

**COMPLIANCE
ENGINEERING
IRELAND LTD**



Compliance Engineering Ireland Ltd

Clonross Lane, Derrockstown, Dunshaughlin

Co. Meath, Ireland A85 XN59

Ph +353 1 8017000 , 8256722

Confidential Report

Project Num	18E7412-2b
Quotation	Q17-2709-1a
Prepared For	Gentian Services Ltd
Address	Bay 89.1, Shannon Free Zone, Shannon, Co. Clare, Ireland. V14 E177
Ph	+353 (0)61 704 986
Contact	Mark Butler
Email	markbutler@gentianservices.com
Prepared By	Compliance Engineering Ireland
Test Lab Address	Clonross Lane, Derrockstown, Dunshaughlin, Co. Meath, Ireland A85XN59
FCC Test Firm Registration number	409640
Tested By	Michael Kirby
Test Report By	Michael Kirby
Date Received	3 rd Jun 2018
Issue Date	7 th Dec 2018
EUT Description	Fitness product with Bluetooth Low Energy
EUT Model	Bionic Gym
Test Standard (s)	15.247
Authorised by	Paul Reilly
Authorised Signature :	

TEST SUMMARY

1.0 SAR Evaluation

SAR Exclusion Limits

Excerpt from 447498 KDB (47498 D01 General RF Exposure Guidance v06)

Section 4.3.1 Standalone SAR Test exclusion considerations

4.3.1. Standalone SAR test exclusion considerations

- 1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* ≤ 50 mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f_{(\text{GHz})}}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR,}^{25} \text{ where}$

- $f_{(\text{GHz})}$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation²⁶
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

The test exclusions are applicable only when the minimum *test separation distance* is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum *test separation distance* is < 5 mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

- 2) At 100 MHz to 6 GHz and for *test separation distances* > 50 mm, the SAR test exclusion threshold is determined according to the following, and as illustrated in Appendix B:²⁷
 - a) $[\text{Power allowed at numeric threshold for } 50 \text{ mm in step 1} + (\text{test separation distance} - 50 \text{ mm}) \cdot (f_{(\text{MHz})}/150)] \text{ mW, at } 100 \text{ MHz to } 1500 \text{ MHz}$
 - b) $[\text{Power allowed at numeric threshold for } 50 \text{ mm in step 1} + (\text{test separation distance} - 50 \text{ mm}) \cdot 10] \text{ mW at } > 1500 \text{ MHz and } \leq 6 \text{ GHz}$
- 3) At frequencies below 100 MHz, the following may be considered for SAR test exclusion, and as illustrated in Appendix C:²⁸
 - a) The power threshold at the corresponding test separation distance at 100 MHz in step 2) is multiplied by $[1 + \log(100/f_{(\text{MHz})})]$ for *test separation distances* > 50 mm and < 200 mm
 - b) The power threshold determined by the equation in a) for 50 mm and 100 MHz is multiplied by $\frac{1}{2}$ for *test separation distances* ≤ 50 mm
 - c) SAR measurement procedures are not established below 100 MHz. When SAR test exclusion cannot be applied, a KDB inquiry is required to determine SAR evaluation requirements for any test results to be acceptable.

Appendix 1

Head and Body SAR

Prediction frequency:	f	2.48	GHz
Maximum power of channel :	P	3.00	mW
Minimum separation distance:	D	5	mm
Calculation		0.95	
Numeric Threshold for 1g SAR		3	
SAR Test not required			
Estimated SAR Value	$[0.95/3]*0.08$	0.03	W/Kg

End of report