WINNF-TS-0122 Spot Check Report

Applicant	**Telrad Networks Ltd**
Equipment	**CPE-12300XG-PRO-1D-3.x**
Brand Name	**Telrad**
Model Name	**735330**
FCC ID	**ARA-CPE12300XG**
Reference	**WINNF-TS-0122 Version V1.0.2**

This is a validation test report. The validation is leveraged conducted PSD value from FCC ID: ARA-CPE12300HG SAS report No: FG0O1219. There is no SW design change between FCC ID: ARA-CPE12300HG and FCC ID: ARA-CPE12300XG. The difference between these two models is that CPE-12300HG-PRO-1D-3.x antenna gain is 17 dBi, but CPE-12300XG-PRO-1D-3.x antenna gain is 20 dBi as declared by manufacturer.

The product was received on Mar. 10, 2021 and testing was started from Mar. 10, 2021 and completed on Mar. 12, 2021. We, Sporton International Inc. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures given in WINNF-TS-0122 Version V1.0.2 and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Jones Tsai

Approved by: Jones Tsai

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Revision History

Report No.	Version	Description	Issued Date
FG0O1219-03	01	Initial issue of report	Apr. 07, 2021

Reviewed by: Thomas Chen
Report Producer: Dara Chiu

1. Administration Data

1.1 Testing Laboratory

Test Site	Sporton International Inc. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	Sporton Site No.
	DFS02-HY
Test Engineer	Thomas Chen
Temperature	21 ~ 25 ℃
Relative Humidity	50 ~ 56 %

1.2 Applicant

Company Name	Telrad Networks Ltd
Address	Industrial Center PO Box 6118 Lod, 711600 Israel

1.3 Manufacturer

Company Name	Asiatelco
Address	No.68 Huatuo Road,Building-8,Zhangjiang Hi-Tech Park,Pudong,Shanghai,PRC

2. General Information

2.1 Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	CPE-12300XG-PRO-1D-3.x
Brand Name	Telrad
Model Name	735330
FCC ID	ARA-CPE12300XG
Professional Installation	☒ Yes ☐ No
Unit Under Test Type	☐ BTS-CBSD product (Base Station) ☒ CPE-CBSD product (Customer Premises Equipment)
UUT Category	☐ Category A (EIRP ≤ 30dBm/10MHz) ☒ Category B (EIRP ≤ 47dBm/10MHz, professional installation is required)
Domain Proxy support	☒ UUT with Domain Proxy ☐ UUT without Domain Proxy
UUT Antenna Gain	20 dBi
UUT HW Version	P1
UUT FW Version	GDM7243A_ARM1_FW_df921e74cb_Rev24722_20062219
UUT SW Version	KT2A_OTE30_TRD_T_US_1.0.0.6
UUT Serial Number	AT110820A023, AT110820A026
Domain Proxy SW Version	BreezeVIEW Version 7.2.0.030.69 (API 4.7.7.4, YANG 720.450 [2018-11-27])
Device Power Class	LTE Band 48: Power Class 3

2.2 Protocol Test Summary

Section	Test Case ID	Test Case Title	Test Result
7.1.4.1.1	WINNF.PT.C.HBT	UUT RF Transmit Power Measurement	PASS

2.3 Support Equipment

Name	Manufacturer	Type/Model	Serial Number	FCC ID
Q710	Ruckus	P01-Q710-US02	991929000175	S9GQ710US02

2.4 Test Equipment List

Name	Manufacturer	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
Spectrum Analyzer	Rohde & Schwarz	FSV3044	101048	Apr. 29, 2020	Apr. 28, 2021

2.5 [WINNF.PT.C.HBT] UUT RF Transmit Power Measurement

#	Test Execution Steps	Results
1	Ensure the following conditions are met for test entry: • UUT has successfully completed SAS Discovery and Authentication with the SAS Test Harness • UUT has registered with the SAS, with CBSD ID = C • UUT has a single valid grant G with parameters {lowFrequency = F_L, highFrequency = F_H, maxEirp = P_i}, with grant in AUTHORIZED state, and grantExpireTime set to a value far past the duration of this test case *Note: in order for the UUT to request a grant with the parameters {lowFrequency, highFrequency, maxEirp), the SAS Test Harness may need to provide appropriate guidance in the availableChannel object of the spectrumInquiry response message, and the operationParam object of the grant response message. Alternately, the UUT vendor may provide the ability to set those parameters on the UUT so that the UUT will request a grant with those parameters.*	--

2	UUT and SAS Test Harness perform a series of Heartbeat Request/Response cycles, which continues until the other test steps are complete. Messaging for each cycle is as follows:
	• UUT sends Heartbeat Request, including:
	  ○ *cbsdId* = C
	  ○ *grantId* = G
	• SAS Test Harness responds with Heartbeat Response, including:
	  ○ *cbsdId* = C
	  ○ *grantId* = G
	  ○ *transmitExpireTime* = current UTC time + 200 seconds
	  ○ *responseCode* = 0
		--

#	Test Execution Steps	Results
3	Tester performs power measurement on RF interface(s) of UUT, and verifies it complies with the maxEirp setting, P_i. The RF measurement method is out of scope of this document, but may include additional configuration of the UUT, as required, to fulfil the requirements of the power measurement method. *Note: it may be required for the vendor to provide a method or configuration to bring the UUT to a mode which is required by the measurement methodology. Any such mode is vendor-specific and depends upon UUT behavior and the measurement methodology.*	PASS

3. RF Performance Test validation

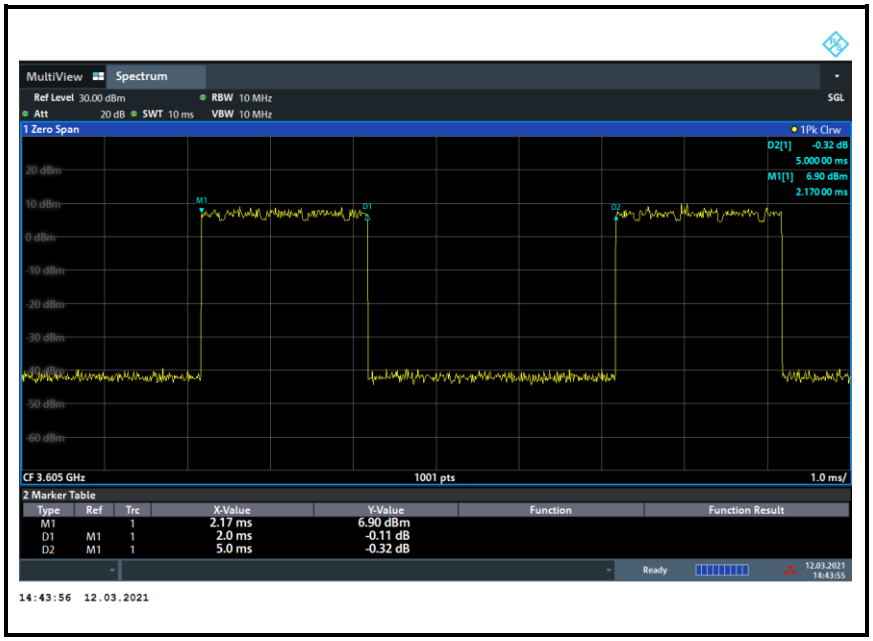
The validation is leveraged conducted PSD value from FCC ID: ARA-CPE12300HG SAS report.

There is no SW design change between FCC ID: ARA-CPE12300HG and FCC ID: ARA-CPE12300XG. The difference between these two models is that CPE-12300HG-PRO-1D-3.x antenna gain is 17 dBi, but CPE-12300XG-PRO-1D-3.x antenna gain is 20 dBi as declared by manufacturer.

Center Frequency [MHz]	Bandwidth [MHz]	Granted MaxEIRP [dBm/MHz]	Conducted PSD [dBm/MHz]	Antenna Gain [dBi]	UUT MaxEIRP [dBm/MHz]
3605	10	23	0.21	20	20.21 dBm
		25	2.32		22.32 dBm
		27	4.33		24.33 dBm
		29	6.41		26.41 dBm
		31	8.22		28.22 dBm
		33	10.3		30.30 dBm
		35	10.82		30.82 dBm

Note: The Spectrum Analyzer Ref Offset 20.73 dB includes cable path loss 16.75 dB and duty cycle factor 3.98 dB, the antenna gain is 20 dBi.

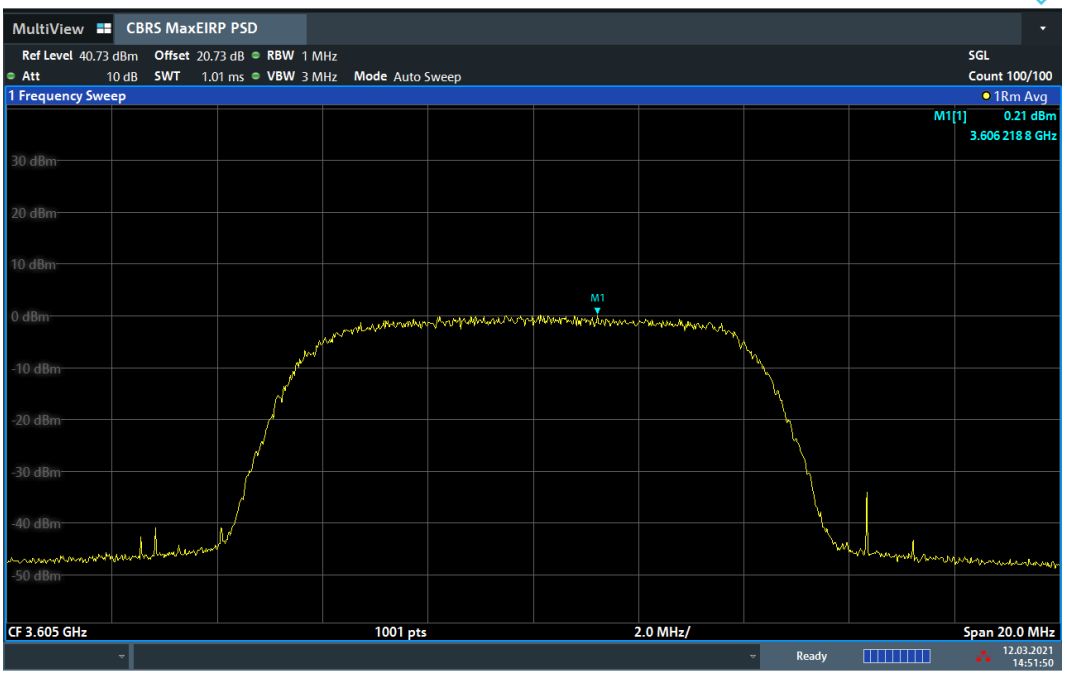
Duty cycle factor:



Note : The duty cycle value is 40%, add 10log(1/duty cycle) to the measured power level to compute the average power during continuous transmission.

SAS Granted MaxEIRP 23 [dBm/MHz]

UUT MaxEIRP 20.21 [dBm/MHz]



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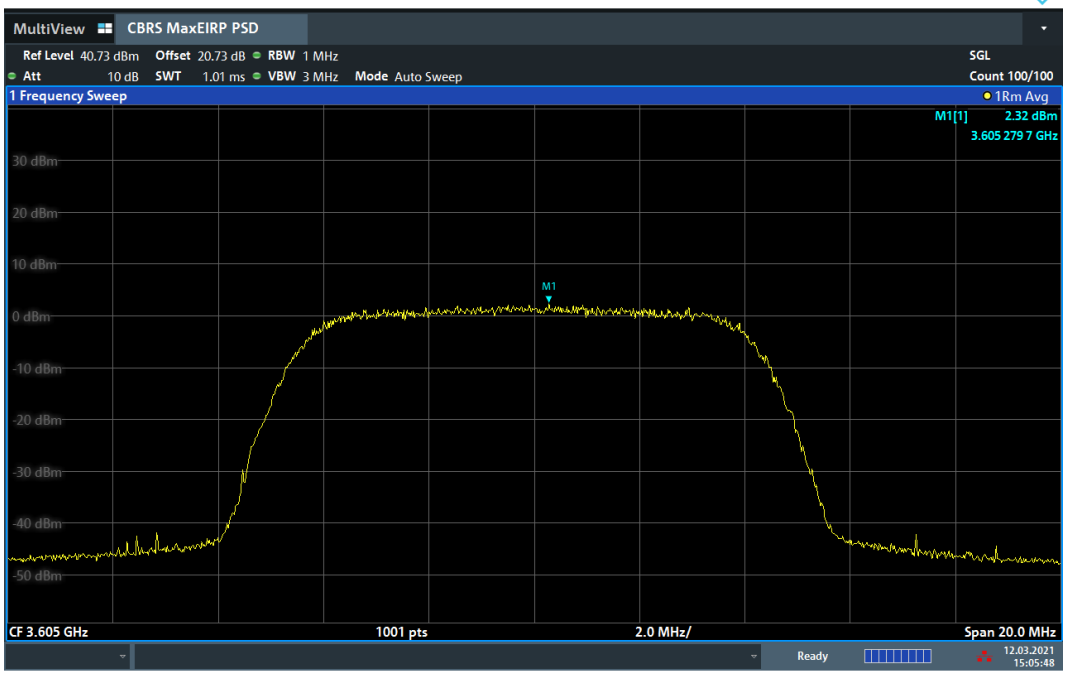
SAS Granted MaxEIRP 25 [dBm/MHz]

UUT MaxEIRP 22.32 [dBm/MHz]



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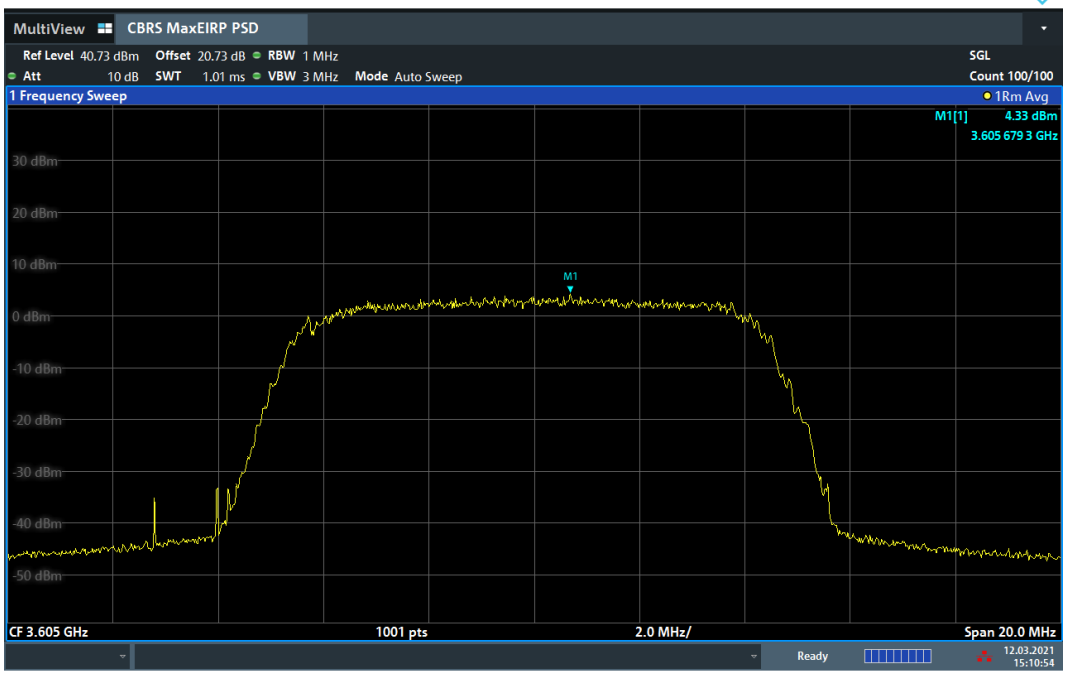
SAS Granted MaxEIRP 27 [dBm/MHz]

UUT MaxEIRP 24.33 [dBm/MHz]



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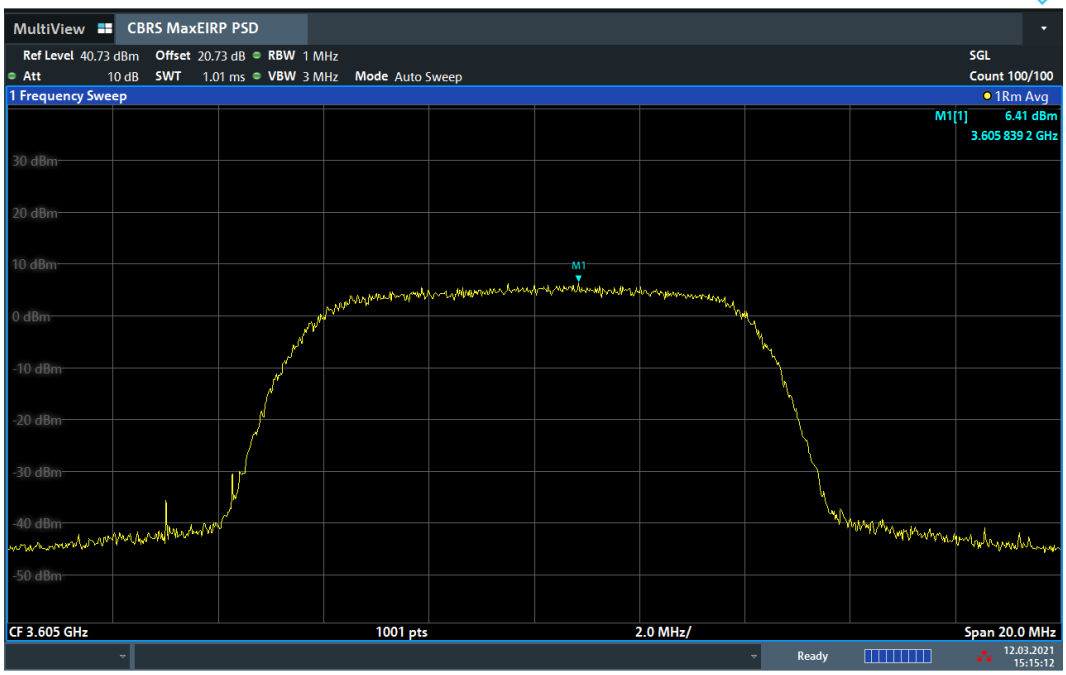
SAS Granted MaxEIRP 29 [dBm/MHz]

UUT MaxEIRP 26.41 [dBm/MHz]



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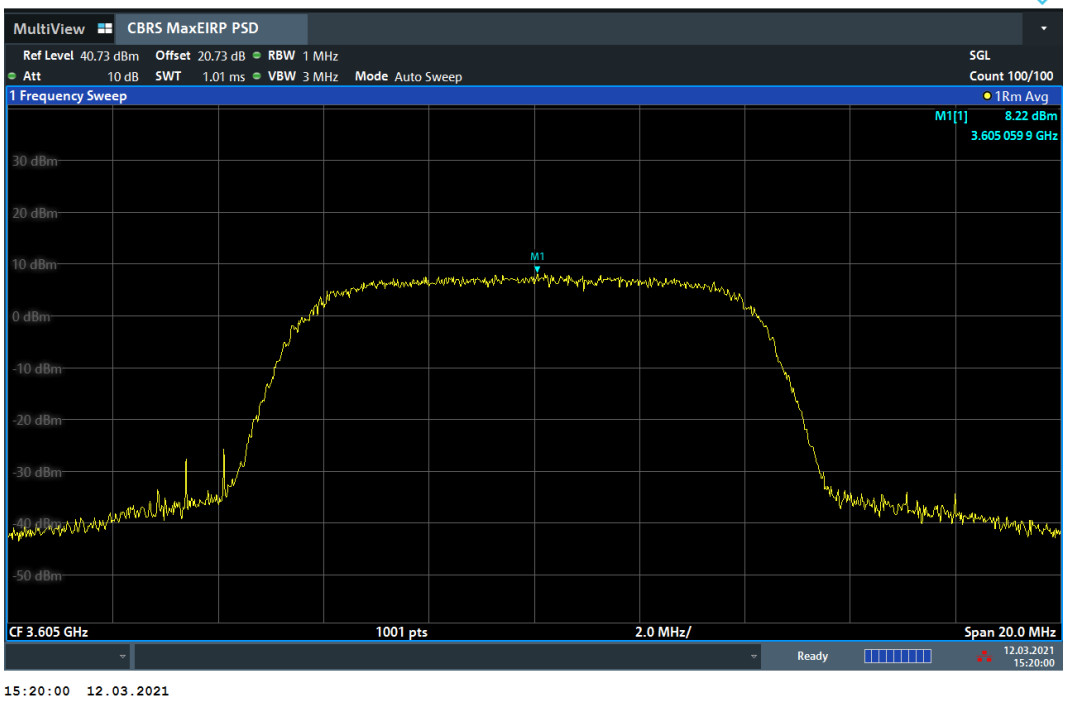
SAS Granted MaxEIRP 31 [dBm/MHz]

UUT MaxEIRP 28.22 [dBm/MHz]



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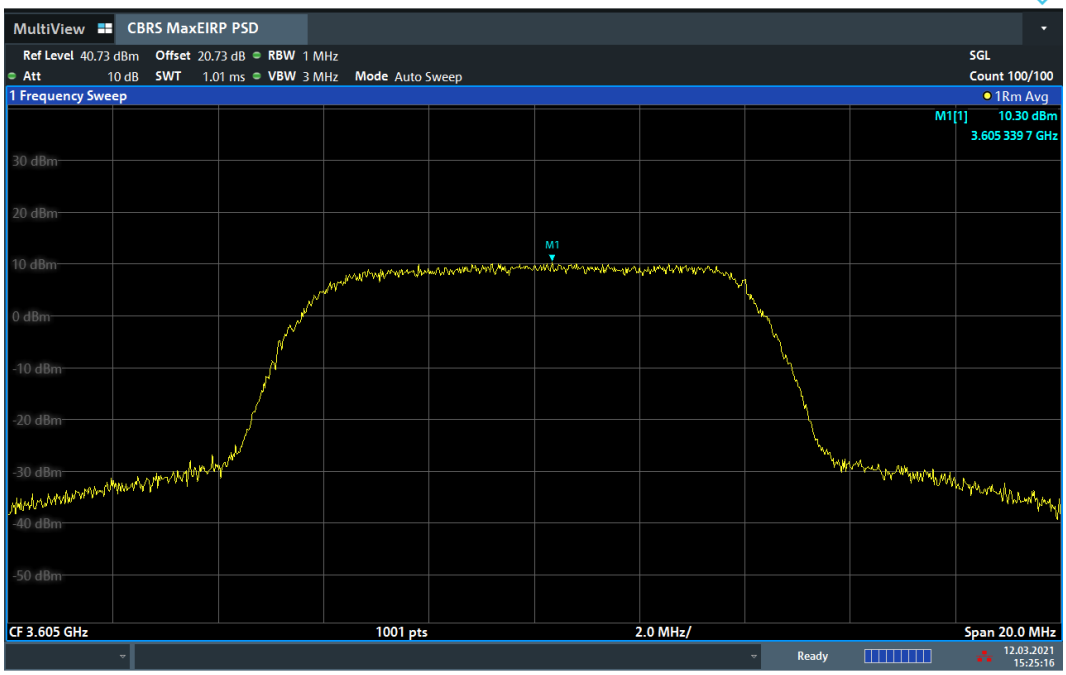
SAS Granted MaxEIRP 33 [dBm/MHz]

UUT MaxEIRP 30.30 [dBm/MHz]



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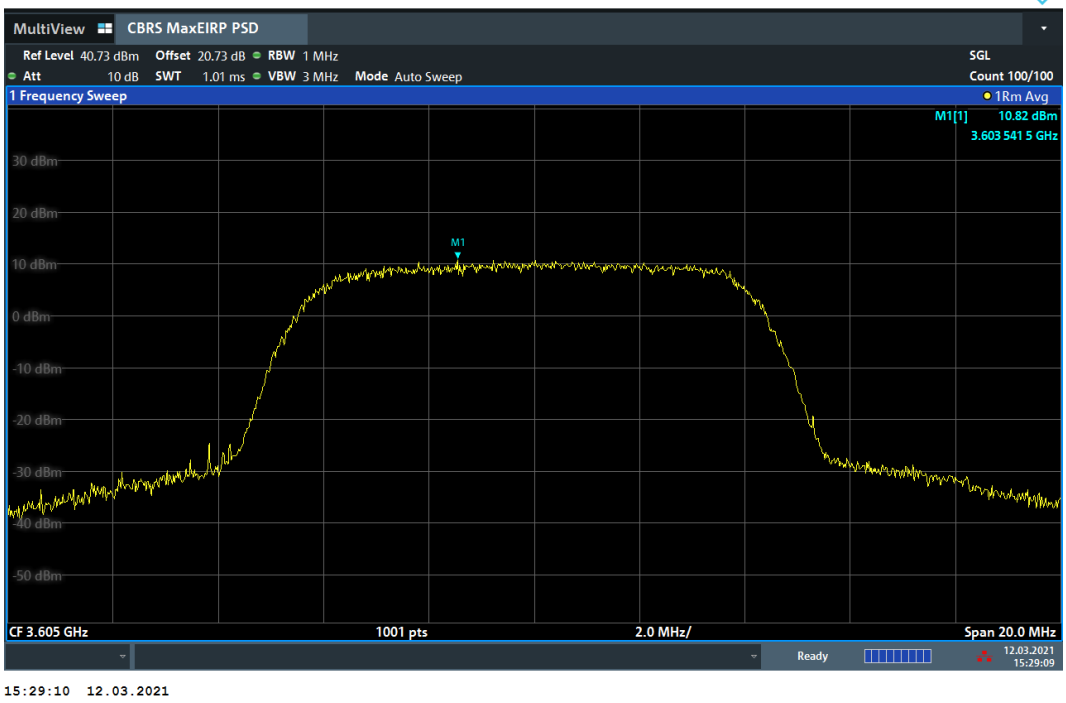
SAS Granted MaxEIRP 35 [dBm/MHz]

UUT MaxEIRP 30.82 [dBm/MHz]



END of this report