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EMC COMPLIANCE REPORT
In accordance with:
ICES-003 Issue 7 October 2020

Gallagher Group Ltd

eS1 Cellular

eShepherd Neckband

REPORT: E2401-1729-5
DATE: April, 2025

Accreditation Number: 18553
Accredited for compliance with ISO/IEC 17025 - Testing

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Certificate of Compliance
EMC Compliance Report
EMC Bayswater Test Report: E2401-1729-5
Issue Date: April, 2025

Product(s): eShepherd Neckband
Model No: eS1 Cellular
Part No: G04081
Serial No: 2350119059
Variant: G040811

The above-listed model with part no. G04081 was tested by EMC Bayswater Pty Ltd as a representative sample and the results and conclusions within this report do not necessarily reflect compliance for other variants. Please refer to section 5 of this report for variant information and the customer variant declaration.

Customer Details:
Mr. Hayden Goble
Gallagher Group Ltd
181 Kahikatea Drive, Melville,
Hamilton 3206
New Zealand

Phone No: +64 800 731 500
e-mail: Hayden.goble@gallagher.com

Test Specification: ICES-003 Issue 7 October 2020
Information Technology Equipment (including Digital Apparatus)

Results Summary:
Radiated Emissions — ***Complied (Class B)***
Conducted Emissions (AC mains power terminals) — ***Complied (Class B)***

Test Date(s): 15th of January, 2024

Test House (Issued By):
EMC Bayswater Pty Ltd
18/88 Merrindale Drive
Croydon South
Victoria, 3136
Australia

Innovation, Science &Economic Development Canada Registration no: 10676A

CAB ID: AU0004

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The Gallagher Group Ltd, eS1 Cellular, eShepherd Neckband, complied with the applicable Class B requirements of ICES-003 Issue 7 October 2020.

Prepared by:	Tested by:	Approved by:	
Fabio D'Amico (EMC Test Engineer)	Adnan Zaman (EMC Test Engineer)	Neville Liyanapatabendige (Manager)	09/04/2025 15:45 Date

EMC Test Report
for
Gallagher Group Ltd

Contents

1. Introduction

Electromagnetic Compatibility (EMC) tests were performed on an Gallagher Group Ltd, eS1 Cellular, eShepherd Neckband in accordance with the requirements of ICES-003 Issue 7 October 2020.

2. Test Report Revision History

None.

3. Report Information

EMC Bayswater Pty Ltd reports apply only to the specific samples tested under the stated test conditions. All samples tested were in good operating condition throughout the entire test program unless otherwise stated. EMC Bayswater Pty Ltd does not in any way guarantee the later performance of the product/equipment. It is the manufacturer's responsibility to ensure that additional production units of the tested model are manufactured with identical electrical and mechanical components. EMC Bayswater Pty Ltd shall have no liability for any deductions, inference or generalisations drawn by the clients or others from EMC Bayswater Pty Ltd issued reports. This report shall not be used to claim, constitute or imply product endorsement by EMC Bayswater Pty Ltd. This report shall not be reproduced except in full (with the exception of the certificate on page 2) without the written approval of EMC Bayswater Pty Ltd. This document may be altered or revised by EMC Bayswater Pty Ltd personnel only, and shall be noted in the revision section of the document. Any alteration of this document not carried out by EMC Bayswater Pty Ltd shall nullify the document.

4. Summary of Results

The EUT complied with the ICES-003 Radiated Emissions, Class B requirements. Worst-case emissions are tabled as follows:

Test	Result
Radiated Emissions (Horizontal Antenna Polarisation)	Complied with quasi-peak limit by 14.2dB
	Complied with peak limit by 30.1dB
	Complied with average limit by 23.3dB
Radiated Emissions (Vertical Antenna Polarisation)	Complied with quasi-peak limit by 12.1dB
	Complied with peak limit by 35.3dB
	Complied with average limit by 24.3dB

Table 1: Summary of test results

5. Product Sample, Configuration & Modifications

5.1. Product Sample Details

The EUT (Equipment Under Test), as supplied by the client, is described as follows:

Product:	eShepherd Neckband	
Model No:	eS1 Cellular	
Part No:	G04081	
Serial No:	2350119059	
Variant:	G040811*	
	**The customer (Gallagher Group Ltd) declared testing of one model as a worst case representative sample and declared that to be the model with part no. G04081 (refer to Appendix D of this report for the customer declaration of worst-case variant used for testing). Please note other than the unit(s) listed as a) "Product" and b) "Model", no other products/models or variant(s) were tested.*	
Firmware:	6.x.xxx	
Software:	N/A	
Power Specifications:	Battery Powered LiFePO4, 3.2V, 12000mAH	
Dimensions:	210mm (L) x 90mm (W) x 350mm (H)	
Weight:	2.7 kg / 5.9lbs (including chains)	
EUT Type:	Tested as table-top	
Transmitter details:	Description:	RF TXRX MODULE CELL/NAV 5G SMD
	Type:	SARA-R510s-01B
	Frequencies:	600MHz, 700MHz, 750MHz, 800MHz, 850MHz, 900MHz, 1.7GHz, 1.8GHz, 1.9GHz, 2.1GHz
	Max power:	23dBm
	Antenna:	PCB type antenna
	FCC ID:	XPYUBX19KM01
	IC:	8595A-UBX19KM01

(Customer supplied product information)

(Refer to photographs in Appendix B for views of the EUT)

5.2. Product description

The EUT (Equipment Under test) has been described by the customer as follows:

"Neckband is located around the neck of a farm animal, typically beef cattle. It determines its location by GPS/GNSS and compares it to programmed 'virtual fences'. If the animal attempts to cross a virtual fence the product first issues an audible warning. If the animal continues moving in the wrong direction the product applies an aversive electrical stimulus (series of HV pulses). It periodically transmits status via cellular network and receives an acknowledgement and optional additional information."

(Customer supplied product description information)

The highest frequency generated or used within the EUT or on which the EUT operates or tunes as specified by the customer is 1.575GHz.

The EUT has been identified as Category II class B digital device or peripheral by the customer.

As specified in section 2 of ICES-Gen:

Class A
Equipment that is, by virtue of its characteristics, highly unlikely to be used in a residential environment, including a home business. Characteristics considered in this assessment include price, marketing and advertising methodology, the degree to which the functional design inhibits applications suitable to residential environments, or any combination of features that would effectively preclude the use of such equipment in a residential environment. Also used for denoting the corresponding emission limits applicable to such equipment.

Class B
Equipment that cannot be classified as Class A; also used for denoting the corresponding emission limits applicable to such equipment.

5.3. Support Equipment

Support Equipment: 1	Description:	Laptop
	Manufacturer:	DELL
	Model No:	Latitude 7420
	Serial No:	Not stated
Support Equipment: 2	Description:	Power supply
	Manufacturer:	TENMA
	Model No:	72-10480
	Serial No:	202108070789
Support Equipment: 3	Description:	1k Ohms Resistive Load
	Manufacturer:	NA
	Model No:	NA
	Serial No:	NA

5.4. Product operating modes

The customer described the products normal operation modes as the following:

“The animal is near a virtual fence, and the product remains active, monitors position and animal movement, and applies audio and aversive stimulus pulses as required. The product transmits status through cellular network to our backend at >10min intervals (programmed time slots) typically every 10 minutes. The backend sends an acknowledgement and optionally additional information such as new virtual fence information or operating parameters.”

(Customer supplied product operating mode information)

5.5. Product operating mode for testing

Refer to section 5.4.

5.6. EUT Configuration

The EUT was either configured by the customer or configured using the customer's instructions.

"Product was put into receive-only mode. A repeating sequence of audio and pulse events at approx. 2 second intervals represented accelerated normal operation for purpose of measurement position scanning (turntable etc). Product would continuously try to acquire GPS fix and solar charge is simulated by connecting power supply to solar inputs via wire.

The product does not normally have any cable connections. For testing a serial cable was connected from the product to a PC running a control program (Bandchat). The cable was fitted with numerous ferrites close to the product so as not to affect measurements."

(Customer supplied product configuration information)

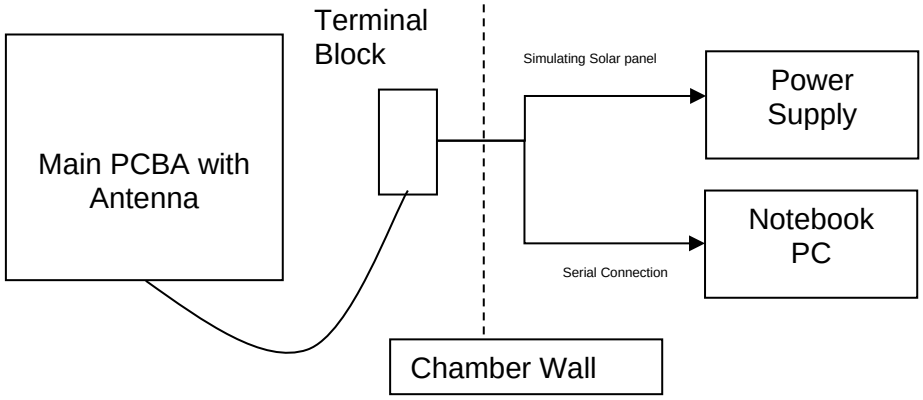

Figure 1: Customer supplied block diagram of EUT test configuration

Port	Cable type	Cable Brand	Cable Model	Length	Termination
Serial debug port (for test access only, not part of normal configuration)	Short 3-wire non shielded patch cable from PCB to outside of product.	Generic	Ribbon cable	50mm	2x8 pin 1.27mm pitch header
(As above)	DC extension cable from above patch cable to power supply simulating Solar input.	Generic	Shielded multi-core	9m	Power supply
	Serial extension cable from above patch cable to control PC – fitted with multiple ferrites				USB-to-Serial adapter at PC end

Table 2: List of ports and associated cables/terminations used for testing.

5.7. Modifications

EMC Bayswater Pty Ltd did not modify the EUT.

6. Test Facility & Equipment

6.1. Test Facility

Radiated Emissions measurements were taken in the indoor Open Area Test Site (iOATS) facility at EMC Bayswater Pty Ltd, located at 18/88 Merrindale Drive, Croydon South, Victoria, 3136, Australia.

EMC Bayswater Pty Ltd's Innovation, Science and Economic Development Canada registration number is 10676A.

EMC Bayswater Pty Ltd's Innovation, Science and Economic Development Canada CAB Identifier is AU0004.

6.2. Test Equipment

Refer to Appendix A for the measurement instrument list.

7. Referenced Standards

Innovation, Science and Economic Development Canada ICES-003 Issue 7 October 2020.
Information Technology Equipment (including Digital Apparatus).

Innovation, Science and Economic Development Canada ICES-Gen: Issue 2 February 23, 2024.
General Requirements for Compliance of Interference-Causing Equipment.

ANSI C63.4 – 2014.
American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.

8. Referenced Documents

None.

9. Radiated Emissions

9.1. Test Procedure

The Radiated Emission measurements were performed in accordance with the ANSI C63.4. Radiated Emissions were measured 3 metres away from the EUT in the iOATS (indoor Open Area Test Site) facility, which is an ANSI C63.4 compliant semi-anechoic chamber with ground plane. The EUT was placed on a non-conductive table, at a height of 0.8m above the ground plane.

In the frequency range of 30MHz to 1GHz, a Biconilog antenna was used. For both horizontal and vertical antenna polarizations, the peak detector was set to MAX-HOLD and the range selected continuously scanned. The measuring antenna was positioned at 4 different fixed height positions and the turntable slowly rotated. The peak preview measurements were performed with a resolution bandwidth of 120 kHz and a video bandwidth of 300 kHz. Peak emissions that exceeded the limit or were close to the applicable limit were investigated further. The frequency of each emissions was then accurately determined. Each emission of interest was then in-turn maximised by using the turntable to rotate the EUT through 360 degrees and varying the height of the antenna between 1 and 4 metres to find the worst-case emission arrangement. Quasi peak measurements were then performed using a measuring time of no less than 15 seconds. The final quasi-peak measurements were performed using a receiver bandwidth of 6dB and a resolution bandwidth of 120 kHz.

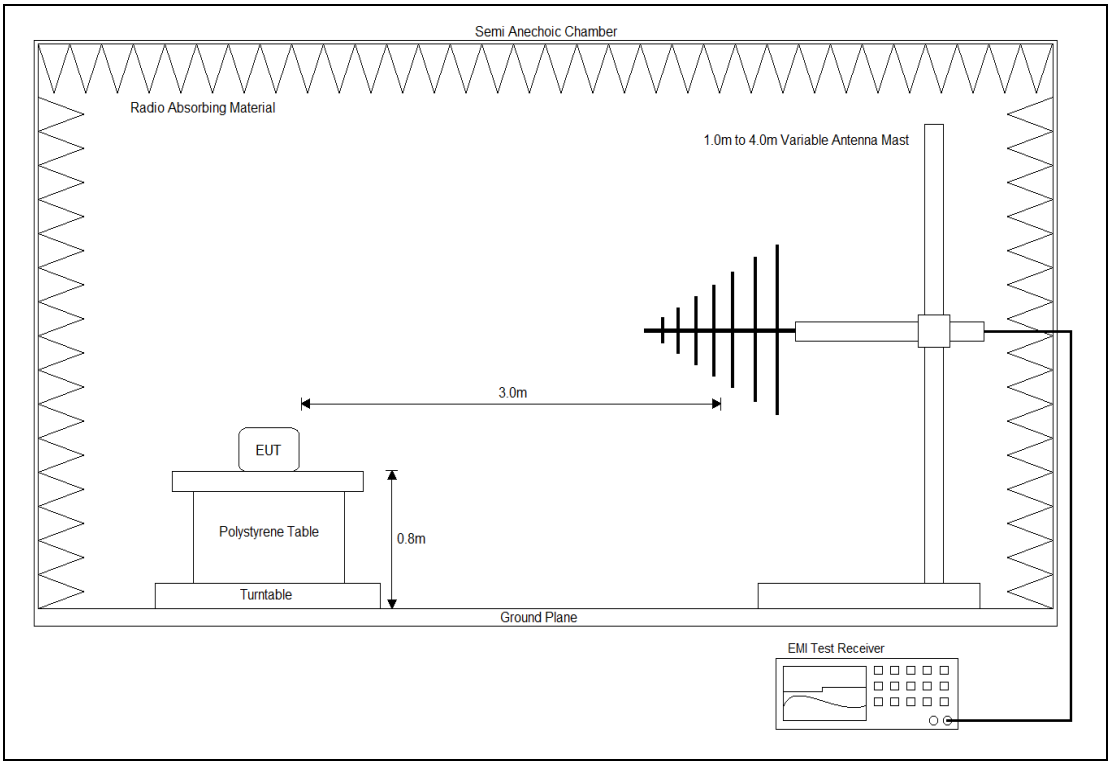

Figure 2: Test setup – 30MHz to 1GHz

In the frequency range 1.0GHz to 26.5GHz a Horn antenna was used and an area of 3m x 3m was covered between the antenna and the EUT using RF absorbing material with a rated attenuation more than 20dB over the frequency range. In the frequency range 26.5GHz to 40.0GHz a Horn antenna was used and an area of 1m x 3m was covered between the antenna and the EUT using RF absorbing material with a rated attenuation more than 20dB over the frequency range. The height of the horn antenna was varied using the antenna bore-sighting technique and the turntable slowly rotated to maximise the emissions. For both horizontal and vertical antenna polarizations, the Peak and Average preview measurements were performed with a resolution bandwidth of 1 MHz and a video bandwidth of 3MHz. Peak and average emissions that exceeded the applicable limit or were close to the applicable limit were investigated further. Each emission of interest was then in-turn maximised by using the turntable to rotate the EUT through 360 degrees and the antenna height varied (if applicable, using the antenna bore-sighting technique) to find the worst-case emission arrangement. Peak and CISPR Average measurements were then performed using a measuring time of no less than 15 seconds, the maximum emission level in the observed duration was recorded as the final result. The final peak and CISPR Average measurements were performed using a receiver bandwidth of 6dB and a resolution bandwidth of 1MHz. Peak and Average measurements were performed at spot frequencies where the peak or average emission was close to, or exceeded the applicable limit line with the EUT rotation and antenna height varied (if applicable, using the antenna bore-sighting technique) to produce the highest emission.

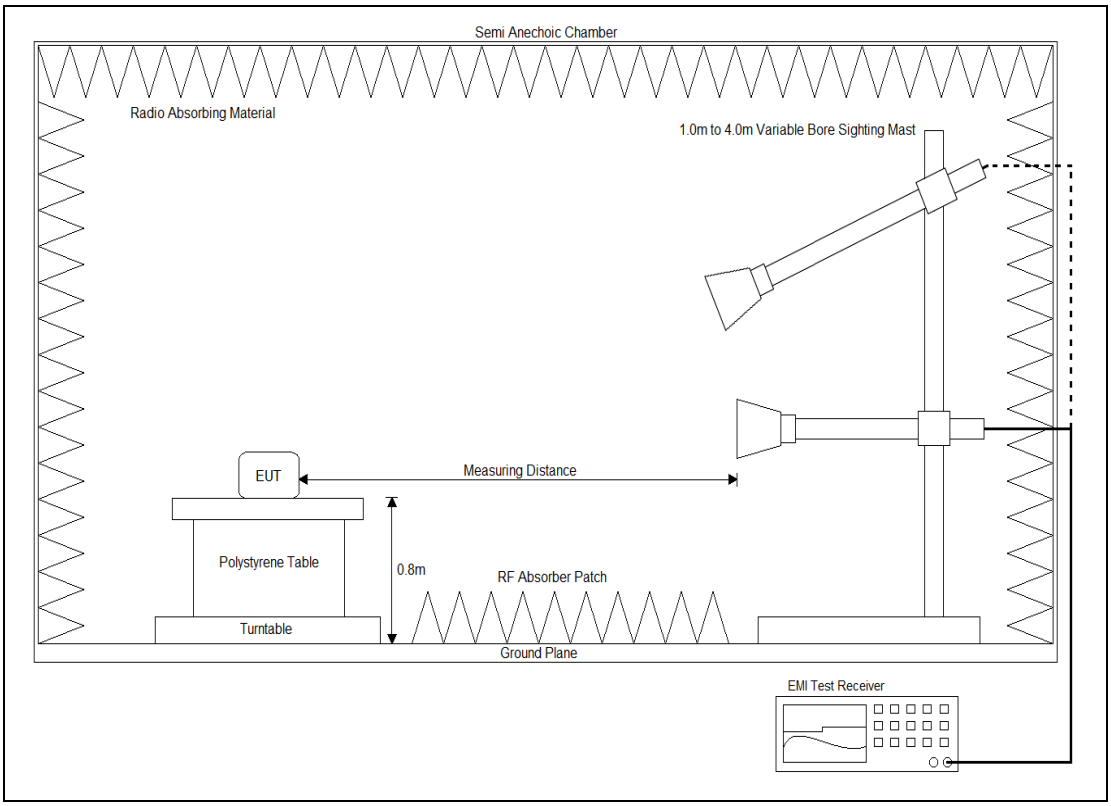

Figure 3: Test setup – above 1GHz

Horn	Frequency	Degrees	Measuring	Illumination	Measuring	Illumination
EMCO 3115	1 to 2	55.00	3	3.12	1	1.04
	2 to 4	50.00	3	2.80	1	0.93
	4 to 6	34.00	3	1.83	1	0.61
AH SAS-584	5.8 to 8.2	30.00	3	1.61	1	0.54
AH SAS-585	8.2 to 12.4	30.00	3	1.61	1	0.54
AH SAS-586	12.4 to 18	30.00	3	1.61	1	0.54
AH SAS 587	18 to 26.5	30.00	3	1.61	1	0.54
AH SAS 588	26.5 to 40	31.00	3	1.66	1	0.55

Table 1: Worst case Maximum size of measuring envelope for Horn antennas

Plots of the accumulated measurement data for both horizontal and vertical antenna polarizations, including all transducer and other measuring system correction factors were produced using commercially available compliant software (as listed in the test equipment list of this report).

(Refer to photographs 1 to 5 in Appendix B for views of the test configuration)

9.2. Limits

The EUT shall meet the limits in the following table:

Frequency Range (MHz)	Measuring distance	Limits (dBµV/m)	
		Quasi-Peak	
30 to 88	3m	40.0	
88 to 216	3m	43.5	
216 to 230	3m	46.0	
230 to 960	3m	47.0	
960 to 1000	3m	54.0	
Frequency Range (GHz)	**Measuring distance**	**Limits (dBµV/m)**	
		Average	**Peak**
1.0 to 26.5	3m	54.0	74.0
26.5 to 40.0	1m	64.0	84.0
NOTE The lower limit shall apply at the transition frequency.			

Table 3: Limits for Radiated Emissions of Class B equipment

9.3. Test Results

Radiated Emissions measurements are tabulated below. For below 1GHz measurements, Quasi-peak measurements were performed at spot frequencies where the peak emission was close to, or exceeded the applicable limit line. For above 1GHz measurements, Peak or CISPR Average measurements were performed at spot frequencies where the peak or average emission was close to, or exceeded the applicable limit line.

(Refer to graphs 1 to 8 in Appendix C)

Frequency (MHz)	Result Quasi-peak (dBµV/m)	Limit Quasi-peak (dBµV/m)	Delta limit (dB)
31.116	25.8	40.0	**-14.2***
36.742	21.0	40.0	-19.0
144.072	17.8	43.5	-25.7
803.478	31.1	47.0	-15.9
891.166	31.8	47.0	-15.2*
977.011	32.9	54.0	-21.1

**Worst-case emissions*

Table 4: Radiated Emissions – Horizontal Antenna Polarisation (30MHz to 1GHz)

Peak Measurements				Average Measurements			
Frequency (MHz)	Result (dBµV/m)	Limit (dBµV/m)	Delta Limit (dB)	Frequency (MHz)	Result (dBµV/m)	Limit (dBµV/m)	Delta Limit (dB)
1495.820	34.4	74.0	-39.6	2023.620	22.3	54.0	-31.7
2648.920	38.0	74.0	-36.0	2672.580	24.2	54.0	-29.8
5833.440	43.9	74.0	**-30.1***	5929.440	30.7	54.0	**-23.3***

**Worst-case emissions*

Table 5: Radiated Emissions – Horizontal Antenna Polarisation (1GHz to 10GHz)

Frequency (MHz)	Result Quasi-peak (dBµV/m)	Limit Quasi-peak (dBµV/m)	Delta limit (dB)
31.455	25.6	40.0	-14.4
38.245	27.4	40.0	-12.6
39.021	27.9	40.0	**-12.1***
39.797	26.0	40.0	-14.0
45.666	17.6	40.0	-22.4
729.904	29.8	47.0	-17.2
872.930	31.7	47.0	-15.3

**Worst-case emissions*

Table 6: Radiated Emissions – Vertical Antenna Polarisation (30MHz to 1GHz)

Peak Measurements				Average Measurements			
Frequency (MHz)	Result (dBµV/m)	Limit (dBµV/m)	Delta Limit (dB)	Frequency (MHz)	Result (dBµV/m)	Limit (dBµV/m)	Delta Limit (dB)
1985.660	36.2	74.0	-37.8	2688.960	24.0	54.0	-30.0
2366.560	36.3	74.0	-37.7	2980.940	25.1	54.0	-28.9
3032.420	38.7	74.0	**-35.3***	5020.080	29.7	54.0	**-24.3***

**Worst-case emissions*

Table 7: Radiated Emissions – Vertical Antenna Polarisation – 1GHz to 10GHz

The measurement uncertainty was calculated as follows:

Measurement frequency range	Calculated measurement uncertainty
30MHz to 1GHz	±4.65dB
1GHz to 6GHz	±4.79dB
6GHz to 18GHz	±4.48dB
18GHz to 26.5GHz	±4.45dB
26.5GHz to 40GHz	±4.44dB

The reported uncertainty is an expanded uncertainty calculated using a coverage factor of *k=2* which gives a level of confidence of approximately 95%. The referenced uncertainty standard specifies that determination of compliance shall be based on measurements without taking into account measurement uncertainty. However, the measurement uncertainty shall appear in the test report.

Climatic Conditions	
Temperature:	22.2 to 22.8ºC
Humidity:	55 to 56%
Atmospheric pressure:	1017.2 to 1020.4hPa

Table 8: Climatic Conditions

Calculation: The above results are based upon the following calculation:

$$E = V_{QP/PK/AV} + AF - G_{Amp} + L_C$$

Where:

E	=	E-field in dBµV/m
$V_{QP/PK/AV}$	=	Measured Voltage (Quasi Peak, Peak or Average) in dBµV
AF	=	Antenna Factor in dB(/m)
L_C	=	Cable and attenuator Loss in dB
G_{Amp}	=	Pre Amplifier Voltage Gain in dB

Example calculation:

$E = V_{QP} + AF - G_{Amp} + L_C$
$E = 30dB\mu V + 12dB/m - 0dB + 2.3dB$
$E = 44.3\ dB\mu V/m$

Notes: All Radiated Emissions measured were below the Class B limits.

If the highest frequency generated or used within the device or on which the device operates or tunes is above 1000MHz, the upper frequency of measurement range should be 5th harmonic of the highest frequency or 40GHz whichever is lower.

The highest frequency of the EUT as specified by the customer is 1.575GHz as such measurements up to 10GHz were taken.

Assessment: The EUT complied with the Radiated Emissions requirements of ICES-003 Issue 7 October 2020.

10. Conclusion

The Gallagher Group Ltd, eS1 Cellular, eShepherd Neckband (Serial No: 2350119059) complied with the requirements of ICES-003 Issue 7 October 2020.

Appendix A – Test Equipment

Inv.	Equipment	Make	Model No.	Serial No.	Calibration	
					Due	Type
Radiated Emissions - 30MHz to 1000MHz						
1217	ANALYSER, EMI Receiver	Rohde & Schwarz	ESU40	100182	Jul-25	E
0932	CONTROLLER, Position	Sunol Sciences	SC104V-3	081006-1	N/A	V
0933	TURNTABLE	Sunol Sciences	SM46C	081006-2	N/A	V
0934	MAST, Antenna	Sunol Sciences	TLT2	081006-5	N/A	V
0935	ANTENNA, Biconilog	Sunol Sciences	JB5	A071106	May-25	E
0718	ATTENUATOR, 6dB	JFW	50FPE-006	-	Jan-26	I
0989	CABLE, Coax, Sucoflex 104A	Huber+Suhner	44454/4A	C357	Jan-26	I
1145	CABLE, Coax, Sucoflex 104PA	Huber + Suhner	84279564	MY056/4PA	Jan-26	I
1155	HYGROMETER, Temp, Humidity	DigiTech	QM7312	-	Jul-25	I
0666	ENCLOSURE, Semi-Anechoic #1	RFI Industries	S800 iOATS	1229	Aug-25	I
SW007	EMC Measurement Software	Rohde & Schwarz	EMC 32	Version 8.53.0	N/A	N/A
Radiated Emissions – 1GHz to 10GHz						
1217	ANALYSER, EMI Receiver	Rohde & Schwarz	ESU40	100182	Jul-25	E
0932	CONTROLLER, Position	Sunol Sciences	SC104V-3	081006-1	N/A	V
0933	TURNTABLE	Sunol Sciences	SM46C	081006-2	N/A	V
0934	MAST, Antenna	Sunol Sciences	TLT2	081006-5	N/A	V
0559	PRE-AMP, Microwave, 18GHz	Miteq	AFS8	605305	May-25	I
0633	ANTENNA, Double Ridge Horn	EMCO	3115	9712-5369	Aug-27	I
1193	Standard Gain Horn Antenna - 5.85GHz to 8.2GHz	A.H. Systems, inc	SAS-584	186	May-25	E
1194	Standard Gain Horn Antenna - 8.2GHz to 12.4GHz	A.H. Systems, inc	SAS-585	224	May-25	E
0989	CABLE, Coax, Sucoflex 104A	Huber+Suhner	44454/4A	C357	Jan-26	I
1145	CABLE, Coax, Sucoflex 104PA	Huber + Suhner	84279564	MY056/4PA	Jan-26	I
1238	CABLE, Coax, Sucoflex 126 E	Huber + Suhner	10422876	8000495/126E	Jan-26	I
1155	HYGROMETER, Temp, Humidity	DigiTech	QM7312	-	Jul-25	I
0666	ENCLOSURE, Semi-Anechoic #1	RFI Industries	S800 iOATS	1229	Aug-25	I
SW007	EMC Measurement Software	Rohde & Schwarz	EMC 32	Version 8.53.0	N/A	N/A

V: Verification of operation against an internal reference
I: Internal calibration against a traceable standard
E: External calibration by a NATA or MRA equivalent endorsed facility
N/A: Not Applicable

Appendix B – Photographs

Number	Photograph Description
1	Radiated Emissions – Test configuration
2	Radiated Emissions – Test configuration – 30MHz to 1GHz
3	Radiated Emissions – Test configuration – 1GHz to 6GHz
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32	Support Equipment – 1k Ohms Resistive Load
33	Support Equipment – Laptop
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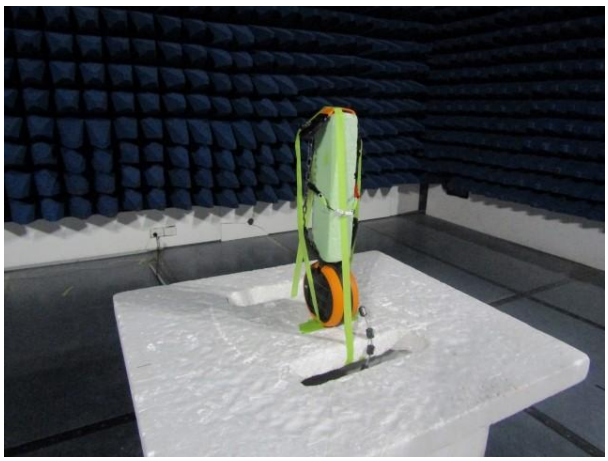
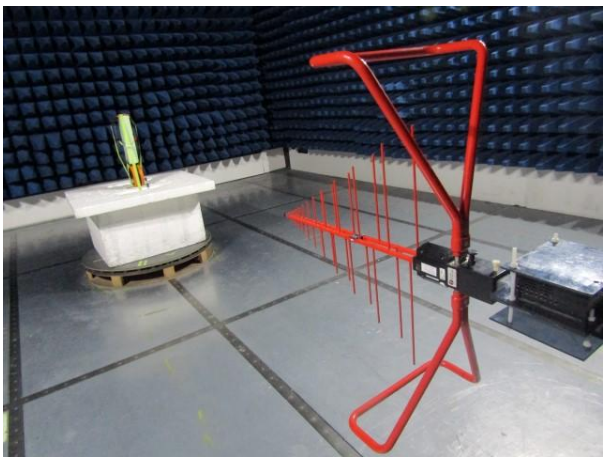
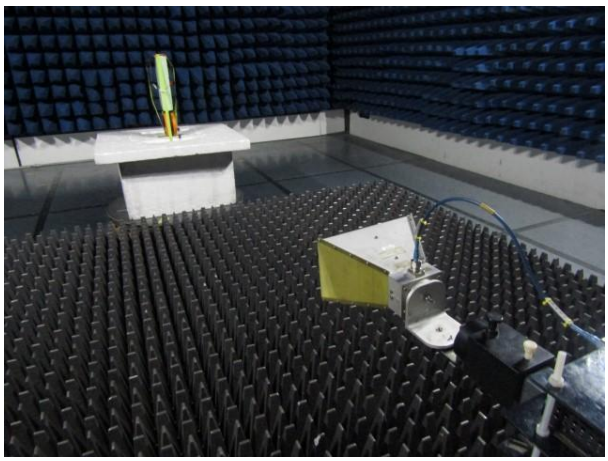


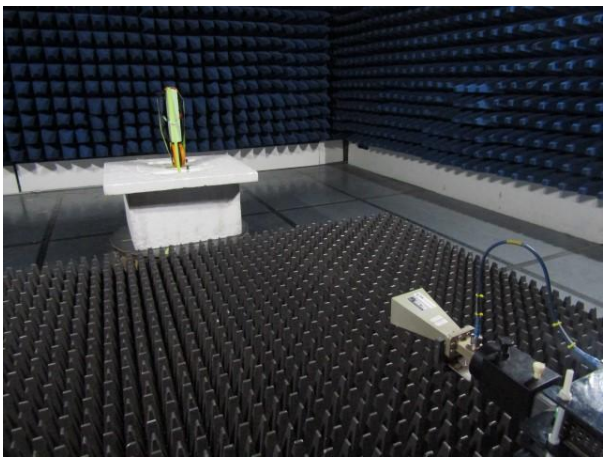
Photograph 1



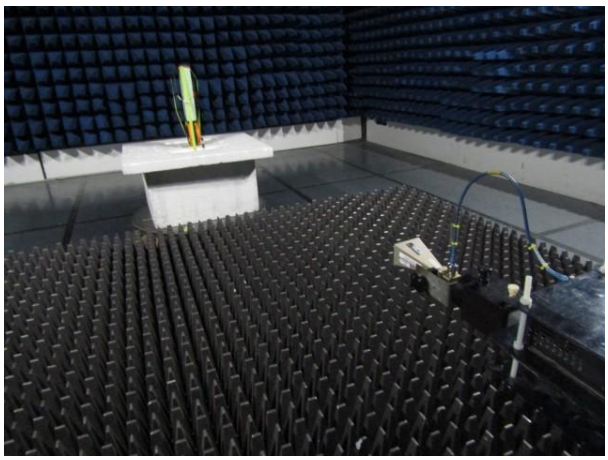
Photograph 2



Photograph 3



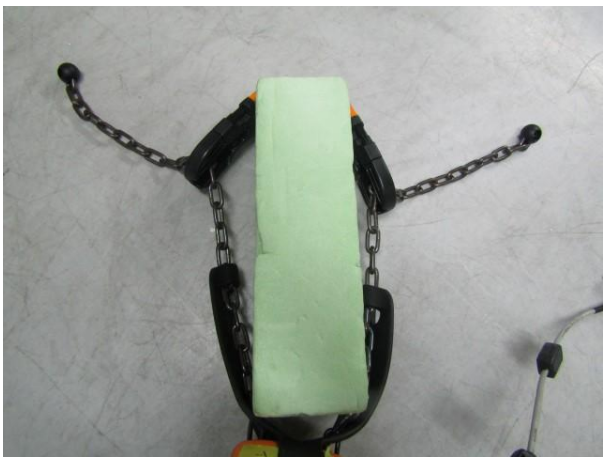
Photograph 4



Photograph 5

Photograph 6

Photograph 7



Photograph 8

Photograph 9

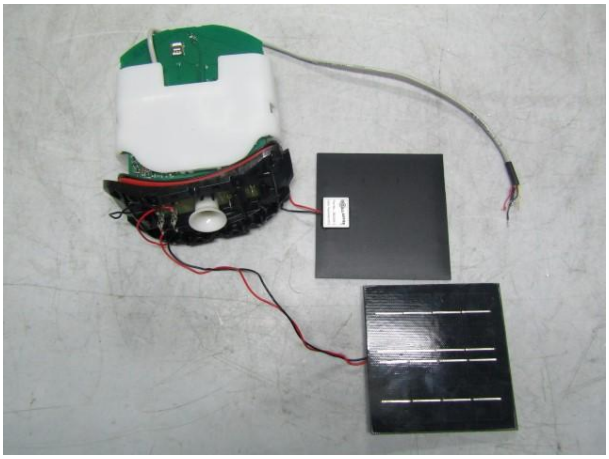
Photograph 10

Photograph 11

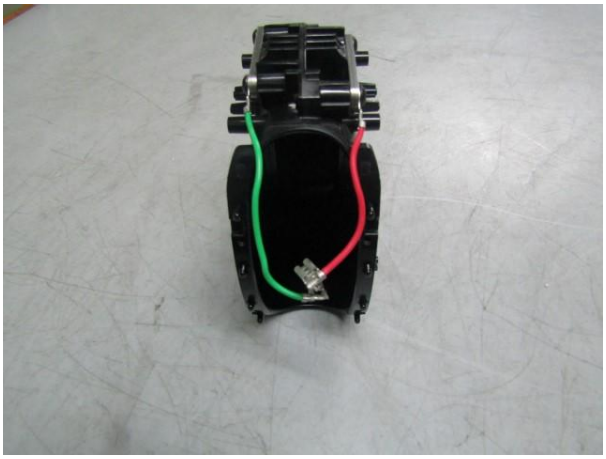
Photograph 12

Photograph 13

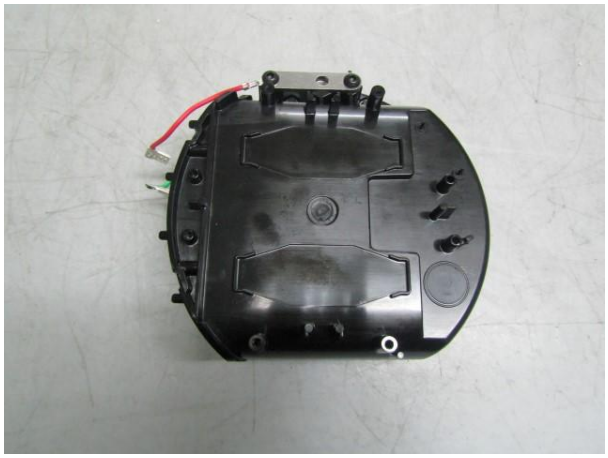
Photograph 14



Photograph 15



Photograph 16

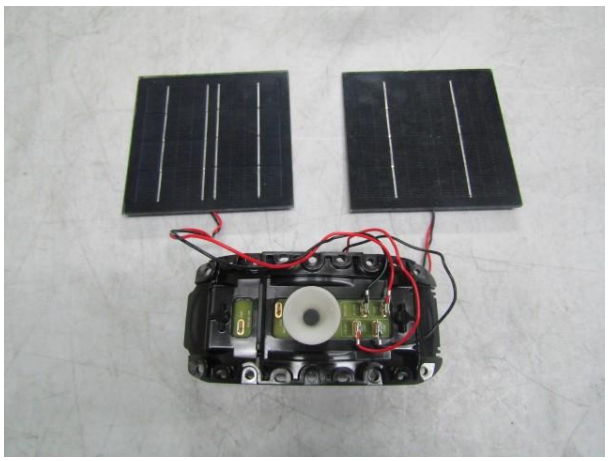


Photograph 17

Photograph 18

Photograph 19

Photograph 20



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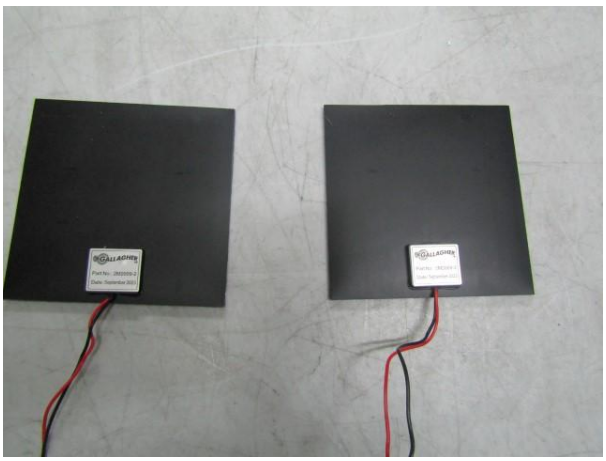
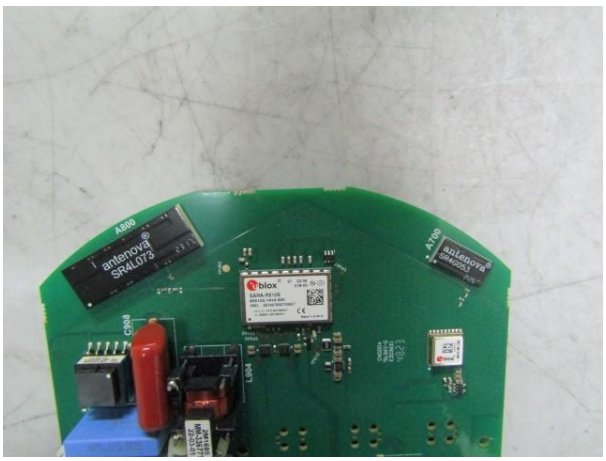


Photograph 22

Photograph 23

Photograph 24

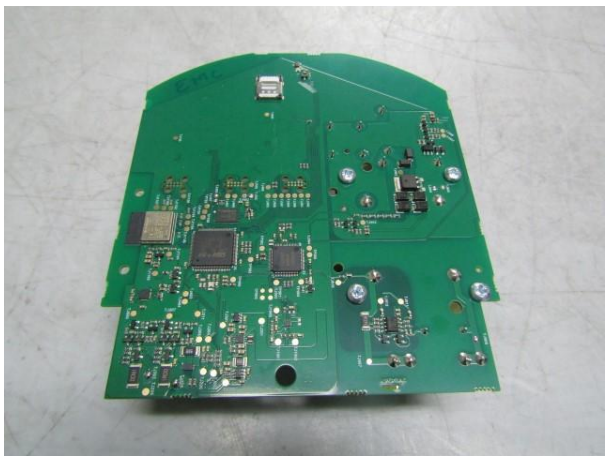
Photograph 25



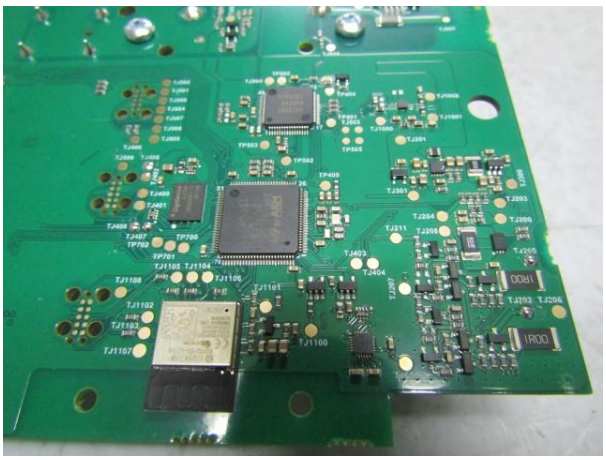
Photograph 26

Photograph 27

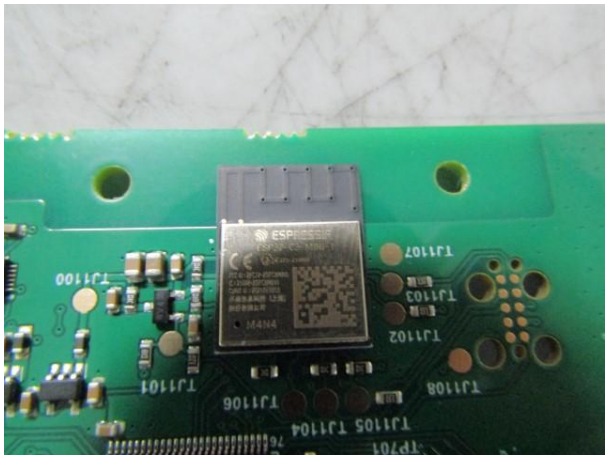
Photograph 28



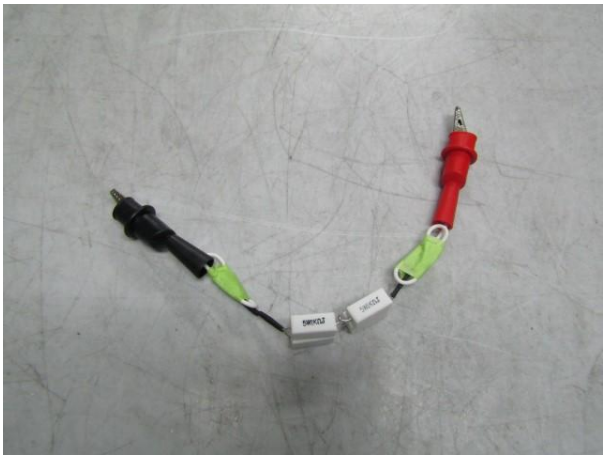
Photograph 29



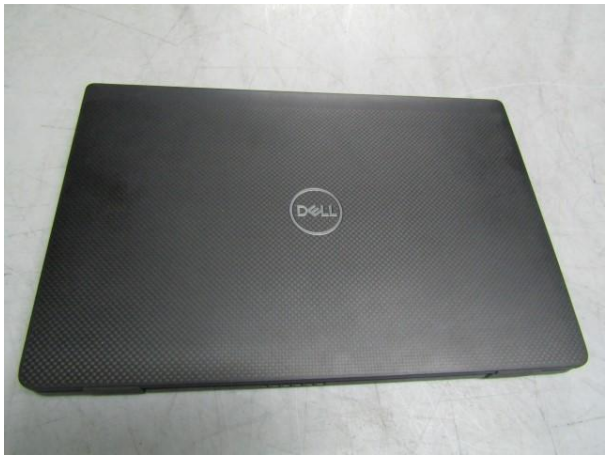
Photograph 30



Photograph 31



Photograph 32



Photograph 33

Photograph 34

Photograph 35

Photograph 36

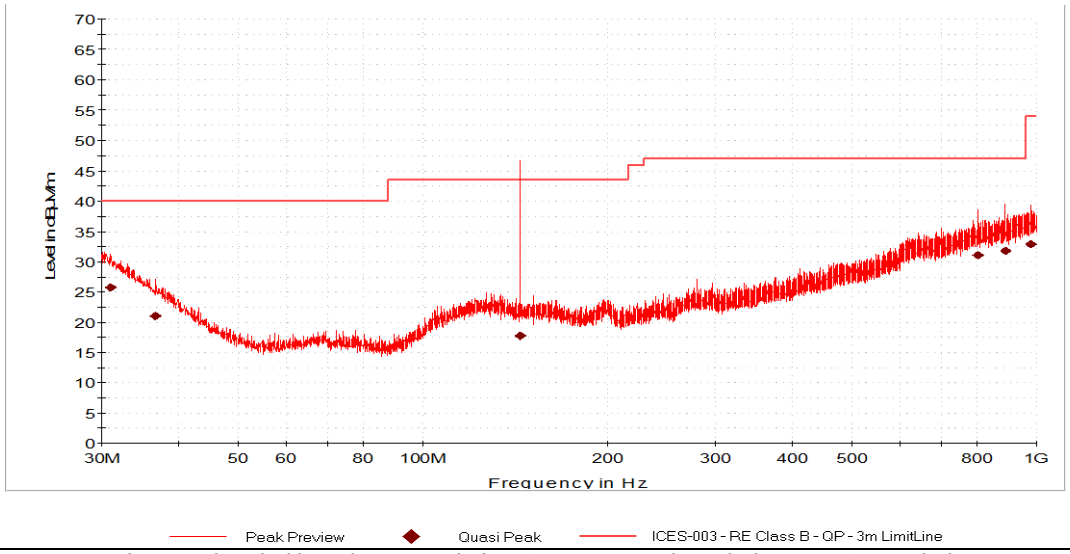
Appendix C – Measurement Graphs

No.	Test	Graph Description
1	Radiated Emissions ICES-003 Issue 7 October 2020	Horizontal Antenna Polarisation 30MHz to 1000MHz
2		Horizontal Antenna Polarisation 1GHz to 6GHz
3		Horizontal Antenna Polarisation 5.8GHz to 8.2GHz
4		Horizontal Antenna Polarisation 8.2GHz to 10GHz
5		Vertical Antenna Polarisation 30MHz to 1000MHz
6		Vertical Antenna Polarisation 1GHz to 6GHz
7		Vertical Antenna Polarisation 5.8GHz to 8.2GHz
8		Vertical Antenna Polarisation 8.2GHz to 10GHz

EMC Bayswater Pty. Ltd.

Radiated Emissions - ICES-003 Issue 7 October 2020
Gallagher Group Ltd - eS1 Cellular - eShepherd Neckband
Horizontal Antenna Polarisation – 30MHz to 1000MHz

Job Number: E2401-1729-5
Test Engineer: AZ

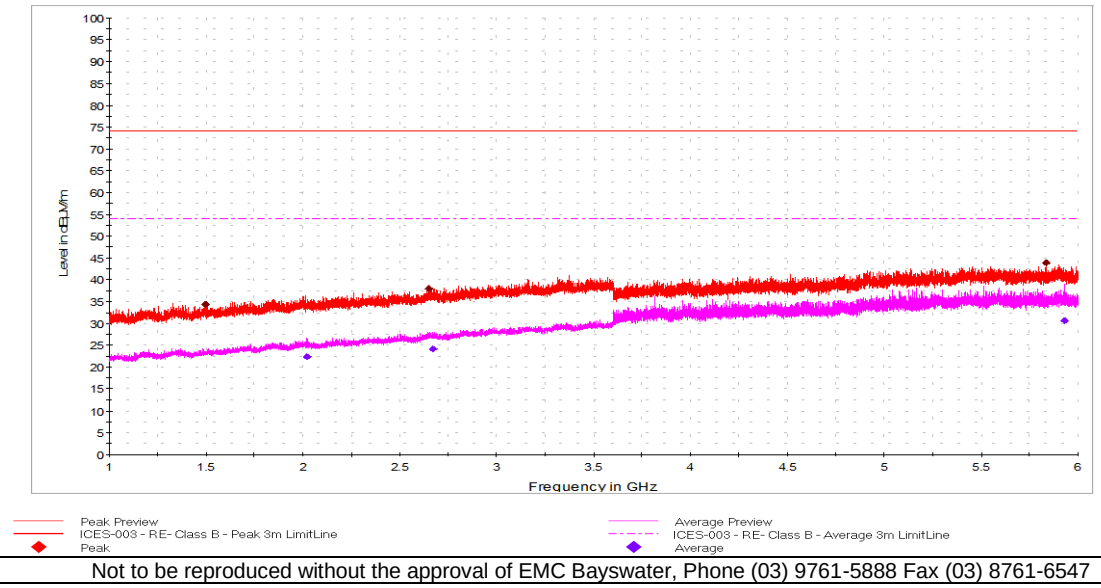


Graph 1

EMC Bayswater Pty. Ltd.

Radiated Emissions - ICES-003 Issue 7 October 2020
Gallagher Group Ltd - eS1 Cellular - eShepherd Neckband
Horizontal Antenna Polarisation – 1GHz to 6GHz

Job Number: E2401-1729-5
Test Engineer: AZ

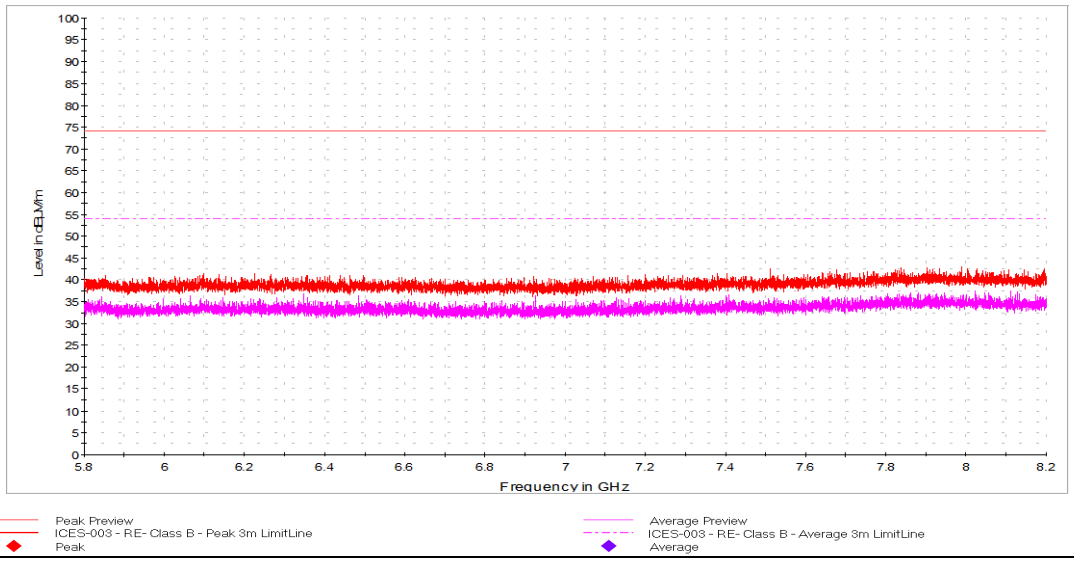


Graph 2

EMC Bayswater Pty. Ltd.

Radiated Emissions - ICES-003 Issue 7 October 2020
Gallagher Group Ltd - eS1 Cellular - eShepherd Neckband
Horizontal Antenna Polarisation – 5.8GHz to 8.2GHz

Job Number: E2401-1729-5
Test Engineer: AZ

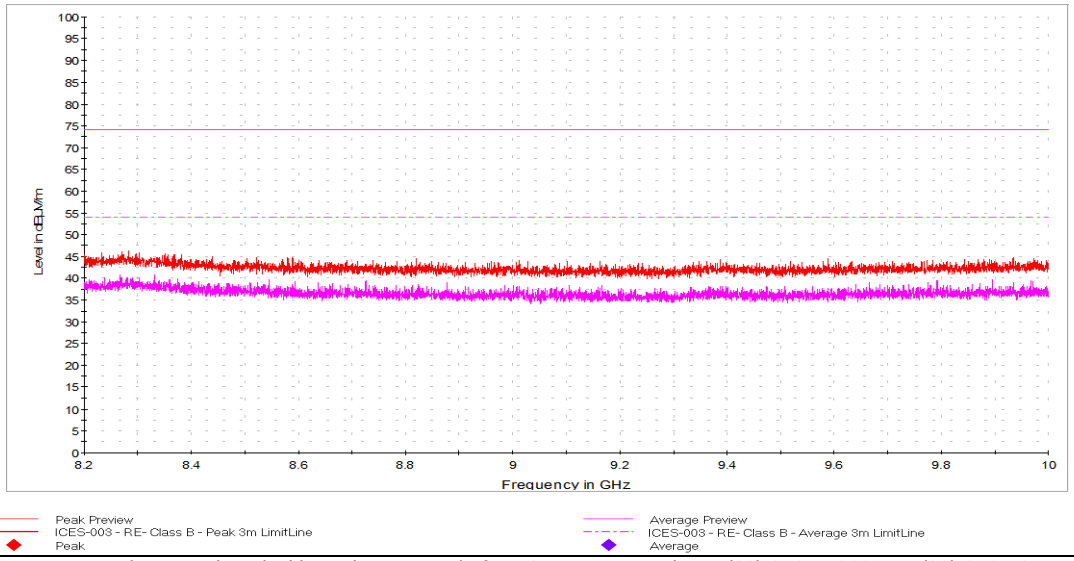


Graph 3

EMC Bayswater Pty. Ltd.

Radiated Emissions - ICES-003 Issue 7 October 2020
Gallagher Group Ltd - eS1 Cellular - eShepherd Neckband
Horizontal Antenna Polarisation – 8.2GHz to 10GHz

Job Number: E2401-1729-5
Test Engineer: AZ

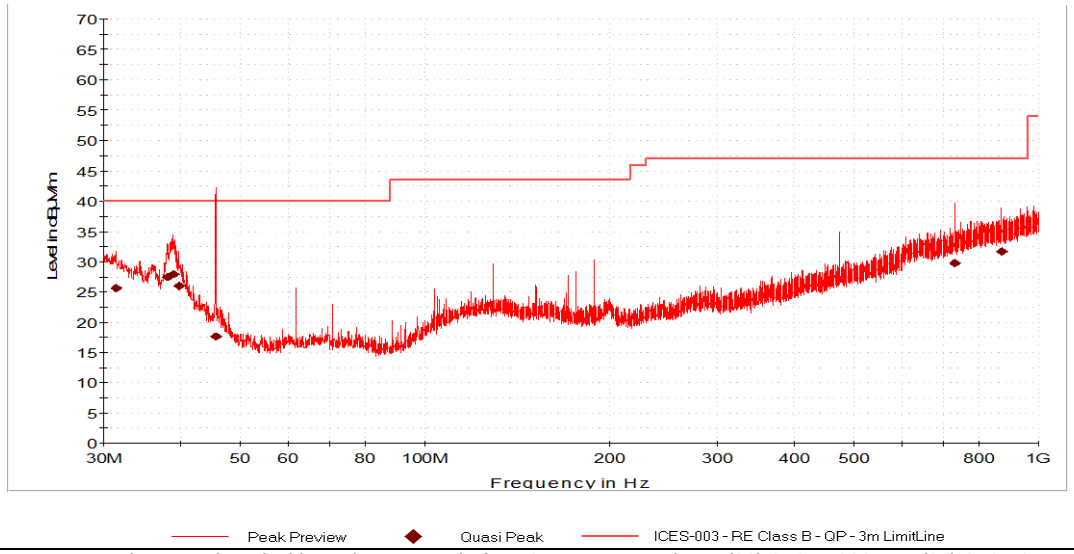


Graph 4

EMC Bayswater Pty. Ltd.

Radiated Emissions - ICES-003 Issue 7 October 2020
Gallagher Group Ltd - eS1 Cellular - eShepherd Neckband
Vertical Antenna Polarisation – 30MHz to 1000MHz

Job Number: E2401-1729-5
Test Engineer: AZ

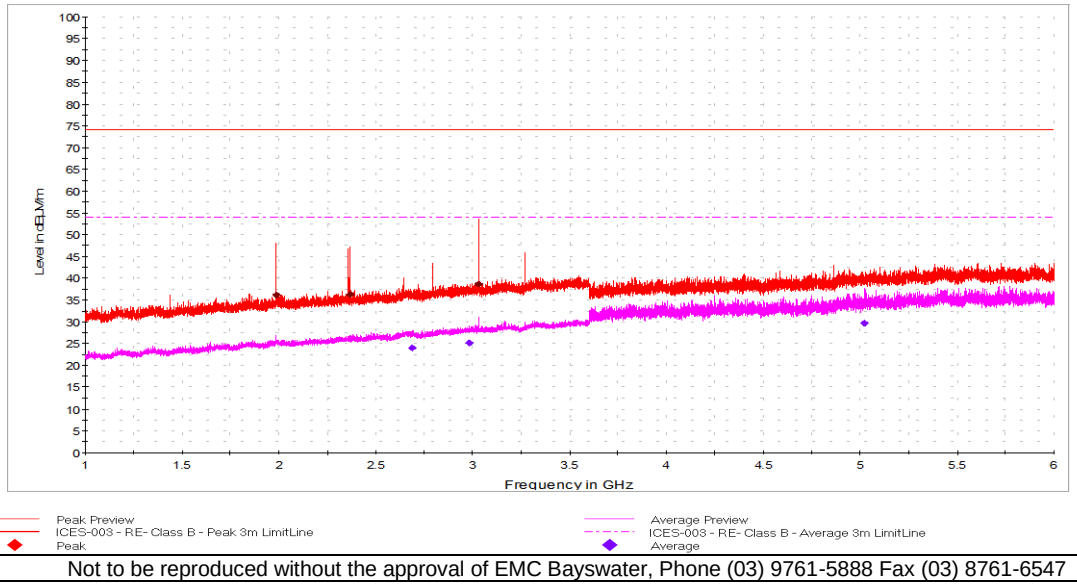


Graph 5

EMC Bayswater Pty. Ltd.

ICES-003 Issue 7 October 2020
Gallagher Group Ltd - eS1 Cellular - eShepherd Neckband
Vertical Antenna Polarisation – 1GHz to 6GHz

Job Number: E2401-1729-5
Test Engineer: AZ

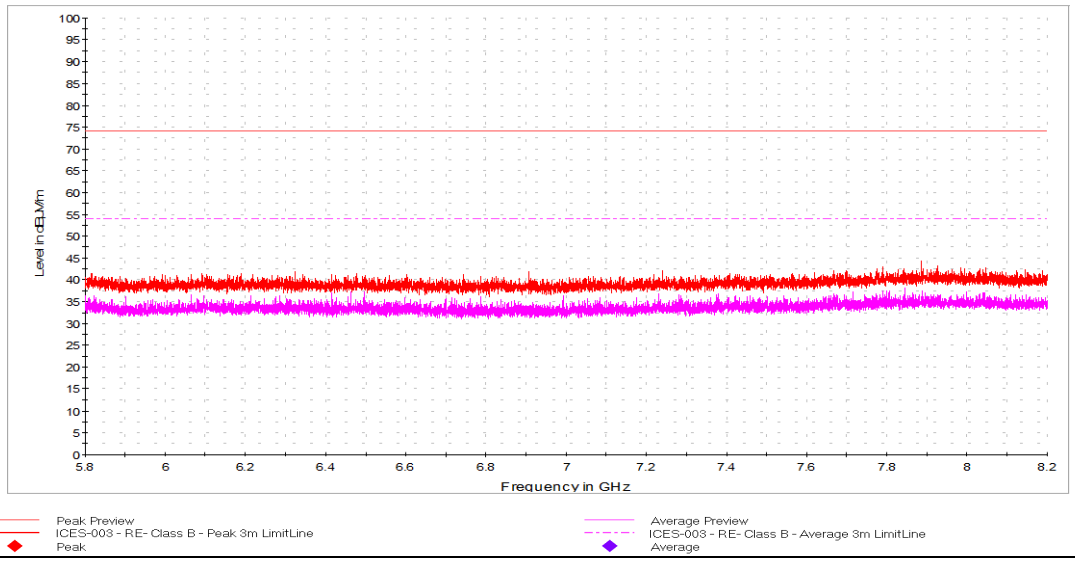


Graph 6

EMC Bayswater Pty. Ltd.

Radiated Emissions - ICES-003 Issue 7 October 2020
Gallagher Group Ltd - eS1 Cellular - eShepherd Neckband
Vertical Antenna Polarisation – 5.8GHz to 8.2GHz

Job Number: E2401-1729-5
Test Engineer: AZ

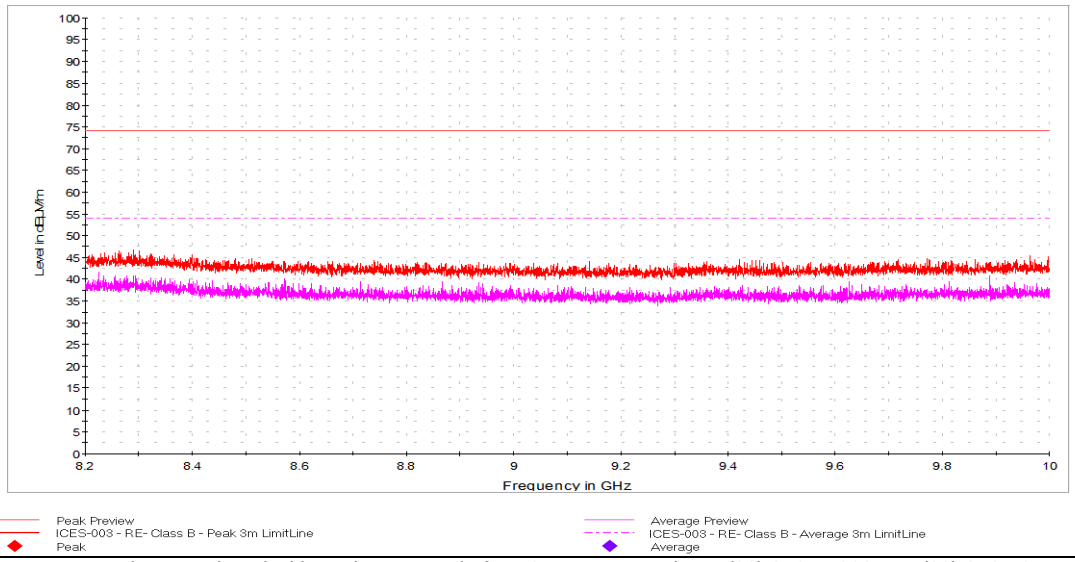


Graph 7

EMC Bayswater Pty. Ltd.

Radiated Emissions - ICES-003 Issue 7 October 2020
Gallagher Group Ltd - eS1 Cellular - eShepherd Neckband
Vertical Antenna Polarisation – 8.2GHz to 10GHz

Job Number: E2401-1729-5
Test Engineer: AZ



Graph 8

Appendix D – Customer Declaration of Product Variant

Docusign Envelope ID: 7D6D13A0-8B76-4E6D-BD91-BD5D6AE39A32

Gallagher Group Ltd
181 Kahikatea Drive
Hamilton 3206
New Zealand
T +64 7 838 9800
F +64 7 838 9801
www.gallagher.com
IRDN 024 824 357

Date: 12th February 2025

Declaration of Product Variations

We Gallagher Group Ltd
of 181 Kahikatea Drive, Melville, Hamilton 3206, New Zealand

hereby declare that:

Equipment eShepherd Neckband

Model number G04081

to be the worst case variant used for EMC testing of a product range consisting of other variants along with the justification declared in the table below. Gallagher Group Ltd accepts all responsibility for any adverse effects with respect to the EMC performance of the variant products listed in the table with regards to the performance observed whilst testing the declared worst case model.

Model tested	Variants models	Justification
G04081	G040811	G040811 uses different network provider SIM card in the product with exact same hardware as G04081

Signed by:
Hayden Goble
3F954F68E3A34C9...

Signed by: .....
Name: Hayden Goble
Position: Head of eShepherd
Date signed: 12th February 2025

GALLAGHER GROUP LIMITED

181 Kahikatea Drive, Hamilton 3206, New Zealand.
Private Bag 3026, Hamilton 3240, New Zealand.

TEL +64 7 838 9800
FAX +64 7 838 9801

EMAIL info@gallagher.com
www.gallagher.com

Appendix E – ICES documentation requirements

INNOVATION, SCIENCE & ECONOMIC DEVELOPMENT CANADA (ISED Canada) REQUIREMENTS

The following information is believed to be true and accurate, however we advise that the current ISED Canada (formerly Industry Canada) rules/regulations be consulted. EMC Bayswater Pty Ltd accepts no responsibility for any consequences arising from the use of the following information. It is the manufacturer's/suppliers responsibility to ensure that all applicable ISEDC Rules are identified and adhered to. If other parts of the ISEDC Rules apply, there may be requirements for additional of different forms of labelling and user information.

ISED CANADA REQUIREMENTS (Refer to ICES-003, ICES-Gen, RSS-Gen, RSP-100)

Procedural Requirements
A record of the measurements and results, showing the date that the measurements were completed, shall be retained by the manufacturer or importer for a period of at least five years from the date shown in the record and made available for examination on the request of the Minister. The manufacturer, importer or supplier shall meet the labelling requirements for every ITE unit.

1. Prior to marketing in Canada, for ITE manufactured in Canada, and;
2. Prior to importation into Canada, for imported ITE.

The presence of the label on the ITE represents the manufacturer's or importer's Self-Declaration of Compliance (SDoC) to Industry Canada ICES-003. Each unit of an ITE model shall bear a label indicating the model's compliance with ICES-003.

The label shall be permanently affixed to the ITE or displayed electronically and its text must be clearly legible. When the dimension of the device is too small or it is otherwise not practical to place the label on the ITE, the label shall be placed in a prominent location in the user manual supplied with the ITE. The user manual may be in an electronic format and must be readily available.

ICES-003 LABELLING REQUIREMENTS

Labelling requirements (Refer to ICES-003 Section 4.2)
ICES-003 Compliance Label statement:

CAN ICES-003 (*)/NMB-003(*)

*Insert either "A" or "B" but not both to identify the applicable Class of ITE.

Compliance statement for ICES-003:

(RSS-Gen Section 8.4 & RSP-100 Section 3.2: Required notices to the user)

Radio apparatus shall comply with the requirements to include required notices or statements to the user of equipment with each unit of equipment model offered for sale.
The required notices are specified in the RSS documents (including RSS-Gen) applicable to the equipment model. These notices are required to be shown in a conspicuous location in the user manual for the equipment, or to be displayed on the equipment model. If more than one notice is required, the equipment model(s) to which each notice pertains should be identified.

Suppliers of radio apparatus shall provide notices and user information in both English and French.

English
"This device complies with Industry Canada's licence-exempt RSS standards.
Operation is subject to the following two conditions:
(1) This device may not cause interference; and
(2) This device must accept any interference, including interference that may cause undesired operation of the device."

French
"Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :
(1) l'appareil ne doit pas produire de brouillage, et
(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement."

Please note: If the device contains pre-approved modular transmitter the following label requirements apply:

If using a permanently affixed label, the modular transmitter must be labelled with its own IC identification numbers, and, if the identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains Transmitter Module IC: XYZMODEL1":

Any similar wording that expresses the same meaning may be used. The Grantee may either provide such a label, an example of which must be included in the application for equipment authorization, or, must provide adequate instructions along with the module which explains this requirement. In the latter case, a copy of these instructions must be included in the application for equipment authorization.

Warning
In addition the user's manual or instruction manual for any product should include a statement cautioning the user that changes or modifications not expressly approved by the party responsible for compliance could void the compliance (see example below).

Warning: Any changes or modifications not expressively approved by (company name) could void the compliance of the product and the user's authority to operate this equipment

The user shall also be informed of any additional information that may affect the compliance of the product, an example would be the use of shielded cable to achieve compliance or if shielded cables were used for testing include. In this instance the following shall be added to the user information:

"In order to maintain compliance with ICES regulations, shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio and TV reception."