Timco Test Report # TR_0847-22_FCC_15B_Scanning Reciever_2 Revision: 2





Test Report – FCC 15B Unintentional Radiator Applicant: Icom Incorporated

Approved for Release By:

 Signature:
 Brund Clavier

 Name & Title:
 Bruno Clavier, General Manager

Date of Signature 3/10/2022

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1. Customer Information

Applicant:Icom IncorporatedAddress:1-1-32 Kamininami, Hirano-KuOsaka, 547-0003, Japan

1.1 Test Result Summary

The following test procedure was used ANSI C63.4-2014. Full test results are available in this report.

No additions to the test methods were needed. There were no deviations, or exclusions from the test methods. No test results are from external providers or from the customer. The test results relate only to the items tested. Timco does not offer opinions and interpretations, only a pass/fail statement.

Clauses	Description of the Requirements	Result (Pass, Fail or N/A)
	Applicable Clauses from FCC 15 B	
15.107	Conducted Emission Limits	N/A
15.111 (a)	Receiver Conducted Power	N/A
15.121	38 dB Rejection	Pass
15.109	Radiated Emission Limits	Pass

2. Location of Testing

2.1 Test Laboratory

Timco Engineering Inc. is a subsidiary of Industrial Inspection & Analysis, Inc. ("IIA"). Testing was performed at Timco's permanent laboratory located at 849 NW State Road 45, Newberry, Florida 32669

FCC test firm # 578780 FCC Designation # US1070 FCC site registration is under A2LA certificate # 0955.01 ISED Canada test site registration # 2056A EU Notified Body # 1177 For all designations see A2LA scope # 0955.01



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2.2 Testing was performed, reviewed by

Dates of Testing: 2/21/2022-2/22/2022

Signature:	Sr. EMC Engineer EMC-003838-NE
Name & Title:	Tim Royer, EMC Engineer
Date of Signature	3/10/2022
Signature:	Kth Ch
Name & Title:	Kristoffer Costa, EMC Technician
Date of Signature	3/10/2022



3. Test Sample(s) (EUT/DUT)

The test sample was received: 2/21/2022

3.1 Description of the EUT

A description as well as unambiguous identification of the EUT(s) tested. Where more than one sample is required for technical reasons (such as the use of connected units for the purpose of conducted output power testing where the product units will have integral antennas), each specific test shall identify which unit was tested.

Identification				
FCC ID:	AFJ432800			
Brief Description	IC-T10 Analog Scanning Receiver			
Model(s) #	IC-T10			
Firmware version	n/a			
Software version	n/a			
Serial Number	n/a			

Technical Characteristics				
Technology	IC-T10 Analog Scanning Receiver			
Frequency Range	88-108 MHz, 136-174 MHz, 400-479 MHz			
Duty Cycle	100%			
Antenna Connector	n/a			
Voltage Rating (AC or Batt.)	Rechargeable Battery, BP-279 1570mAh 7.2V			

Antenna Characteristics						
Antenna	Frequency Range	Mode / BW	Antenna Gain			
1	n/a	n/a	0 dBi			

- Note: Information such as antenna gain, firmware/software numbers are provide by manufacturer and cannot be validated by the test lab.



3.2 Configuration of EUT

Band (MHz)	Mode	Number of Ant.
88-108 MHz, 136-174 MHz, 400- 479 MHz	Receive	1

Operating conditions during Testing:

No modifications of the device under test (including firmware, specific software settings, and input/output signal levels to the EUT).

Peripherals used during Testing:

No peripherals used.

3.3 Test Setup of EUT

Equipment, antenna, and cable arrangement. The setup of the equipment and cable or wire placement on the test site that produces the highest radiated and the highest ac power-line conducted emissions shall be shown clearly and described. Information on the orientation of portable equipment during testing shall be included. Drawings or photographs may be used for this purpose.

Test Setups are included in the test report.



4. Test methods & Applicable Regulatory Limits

4.1 Test methods/Standards/Guidance

The measurement was performed as per FCC 15B. Full test results are available in this report.

Limits and Regulatory Limits:

1) FCC 15B

5. Measurement Uncertainty

Parameter	Uncertainty (dB)			
Conducted Emissions	± 3.14 dB			
Radiated Emissions (9kHz – 30 MHz)	± 3.08 dB			
Radiated Emissions (30 – 200 MHz)	± 2.16 dB			
Radiated Emissions (200 – 1000 MHz)	± 2.15 dB			
Radiated Emissions (1 GHz – 18 GHz)	± 2.14 dB			
Radiated Emissions (18 GHz – 40 GHz)± 2.31 dB				
Note: The uncertainties provided in this table represent an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $K=2$.				

6. Environmental Conditions

Temperature & Humidity

Measurements performed at the test site did not exceed the following:

Parameter	Measurement		
Temperature	23 C +/- 5%		
Humidity	55% +/- 5%		
Barometric Pressure	30.05 in Hg		
Note: Specific environmental conditions that are applicable to a specific test are available in the test resul			
section.			



7. List of Test Equipment and Test Facility

The test equipment used identified by type, manufacturer, serial number, or other identification and the date on which the next calibration or service check is due.

Description of the firmware or software used to operate EUT for testing purposes.

A complete list of all test equipment used shall be included with the test report. The manufacturer's model and serial numbers, and date of last calibration, and calibration interval shall be included. Measurement cable loss, measuring instrument bandwidth and detector function, video bandwidth, if appropriate, and antenna factors shall also be included where applicable.

List of Test Equipment

Test Equipment							
Туре	Device	Manufacturer	Model	SN#	Current Cal	Cal Due	
Antenna	Biconical 1057	Eaton	94455-1	1057	10/16/20	10/16/2023	
Antenna, NSA	Log-Periodic 1243	Eaton	96005	1243	5/4/21	5/3/2024	
Antenna	Double-Ridged Horn/ETS Horn 1	ETS-Lindgren	3117	00035923	2/25/20	2/24/2023	
CHAMBER	CHAMBER	Panashield	3M	N/A	3/12/19	3/11/2022	
Pre-amp	Pre-amp	rf-lambda	RLNA00M45GA	NA	2/27/19	2/26/2022	
Receiver	EMI Test Receiver R&S ESU 40	Rohde & Schwarz	ESU 40	100320	5/27/21	5/26/2024	

Software						
Software	Author	Version	Validation on			
ESU Firmware	Rohde & Schwarz	4.43 SP3; BIOS v5.1-24-3	2018			
RSCommander	Rohde & Schwarz	1.6.4	2014			
ScopeExplorer	LeCroy	v2.25.0.0	2009			
Field Strength	Timco	v4.10.7.0	2016			



8. Test Results

The results of the test are usually indicated in the form of tables, spectrum analyzer plots, charts, sample calculations, as appropriate for each test procedure.

A description and/or a block diagram of the test setup is usually provided.

The measurement results, along with the appropriate limits for comparison, may be presented in tabular or graphical form. In addition, any variation in the measurement environment may be reported if applicable (e.g., a significant change of temperature that could affect the cable loss and amplifier response).

Units of measurement

Unless noted otherwise in the referenced standard, the measurements of ac power-line conducted emissions and conducted power output will be reported in units of dB μ V. Unless noted otherwise in the referenced standard, the measurements of radiated emissions will be reported in units of decibels, referenced to one microvolt per meter (dB μ V/m) for electric fields, or to one ampere per meter (dBA/m) for magnetic fields, at the distance specified in the appropriate standards or requirements. The measurements of antenna-conducted power for receivers may be reported in units of dB μ V if the impedance of the measuring instrument is also reported. Otherwise, antenna-conducted power will be reported in units of decibels referenced to one milliwatt (dBm). All formulas for data conversions and conversion factors, if used, will be included in this measurement report.

Example:

Freq (MHz)	Meter Reading	+ ACF	+CL	= FS
33	20 dBµV	+ 10.36 dB/m	+0.40 dB	=30.36 dBµV/m @ 3m

EIRP = Pcond (dBm) + dBi



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8.1 Radiated Emissions

Limits from FCC 15.109 and test procedure from ANSI C63.4-2014.







8.1.1 Scanning Receiver Function, 30 MHz to 200 MHz, Horizontal/ Vertical Polarity Plot





8.1.2 Scanning Receiver Function, 30 MHz to 200 MHz, Horizontal/ Vertical Polarity Table

EMI Auto Test(13)

Final Result

Frequency	QuasiPeak	CAverage	Limit	Margin	Meas. Time	Bandwidth	Height	Pol	Azimuth	Corr.	Comment
(MHz)	(dBµV/m)	(dBµV/m)	(dBµV/m)	(dB)	(ms)	(kHz)	(cm)		(deg)	(dB/m)	



8.1.3 Scanning Receiver Function, 200 MHz to 1000 MHz, Horizontal/ Vertical Polarity Plot





8.1.4 Scanning Receiver Function, 200 MHz to 1000 MHz, Horizontal/ Vertical Polarity Table

EMI Auto Test(13)

Final_Res	ult										
Frequency	QuasiPeak	CAverage	Limit	Margin	Meas. Time	Bandwidth	Height	Pol	Azimuth	Corr.	Comment
(MHz)	(dBµV/m)	(dBµV/m)	(dBµV/m)	(dB)	(ms)	(kHz)	(cm)		(deg)	(dB/m)	



8.1.5 Scanning Receiver Function, above 1000 MHz, Horizontal Polarity Plot

CISPR 22 Radiated Disturbances



22.Feb 22 10:58

Test Spec Polarity Vertical

<u>Stepped Scan (1 Range)</u>

Scan St Scan St Detecto Transdu	tart: 1.0 top: 12. r: Tra ucer: TD	Hz 5 GHz ace 1: MAX PE/ S_05	AK Trace 2:7	Average					
Start		Stop	Step	_		Meas	RF	D	
	1 СУ 10000 СН7	12 500000	SIZE	N 12 H 7	1 00 MH2	1100 us	Auto	Preamp 35 dB	TNPITTI
٠	tep AUTO	Att	0 de auto	REW 1 MI 50 PREAMP LY	ина мях ID ma IA	. 100 µb	Auco		IMIOII
de over /n	111		LIMII CH	ECK PASS		10	2.8 =		
L 98 MAXO -1	»ı								
Z 17	1.						703		
-	61 <u> </u>								
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	21			• # • • • • • • • • • • • •	. s++thlyather.d				
1	RN 2					12	.5 GH x		

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8.1.6 Scanning Receiver Function, above 1000 MHz, Horizontal Polarity Table

22.Feb 22 10:58

Test Sp Polarity Vertical	ec	CISPR 2	2 Radiated Distur	bances	
Final M Meas Ti Margin: Subrang	Measurement ime: ges:	500 ms 40 dB 16			
Trace	Frequenc	cy .	Level (dBµV/m)	Detector	Delta Limit/dB
2	1.192000000	GHz	50.49	Max Peak	
1	1.317600000	GHz	37.68	CISPR Averag	-16.32
2	1.415600000	GHz	49.47	Max Peak	
1	1.426400000	GHz	36.76	CISPR Averag	-17.24
2	1.884800000	GHz	49.31	Max Peak	
1	1.892800000	GHz	36.99	CISPR Averag	-17.01
2	2.591600000	GHz	46.39	Max Peak	
1	3.130400000	GHz	33.45	CISPR Averag	-20.55
1	3.594400000	GHz	33.26	CISPR Averag	-20.74
2	3.595600000	GHz	45.80	Max Peak	
2	4.967200000	GHz	42.48	Max Peak	
1	4.97000000	GHz	30.27	CISPR Averag	-23.73
1	7.026800000	GHz	29.58	CISPR Averag	-24.42
2	7.034000000	GHz	41.77	Max Peak	
2	11.392400000	GHz	42.73	Max Peak	
1	11.618000000	GHz	29.68	CISPR Avera	g -24.32

Page 2 of 2



8.1.7 Scanning Receiver Function, above 1000 MHz, Vertical Polarity Plot

CISPR 22 Radiated Disturbances



22.Feb 22 10:59

Test Spec Polarity Vertical

<u>Stepped Scan (1 Range)</u>

Scan : Scan : Detect Trans	Start: Stop: tor: duce	: 1 : 1: Ti r. Ti	GHz 2.5 GHz race 1: MA DS_05	X PEAK	Trace 2	: Avera	ge									
Start Eronu	oncu	,	Stop	~.	Step Size			oe Diff		Mea	is n	RF		Dros	amn	Innut
1.0	0000)00 GHz	12.500	• 9 1000 GHz	400.	00 kH	z	1.00	MHz	100	μs	Auto		35	dB	INPUT1
Þ	Step	OTUA (Att O d	18 AUTO	REW MI PRE	1 50 AMP L3	a Hið em D A								
d∎ u¶ /n					LINII C	неск	PASS				10	ся. 				
L 98	- ?1 -										+					
NA TO											+					
2 14 NJ 18	- 11 -										_		TOS			
	V.	Ŵ	ww	Www	<i>.</i> ММИ	MÅ.			-	_	+		508			
	Ŵ	Ŵ	ŴŴ	www	MAN	tillite All television	Annand.	an Hin	W ikulju	upd <mark>ub</mark>)						
	[մվտ	Vilailiù	an dha	i h imiti	14 Maple	()er (in)	4 ALANCAS				
	- 21 -									-	+					
										_	_					
	1 GH	1 =									13	2.5 GHz				

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8.1.8 Scanning Receiver Function, above 1000 MHz, Vertical Polarity Table

22.Feb 22 10:59

Test Sp Polarity Vertical	рес /	CISPR 22 Ra	diated Disturband	ces	
Final I	Measurement				
Meas T Margin: Subran	ime: 5 4 ges: 1	00 ms 0 dB 6			
Trace	Frequency	Leve	el(dBµV/m) Det	tector	Delta Limit/dB
1 2 2 1 1 2 2 1 1 2 1 2 1 2 1	1.19880000 1.211600000 1.43280000 1.66200000 1.88760000 2.67720000 3.26520000 3.59160000 3.59400000 4.96360000 4.97600000	GHz 38 GHz 51 GHz 51 GHz 49 GHz 36 GHz 36 GHz 33 GHz 33 GHz 33 GHz 45 GHz 29 GHz 42 GHz 29 GHz 42 GHz 42	.12 CI: .26 Mai .20 Mai .20 Mai .10 CI: .10 CI: .10 CI: .11 CI: .12 CI: .12 CI: .19 CI: .47 Mai .97 CI: .26 Mai .26 Mai	SPR Averag x Peak SPR Averag SPR Averag x Peak x Peak SPR Averag x Peak SPR Averag x Peak SPR Averag x Peak	-15.88 -17.90 -16.90 -20.88 -20.81 -24.03
1 2 1 2	7.033600000 11.715200000 12.397200000	GHZ 29 GHZ 42 GHZ 29 GHZ 42	.32 Ma: .70 CI: .30 Ma:	x Peak SPR Averag x Peak	-24.30

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8.1.9 88-108 MHz, 30 MHz to 200 MHz, Horizontal/ Vertical Polarity Plot





8.1.10 88-108 MHz, 30 MHz to 200 MHz, Horizontal/ Vertical Polarity Table

EMI Auto Test(13)

Final_Res	ult										
Frequency	QuasiPeak	CAverage	Limit	Margin	Meas. Time	Bandwidth	Height	Pol	Azimuth	Corr.	Comment
(MHz)	(dBµV/m)	(dBµV/m)	(dBµV/m)	(dB)	(ms)	(kHz)	(cm)		(deg)	(dB/m)	

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8.1.11 88-108 MHz, 200 MHz to 1000 MHz, Horizontal/ Vertical Polarity Plot





8.1.12 88-108 MHz, 200 MHz to 1000 MHz, Horizontal/ Vertical Polarity Table

EMI Auto Test(13)

Final_Res	ult										
Frequency	QuasiPeak	CAverage	Limit	Margin	Meas. Time	Bandwidth	Height	Pol	Azimuth	Corr.	Comment
(MHz)	(dBµV/m)	(dBµV/m)	(dBµV/m)	(dB)	(ms)	(kHz)	(cm)		(deg)	(dB/m)	
									-		



8.1.13 88-108 MHz, above 1000 MHz, Horizontal Polarity Plot

CHWARZ

22.Feb 22 10:46

Preamp Input

35 dB INPUT1

12.5 GH =

Test Spec Polarity Vertical

1 GH =

Stepped Scan (1 Range)

Scan Start: Scan Stop: Detector: Transducer:	1 GHz 12.5 GHz Trace 1: MA: TDS_05	ХРЕАК Т	race 2: Av	erage			
Start Frequency	Stop Frequenc	ÿ	Step Size		Res BW	Meas Time	RF Atten
1.000000 0	Hz 12.500	000 GHz	400.00	kHz	1.00 MHz	100 µs	Auto
Step AU	10	Att 0 dB	AUTO	REW MI PREAMP	1 86H x 500 ms LVA		
dB ut 111						10	a R D

CISPR 22 Radiated Disturbances



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8.1.14 88-108 MHz, above 1000 MHz, Horizontal Polarity Table

22.Feb 22 10:46

Test Sp Polarity Vertica	bec V	CISP	R 22 Radiated Distur	bances	
<u>Final</u>	Measurement				
Meas T Margin: Subran	ïme: ges:	500 ms 40 dB 16			
Trace	Frequen	cy	Level (dBµV/m)	Detector	Delta Limit/dB
1	1.09000000) GHz	37.96	CISPR Averag	-16.04
2	1.198800000) GHz	51.14	Max Peak	
2	1.428000000) GHz	49.32	Max Peak	
1	1.652800000) GHz	36.17	CISPR Averag	-17.83
1	1.881600000) GHz	37.13	CISPR Averag	-16.87
2	1.889200000) GHz	49.86	Max Peak	
2	2.686800000) GHz	47.23	Max Peak	
1	2.798800000) GHz	34.09	CISPR Averag	-19.91
1	3.59600000) GHz	33.51	CISPR Averag	-20.49
2	3.599200000) GHz	46.41	Max Peak	
2	4.971200000) GHz	43.48	Max Peak	
1	5.31200000) GHz	30.39	CISPR Averag	-23.61
2	7.035200000) GHz	42.49	Max Peak	
1	7.142800000) GHz	29.57	CISPR Averag	-24.43
2	11.281200000) GHz	43.32	Max Peak	
1	11.713600000) GHz	30.02	CISPR Averag	-23.98

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8.1.15 88-108 MHz, above 1000 MHz, Vertical Polarity Plot

CISPR 22 Radiated Disturbances

ROHDE & SCHWARZ

22.Feb 22 10:48

Test Spec Polarity Vertical

<u>Stepped Scan (1 Range)</u>

Scan Start: Scan Stop: Detector: Transducer:	1 GHz 12.5 GHz Trace 1: MA) TDS_05	KPEAK Trace	2: Averag	je								
Start Frequency	Stop Frequenc	Step v Size		Re	s B₩		Mea: Time	S	RF Atten		Preamp	Input
1.000000	GHz 12.500	000 GHz 400	.00 kHz	:	1.00	MHz	100	μз	Auto		35 dB	INPUT1
Step A	UIO	Att 0 dB AUIG	REW MI D PREJ	1 8 500 886 LVS	úHz 1 ma L							
d⊒u¶ /n		LINII	сявск	PASS				10	Ğн.			
- 91												
Z 17 H1 X0 - 11										TDS		
- 51						_						
	Mmm	Wwww	WAN Š A JA	យោកខ្ម					X	LDB AC		
<u>~~</u>	£vvvvtv	WWWWW		Adivenda Aalioaria	n an	in i	14 1-146(14) 1404-14					
- 21			-•									

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8.1.16 88-108 MHz, above 1000 MHz, Vertical Polarity Table

22.Feb 22 10:48

Test Sp Polarity Vertical	ec	CISPR 2	22 Radiated Distur	bances	
Final N	<u>leasurement</u>				
Meas Ti Margin: Subrang	me: ges:	500 ms 40 dB 16			
Trace	Frequenc	у	Level (dBµV/m)	Detector	Delta Limit/dB
2	1.197600000	GHz	51.18	Max Peak	
1	1.294400000	GHz	36.73	CISPR Averag	-17.27
2	1.426800000	GHz	49.61	Max Peak	
1	1.878800000	GHz	36.98	CISPR Averag	-17.02
2	1.888400000	GHz	49.73	Max Peak	
1	1.891200000	GHz	37.19	CISPR Averag	-16.81
1	2.802400000	GHz	33.92	CISPR Averag	-20.08
2	3.033200000	GHz	46.25	Max Peak	
1	3.591600000	GHz	33.36	CISPR Averag	-20.64
2	3.594400000	GHz	45.91	Max Peak	
2	4.956800000	GHz	41.93	Max Peak	
1	4.971200000	GHz	30.40	CISPR Averag	-23.60
2	7.038000000	GHz	42.27	Max Peak	
1	7.143600000	GHz	29.42	CISPR Averag	-24.58
2	11.266000000	GHz	43.32	Max Peak	
1	11.599200000	GHz	30.08	CISPR Averag	-23.92

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8.1.17 136-174 MHz, 30 MHz to 200 MHz, Horizontal/ Vertical Polarity Plot





8.1.18 136-174 MHz, 30 MHz to 200 MHz, Horizontal/ Vertical Polarity Table

EMI Auto Test(13)

Final_Res	ult										
Frequency	QuasiPeak	CAverage	Limit	Margin	Meas. Time	Bandwidth	Height	Pol	Azimuth	Corr.	Comment
(MHz)	(dBµV/m)	(dBµV/m)	(dBµV/m)	(dB)	(ms)	(kHz)	(cm)		(deg)	(dB/m)	

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8.1.19 136-174 MHz, 200 MHz to 1000 MHz, Horizontal/ Vertical Polarity Plot





8.1.20 136-174 MHz, 200 MHz to 1000 MHz, Horizontal/ Vertical Polarity Table

EMI Auto Test(13)

Final_Res	ult										
Frequency	QuasiPeak	CAverage	Limit	Margin	Meas. Time	Bandwidth	Height	Pol	Azimuth	Corr.	Comment
(MHz)	(dBµV/m)	(dBµV/m)	(dBµV/m)	(dB)	(ms)	(kHz)	(cm)		(deg)	(dB/m)	

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8.1.21 136-174 MHz, above 1000 MHz, Horizontal Polarity Plot

ROHDE & SCHWARZ

22.Feb 22 10:50

Test Spec Polarity Vertical

1 GH =

<u>Stepped Scan (1 Range)</u>

Scan S Scan S Detect Transo	Start: Stop: or: ducer:	1 GHz 12.5 GHz Trace 1: MA: TDS_05	X PEAK Tra	ice 2: Avera	age								
Start Frequ	ency	Stop Frequenc	s xy s	itep iize	R	es BW	,	Mea: Time	5 9	RF Atten	Pre	eamp	Input
48 ut	Step AUTO		Att 0 dB	RUIO PRI	W 1 50 EAMP LW	1.00 KHz 0 ms 4			10	GH:		w	IMIOII
L 2X N3 10	- 91			off CARCK	rass								
Z 17 H110	- 11										7DS		
									-				

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CISPR 22 Radiated Disturbances

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12.5 GH =



8.1.22 136-174 MHz, above 1000 MHz, Horizontal Polarity Table

22.Feb 22 10:50

Test Sp Polarity Vertical	ec /	CISPR 2	2 Radiated Distur	bances	
Final I	Measurement				
Meas T Margin: Subrang	ime: ges:	500 ms 40 dB 16			
Trace	Frequenc	У	Level (dBµV/m)	Detector	Delta Limit/dB
2	1.192400000	GHz	50.31	Max Peak	
1	1.200400000	GHz	38.11	CISPR Averag	-15.89
2	1.429600000	GHz	49.03	Max Peak	
1	1.664400000	GHz	36.14	CISPR Averag	-17.86
1	1.883200000	GHz	36.98	CISPR Averag	-17.02
2	1.889200000	GHz	49.74	Max Peak	
2	2.800800000	GHz	46.65	Max Peak	
1	2.804000000	GHz	33.80	CISPR Averag	-20.20
1	3.586400000	GHz	32.98	CISPR Averag	-21.02
2	3.591600000	GHz	46.36	Max Peak	
2	4.972000000	GHz	43.38	Max Peak	
1	4.982800000	GHz	30.07	CISPR Averag	-23.93
2	7.019600000	GHz	42.01	Max Peak	
1	7.044400000	GHz	29.01	CISPR Averag	-24.99
2	11.281200000	GHz	43.12	Max Peak	
1	12.177200000	GHz	29.51	CISPR Averag	-24.49

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8.1.23 136-174 MHz, above 1000 MHz, Vertical Polarity Plot

CISPR 22 Radiated Disturbances

ROHDE & SCHWARZ

22.Feb 22 10:52

Test Spec Polarity Vertical

<u>Stepped Scan (1 Range)</u>

Scan Start: 1 GH Scan Stop: 12.5 Detector: Trace Transducer: TDS_	z GHz a 1: MAX PEAK Trac _05	e 2: Average				
Start Sti Frequency Fr	op Sto equency Siz	ep ze	Res BW 1	Meas RF Time Atto	en Preamp	Input
1.000000 GHz 1	12.500000 GHz 40	0.00 kHz	1.00 MHz .	100 µs Aut	to 35 dB	INPUT1
Step AUTO	Att D dE AC	REW 1 MI 5 JIO PREAMP I	- 264 x em 00 AK			
d⊒u∜)II /n	L 1861	CHECK PASS		10 GH×	7	
- 21						
Z 17 Hizo _ 11					202	
- 51					-	
	MMMM	MAN	ander obter sta		50g	
<u> </u>	MAMMAN	WWW	and the second			
- 21			leaterthindhicilini			
- 31						

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8.1.24 136-174 MHz, above 1000 MHz, Vertical Polarity Table

22.Feb 22 10:52

Test Sp Polarity Vertica	pec y I	CISP	R 22 Radiated Distur	bances	
Final	Measurement				
Meas T Margin: Subran	īme: : ges:	500 ms 40 dB 16			
Trace	Frequen	зy	Level (dBµV/m)	Detector	Delta Limit/dB
2	1.203200000	GHz	51.06	Max Peak	
1	1.308800000	GHz	37.78	CISPR Averag	-16.22
2	1.414400000	GHz	49.91	Max Peak	
1	1.876400000	GHz	36.68	CISPR Averag	-17.32
2	1.887200000	GHz	49.77	Max Peak	
1	1.899600000	GHz	36.79	CISPR Averag	-17.21
2	2.689600000	GHz	46.50	Max Peak	
1	2.806800000	GHz	33.76	CISPR Averag	-20.24
2	3.593600000	GHz	45.85	Max Peak	
1	3.60000000	GHz	33.34	CISPR Averag	-20.66
1	4.970400000	GHz	30.34	CISPR Averag	-23.66
2	4.970400000	GHz	42.65	Max Peak	
2	7.035200000	GHz	42.35	Max Peak	
1	7.261600000	GHz	29.02	CISPR Averag	-24.98
1	11.281600000	GHz	30.34	CISPR Averag	-23.66
2	11.384800000	GHz	42.61	Max Peak	

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8.1.25 400-479 MHz, 30 MHz to 200 MHz, Horizontal/ Vertical Polarity Plot





8.1.26 400-479 MHz, 30 MHz to 200 MHz, Horizontal/ Vertical Polarity Table

EMI Auto Test(13)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Comment

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8.1.27 400-479 MHz, 200 MHz to 1000 MHz, Horizontal/ Vertical Polarity Plot





8.1.28 400-479 MHz, 200 MHz to 1000 MHz, Horizontal/ Vertical Polarity Table

EMI Auto Test(13)

Final_Res	ult										
Frequency	QuasiPeak	CAverage	Limit	Margin	Meas. Time	Bandwidth	Height	Pol	Azimuth	Corr.	Comment
(MHz)	(dBµV/m)	(dBµV/m)	(dBµV/m)	(dB)	(ms)	(kHz)	(cm)		(deg)	(dB/m)	

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8.1.29 400-479 MHz, above 1000 MHz, Horizontal Polarity Plot

CISPR 22 Radiated Disturbances

ROHDE & SCHWARZ

22.Feb 22 10:54

Test Spec Polarity Vertical

<u>Stepped Scan (1 Range)</u>

Scan S Scan S Detect Transc	Start: Stop: or: lucer:	1 1 T T	GHz 2.5 GHz Trace 1: M DS_05	IAX PE	ak t	race	2: Av	vera	ge											
Start Freque	ncv		Stop Freque	ncv		Ster Size	;)			Re	s BW		M Ti	eas me		RF Atten		Pre	amp	Input
1.0	000	DO GHz	12.5	00000	GHz	400	.00	kH	z		1.00	MHz	10)O 1	13	Auto		35	dB	INPUT1
×	Step	AUTO		At	t 0 d.1	S AUI	0	REN MI PRE	AMP	т из 201	áHz Ims									
d⊒u¶ /s					L	1991	сяв	сĸ	PAS	s					10	ён. 				
L 27.	- 91																			
Z 1.4																				
NLTD	- 11			+																
	- 61					+				_										
	Ŵ	Ŵ	WW	ŇW	w	huh	AAAA	¥.			e del sec		x			x	508			
	Ŵ	\sim	WW	ŴW	ŴŴ	W	ANAA	-0400 t	Alto	W)u	WWW	V IVU)	jup _i n			a the second				
								ומני	uhala	Wa	41-4MH	i h iraliji	ill)iliggi	.	i	-Africates				
	- 21			1																
				+																
l	1 68														1:	. 5 GHz				

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8.1.30 400-479 MHz, above 1000 MHz, Horizontal Polarity Table

22.Feb 22 10:54

Test Sp Polarity Vertica	bec V	CISPE	R 22 Radiated Distur	bances	
Final	Measurement				
Meas T Margin: Subran	ïme: ges:	500 ms 40 dB 16			
Trace	Frequenc	;y	Level (dBµV/m)	Detector	Delta Limit/dB
1	1.19400000	GHz	38.03	CISPR Averag	-15.97
2	1.197600000	GHz	50.49	Max Peak	
2	1.429200000	GHz	49.62	Max Peak	
1	1.774000000	GHz	36.61	CISPR Averag	-17.39
1	1.892800000	GHz	37.03	CISPR Averag	-16.97
2	1.892800000	GHz	49.93	Max Peak	
2	2.685600000	GHz	46.29	Max Peak	
1	2.694400000	GHz	34.17	CISPR Averag	-19.83
1	3.598400000	GHz	33.34	CISPR Averag	-20.66
2	3.599600000	GHz	46.09	Max Peak	
2	4.968400000	GHz	43.20	Max Peak	
1	4.97400000	GHz	30.36	CISPR Averag	-23.64
1	7.011600000	GHz	28.88	CISPR Averag	-25.12
2	7.142400000	GHz	42.15	Max Peak	
2	11.278400000	GHz	43.15	Max Peak	
1	11.715200000	GHz	29.82	CISPR Averag	-24.18

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8.1.31 400-479 MHz, above 1000 MHz, Vertical Polarity Plot

CISPR 22 Radiated Disturbances

ROHDE & SCHWARZ

22.Feb 22 10:55

Test Spec Polarity Vertical

<u>Stepped Scan (1 Range)</u>

Scan : Scan : Detect Transi	Start: Stop: tor: ducer:	1 (12 Tr TC	3Hz : 5 GHz ace 1: M)S_05	AX PE	AK T	race	9 2: A'	vera	ge											
Start Fregu	encv		Stop Freque	1617		Ste Size	p			Re	s RW		M Ti	eas me		RF Atten		Pre	amn	Innut
1.0	00000	0 GHz	12.50	00000	GHz	400	0.00	kH:	z		1.00	MHz	10	00 1	13	Auto		35	dB	INPUT1
% >	Step	AUTO		At	t 0 43	E AU	10	REW MI PRE	AMP :	1 % 500 LVA	r H. Ma									
d⊒u¶ /n					I	1991	с нв	сx	PASS						10	ён <u>≭</u> ∥				
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NATE				_		_				_										
Z 17 1110	L																TOS			
	- 61									+					\vdash					
	VV	M	Ŵ	Ŵ	AAA	111	inhaa	x		8						x	508			
	$\overline{\mathbb{V}}$	• • V/V	Ŵ	ŴŴ	ŴŴ	WW	VIAM	9000 ta	(hojtati)	n feir	44 1 11	intern t	n hai	W	1 104	and the second	ac.			
								. Millor	(MM)	NPP N	w i lin	i h ikaliji	U UU	h(M) ^{AU}	V					
	- 21			+						+										
				_		_				_				-						
	1 GHz														12	1.5 GHz				

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8.1.32 400-479 MHz, above 1000 MHz, Vertical Polarity Table

22.Feb 22 10:55

Test Spec CISP Polarity Vertical		CISPR 2	2 Radiated Distur	bances					
	<u>Final N</u>	Final Measurement							
	Meas Tii Margin: Subrang	me: s	500 ms 40 dB 16						
	Trace	Frequenc	у	Level (dBµV/m)	Detector	Delta Limit/dB			
	2	1.204400000	GHz	50.46	Max Peak				
	1	1.214400000	GHz	37.62	CISPR Averag	-16.38			
	2	1.415600000	GHz	49.46	Max Peak				
	1	1.660400000	GHz	36.17	CISPR Averag	-17.83			
	1	1.888400000	GHz	37.18	CISPR Averag	-16.82			
	2	1.890400000	GHz	49.52	Max Peak				
	2	2.687600000	GHz	47.80	Max Peak				
	1	3.245600000	GHz	33.11	CISPR Averag	-20.89			
	2	3.598800000	GHz	46.46	Max Peak				
	1	3.599200000	GHz	33.34	CISPR Averag	-20.66			
	1	4.964400000	GHz	30.03	CISPR Averag	-23.97			
	2	4.974400000	GHz	42.94	Max Peak				
	1	7.025200000	GHz	29.60	CISPR Averag	-24.40			
	2	7.030400000	GHz	42.87	Max Peak				
	2	11.262000000	GHz	42.85	Max Peak				
	1	11.270000000	GHz	30.58	CISPR Averag	-23.42			

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9. ANNEX-A - Photographs of the EUT

Photographs of the EUT and any manufacturer supplied accessories to be used with the EUT are in a separate document.

10. ANNEX-B – Test Setup Photographs

Test setup photographs are located in a separate document.

11. History of Test Report Changes

Test Report #	Revision #	Description	Date of Issue
	1	Initial release	2/22/2022
TR_0847-22_FCC_15B_Scanning Receiver_	2	Updated model # Page 6, 11	3/9/2022



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END OF TEST REPORT

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