



SPOT CHECK EVALUATION

FCC ID : MMATGC150
IC : 3690A-TGC150
Equipment : Midland Wireless Audio System - Charger
Brand Name : Midland TeamComm®
Model Name : TGC150
HVIN : TGC150
Marketing Name : Midland TeamComm® Gang Charger
PMN : Midland TeamComm® Gang Charger
Applicant : Midland Radio
5900 Parretta Drive Kansas City, MO 64120
Manufacturer : Midland Radio
5900 Parretta Drive Kansas City, MO 64120
Standard : FCC Part 15 Subpart C §15.247
ISED RSS-247 Issue 2

The product was received on Jun. 03, 2021 and testing was started from Jul. 02, 2021 and completed on Jul. 15, 2021. We, Sporton International (USA) Inc., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this spot check data report apply exclusively to the tested model / sample. Without written approval of Sporton International (USA) Inc., the test report shall not be reproduced except in full.

Approved by: Neil Kao

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History of this test report

Version	Description	Issued Date
01	Initial issue of report	Aug. 27, 2021



1. Introduction Section

Within the Midland Earbud system, a smart battery charger is employed to charge the batteries of the Earbud. For smaller customers, there is a charger that can simultaneously charge up to 2 Earbuds (Model: TDC150), this product has 2 Earbud pockets to capture the Earbuds.

For larger customers, there is a charger that can simultaneously charge up to 6 Earbuds (Model: TGC150), this product has 6 Earbud pockets to capture the Earbuds.

In addition to battery charging, the battery chargers contain a 2.4GHz Proprietary Radio. This radio talks to a Smart Phone App to move in Earbud settings, or firmware updates from the smart phone.

This spot check evaluation report is issued to substantiate the fact that the chargers with different number of pockets share the same RF characteristics that makes data referencing applicable to the submission.

Equipment	2-pocket Earbud Charger	6-pocket Earbud Charger
Model Name	TDC150	TGC150
FCC ID	MMATDC150	MMATGC150
IC	3690A-TDC150	3690A-TGC150



2. Difference Section

Based on the declaration made by the manufacturer, the design for the larger capacity charger is fully leveraged from the smaller capacity charger. This applies directly to the radio sections of the product, which are leveraged from schematic, to BOM, to layout. It is also true for the battery charging.

The only electrical difference between the two products, TDC150 (FCC ID: MMATDC150; IC: 3690A-TDC150) and TGC150 (FCC ID: MMATGC150; IC: 3690A-TGC150) is that four more charging chips are equipped on TGC150. The only mechanical difference between the two products is that four more earbud cups are added.

The applicant takes full responsibility that the test data as referenced in this test report issued by Sporton International (USA) Inc. represents compliance for this FCC ID: MMATDC150; IC: 3690A-TDC150.

Therefore, the original test reports issued for TDC150 (FCC ID: MMATDC150; IC: 3690A-TDC150) may be used as reference test data for TGC150 (FCC ID: MMATGC150; IC: 3690A-TGC150), along with the spot check verification data presented below by following the FCC KDB 484596 D01 v01.



3. Spot Check Verification Data Section

Conducted power test and radiated spurious emission test against the variant model based on the worst-case condition identified from the original model were performed for this filing to demonstrate the fact that the test data from the original model remain representative for the variant model.

A summary of conducted power measurement and RSE spot check for each rule entry and technology is listed below:

Summary of the spot check:

Test Item	Mode	Original Model FCC ID: MMATDC150 IC: 3690A-TDC150 Worst Results	Variant Model FCC ID: MMATGC150 IC: 3690A-TGC150 Worst Results	Difference (dB)
Average Conducted Power (dBm)	2.4GHz Proprietary Radio 1MHz	19.80 dBm	18.7 dBm	1.1
	2.4GHz Proprietary Radio 2MHz	19.82 dBm	18.7 dBm	1.12
Average Radiated Spurious Emission (Band Edge) (dBuV/m)	2.4GHz Proprietary Radio 1MHz	62.51 dBuV/m	62.66 dBuV/m	0.15
	2.4GHz Proprietary Radio 2MHz	68.46 dBuV/m	69.42 dBuV/m	0.96
Peak Radiated Spurious Emission (Harmonic) (dBuV/m)	2.4GHz Proprietary Radio 1MHz	68.12 dBV/m	69.76 dBV/m	1.64
	2.4GHz Proprietary Radio 2MHz	69.55 dBV/m	70.02 dBV/m	0.47



4. Conclusion

Based on the conducted and RSE spot check test results, the test data from the original model TDC150 (FCC ID: MMATDC150; IC: 3690A-TDC150) is still representative for the variant model and demonstrates compliance for TGC150 (FCC ID: MMATGC150; IC: 3690A-TGC150).

We confirm that the test data reuse policy of FCC KDB 484596 D01 Referencing Test Data v01 has been followed and the test data as referenced from the reports for the parent model represent compliance of variant model with a new FCC ID and IC.



5. Reference detail Section

FCC

Rule Part	Equipment Class	Wireless Technology	Frequency Band (MHz)	Original FCC ID	Original Report	Variant Model FCC ID	Variant Model Report
15C	FHSS	2.4GHz Proprietary Radio	2400 – 2483.5	MMATDC150	FR210525003	MMATGC150	Reference the original reports issued for the parent model
47 CFR Part 1.1307	FHSS	2.4GHz Proprietary Radio	2400 – 2483.5	MMATDC150	FA152603	MMATGC150	Reference the original reports issued for the parent model

IC

Rule Part	Equipment Class	Wireless Technology	Frequency Band (MHz)	Original IC	Original Report	Variant Model IC	Variant Model Report
RSS-247	FHSS	2.4GHz Proprietary Radio	2400 – 2483.5	3690A-TDC150	CR210525003	3690A-TGC150	Reference the original reports issued for the parent model
RSS-102	FHSS	2.4GHz Proprietary Radio	2400 – 2483.5	3690A-TDC150	CA152603	3690A-TGC150	Reference the original reports issued for the parent model

END of this report