RF Exposure Evaluation Report

Product	:	Wireless mouse
Trade mark	:	MINISO
Model/Type reference	:	Look at page 2
Test Model No.	:	CM612G
Serial Number	:	N/A
Report Number	:	EED32N80217202
FCC ID	:	2AMSRCM612G
Date of Issue	:	May 20, 2021
Test Standards	:	47 CFR Part 1.1307 47 CFR Part 2.1093 KDB447498D01 General RF Exposure Guidance v06
Test result	:	PASS

Prepared for:

Dongguan Couso Technology Co,.Ltd
No.26 minye road, tangxia town, Dongguan City,
Guangdong Province, China

Prepared by:

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Approved by:	David Wang	Date:	May 20, 2021
	David Wang		

Check No.:9114120421

2 Version

Version No.	Date	Description
00	May 20, 2021	Original

All Model No.:

CS1000, CS1100, CS1200, CS1300, CS1400, CS1500, CS1600, CS1700, CS1800, CS1900, CS2000, CS2100, CS2200, CS2300, CS2400, CS2500, CS2600, CS2700, CS2800, CS2900, CS3000, CS3100, CS3200, CS3300, CS3400, CS3500, CS3600, CS3610, CS3620, CS3630, CS3640, CS3650, CS3660, CS3670, CS3680, CS3690, CS3700, CS3710, CS3720, CS3730, CS3740, CS3750, CS3760, CS3770, CS3780, CS3790, CS3800, CS3810, CS3820, CS3830, CS3840, CS3850, CS3860, CS3870, CS3880, CS3890, CS4000, CS4100, CS4200, CS4300, CS4400, CS4500, CS4570, CS4380, CS4550 CS4600, CS4650, CS4700, CS4800, CS4900, CS5000, CS5100, CS5200, CS5300, CS5400, CS5500, CS5600, CS5700, CS5800, CS5900, CS6000, CS6100, CS6200, CS6300, CS6400, CS6500, CS6600, CS6700, CS6800, CS6900, CS7000, CS7100, CS7200, CS7300, CS7400, CS7500, CS7600, CS7700, CS7800, CS7900, CS8000, CS8100, CS8200, CS8300, CS8400, CS8500, CS8600, CS8700, CS8800, CS8900, CS9000, CS9100, CS9200, CS9300, CS9400, CS9500, CS9600, CS9700, CS9800, CS9900, CK300, CK310, CK320, CK330, CK340, CK350, CK360, CK370, CK380, CK390, CK400, CK410, CK420, CK430, CK440, CK450, CK455 ,CK465, CK460, CK470T, CK480, CK490, CK500, CK510, CK520, CK530, CK540, CK550, CK560, CK570, CK580, CK590, CK600, CK601, CK700, CK710, CK720, CK730, CK740, CK750, CK760, CK770, CK780, CK790, CK800, CK801, CK802, CK803, CK804, CK805, CK806, CK807, CK808, CK809, CK900, CK910, CK920, CK921, CK923, CK925, CK926, CK927, CK928, CK929, CK930, CK940, CK950, CK960, CK970, CK980, CK990, CG10, CG16, CG20, CG30, CG40, CG50, CG60, CG70, CG80, CG90, V10, V11, V20, V30, V40, V50, V60, V70, V80, V90, CM610, CM611, CM613, CM614, CM615, CM616, CM617, CM618, CM619, CM620, CM621, CM622, CM623, CM624, CM625, CM626, CM627, CM628, CM629, CM630, CM631, CM632, CM633, CM634, CM635, CM636, CM637, CM638, CM639, CM640, CM650, CM660, CM665, CM670, CM675, CM680, CM685, CM690, CM695, CM800, CM810, CM815, CM820, CM830, CM840, CM850, CM860, CM870, CM880, CM881, CM890,CM891, CM892, CM892W, CM893, CM894, CM895, CM896, CM897, CM898, CM899, CM898L, CM880 PRO, CM880 PLUS, CM612G

Only the model CM612G was tested, since the electrical circuit design, layout, components used and internal wiring were identical for the above models, with difference being color of appearance and model name.

3 Contents

4 General Information

4.1 Client Information

Applicant:	Dongguan Couso Technology Co,.Ltd
Address of Applicant:	No.26 minye road, tangxia town, Dongguan City, Guangdong Province, China
Manufacturer:	Dongguan Couso Technology Co,.Ltd
Address of Manufacturer:	No.26 minye road, tangxia town, Dongguan City, Guangdong Province, China
Factory:	Dongguan Couso Technology Co,.Ltd
Address of Factory:	No.26 minye road, tangxia town, Dongguan City, Guangdong Province, China

4.2 General Description of EUT

Product Name:	Wireless mouse
Model No.:	Look at page 2
Test Model No.:	CM612G
Trade Mark:	MINISO
Product Type:	☐ Mobile ☒ Portable ☐ Fix Location
Operation Frequency:	2402MHz~2480MHz
Modulation Type:	GFSK
Number of Channel:	79
Antenna Type:	PCB antenna
Antenna Gain:	-0.61dBi
Power Supply:	AA battery, DC 1.5V
Sample Received Date:	Apr. 14, 2021
Sample tested Date:	Apr. 14, 2021 to Apr. 26, 2021
Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.	

4.3 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd
Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China
Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385
No tests were sub-contracted.
FCC Designation No.: CN1164

4.4 Deviation from Standards

None.

4.5 Abnormalities from Standard Conditions

None.

4.6 Other Information Requested by the Customer

None.

5 SAR Evaluation

5.1 RF Exposure Compliance Requirement

5.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06
Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

Limits

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:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where
f(GHz) is the RF channel transmit frequency in GHz
Power and distance are rounded to the nearest mW and mm before calculation[17]
The result is rounded to one decimal place for comparison
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 is applied to determine SAR test exclusion

5.1.2 EUT RF Exposure

eirp = pt x gt = $(E \times d)^2/30$
where:
pt = transmitter output power in watts,
gt = numeric gain of the transmitting antenna (unitless),
E = electric field strength in V/m, ---$10^{((dB\mu V/m)/20)}/10^6$,
d = measurement distance in meters (m)---3m,
So pt = $(E \times d)^2/30$ / gt

The worst case (refer to report EED32N80217201) is below:

Antenna polarization: Horizontal		
Frequency (MHz)	Level (dBuV/m)	Polarization
2402	93.41	Peak
2402	88.63	Average

Antenna polarization: Vertical		
Frequency (MHz)	Level (dBuV/m)	Polarization
2480	92.63	Peak
2480	87.79	Average

For 2402MHz wireless:
Field strength = 93.41dBμV/m @3m
Ant. gain -0.61dBi; so Ant numeric gain=0.87
So pt={[$10^{(93.41/20)}/10^6$x3]^2/30 /0.87}x1000mW =0.757mW
So (0.757mW/5mm)x √2.402GHz = 0.235,

0.235<3.0 for 1-g SAR

So the SAR report is not required.

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32N80217201 for EUT external and internal photos.

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.

*** End of Report ***