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TIMCO ENGINEERING, Inc.

An IIA Company

FCC 47 CFR Part 15.247 Test Report for FCC ID CN290273, Referencing FCC ID CN290275

APPLICANT	CATTRON NORTH AMERICA INC.
ADDRESS	655 N. RIVER ROAD NW SUITE A WARREN, OH 44483-2254 USA
FCC ID	CN290273
MODEL NUMBER	90273 TRX
PRODUCT DESCRIPTION	IR LRM2 450/2400 MHz MODULE
DATE SAMPLE RECEIVED	6/3/2020
FINAL TEST DATE	6/8/2020
TESTED BY	Tim Royer
APPROVED BY	Franklin Rose
TEST RESULTS	☒ PASS ☐ FAIL

Report Number	Report Version	Description	Issue Date
1704-20_FCC 2.4G 15.247 TestReport_	Rev1	Initial Issue	07/08/2020

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GENERAL REMARKS

Summary

The device under test does:

☒ Fulfill the general approval requirements as identified in this test report and was selected by the customer.

☐ Not fulfill the general approval requirements as identified in this test report

Attestations

This equipment has been tested in accordance with the standards identified in this test report. To the best of my knowledge and belief, these tests were performed using the measurement procedures described in this report.

All instrumentation and accessories used to test products for compliance to the indicated standards are calibrated regularly in accordance with ISO 17025 requirements.

I attest that the necessary measurements were made at:

Timco Engineering Inc.
849 NW State Road 45
Newberry, FL 32669
Designation #: US1070

Tested by:

Name and Title	Tim Royer, Project Manager / EMC Engineer
Date	07/08/2020

Reviewed and Approved by:

Name and Title	Franklin Rose, Project Manager / EMC Specialist
Date	07/08/2020

GENERAL INFORMATION

EUT Information

EUT Description	IR LRM2 450MHZ/2400MHZ MODULE		
FCC ID	CN290273		
Model Number	**90273 TRX**		
EUT Power Source	☐110–120Vac, 50–60Hz	☒ DC Power	☐ Battery Operated
Test Item	☐ Prototype	☒ Pre-Production	☐ Production
Type of Equipment	☒ Fixed	☐ Mobile	☐ Portable
Test Conditions	The temperature was 26ºC Relative humidity of 50%.		
Test Configuration	Normal use.		
Modification to the EUT	No Modification to EUT.		
Applicable Standards	FCC CFR 47 Part 2, Part 15, Referring to ANSI C63.10-2013 for Test Procedures		
Test Facility	Timco Engineering Inc. at 849 NW State Road 45 Newberry, FL 32669 USA. Designation #: US1070		

Peripherals Used in Testing

Description	Type	Connector	Length
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a

EUT Modes of Operation

Description	Modulation Type
Coded 8	GFSK

The present document shall be constructed per the guidelines found in KDB 484596 D01 "Referencing Test Data" v01

Introduction (KDB 484596 Section 3 a)

In order to re-use data from the testing of previously certified equipment known as FCC ID CN290275, this document attests that the present filing for FCC ID CN290273 is electrically identical to, and is equipped with identical software/firmware as the previous FCC ID CN290275 by the same manufacturer.

The need to re-file identical equipment under a new FCC ID is due to the re-use of the 2.4 GHz portion of the previous device within the present system.

Explain the Differences (KDB 484596 Section 3 b)

Please refer to cover letter "Identical-2.4GHz-CN290273-CN290275.pdf" submitted by the manufacturer of both devices.

They attest that no change (electrical, software, or otherwise) has been made to the equipment in question.

Spot Check Verification Data (KDB 484596 Section 3 c)

Applied Rule Part(s)	Test	FCC ID CN290275 Result	FCC ID CN290273 Result
FCC Pt. 15.247(d)	Unwanted Spurious Emissions	**PASS**	**Spot-Checked, PASS**

Reference Section (KDB 484596 Section 3 d)

A matrix has been provided to disambiguate the source data for each frequency band, rule part, and emission designator, as required by KDB 484596:

Rule Part	Equipment Class	Frequency Range	Emission Designator	Source Data FCC ID	Exhibit Name(s)
15.247	DTS	2.4 – 2.4835 GHz	n/a	FCC ID CN290275	519BUT20_PT 15.247 DTS _ TestReport_Rev1.docx
90	TNB	450 – 470 MHz	10K8F1D, ..F1W, ..F1X	FCC ID CN290273	1704-20_TestReport_.pdf

SPOT-CHECK OF RADIATED SPURIOUS EMISSIONS

RULE PART NO.: FCC part 15.247(b)(4), (d), 15.205, 15.209

Requirements:

§15.247 Operation within the bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz.

(b) The maximum peak conducted output power of the intentional radiator shall not exceed the following:

(4) The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

§15.205 Restricted bands of operation.

(a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	([2])
13.36-13.41			

RADIATED SPURIOUS EMISSIONS

§15.31 Measurement standards.

(f) To the extent practicable, the device under test shall be measured at the distance specified in the appropriate rule section. The distance specified corresponds to the horizontal distance between the measurement antenna and the closest point of the equipment under test, support equipment or interconnecting cables as determined by the boundary defined by an imaginary straight line periphery describing a simple geometric configuration enclosing the system containing the equipment under test. The equipment under test, support equipment and any interconnecting cables shall be included within this boundary.

(2) At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). This paragraph (f) shall not apply to Access BPL devices operating below 30 MHz.

§15.209 Radiated emission limits; general requirements.

(a) Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency	Limit (μV/m)	15.31 Extrapolation factor (dB)	3m Limit (dBμV/m)
9 kHz – 30 kHz	2400/F(in kHz) @ 300m	80 dB	-31.48 to -41.94
30 kHz – 300 kHz	2400/F(in kHz) @ 300m	80 dB	-41.94 to -61.94
300 kHz – 490 kHz	2400/F(in kHz) @ 300m	80 dB	-61.94 to -66.2
490 kHz – 1.705 MHz	24000/F(in kHz) @ 30m	40 dB	-6.2 to -17.03
1.705 MHz – 3 MHz	30.0 @ 30 m	40 dB	-10.46
3 MHz – 30 MHz	30.0 @ 30 m	40 dB	-10.46

RADIATED SPURIOUS EMISSIONS

(1) At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

§15.209 Radiated emission limits; general requirements.

(a) Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency (MHz)	Limit (μV/m)	3m Limit (dBμV/m)
30 – 88	100.0	40.00
88 – 216	150.0	43.52
216 – 960	200.0	46.02
Above 960	500.0	53.98

§15.35 Measurement detector functions and bandwidths.

(b) Unless otherwise specified, on any frequency or frequencies above 1000 MHz, the radiated emission limits are based on the use of measurement instrumentation employing an average detector function. Unless otherwise specified, measurements above 1000 MHz shall be performed using a minimum resolution bandwidth of 1 MHz. When average radiated emission measurements are specified in this part, including average emission measurements below 1000 MHz, there also is a limit on the peak level of the radio frequency emissions. Unless otherwise specified, *e.g.,* see §§15.250, 15.252, 15.253(d), 15.255, 15.256, and 15.509 through 15.519, the limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device, *e.g.,* the total peak power level. Note that the use of a pulse desensitization correction factor may be needed to determine the total peak emission level. The instruction manual or application note for the measurement instrument should be consulted for determining pulse desensitization factors, as necessary.

RADIATED SPURIOUS EMISSIONS

Test Procedure: ANSI C63.4 § Annex D Validation of radiated emissions standard test sites
ANSI C63.10 § 6.3 Common requirements radiated emissions
ANSI C63.10 § 6.4 Emissions below 30 MHz
ANSI C63.10 § 6.5 Emissions between 30 & 1000 MHz
ANSI C63.10 § 6.6 Emissions above 1 GHz

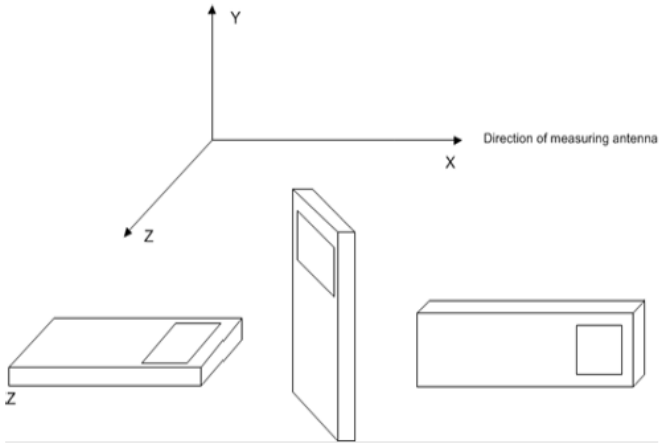
Radiated Emissions Test Setup:

EUT setup and arrangement was completed as described in ANSI C63.4. Exploratory measurements were taken following different peripheral placement and cable manipulations as described in ANSI C63.4. A photo is provided of the Test setup to record the exact peripheral equipment and cable manipulation arrangement found to produce the highest possible level of radiated emissions.

The test procedure used for radiated emissions is described ANSI C63.10 using a spectrum analyzer. The resolution bandwidth used was 100 kHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna. All cable loss and antenna factors were calibrated to provide plots with correction factors applied to results using the formula and example described below. The video bandwidth of the analyzer was always greater than or equal to the resolution bandwidth, and a peak detector with max hold was used.

The unit under test was placed on a table 80 cm high and with dimensions of 1m by 1.5m. The table used for radiated measurements is capable of continuous rotation. When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and verticals planes. The frequency was scanned from 30 MHz to 1.0 GHz. The EUT was measured in three parts of the tunable band of EUT and (3) orthogonal planes when necessary.

EUT Orientation(s):



RADIATED SPURIOUS EMISSIONS

Formula of Conversion Factors:

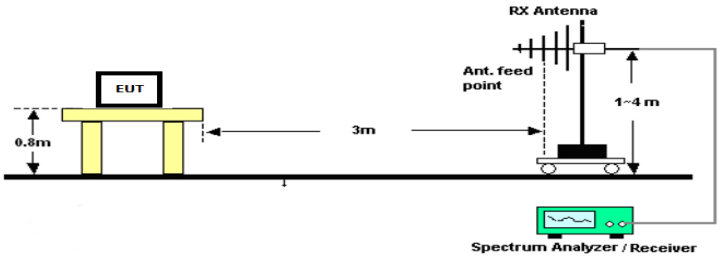
The field strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dBµV) to the antenna correction factor supplied by the antenna manufacturer plus the coax loss. The antenna correction factors are stated in terms of dB. The gain of the preselector was accounted for in the spectrum analyzer meter reading.

Field Strength Correction Factor Conversion Example:

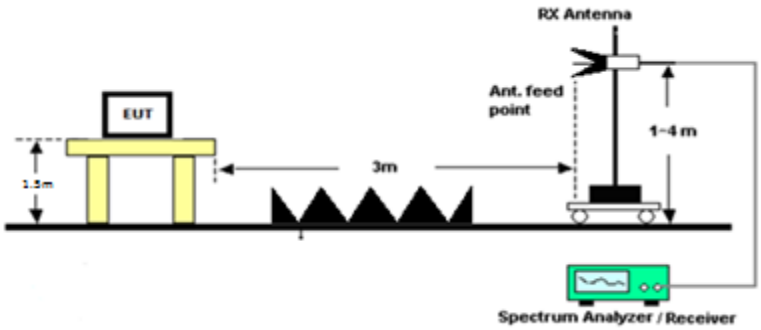
Freq (MHz)	Meter Reading	+ ACF	+CL	= FS
33	20 dBµV	+ 10.36 dB/m	+0.40 dB	=30.76 dBµV/m @ 3m

Test Setup:

Emissions 30 – 1000 MHz



Emissions above 1 GHz



RADIATED SPURIOUS EMISSIONS

Test Data: 30 – 200 MHz, Horizontal

ROHDE&SCHWARZ

05.Jun 20 12:06

Test Spec CISPR 22 Radiated Disturbances

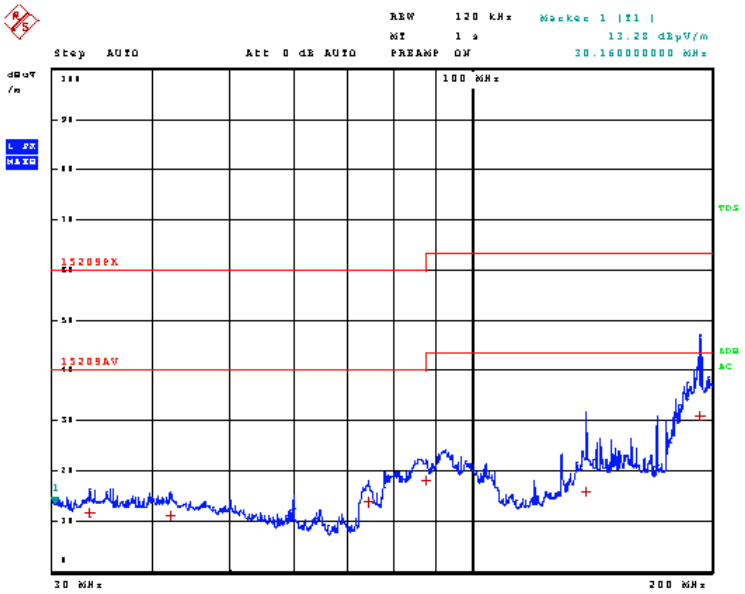
Polarity

H

Stepped Scan (1 Range)

Scan Start: 30 MHz
Scan Stop: 200 MHz
Detector: Trace 1: MAX PEAK
Transducer: TDS_01

Start Frequency	Stop Frequency	Step Size	Res BW	Meas Time	RF Atten	Preamp	Input
30.000000 MHz	200.000000 MHz	40.00 kHz	120.00 kHz	50 µs	Auto	20 dB	INPUT1



RADIATED SPURIOUS EMISSIONS

05.Jun 20 12:06

Test Spec CISPR 22 Radiated Disturbances

Polarity
H

Final Measurement

Meas Time: 1 s
Margin: 25 dB
Subranges: 6

Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
1	33.360000000 MHz	11.59	Quasi Peak	-28.41
1	42.080000000 MHz	10.99	Quasi Peak	-29.01
1	74.320000000 MHz	13.79	Quasi Peak	-26.21
1	87.600000000 MHz	18.18	Quasi Peak	-21.82
1	139.360000000 MHz	15.96	Quasi Peak	-27.54
1	193.280000000 MHz	31.05	Quasi Peak	-12.45

RADIATED SPURIOUS EMISSIONS

Test Data: 30 – 200 MHz, Vertical

ROHDE&SCHWARZ

05.Jun 20 12:08

Test Spec CISPR 22 Radiated Disturbances

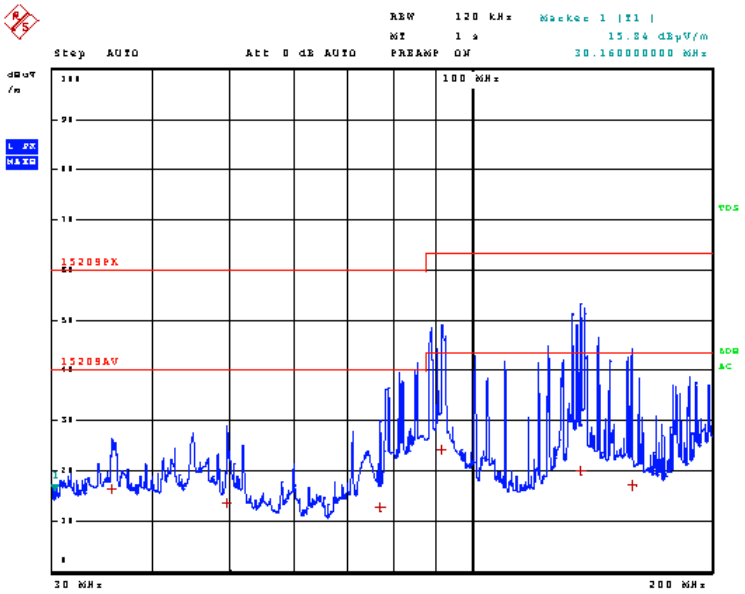
Polarity

V

Stepped Scan (1 Range)

Scan Start: 30 MHz
Scan Stop: 200 MHz
Detector: Trace 1: MAX PEAK
Transducer: TDS_01

Start Frequency	Stop Frequency	Step Size	Res BW	Meas Time	RF Atten	Preamp	Input
30.000000 MHz	200.000000 MHz	40.00 kHz	120.00 kHz	50 µs	Auto	20 dB	INPUT1



RADIATED SPURIOUS EMISSIONS

05.Jun 20 12:08

Test Spec CISPR 22 Radiated Disturbances

Polarity
V

Final Measurement

Meas Time: 1 s
Margin: 25 dB
Subranges: 6

Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
1	35.520000000 MHz	16.41	Quasi Peak	-23.59
1	49.560000000 MHz	13.57	Quasi Peak	-26.43
1	77.000000000 MHz	12.68	Quasi Peak	-27.32
1	91.880000000 MHz	24.27	Quasi Peak	-19.23
1	137.200000000 MHz	20.17	Quasi Peak	-23.33
1	158.720000000 MHz	17.16	Quasi Peak	-26.34

RADIATED SPURIOUS EMISSIONS

Test Data: 200 – 1000 MHz, Horizontal

ROHDE&SCHWARZ

05.Jun 20 12:04

Test Spec CISPR 22 Radiated Disturbances

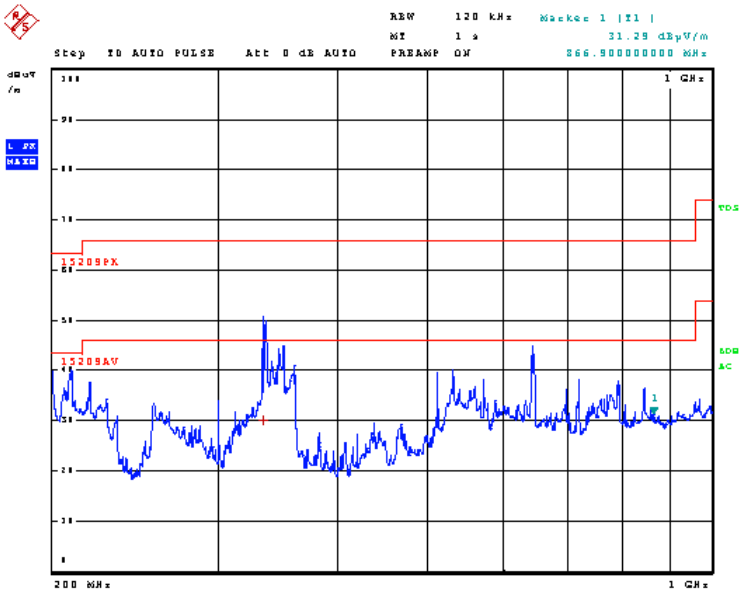
Polarity

H

Time Domain Scan (1 Range)

Scan Start: 200 MHz
Scan Stop: 1 GHz
Detector: Trace 1: MAX PEAK
Transducer: TDS_01

Start Frequency	Stop Frequency	Step Size	Res BW	Meas Time	RF Atten	Preamp	Input
200.000000 MHz	1.000000 GHz	30.00 kHz	120.00 kHz	50 µs	Auto	20 dB	INPUT1



Final Measurement

Meas Time: 1 s
Margin: 20 dB
Subranges: 1

Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
1	334.280000000 MHz	30.19	Quasi Peak	-35.81

Page 1 of 1

RADIATED SPURIOUS EMISSIONS

Test Data: 200 – 1000 MHz, Vertical

ROHDE&SCHWARZ

05.Jun 20 12:00

Test Spec CISPR 22 Radiated Disturbances

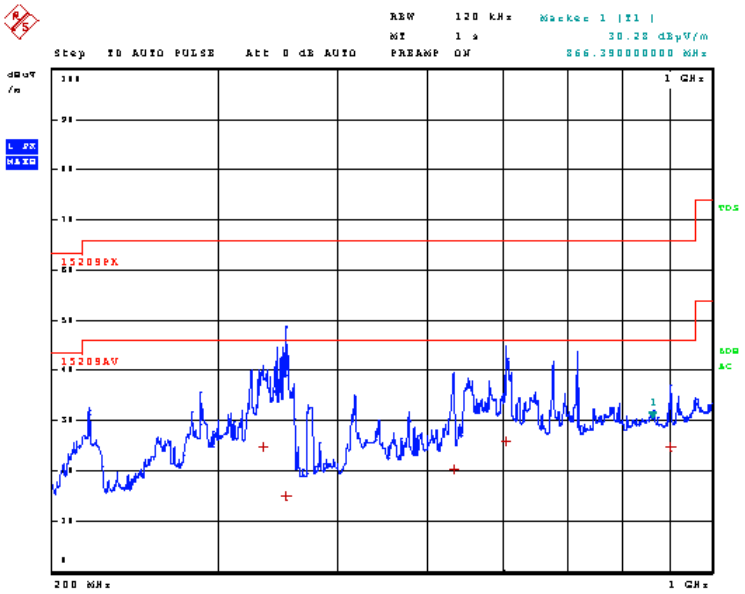
Polarity

V

Time Domain Scan (1 Range)

Scan Start: 200 MHz
Scan Stop: 1 GHz
Detector: Trace 1: MAX PEAK
Transducer: TDS_01

Start Frequency	Stop Frequency	Step Size	Res BW	Meas Time	RF Atten	Preamp	Input
200.000000 MHz	1.000000 GHz	30.00 kHz	120.00 kHz	50 µs	Auto	20 dB	INPUT1



RADIATED SPURIOUS EMISSIONS

05.Jun 20 12:00

Test Spec CISPR 22 Radiated Disturbances

Polarity

V

Final Measurement

Meas Time: 1 s
Margin: 20 dB
Subranges: 5

Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
1	334.100000000 MHz	24.83	Quasi Peak	-31.67
1	353.750000000 MHz	15.12	Quasi Peak	-41.38
1	532.250000000 MHz	20.26	Quasi Peak	-36.24
1	605.210000000 MHz	25.90	Quasi Peak	-30.60
1	904.280000000 MHz	24.94	Quasi Peak	-31.56

RADIATED SPURIOUS EMISSIONS

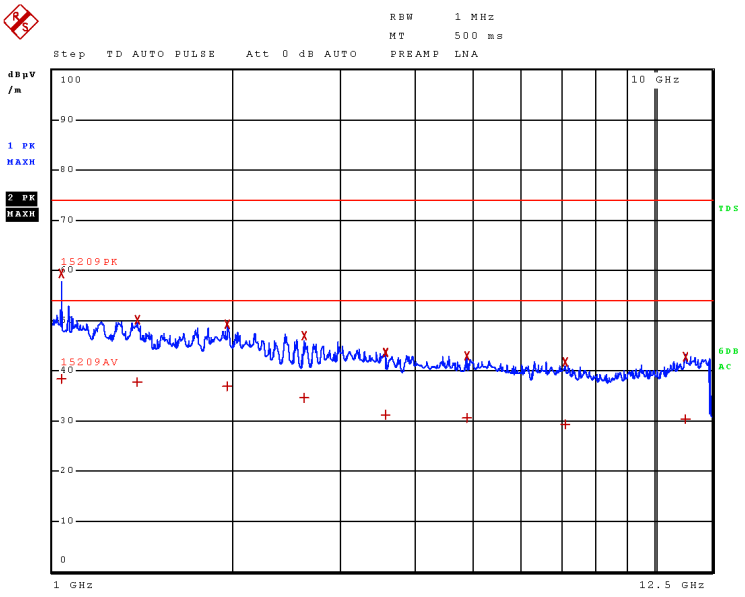
Test Data: Above 1 GHz, Horizontal

05.Jun 20 12:58

Time Domain Scan (1 Range)

Scan Start: 1 GHz
Scan Stop: 12.5 GHz
Detector: Trace 1: MAX PEAK Trace 2: MAX PEAK
Transducer: TDS_05

Start Frequency	Stop Frequency	Step Size	Res BW	Meas Time	RF Atten	Preamp	Input
1.000000 GHz	12.500000 GHz	250.00 kHz	1.00 MHz	100 µs	Auto	35 dB	INPUT1



RADIATED SPURIOUS EMISSIONS

05.Jun 20 12:58

Final Measurement

Meas Time: 500 ms
Margin: 40 dB
Subranges: 16

Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
1	1.031500000 GHz	38.42	CISPR Averag	-15.58
2	1.031500000 GHz	59.28	Max Peak	
1	1.383500000 GHz	37.71	CISPR Averag	-16.29
2	1.383500000 GHz	50.06	Max Peak	
1	1.950750000 GHz	36.94	CISPR Averag	-17.06
2	1.950750000 GHz	49.28	Max Peak	
1	2.623750000 GHz	34.62	CISPR Averag	-19.38
2	2.623750000 GHz	47.01	Max Peak	
1	3.594750000 GHz	31.30	CISPR Averag	-22.70
2	3.594750000 GHz	43.66	Max Peak	
1	4.880500000 GHz	30.61	CISPR Averag	-23.39
2	4.880500000 GHz	42.88	Max Peak	
1	7.133250000 GHz	29.39	CISPR Averag	-24.61
2	7.133250000 GHz	41.81	Max Peak	
1	11.286000000 GHz	30.30	CISPR Averag	-23.70
2	11.286000000 GHz	42.84	Max Peak	

RADIATED SPURIOUS EMISSIONS

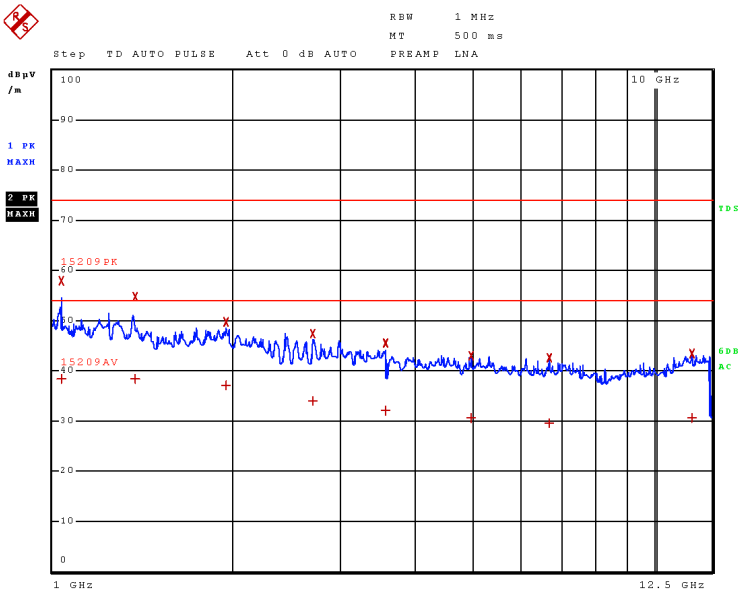
Test Data: Above 1 GHz, Vertical

05.Jun 20 12:57

Time Domain Scan (1 Range)

Scan Start: 1 GHz
Scan Stop: 12.5 GHz
Detector: Trace 1: MAX PEAK Trace 2: MAX PEAK
Transducer: TDS_05

Start Frequency	Stop Frequency	Step Size	Res BW	Meas Time	RF Atten	Preamp	Input
1.000000 GHz	12.500000 GHz	250.00 kHz	1.00 MHz	100 µs	Auto	35 dB	INPUT1



RADIATED SPURIOUS EMISSIONS

05.Jun 20 12:57

Final Measurement

Meas Time: 500 ms
Margin: 40 dB
Subranges: 16

Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
1	1.031750000 GHz	38.24	CISPR Averag	-15.76
2	1.031750000 GHz	57.85	Max Peak	
1	1.372250000 GHz	38.40	CISPR Averag	-15.60
2	1.372250000 GHz	54.72	Max Peak	
1	1.941500000 GHz	37.05	CISPR Averag	-16.95
2	1.941500000 GHz	49.68	Max Peak	
1	2.707750000 GHz	34.00	CISPR Averag	-20.00
2	2.707750000 GHz	47.34	Max Peak	
1	3.583000000 GHz	32.03	CISPR Averag	-21.97
2	3.583000000 GHz	45.45	Max Peak	
1	4.961750000 GHz	30.51	CISPR Averag	-23.49
2	4.961750000 GHz	42.93	Max Peak	
1	6.710250000 GHz	29.50	CISPR Averag	-24.50
2	6.710250000 GHz	42.44	Max Peak	
1	11.552750000 GHz	30.67	CISPR Averag	-23.33
2	11.552750000 GHz	43.41	Max Peak	

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TEST EQUIPMENT LIST

Device	Manufacturer	Model	Serial Number	Cal/Char Date	Due Date
Antenna: Active Loop	ETS-Lindgren	6502	62529	12/11/2017	12/11/2020
Antenna: Biconical 1057	Eaton	94455-1	1057	12/13/2017	12/13/2020
Antenna: Log-Periodic 1122	Electro-Metrics	LPA-25	1122	7/26/2017	7/26/2020
CHAMBER	Panashield	3M	N/A	3/15/2019	3/15/2021
EMI Test Receiver R & S ESU 40 Chamber	Rohde & Schwarz	ESU 40	100320	08/28/18	08/28/2021
Software: Field Strength Program	Timco	N/A	Version 4.10.7.0	N/A	N/A
Antenna: Double-Ridged Horn/ETS Horn 2	ETS-Lindgren	3117	41534	3/1/2017	4/1/2020
Bore-sight Antenna Positioning Tower	Sunol Sciences	TLT2	N/A	N/A	N/A
Coaxial Cable #103 - KMKM-0180-01 Aqua	Micro-Coax	UFB142A-0-0720-200200	225363-002 (#103)	4/12/2019	4/12/2021
Coaxial Cable - Chamber 3 cable set (Primary)	Micro-Coax	Chamber 3 cable set (Primary)	KMKM-0244-01 KMKM-0670-00 KFKF-0198-01	4/12/2019	4/12/2021
Band Reject Filter 2.4 GHz	Micro-Tronics	BRM50702-02	0	4/12/2019	4/12/2021
Pre-amp	RF-LAMBDA	RLNA00M45GA	N/A	2/27/2019	2/27/2021
Antenna: Double-Ridged Horn 18-40 GHz	EMCO	3116	9011-2145	2/27/2019	2/27/2021
Attenuator SMA 30dB 5W DC-18G	Pasternack	PE7013-30	#23	11/19/2017	11/19/2020

***EMI RECEIVER SOFTWARE VERSION**

The receiver firmware used was version 4.43 Service Pack 3

STATEMENT OF MEASUREMENT UNCERTAINTY

The data and results referenced in this document are true and accurate. The measurement uncertainty was calculated for all measurements listed in this test report according To CISPR 16–4 or ENTR 100-028 Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: "Uncertainty in EMC Measurements" and is documented in the Timco Engineering, Inc. quality system according to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.
Hereafter the best measurement capability for Timco Engineering, Inc. is reported:

Test Items	Measurement Uncertainty	Notes
RF Frequency Accuracy	± 49.5 Hz	(1)
RF Conducted Power	±0.93dB	(1)
Conducted spurious emission of transmitter valid up to 40GHz	±1.86dB	
Occupied Bandwidth	±2.65%	
Radiated RF Power	±1.4dB	
Maximum frequency deviation: Within 300 Hz and 6kHz of audio freq. Within 6kHz and 25kHz of audio Freq.	 ±1.88% ±2.04%	
Radiated Emissions up to 26.5GHz	±2.14dB	
Temperature	±1.0°C	(1)
Humidity	±5.0%	

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

END OF REPORT