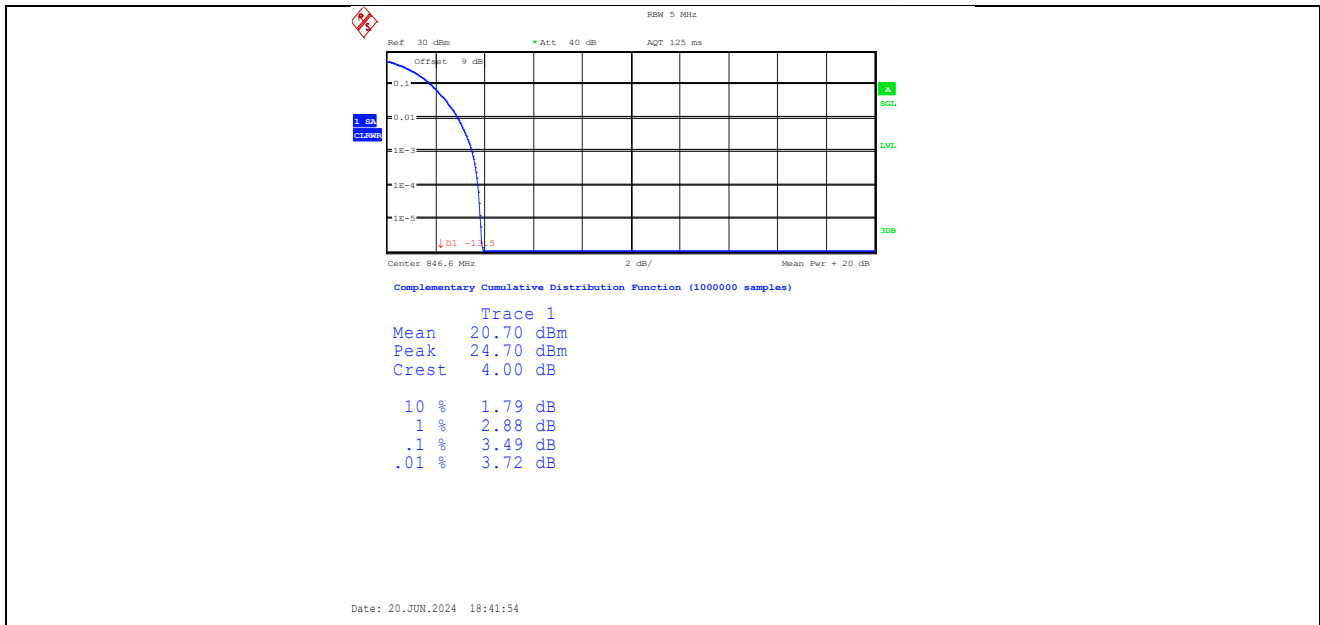
Band	Channel	Peak-to-Average Ratio(dB)	Limit(dB)	Verdict
Band5	4132	3.27	13	PASS
Band5	4182	3.33	13	PASS
Band5	4233	3.3	13	PASS

Band	Channel	SubTest	Peak-to-Average Ratio(dB)	Limit(dB)	Verdict
Band5	4132	1	3.46	13	PASS
Band5	4182	1	3.49	13	PASS
Band5	4233	1	3.49	13	PASS
Band5	4132	2	3.81	13	PASS
Band5	4182	2	3.88	13	PASS
Band5	4233	2	3.88	13	PASS
Band5	4132	3	4.01	13	PASS
Band5	4182	3	4.1	13	PASS
Band5	4233	3	4.04	13	PASS
Band5	4132	4	4.07	13	PASS
Band5	4182	4	4.13	13	PASS
Band5	4233	4	4.1	13	PASS

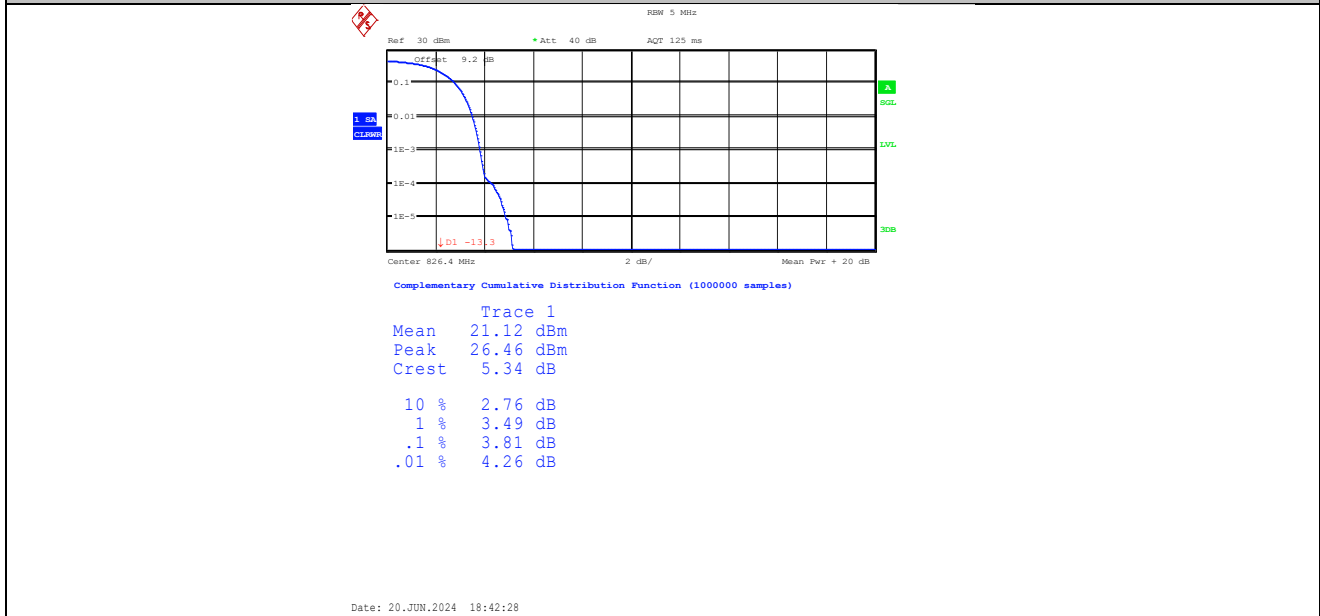
Band	Channel	SubTest	Peak-to-Average Ratio(dB)	Limit(dB)	Verdict
Band5	4132	1	4.62	13	PASS
Band5	4182	1	4.62	13	PASS
Band5	4233	1	4.65	13	PASS
Band5	4132	2	5.61	13	PASS
Band5	4182	2	5.61	13	PASS
Band5	4233	2	5.64	13	PASS
Band5	4132	3	5.29	13	PASS
Band5	4182	3	5.29	13	PASS
Band5	4233	3	5.29	13	PASS
Band5	4132	4	5.71	13	PASS
Band5	4182	4	5.74	13	PASS
Band5	4233	4	5.74	13	PASS
Band5	4132	5	4.46	13	PASS
Band5	4182	5	4.52	13	PASS
Band5	4233	5	4.52	13	PASS



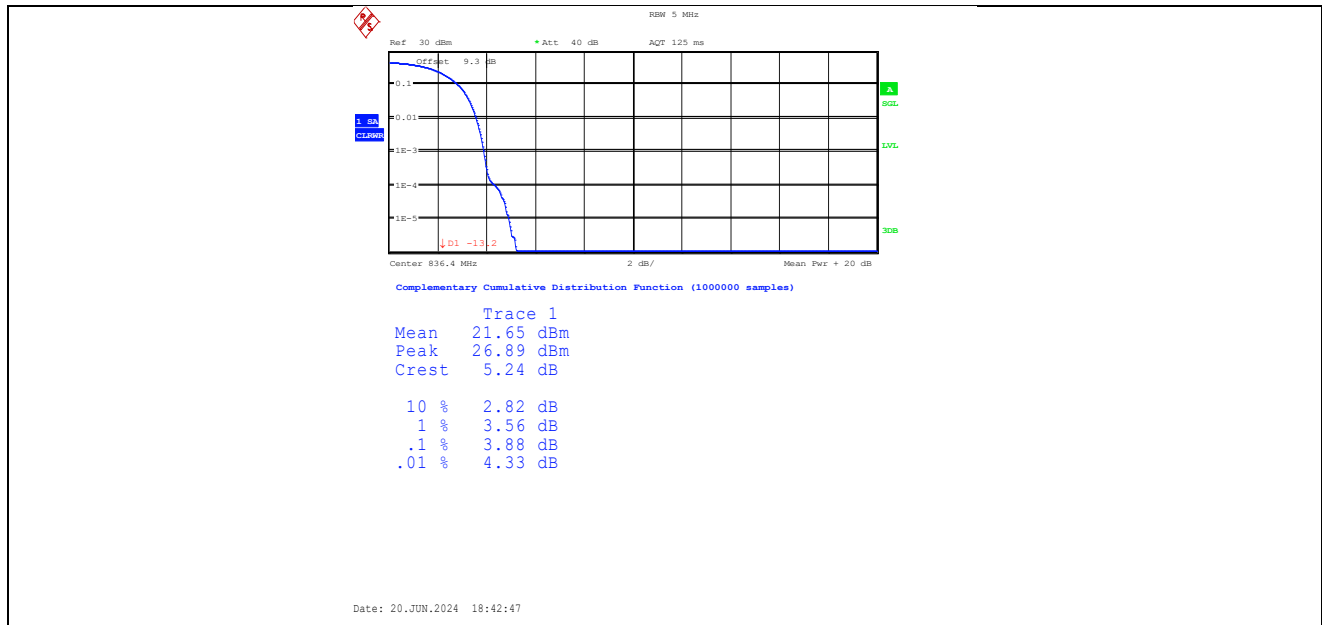




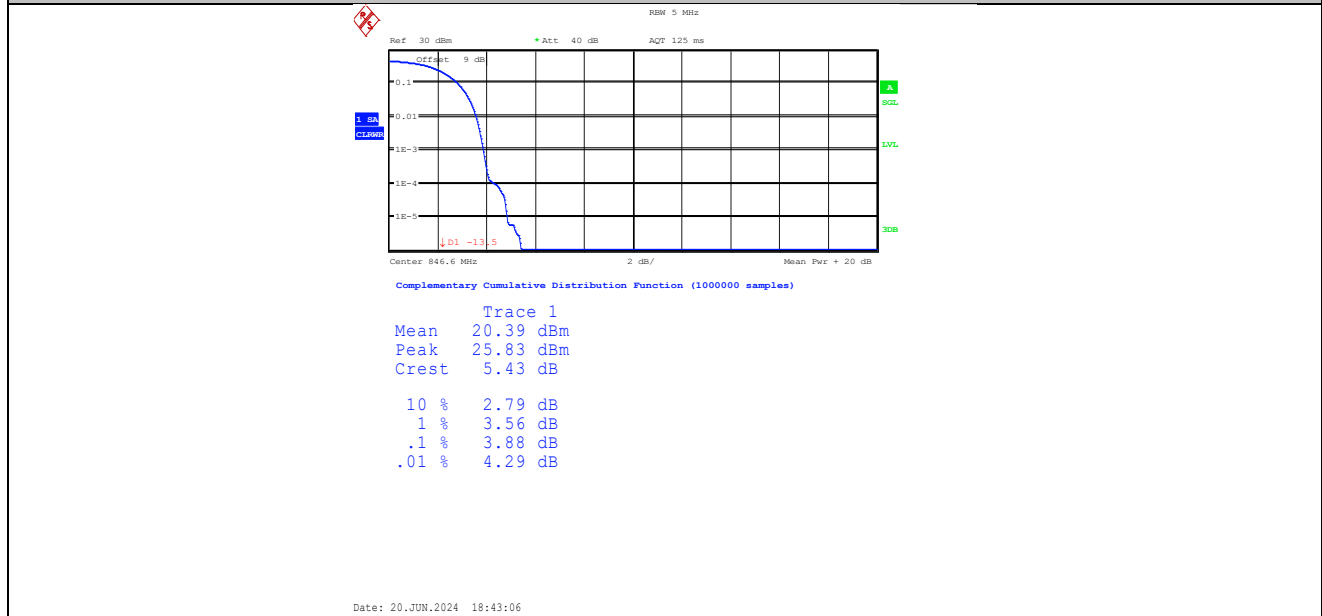
Band5-4233-1-PASS



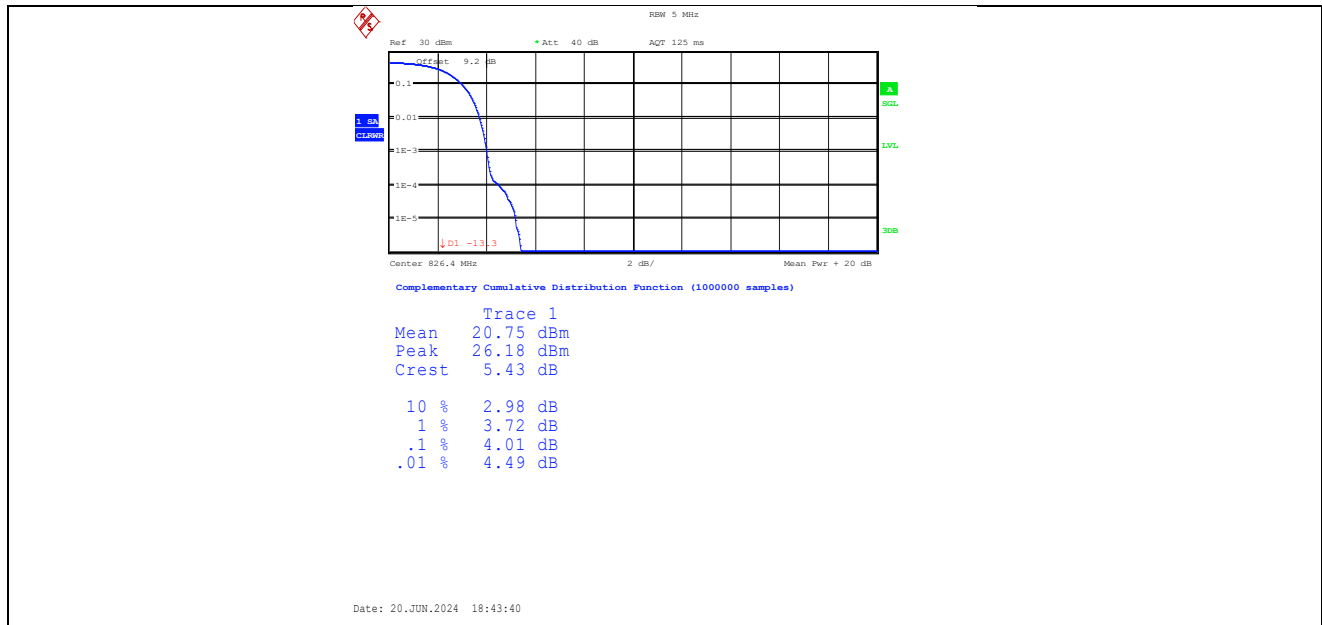
Band5-4132-2-PASS



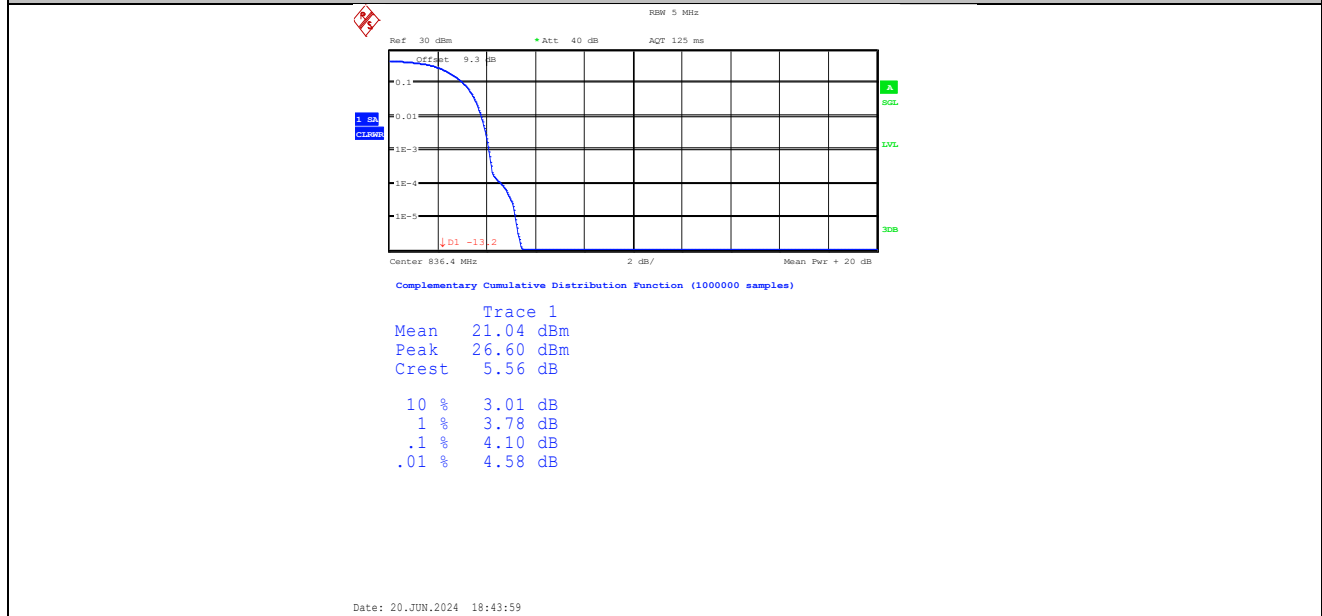
Band5-4182-2-PASS



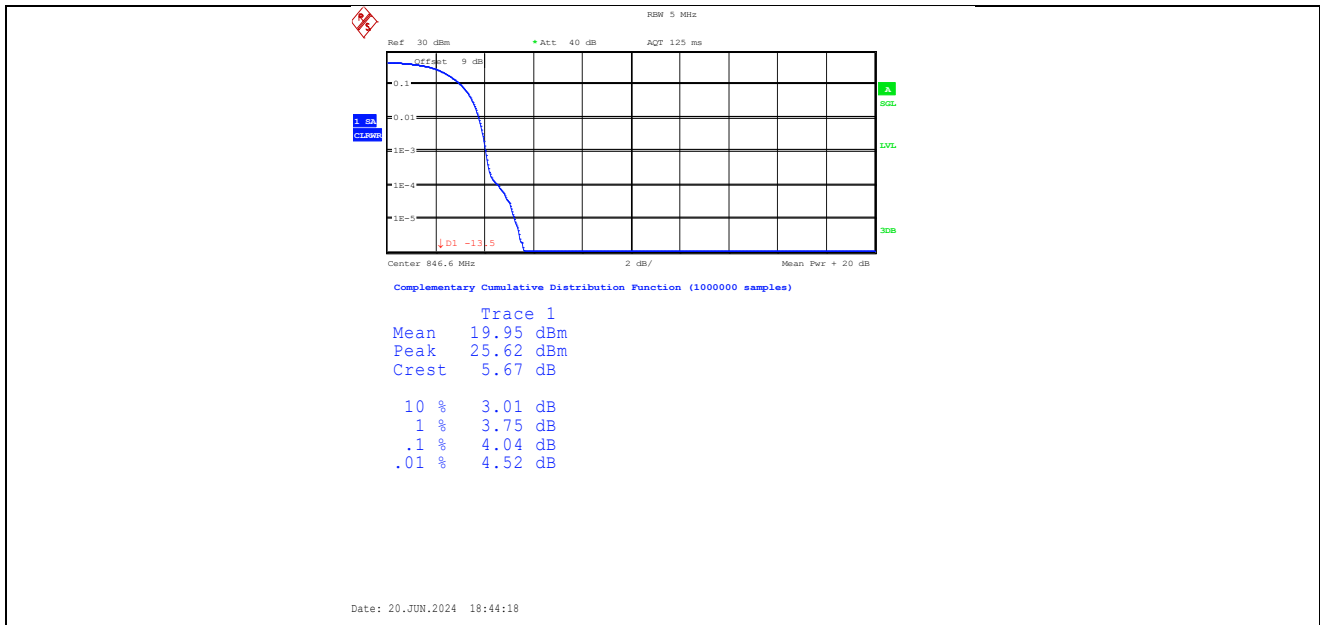
Band5-4233-2-PASS



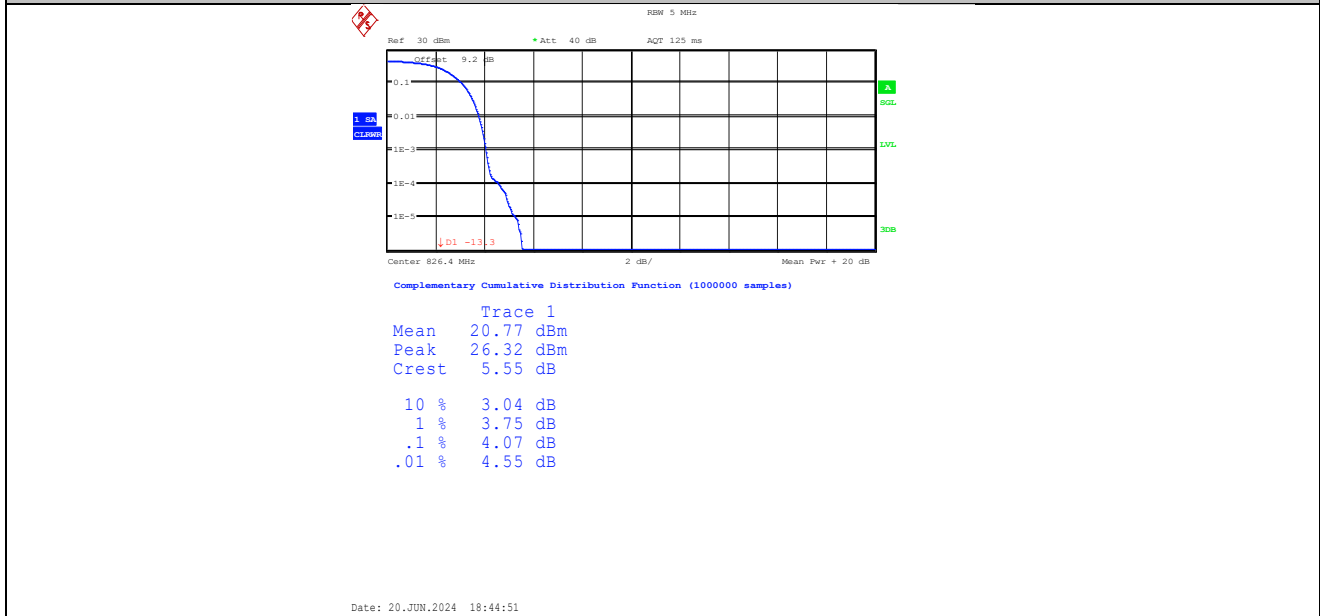
Band5-4132-3-PASS



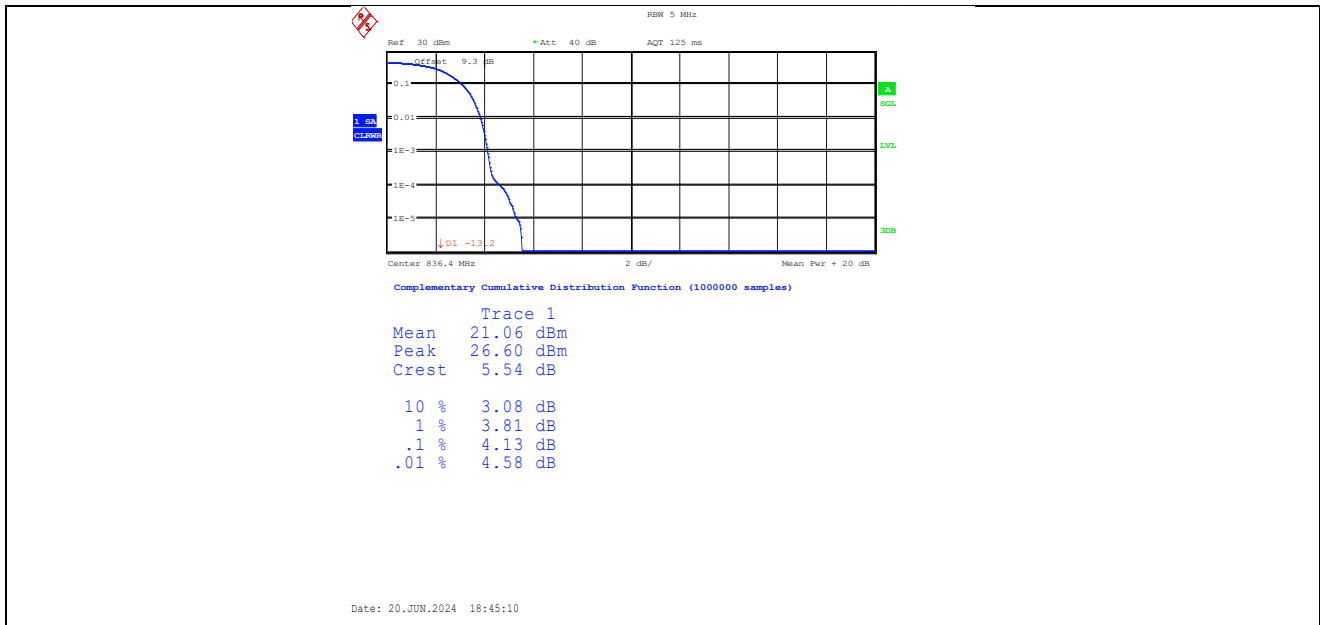
Band5-4182-3-PASS



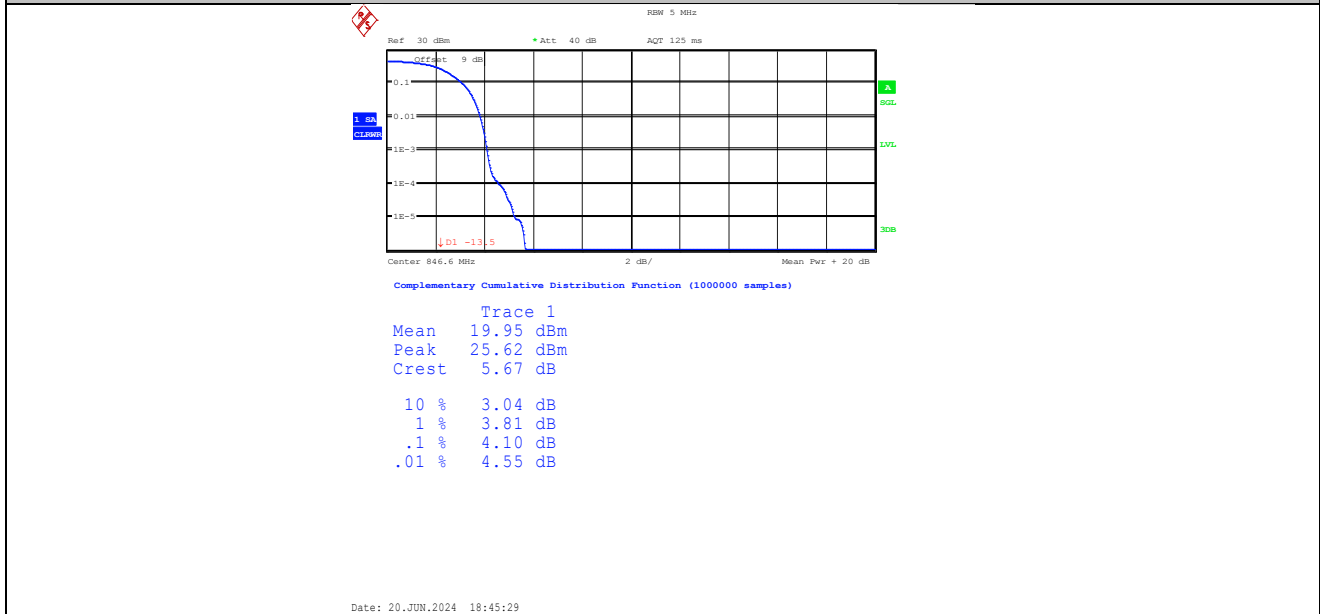
Band5-4233-3-PASS



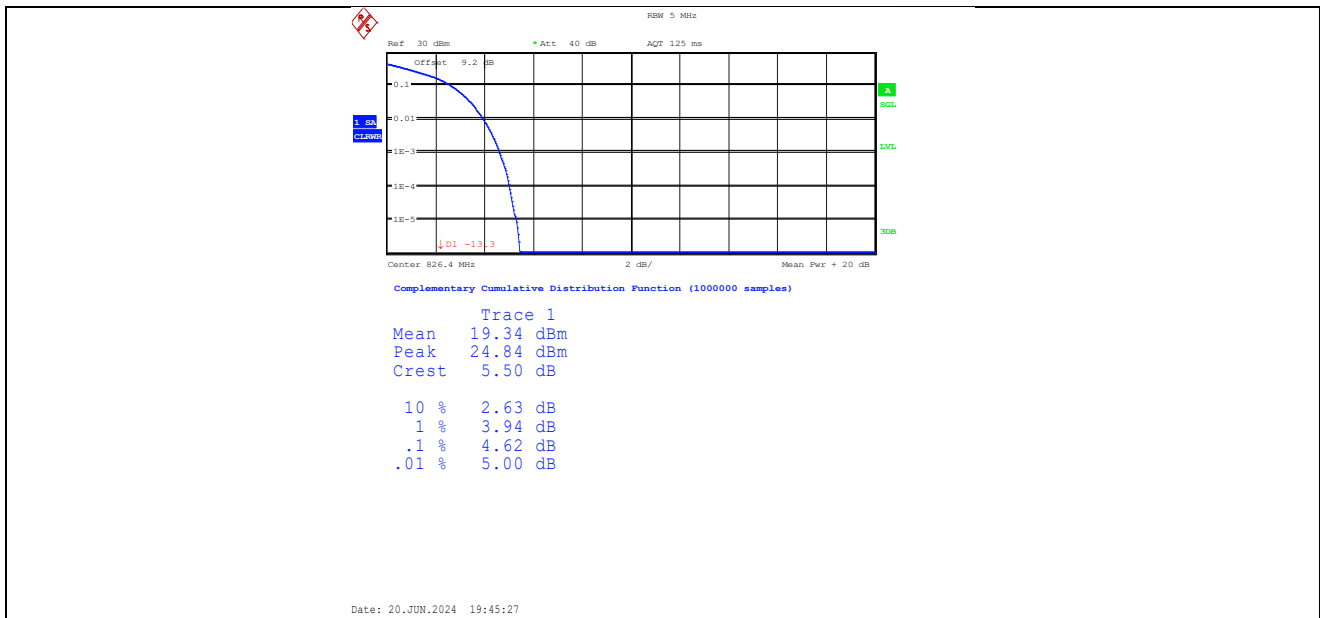
Band5-4132-4-PASS



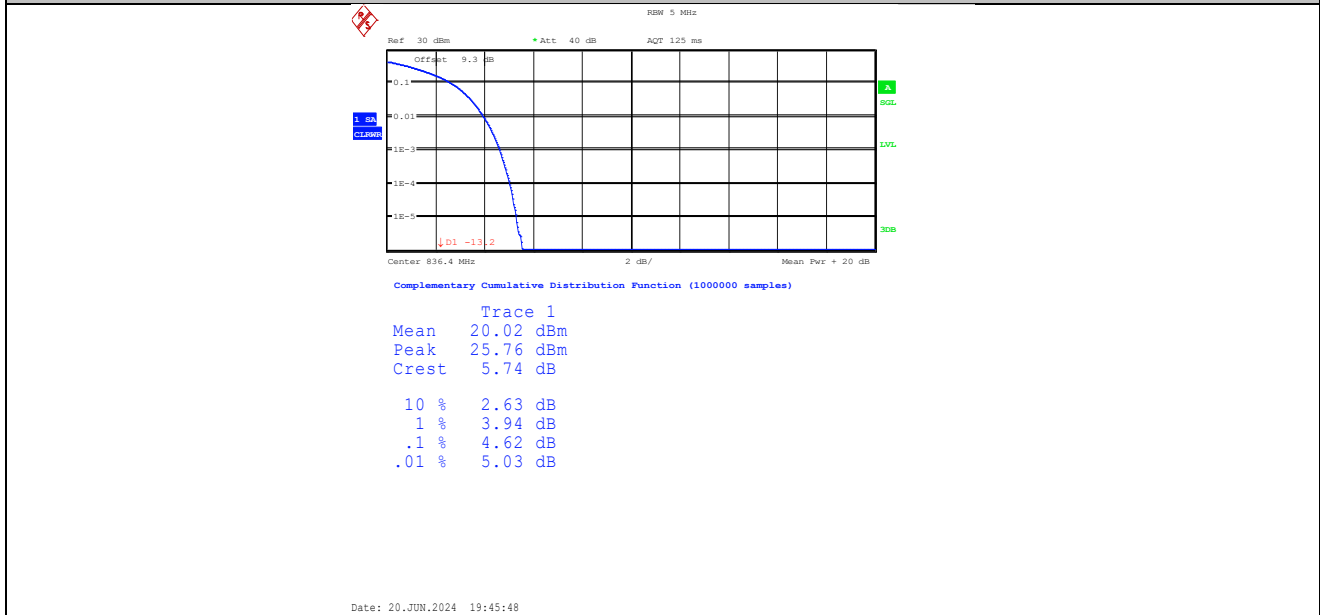
Band5-4182-4-PASS



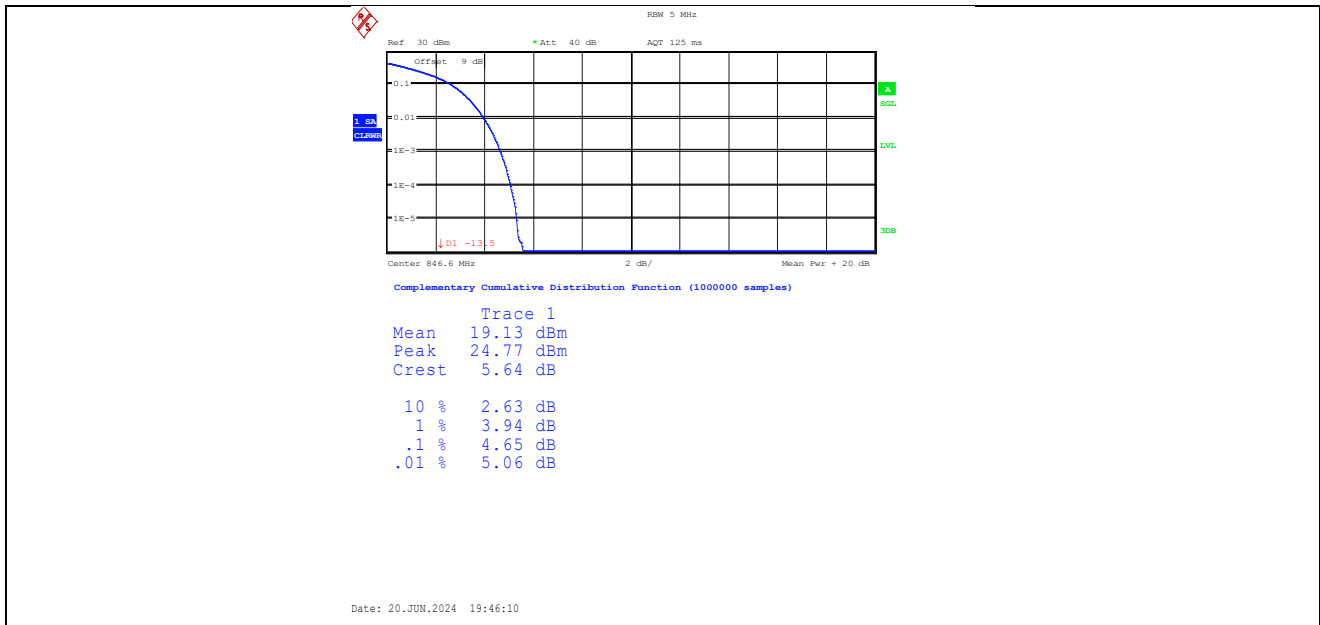
Band5-4233-4-PASS



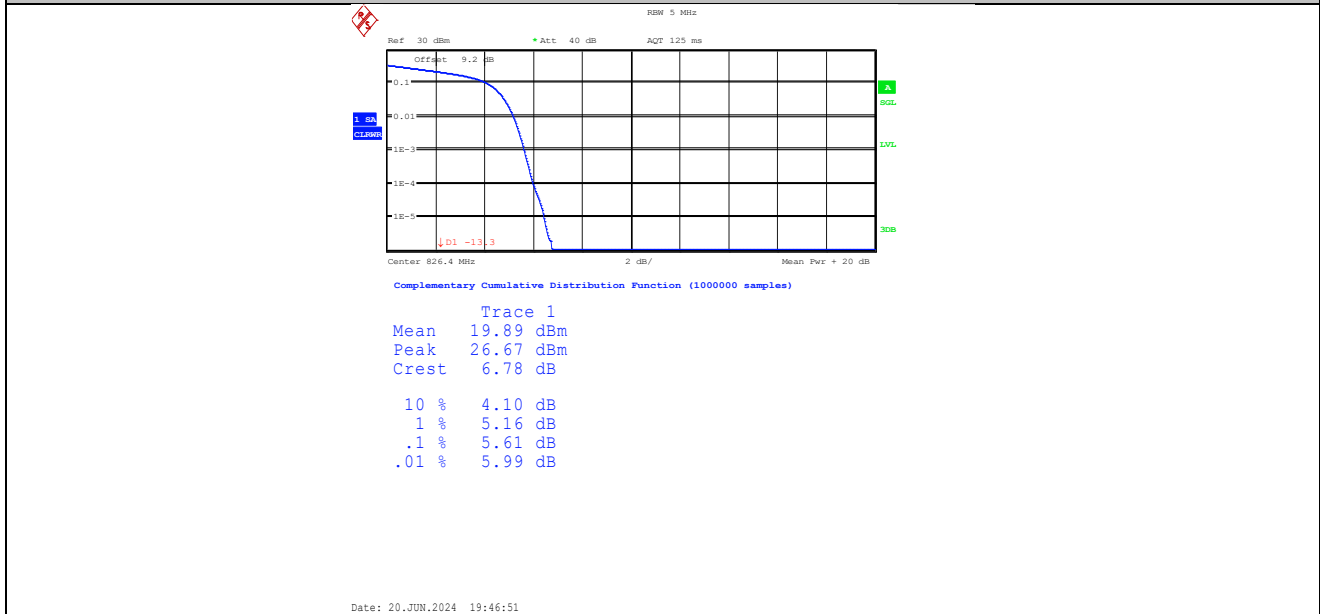
Band5-4132-1-PASS



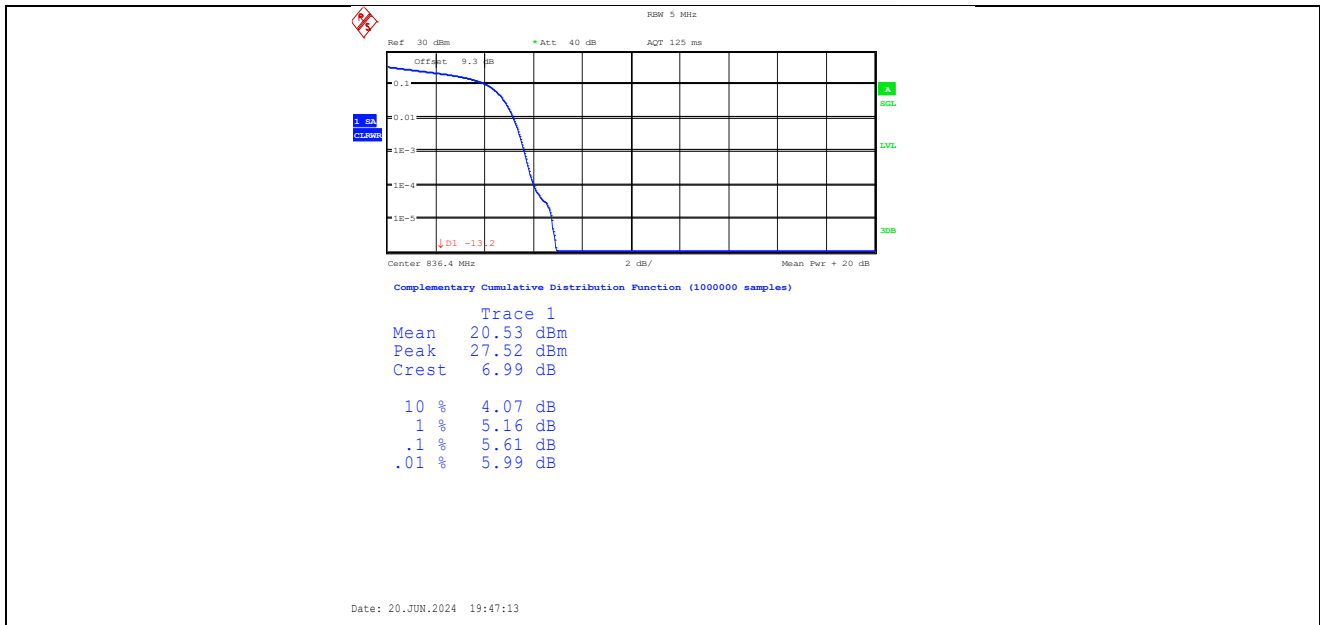
Band5-4182-1-PASS



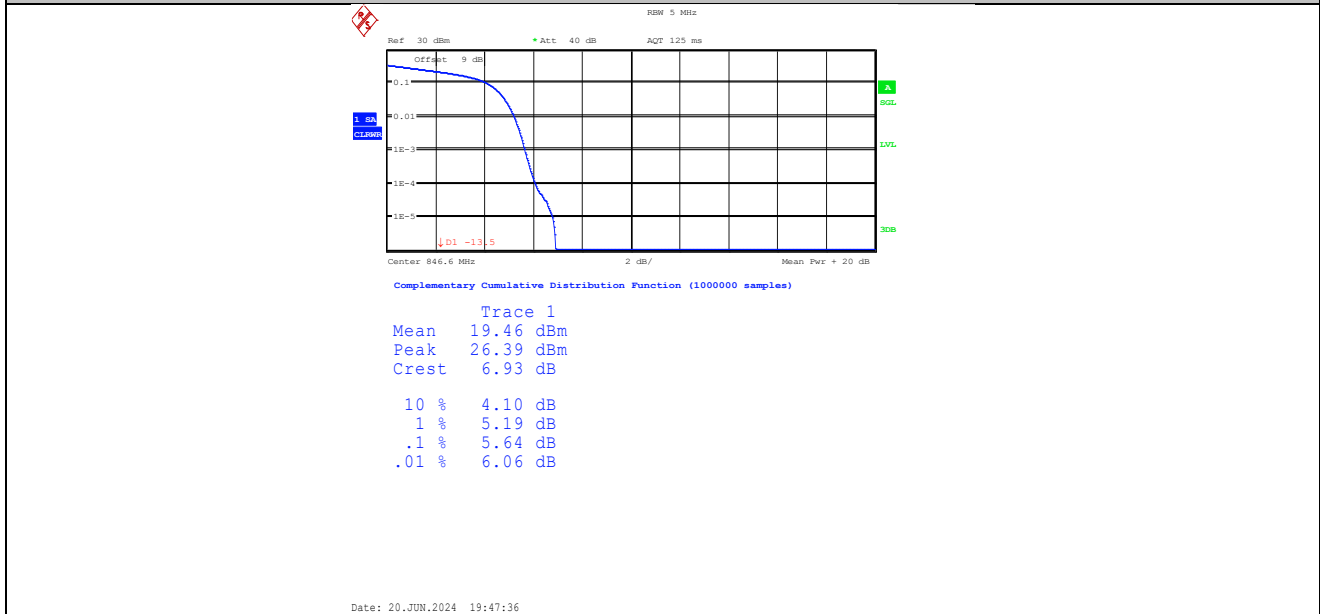
Band5-4233-1-PASS



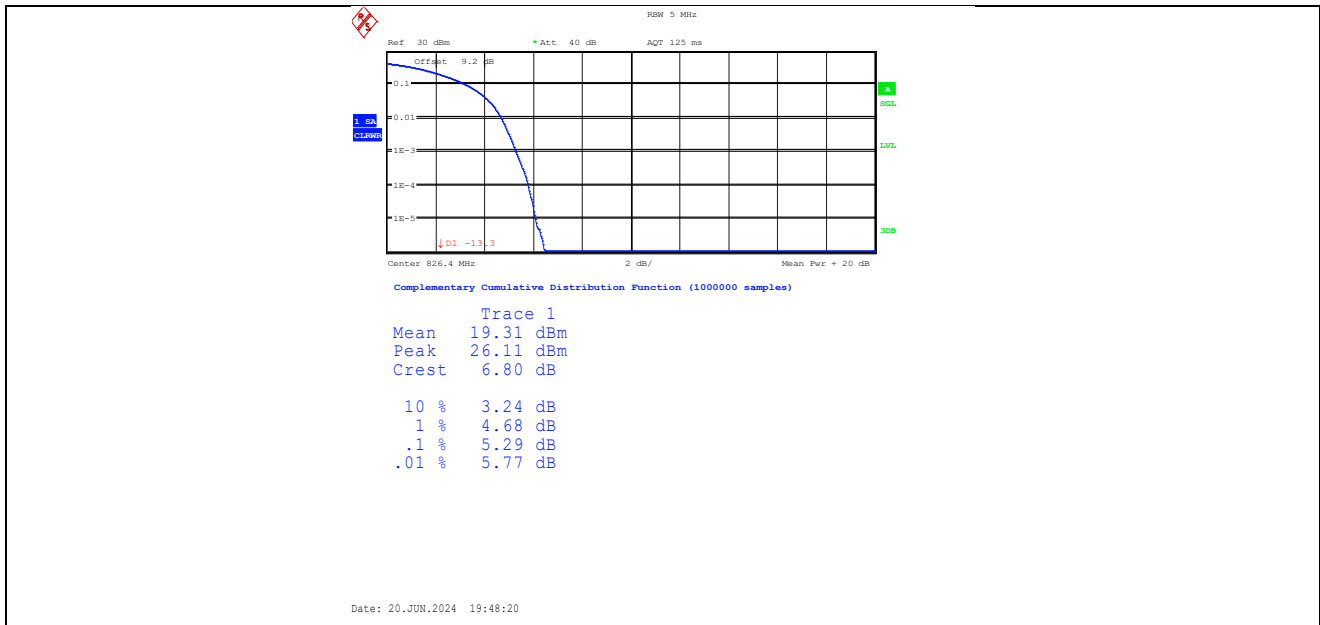
Band5-4132-2-PASS



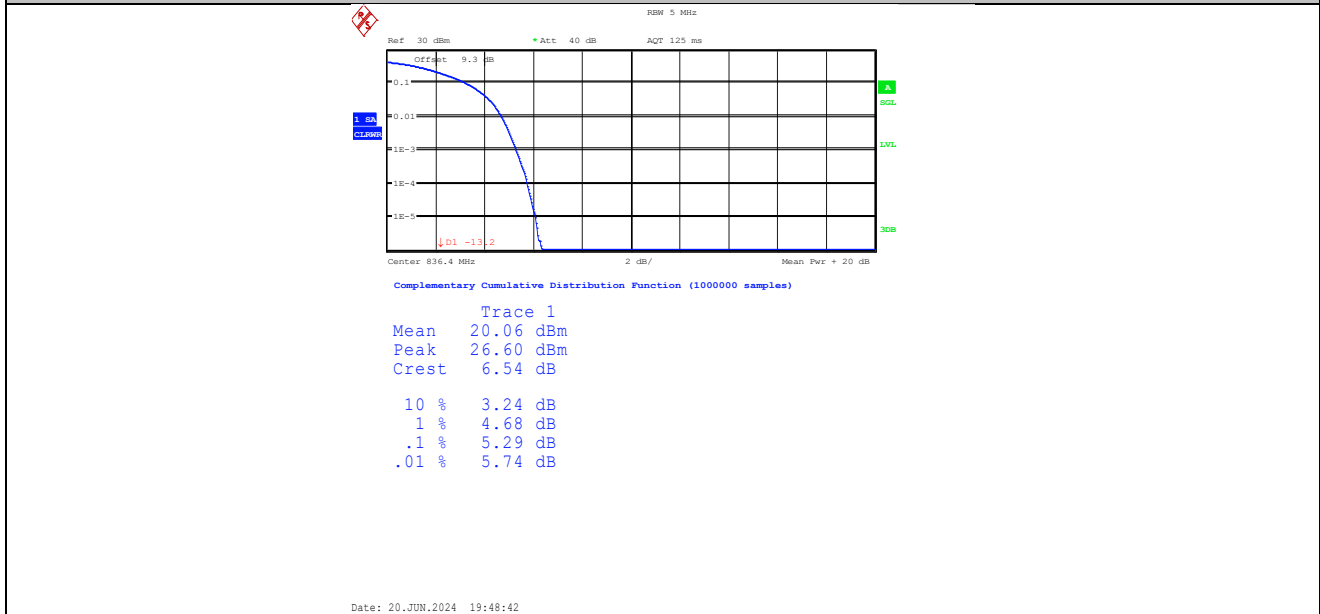
Band5-4182-2-PASS



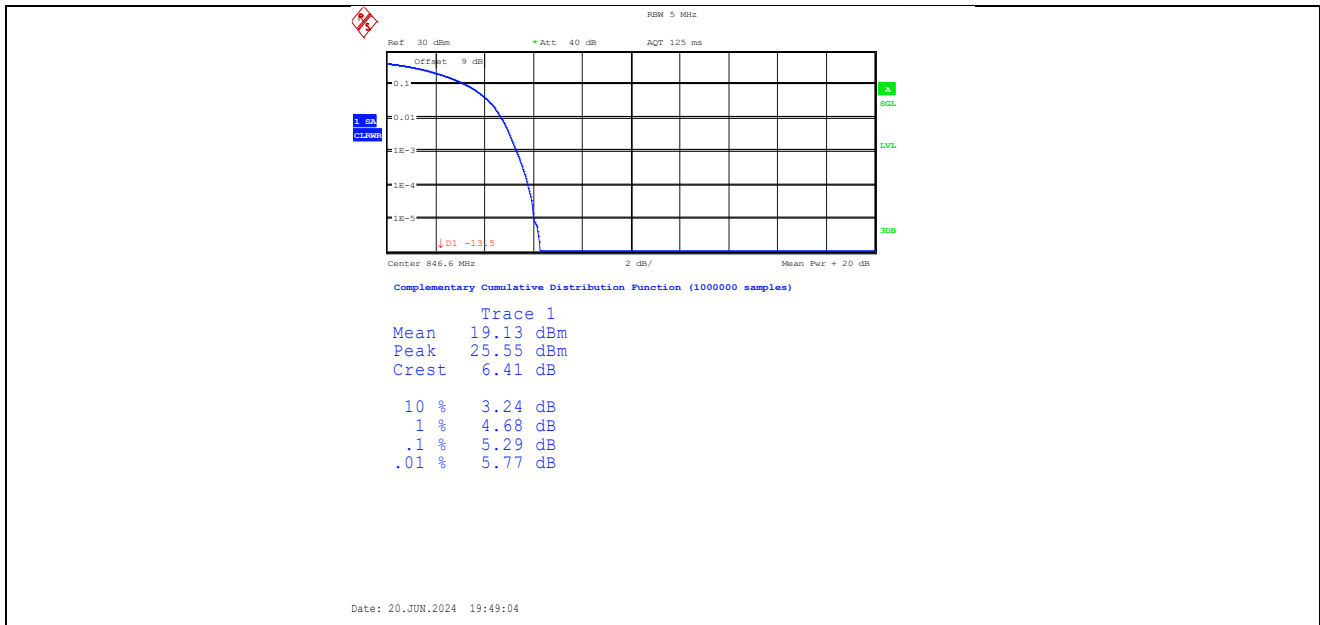
Band5-4233-2-PASS



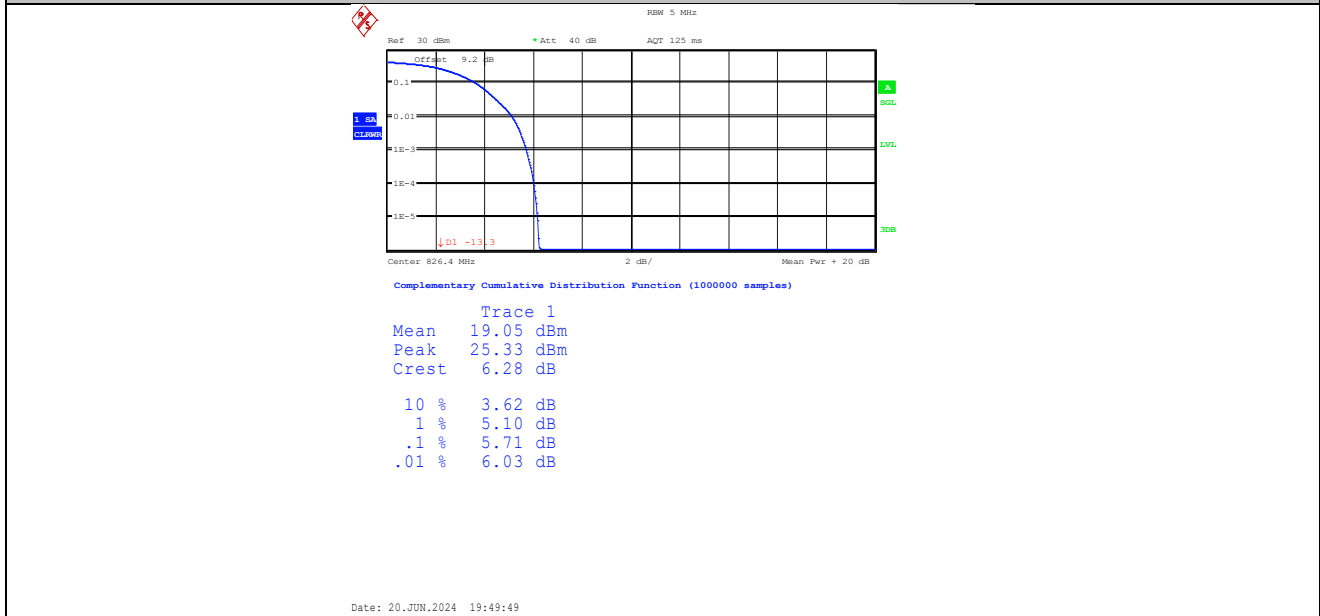
Band5-4132-3-PASS



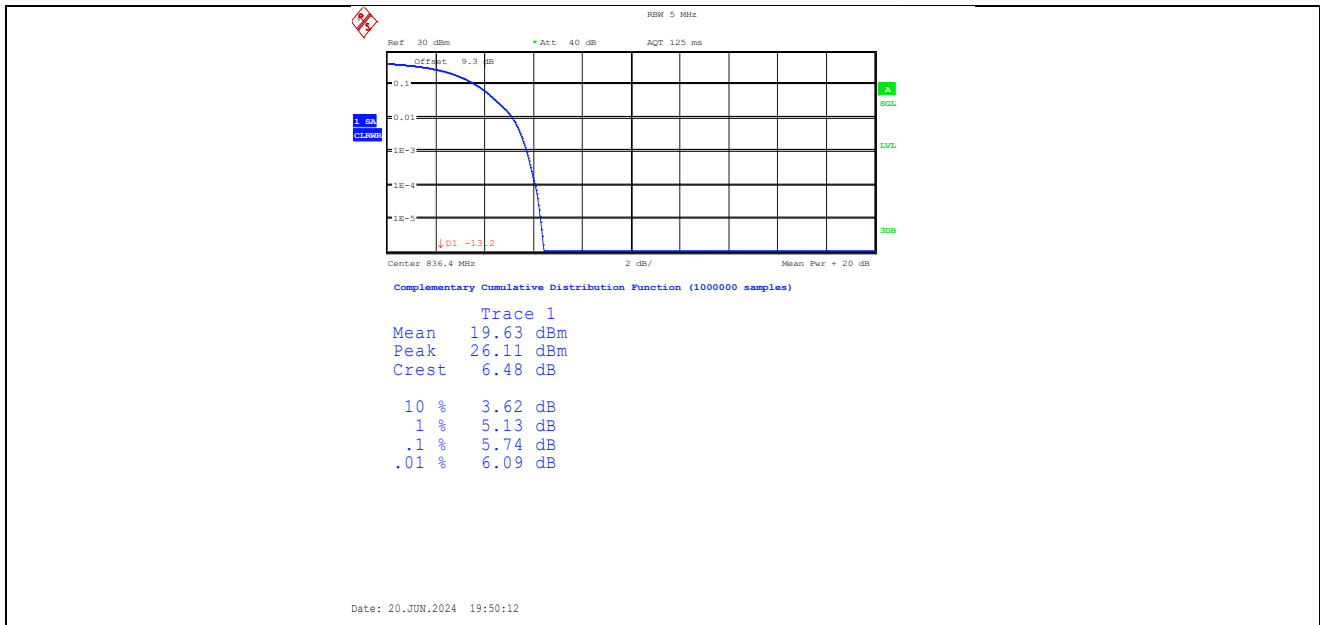
Band5-4182-3-PASS



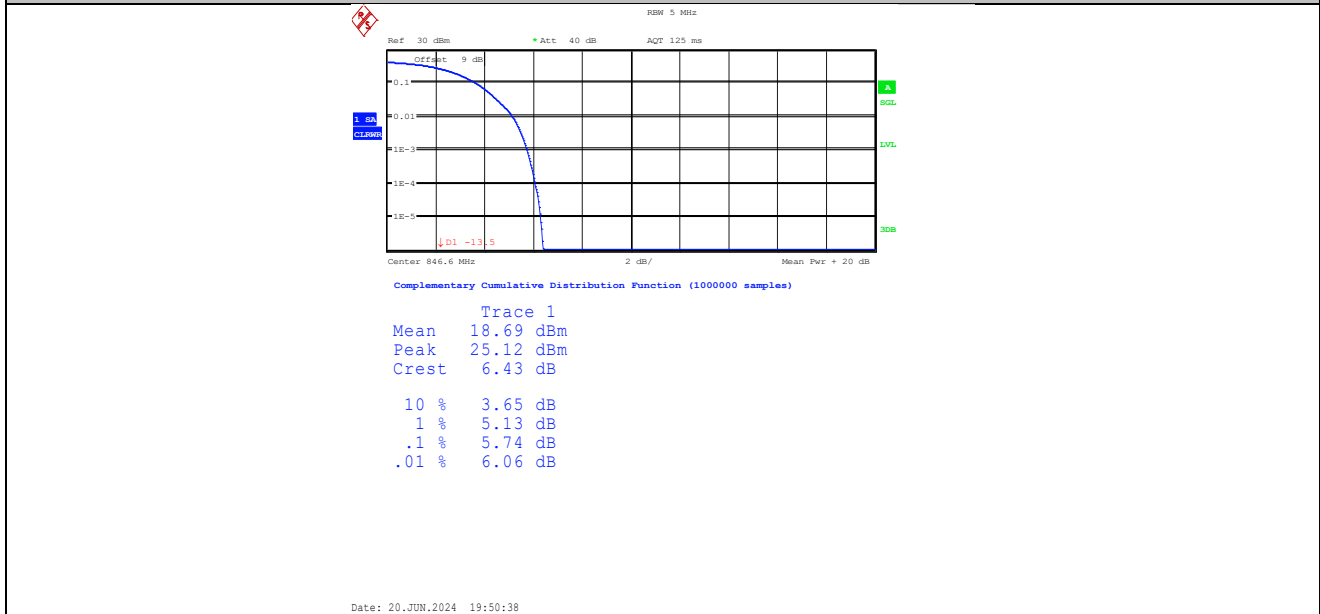
Band5-4233-3-PASS



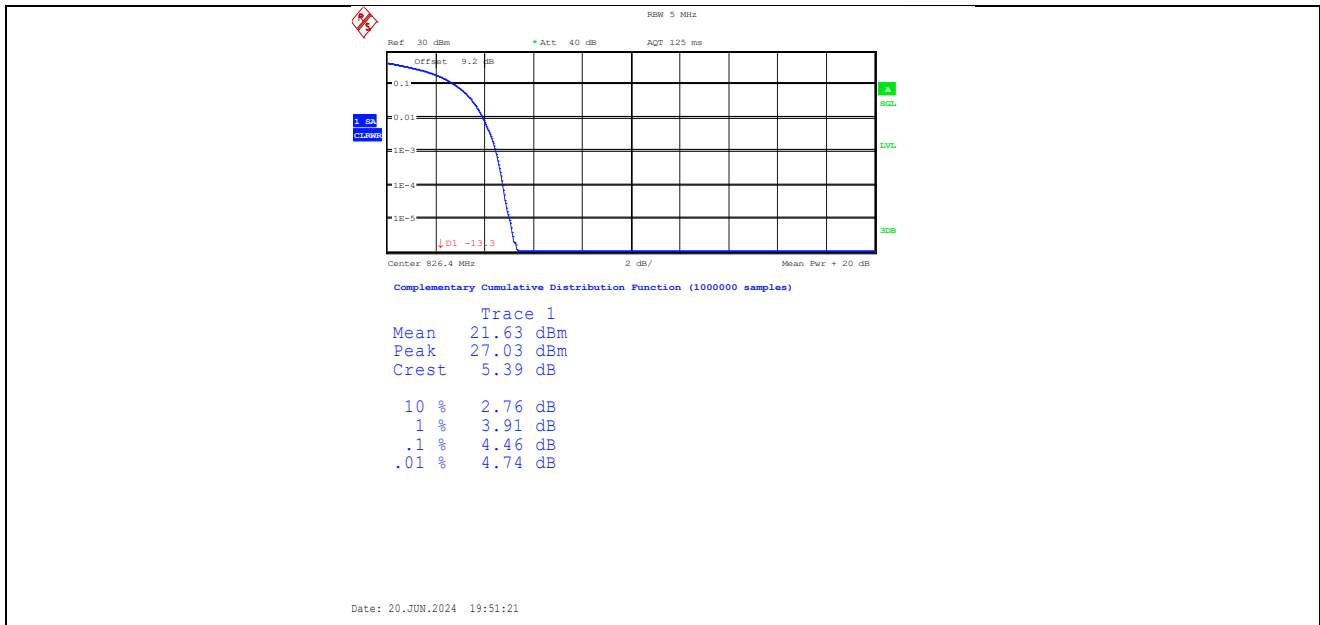
Band5-4132-4-PASS



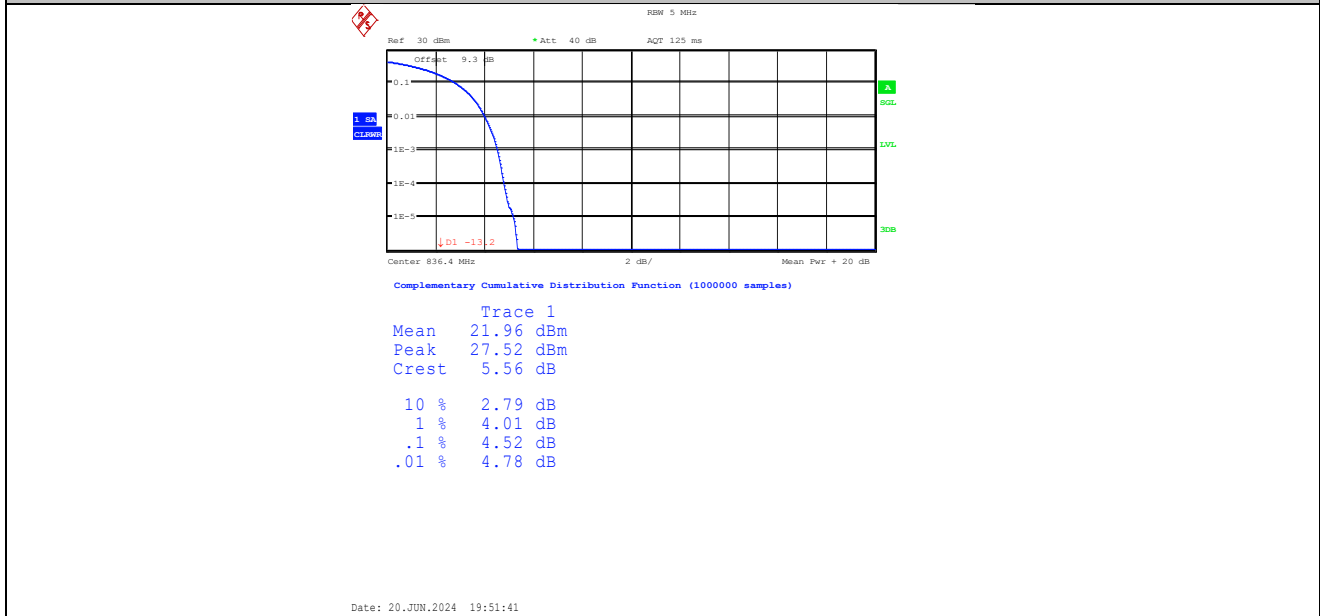
Band5-4182-4-PASS



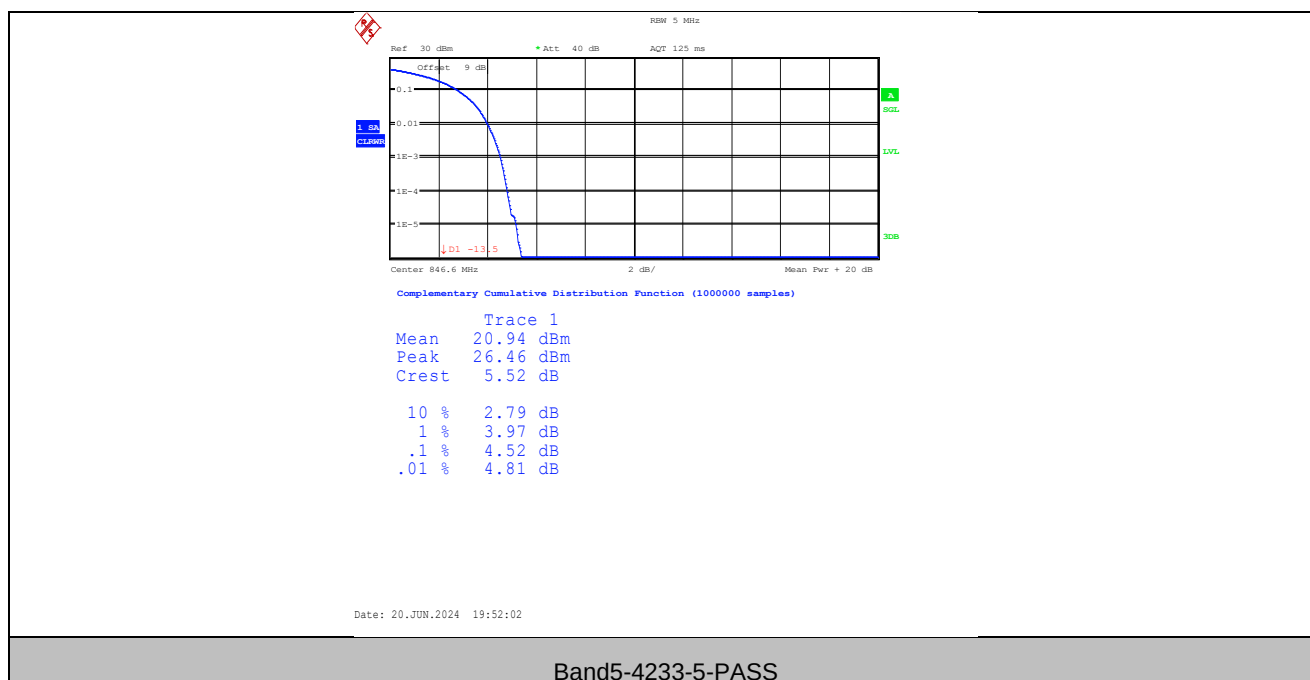
Band5-4233-4-PASS



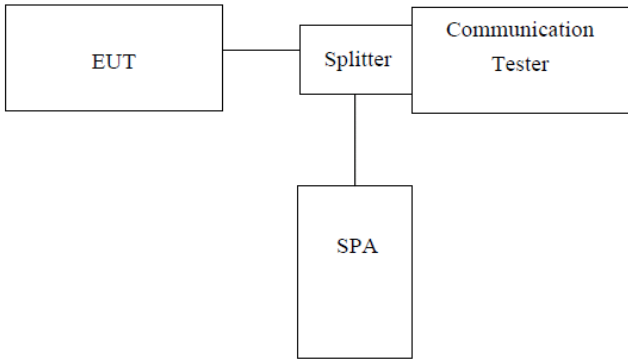
Band5-4132-5-PASS



Band5-4182-5-PASS

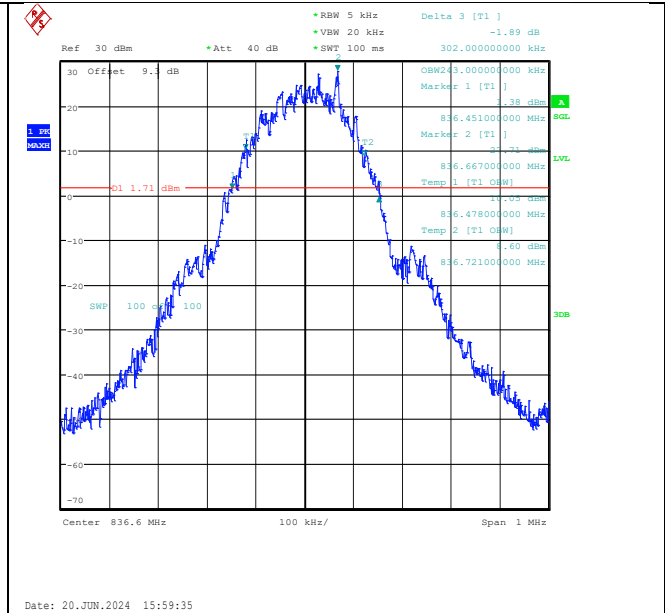
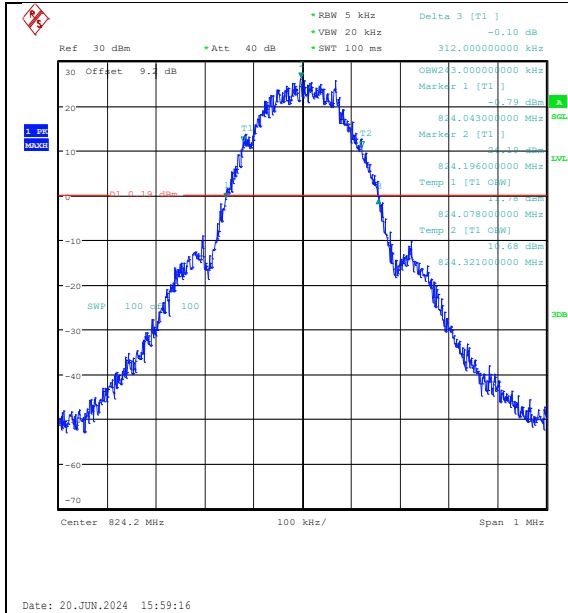


4.5 Occupy Bandwidth

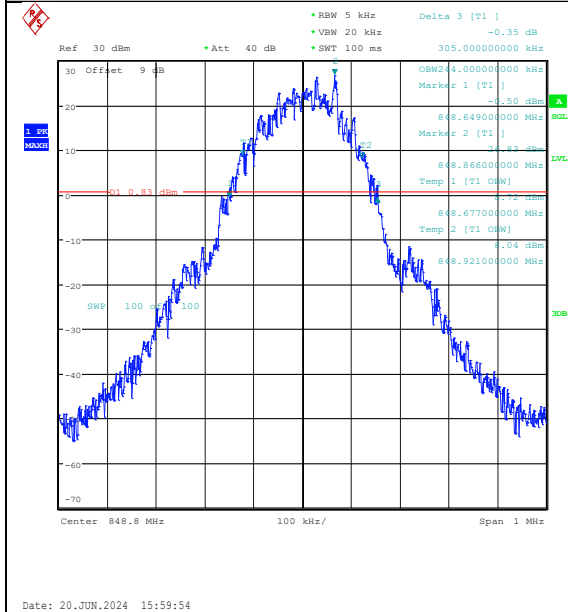
Test Requirement:	FCC part22.917(a) and FCC part24.232(b), FCC part27.50(h)
Test Method:	FCC part2.1049
Test setup:	 <i>Note: Measurement setup for testing on Antenna connector</i>
Test Procedure:	1. The EUT's output RF connector was connected with a short cable to the spectrum analyzer 2. RBW was set to about 1% of emission BW, VBW= 3 times RBW. 3. -26dBc display line was placed on the screen (or 99% bandwidth), the occupied bandwidth is the delta frequency between the two points where the display line intersects the signal trace.
Test Instruments:	Refer to section 3 for details
Test mode:	Refer to section 4.1 for details
Test results:	Pass

Measurement Data

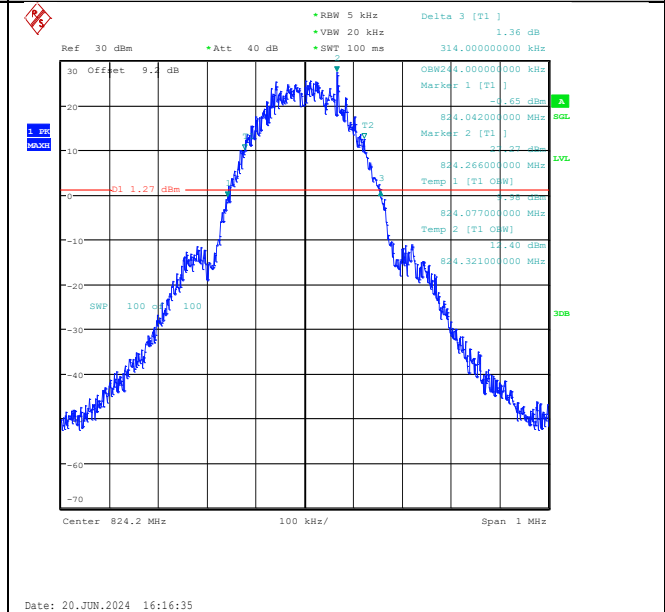
Band	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	0.243	0.31	---	PASS
GSM850	190	0.243	0.30	---	PASS
GSM850	251	0.244	0.30	---	PASS
GPRS850	128	0.244	0.31	---	PASS
GPRS850	190	0.243	0.32	---	PASS
GPRS850	251	0.243	0.31	---	PASS
EGPRS850	128	0.243	0.30	---	PASS
EGPRS850	190	0.242	0.30	---	PASS
EGPRS850	251	0.239	0.30	---	PASS



GSM850-128-5-PASS

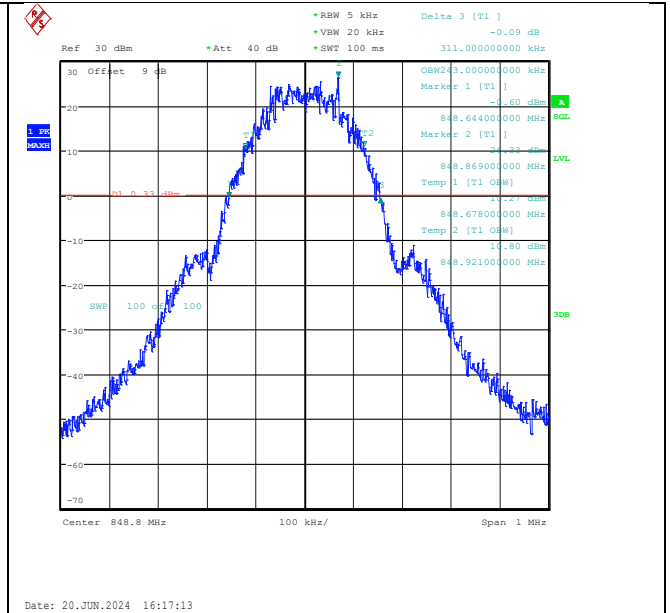
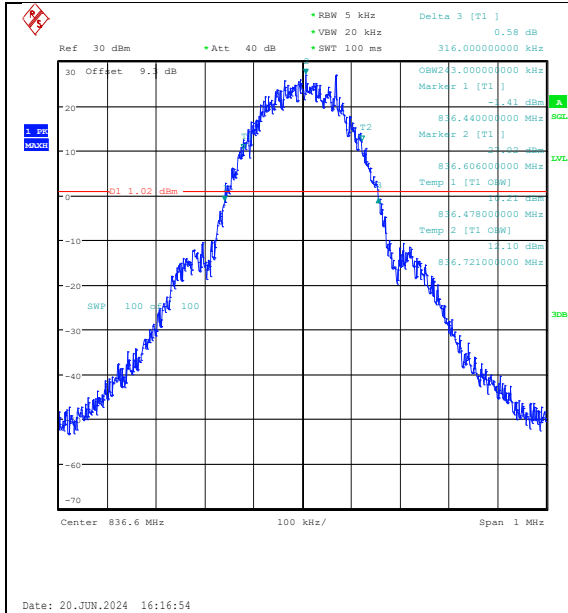


GSM850-190-5-PASS

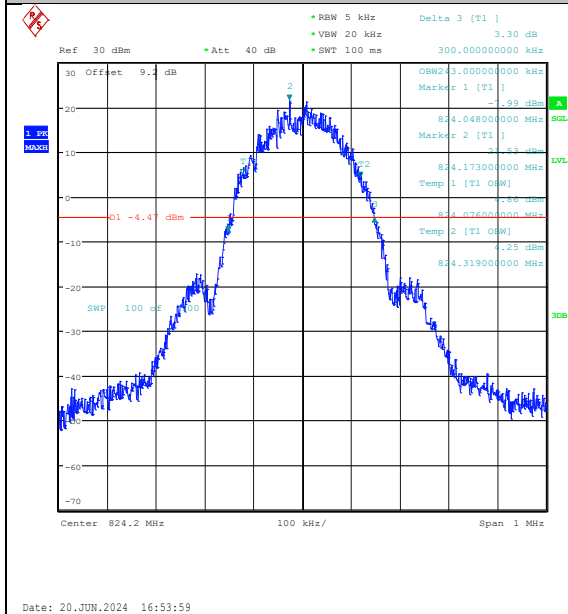


GSM850-251-5-PASS

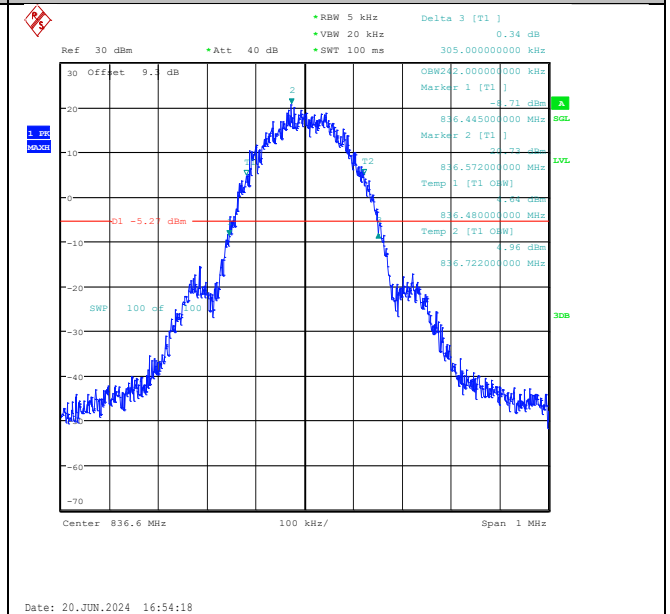
GPRS850-128-5-PASS



GPRS850-190-5-PASS

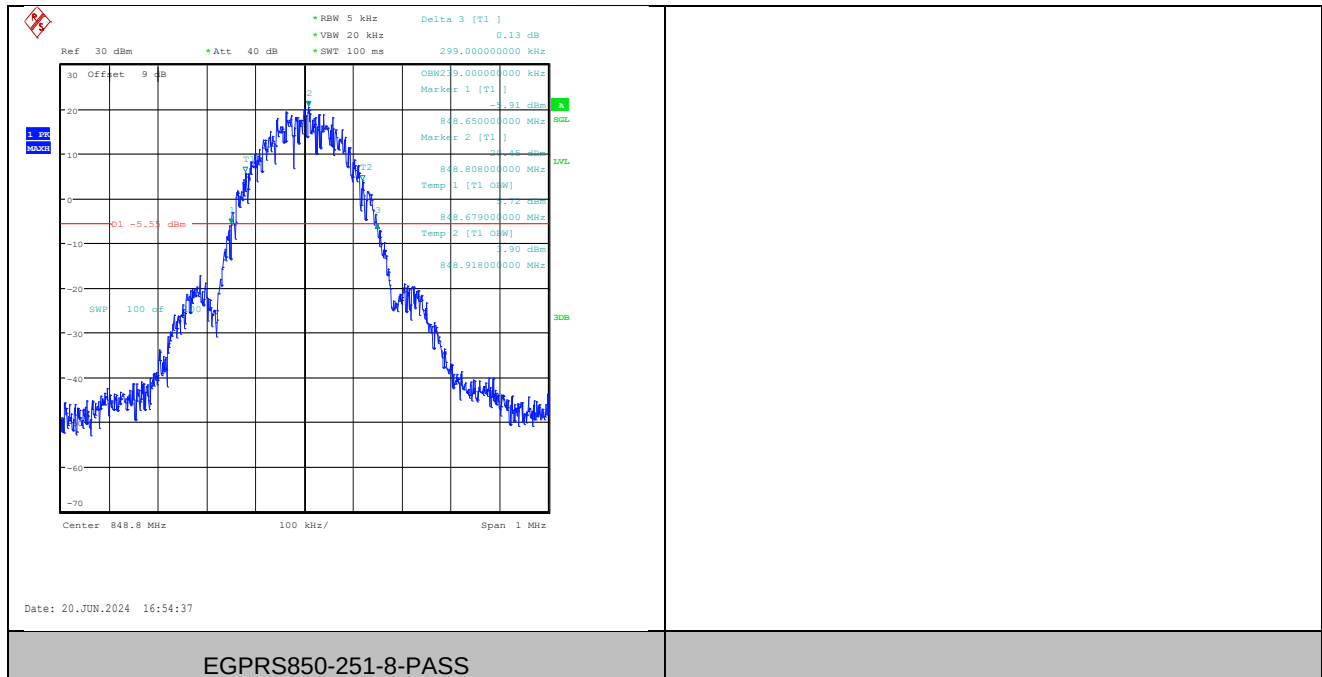


GPRS850-251-5-PASS

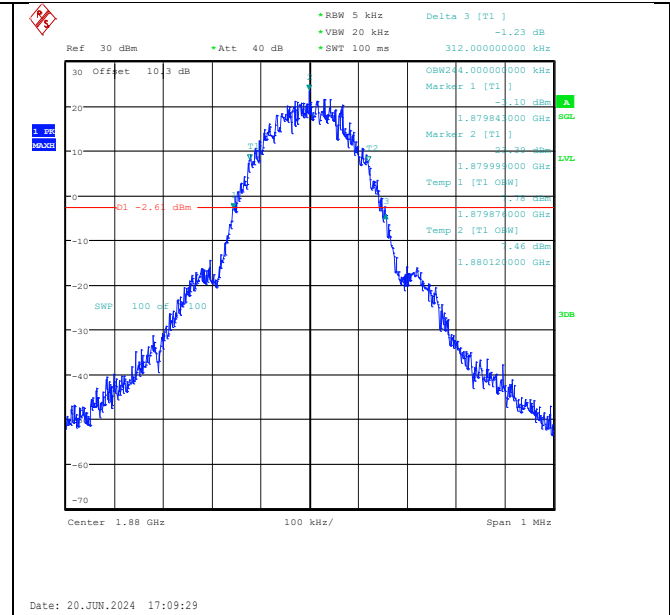
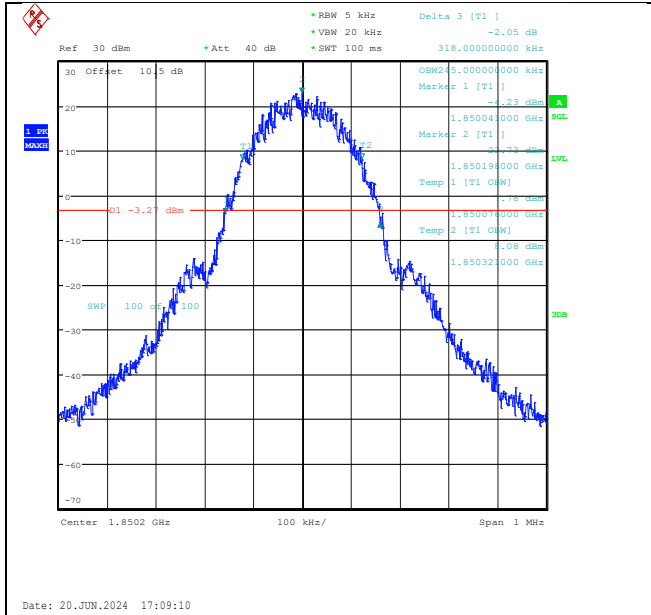


EGPRS850-128-8-PASS

EGPRS850-190-8-PASS

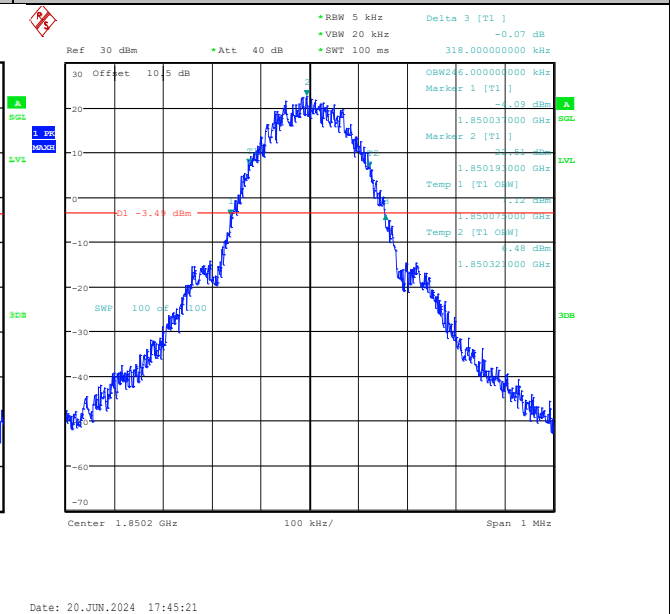
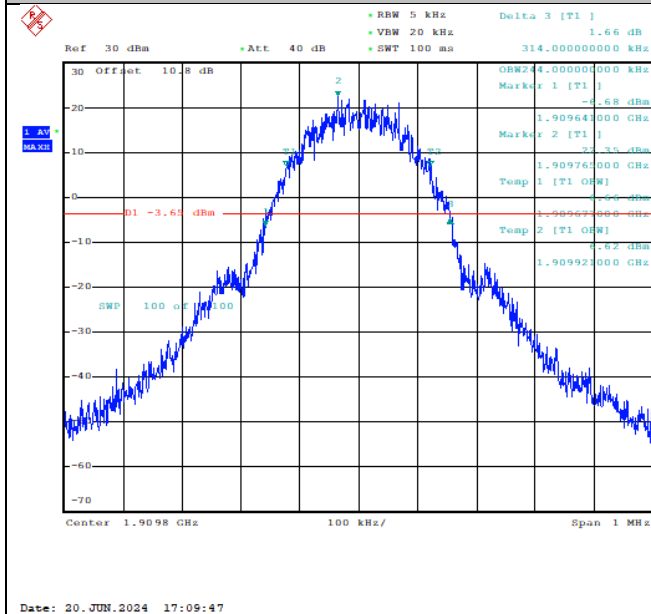


Band	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM1900	512	0.245	0.32	---	PASS
GSM1900	661	0.244	0.31	---	PASS
GSM1900	810	0.241	0.29	---	PASS
GPRS1900	512	0.246	0.32	---	PASS
GPRS1900	661	0.246	0.32	---	PASS
GPRS1900	810	0.246	0.31	---	PASS
EGPRS1900	512	0.246	0.31	---	PASS
EGPRS1900	661	0.242	0.31	---	PASS
EGPRS1900	810	0.246	0.30	---	PASS



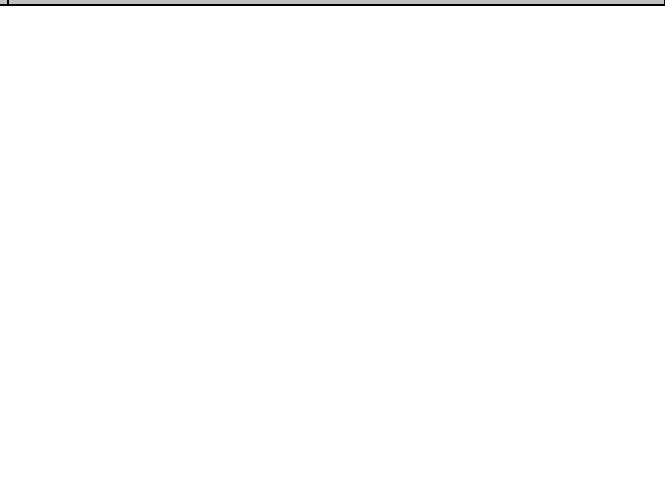
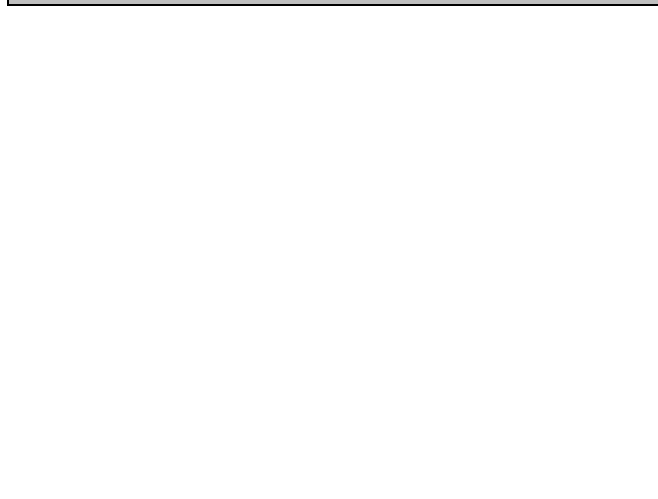
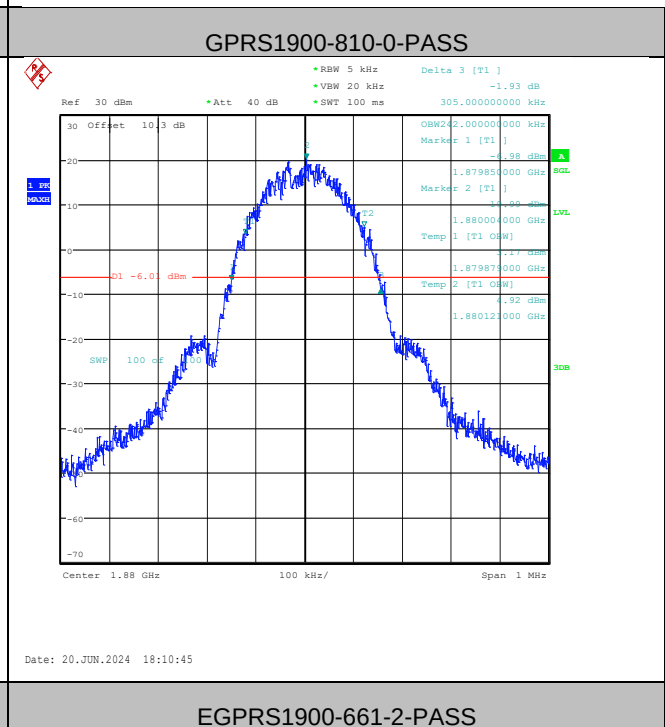
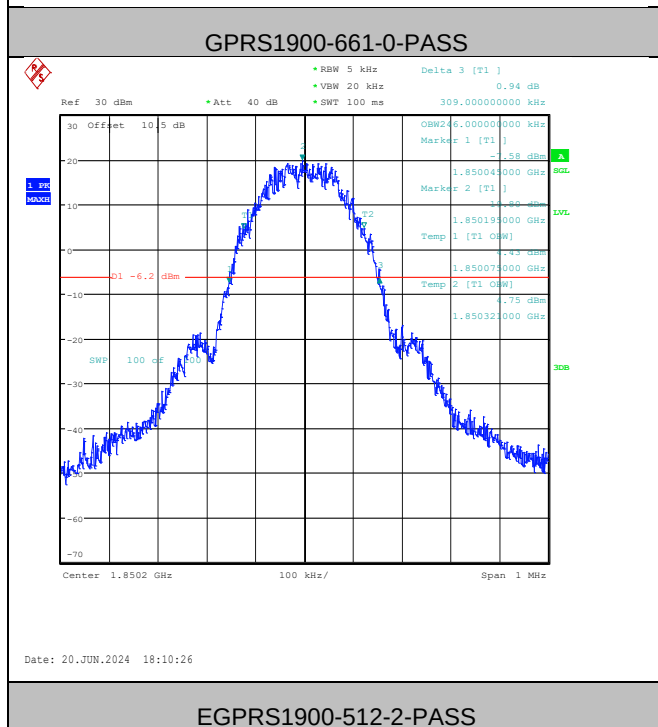
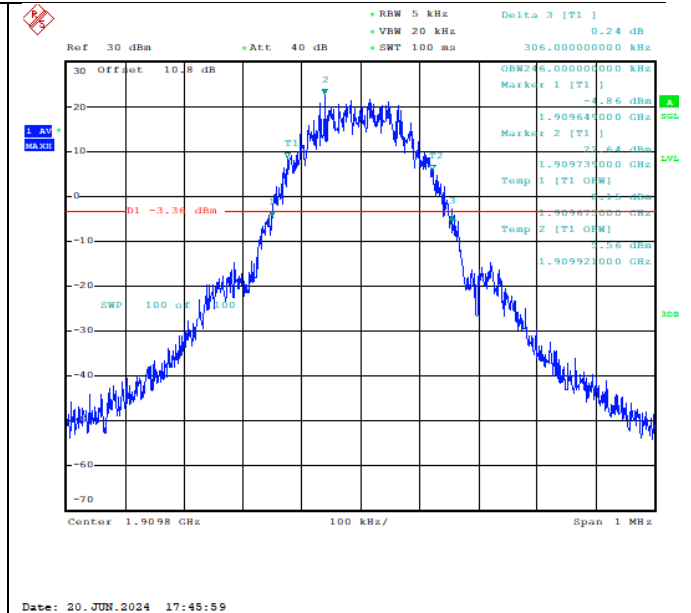
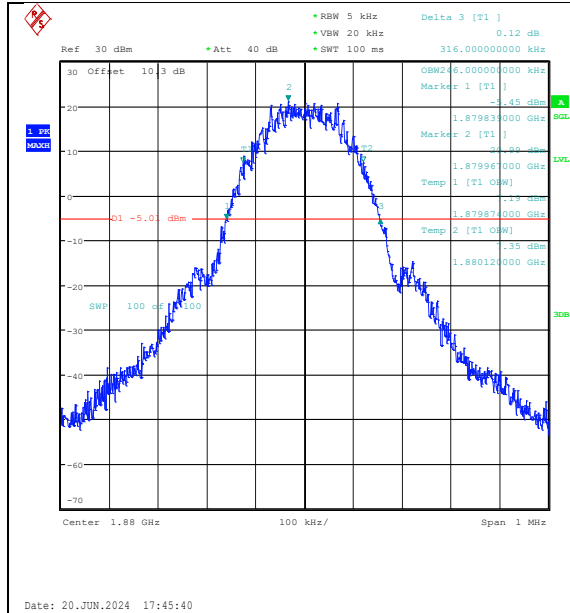
GSM1900-512-0-PASS

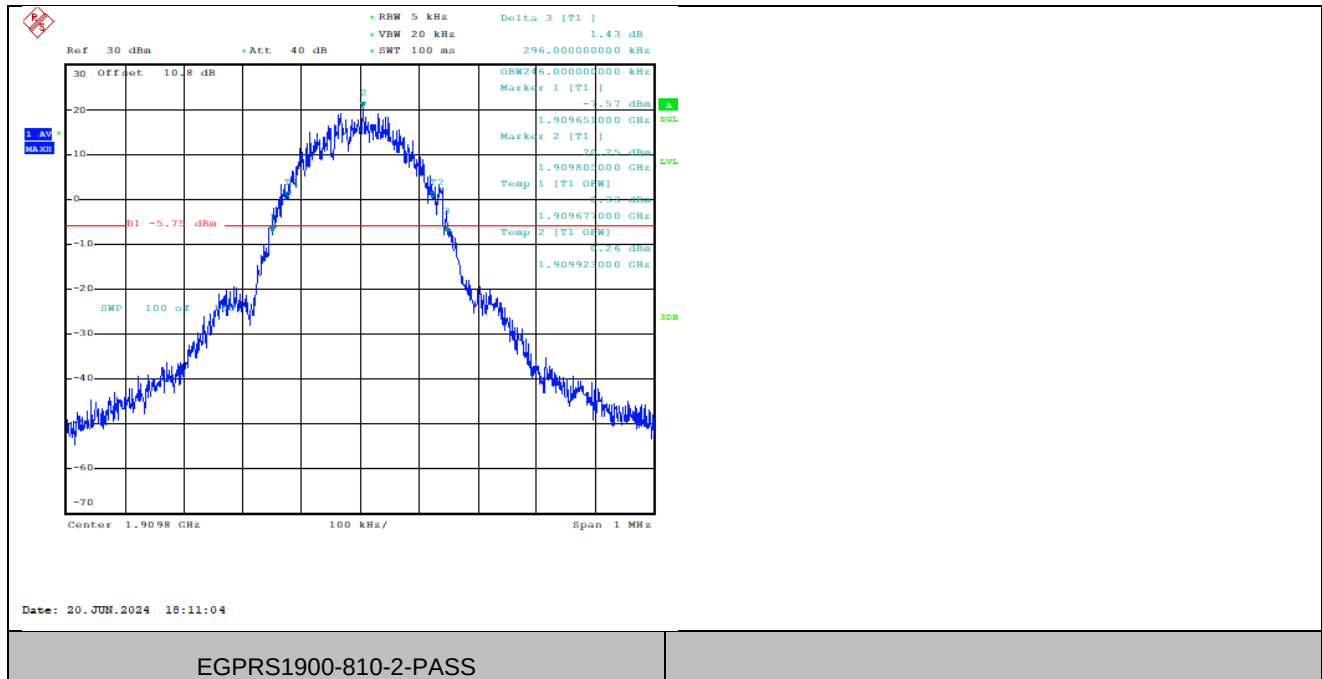
GSM1900-661-0-PASS



GSM1900-810-0-PASS

GPRS1900-512-0-PASS

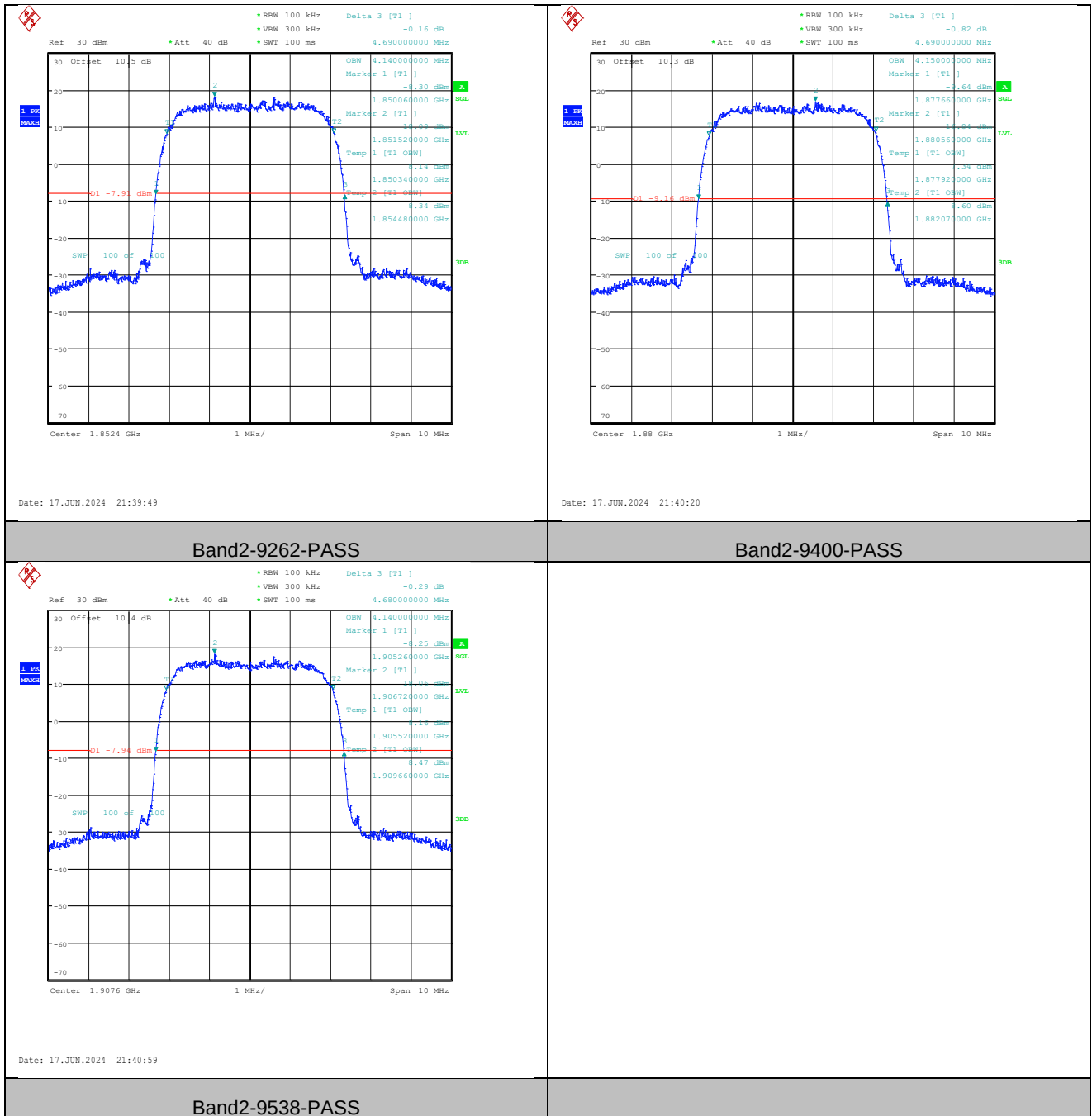


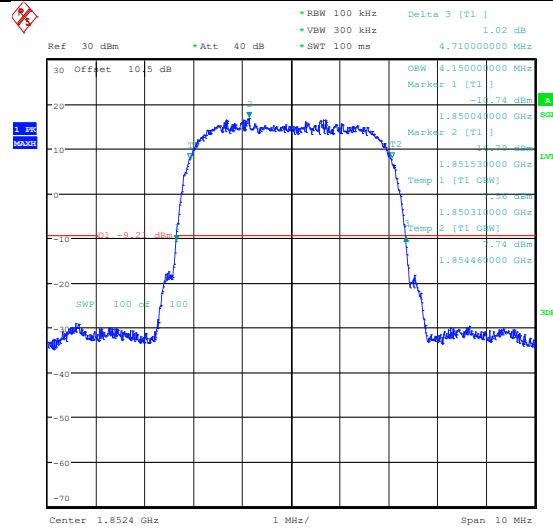


Band	Channel	Occupied Bandwidth (kHz)	26dB Bandwidth (kHz)	Limit(kHz)	Verdict
Band2	9262	4.14	4.69	---	PASS
Band2	9400	4.15	4.69	---	PASS
Band2	9538	4.14	4.68	---	PASS

Band	Channel	SubTest	Occupied Bandwidth (kHz)	26dB Bandwidth (kHz)	Limit(kHz)	Verdict
Band2	9262	1	4.15	4.71	---	PASS
Band2	9400	1	4.16	4.71	---	PASS
Band2	9538	1	4.15	4.72	---	PASS
Band2	9262	2	4.15	4.71	---	PASS
Band2	9400	2	4.15	4.71	---	PASS
Band2	9538	2	4.15	4.71	---	PASS
Band2	9262	3	4.15	4.72	---	PASS
Band2	9400	3	4.15	4.72	---	PASS
Band2	9538	3	4.15	4.71	---	PASS
Band2	9262	4	4.15	4.72	---	PASS
Band2	9400	4	4.16	4.71	---	PASS
Band2	9538	4	4.15	4.70	---	PASS

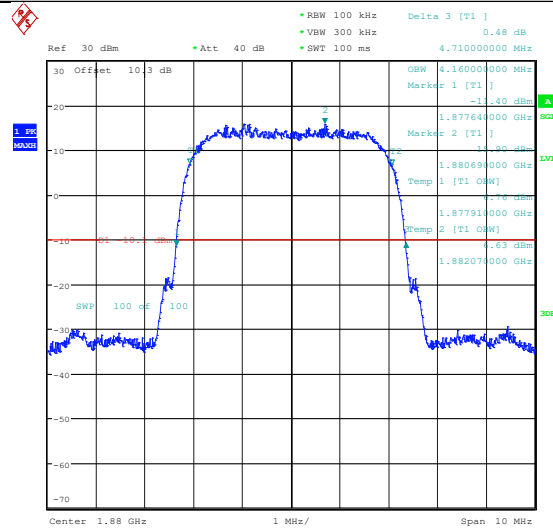
Band	Channel	SubTest	Occupied Bandwidth (kHz)	26dB Bandwidth (kHz)	Limit(kHz)	Verdict
Band2	9262	1	4.18	4.69	---	PASS
Band2	9400	1	4.18	4.71	---	PASS
Band2	9538	1	4.18	4.72	---	PASS
Band2	9262	2	4.17	4.70	---	PASS
Band2	9400	2	4.16	4.69	---	PASS
Band2	9538	2	4.17	4.70	---	PASS
Band2	9262	3	4.17	4.70	---	PASS
Band2	9400	3	4.17	4.70	---	PASS
Band2	9538	3	4.18	4.71	---	PASS
Band2	9262	4	4.16	4.69	---	PASS
Band2	9400	4	4.18	4.70	---	PASS





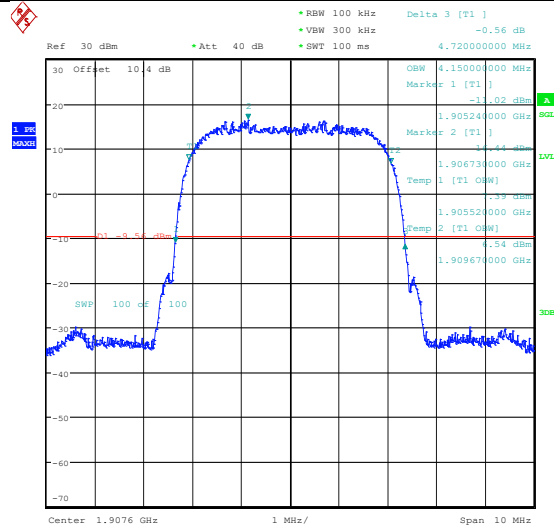
Date: 18.JUN.2024 12:47:47

Band2-9262-1-PASS



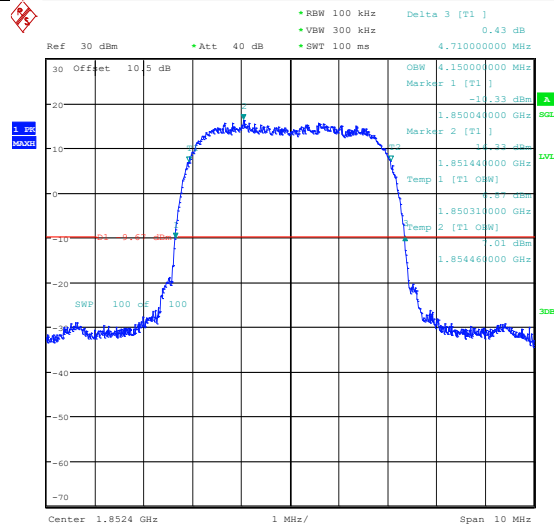
Date: 18.JUN.2024 12:48:30

Band2-9400-1-PASS



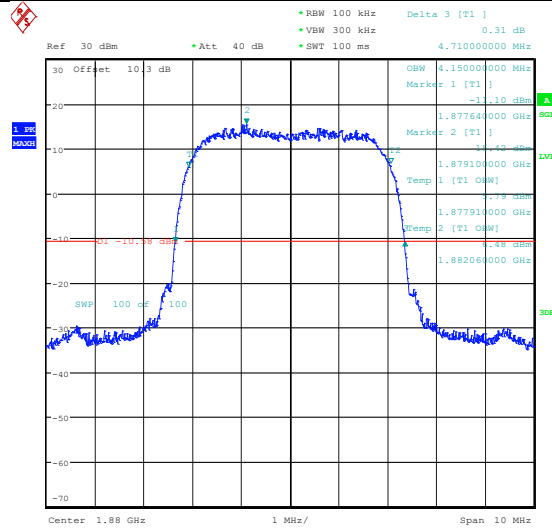
Date: 18.JUN.2024 12:49:13

Band2-9538-1-PASS



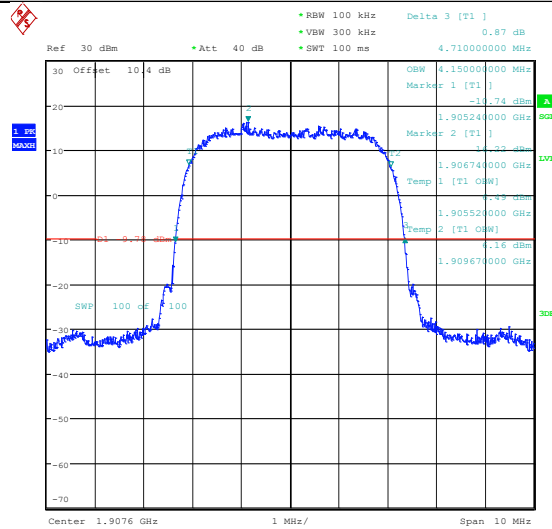
Date: 18.JUN.2024 12:50:07

Band2-9262-2-PASS



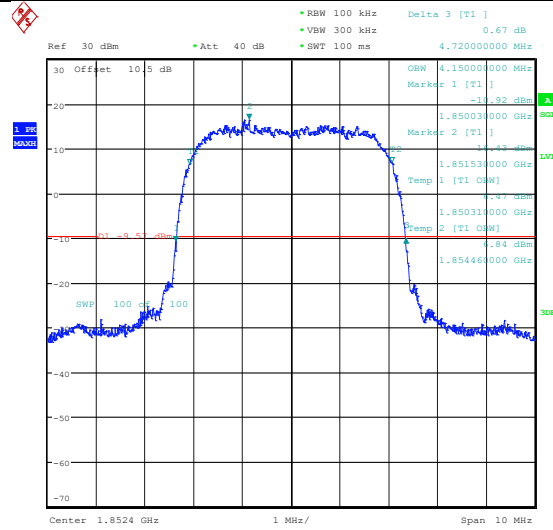
Date: 18.JUN.2024 12:51:00

Band2-9400-2-PASS



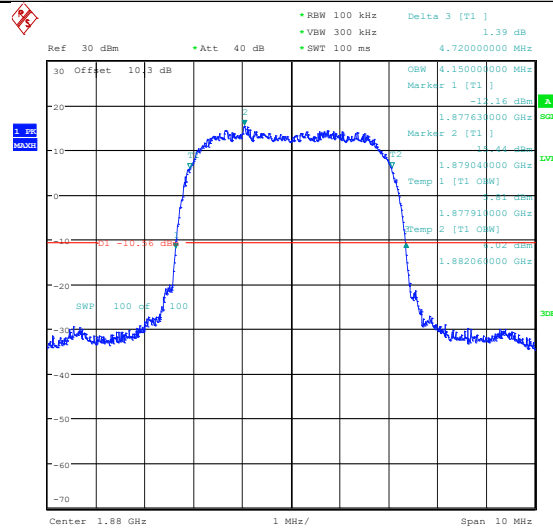
Date: 18.JUN.2024 12:51:52

Band2-9538-2-PASS



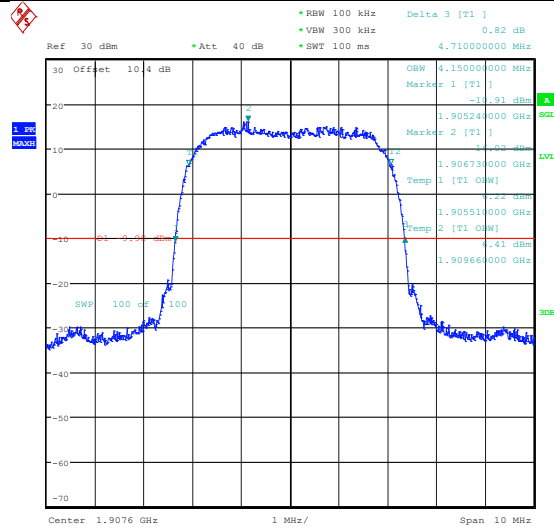
Date: 18.JUN.2024 12:52:46

Band2-9262-3-PASS



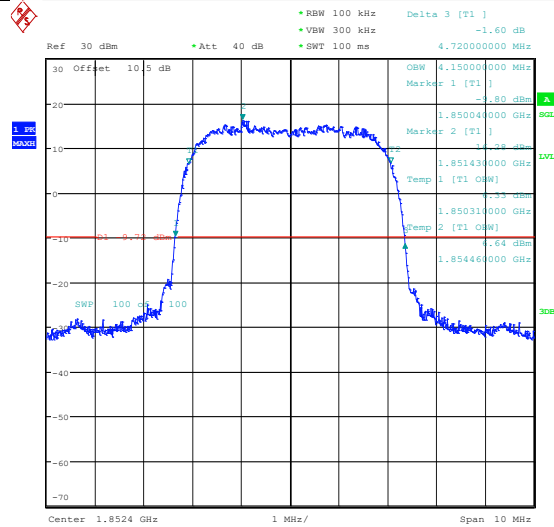
Date: 18.JUN.2024 12:53:37

Band2-9400-3-PASS



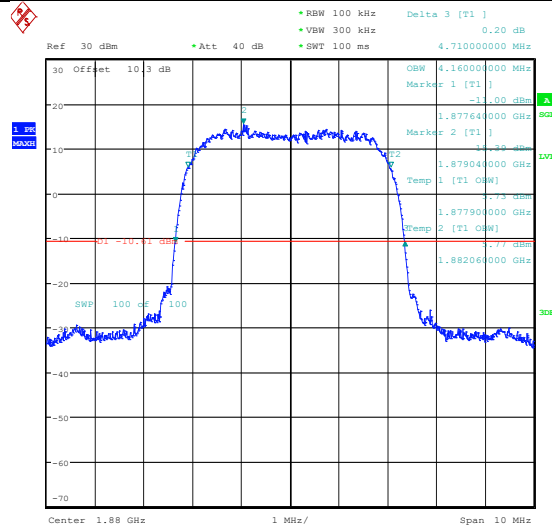
Date: 18.JUN.2024 12:54:28

Band2-9538-3-PASS



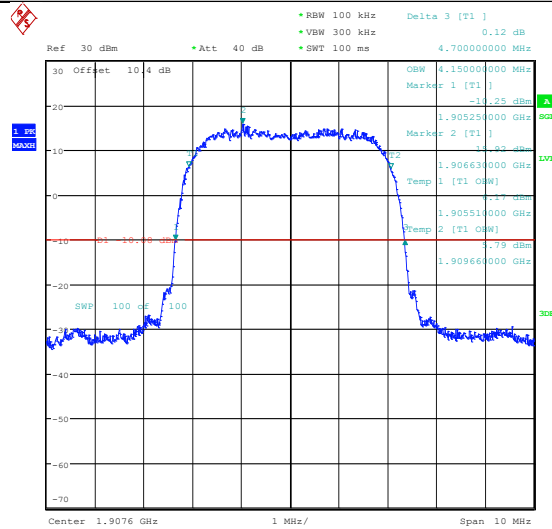
Date: 18.JUN.2024 12:55:22

Band2-9262-4-PASS



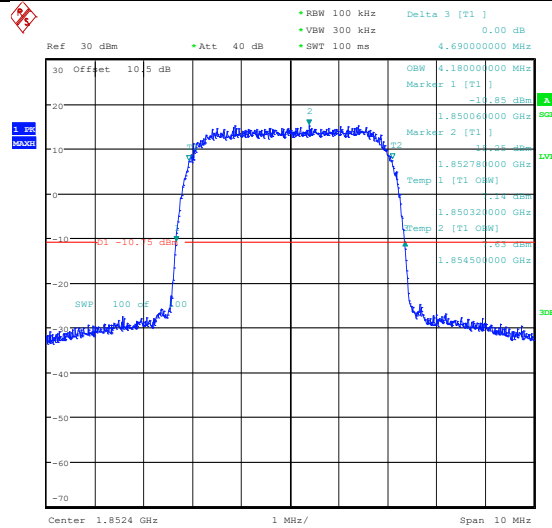
Date: 18.JUN.2024 12:56:13

Band2-9400-4-PASS



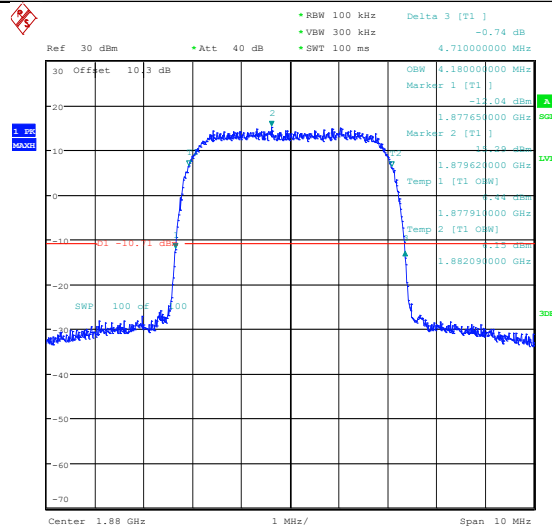
Date: 18.JUN.2024 12:57:04

Band2-9538-4-PASS



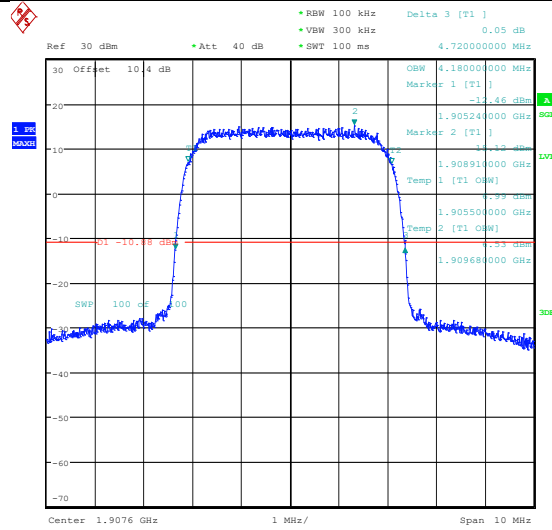
Date: 18.JUN.2024 18:03:57

Band2-9262-1-PASS



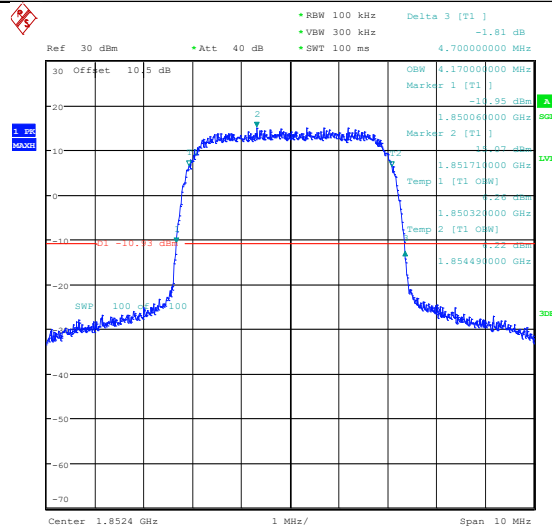
Date: 18.JUN.2024 18:04:31

Band2-9400-1-PASS



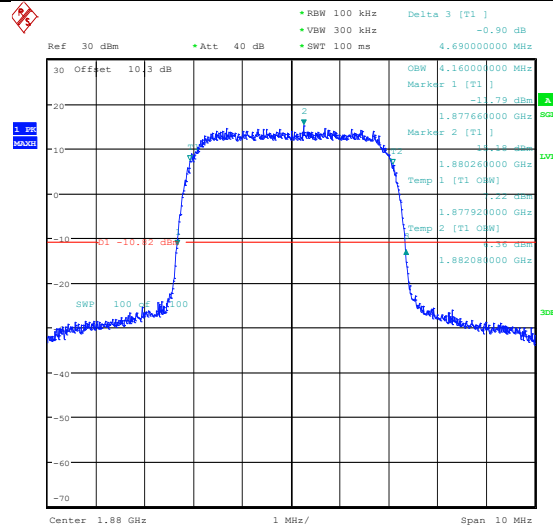
Date: 18.JUN.2024 18:05:09

Band2-9538-1-PASS



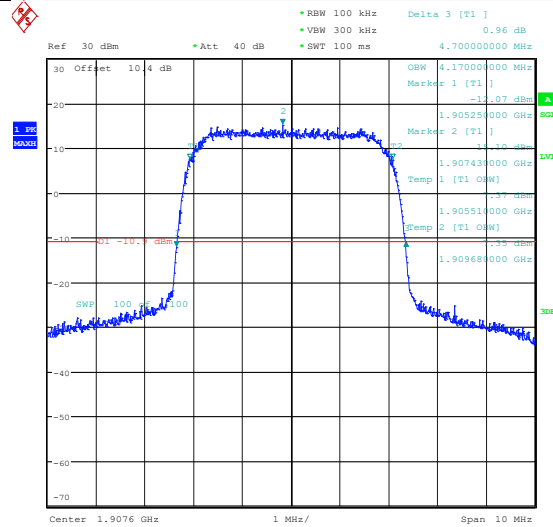
Date: 18.JUN.2024 18:06:03

Band2-9262-2-PASS



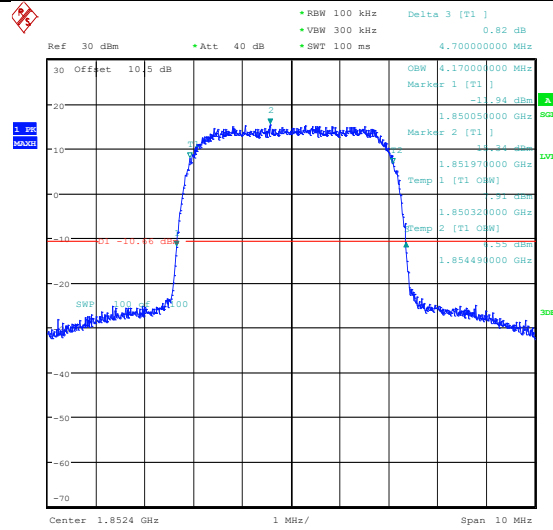
Date: 18.JUN.2024 18:06:42

Band2-9400-2-PASS



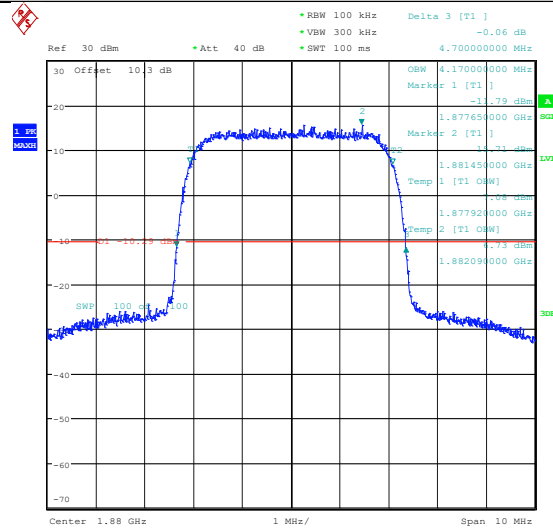
Date: 18.JUN.2024 18:07:15

Band2-9538-2-PASS



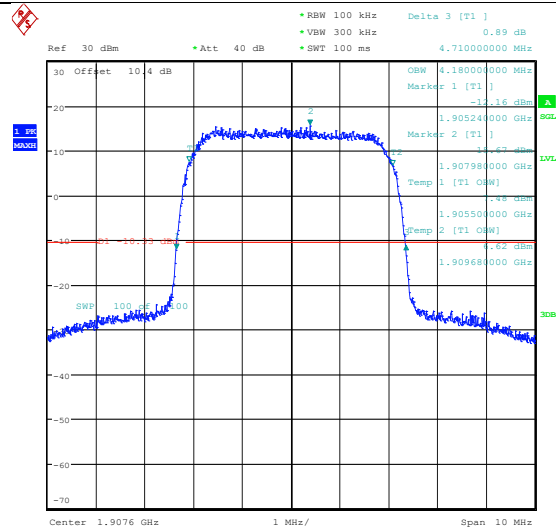
Date: 18.JUN.2024 18:08:08

Band2-9262-3-PASS



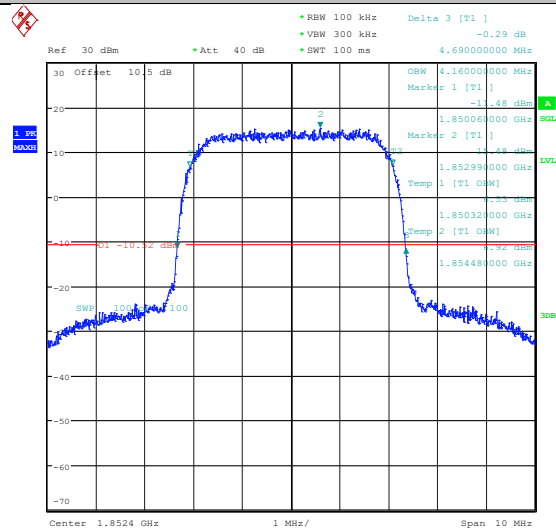
Date: 18.JUN.2024 18:08:42

Band2-9400-3-PASS



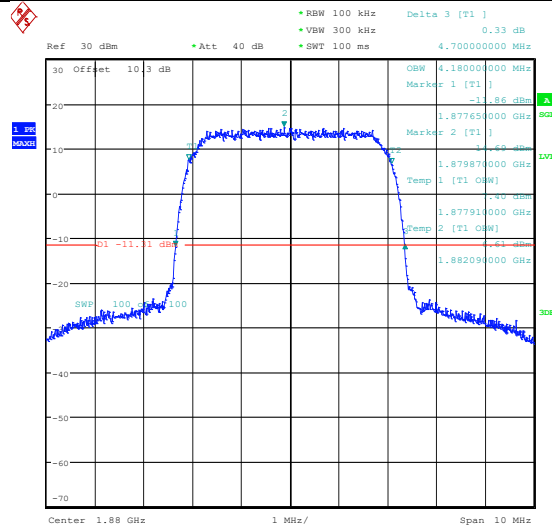
Date: 18.JUN.2024 18:09:16

Band2-9538-3-PASS



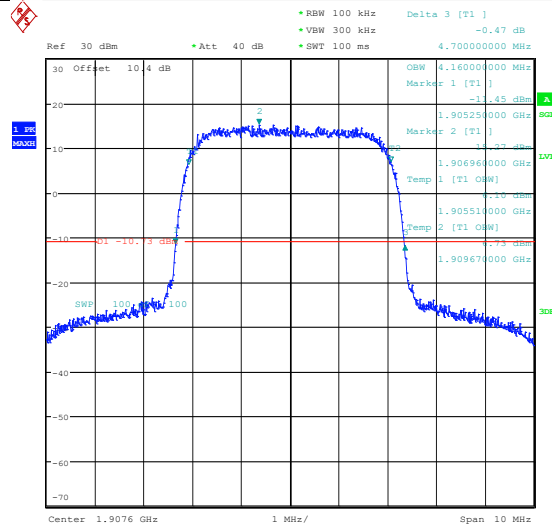
Date: 18.JUN.2024 18:10:09

Band2-9262-4-PASS



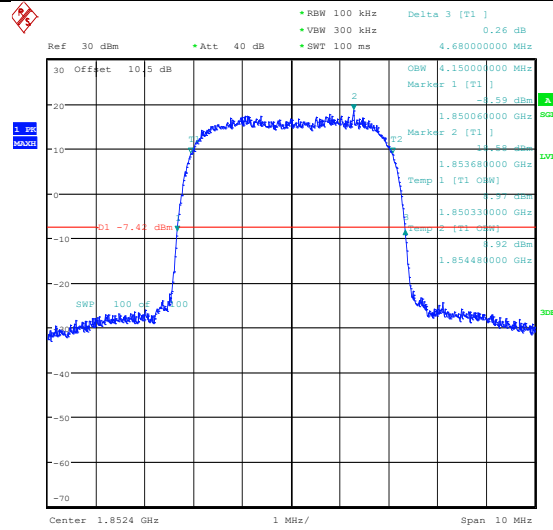
Date: 18.JUN.2024 18:10:47

Band2-9400-4-PASS



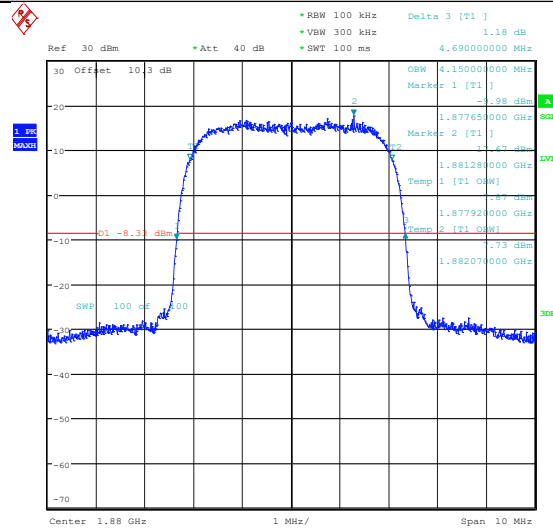
Date: 18.JUN.2024 18:11:26

Band2-9538-4-PASS



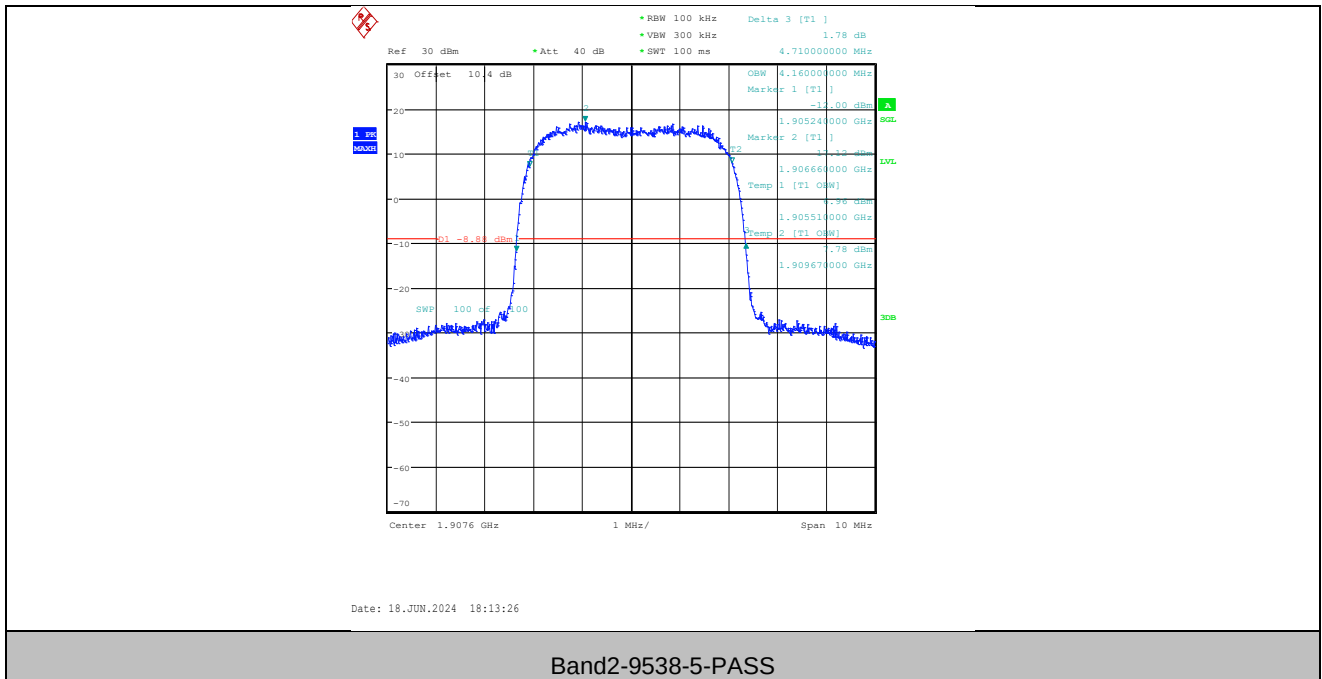
Date: 18.JUN.2024 18:12:20

Band2-9262-5-PASS



Date: 18.JUN.2024 18:12:53

Band2-9400-5-PASS



Band	Channel	Occupied Bandwidth (kHz)	26dB Bandwidth (kHz)	Limit(kHz)	Verdict
Band4	1312	4.15	4.69	---	PASS
Band4	1413	4.14	4.70	---	PASS
Band4	1513	4.15	4.68	---	PASS

Band	Channel	SubTest	Occupied Bandwidth (kHz)	26dB Bandwidth (kHz)	Limit(kHz)	Verdict
Band4	1312	1	4.16	4.70	---	PASS
Band4	1413	1	4.16	4.69	---	PASS
Band4	1513	1	4.15	4.69	---	PASS
Band4	1312	2	4.16	4.69	---	PASS
Band4	1413	2	4.15	4.71	---	PASS
Band4	1513	2	4.16	4.69	---	PASS
Band4	1312	3	4.15	4.69	---	PASS
Band4	1413	3	4.16	4.70	---	PASS
Band4	1513	3	4.16	4.69	---	PASS
Band4	1312	4	4.16	4.70	---	PASS
Band4	1413	4	4.15	4.69	---	PASS
Band4	1513	4	4.17	4.69	---	PASS

Band	Channel	SubTest	Occupied Bandwidth (kHz)	26dB Bandwidth (kHz)	Limit(kHz)	Verdict
Band4	1312	1	4.17	4.69	---	PASS
Band4	1413	1	4.16	4.70	---	PASS
Band4	1513	1	4.18	4.70	---	PASS
Band4	1312	2	4.17	4.70	---	PASS
Band4	1413	2	4.17	4.70	---	PASS
Band4	1513	2	4.16	4.69	---	PASS
Band4	1312	3	4.17	4.69	---	PASS
Band4	1413	3	4.16	4.71	---	PASS
Band4	1513	3	4.18	4.71	---	PASS
Band4	1312	4	4.16	4.69	---	PASS
Band4	1413	4	4.16	4.71	---	PASS