## **SAR Test Exclusion Evaluation**

FCC ID: W3L4713809663050 Product Name: ECG Pen Model No: (1)880E (2)870E

Pursuant to 447498 D01 General RF Exposure Guidance v06 that SAR testing is not required when EUT has output power related to distance satisfy with following table.

| MHz   |      |     |     |     |     |     |           |  |  |
|---|------|-----|-----|-----|-----|-----|-----------|--|--|
| 300   27   55   82   110   137  | MHz  | 5   | 10  | 15  | 20  | 25  | mm        |  |  |
| A50   | 150  | 39  | 77  | 116 | 155 | 194 |           |  |  |
| 835         16         33         49         66         82           900         16         32         47         63         79           1500         12         24         37         49         61           1900         11         22         33         44         54           1900         10         19         29         38         48           3600         8         16         24         32         40           5200         7         13         20         26         33           5400         6         13         19         26         32           5800         6         12         19         25         31    MHz  30  35  40  45  50  mm  MHz  30  349  387  330  164  192  219  246  274  450  134  157  179  201  224  835  98  115  131  148  164  900  95  111  126  142  158  1500  73  86  98  110  122  1900  65  76  87  98  109  1900  65  76  87  98  109  1900  2450  57  67  77  86  96  3600  47  55         63         71         79           5200  39  46  530  540  39  45  52  58  65         58  65         65   | 300  | 27  | 55  | 82  | 110 | 137 | Exclusion |  |  |
| SAR Test   SAR Test | 450  | 22  | 45  | 67  | 89  | 112 |           |  |  |
| SAR Test   Exclusion   Threshold (mW)   | 835  | 16  | 33  | 49  | 66  | 82  |           |  |  |
| 1900  | 900  | 16  | 32  | 47  | 63  | 79  |           |  |  |
| 1900  | 1500 | 12  | 24  | 37  | 49  | 61  |           |  |  |
| 2450         10         19         29         38         48           3600         8         16         24         32         40           5200         7         13         20         26         33           5400         6         13         19         26         32           5800         6         12         19         25         31           MHz         30         35         40         45         50         mm           150         232         271         310         349         387           300         164         192         219         246         274           450         134         157         179         201         224           835         98         115         131         148         164           900         95         111         126         142         158           1500         73         86         98         110         122           1900         65         76         87         98         109           2450         57         67         77         86         96           3  | 1900 | 11  | 22  | 33  | 44  | 54  |           |  |  |
| 5200         7         13         20         26         33           5400         6         13         19         26         32           5800         6         12         19         25         31           MHz         30         35         40         45         50         mm           150         232         271         310         349         387           300         164         192         219         246         274           450         134         157         179         201         224           835         98         115         131         148         164           900         95         111         126         142         158           1500         73         86         98         110         122           1900         65         76         87         98         109           2450         57         67         77         86         96           3600         47         55         63         71         79           5200         39         46         53         59         66   | 2450 | 10  | 19  | 29  | 38  | 48  |           |  |  |
| 5400         6         13         19         26         32           5800         6         12         19         25         31           MHz         30         35         40         45         50         mm           150         232         271         310         349         387           300         164         192         219         246         274           450         134         157         179         201         224           835         98         115         131         148         164           900         95         111         126         142         158           1500         73         86         98         110         122           1900         65         76         87         98         109           1900         65         76         87         98         109           2450         57         67         77         86         96           3600         47         55         63         71         79           5200         39         46         53         59         66           5400  | 3600 | 8   | 16  | 24  | 32  | 40  |           |  |  |
| MHz         30         35         40         45         50         mm           150         232         271         310         349         387           300         164         192         219         246         274           450         134         157         179         201         224           835         98         115         131         148         164           900         95         111         126         142         158           1500         73         86         98         110         122           1900         65         76         87         98         109           2450         57         67         77         86         96           3600         47         55         63         71         79           5200         39         46         53         59         66           5400         39         45         52         58         65  | 5200 | 7   | 13  | 20  | 26  | 33  |           |  |  |
| MHz         30         35         40         45         50         mm           150         232         271         310         349         387           300         164         192         219         246         274           450         134         157         179         201         224           835         98         115         131         148         164           900         95         111         126         142         158           1500         73         86         98         110         122           1900         65         76         87         98         109           2450         57         67         77         86         96           3600         47         55         63         71         79           5200         39         46         53         59         66           5400         39         45         52         58         65  | 5400 | 6   | 13  | 19  | 26  | 32  |           |  |  |
| 150         232         271         310         349         387           300         164         192         219         246         274           450         134         157         179         201         224           835         98         115         131         148         164           900         95         111         126         142         158           1500         73         86         98         110         122           1900         65         76         87         98         109           2450         57         67         77         86         96           3600         47         55         63         71         79           5200         39         46         53         59         66           5400         39         45         52         58         65  | 5800 | 6   | 12  | 19  | 25  | 31  |           |  |  |
| 150         232         271         310         349         387           300         164         192         219         246         274           450         134         157         179         201         224           835         98         115         131         148         164           900         95         111         126         142         158           1500         73         86         98         110         122           1900         65         76         87         98         109           2450         57         67         77         86         96           3600         47         55         63         71         79           5200         39         46         53         59         66           5400         39         45         52         58         65  |      |     |     |     |     |     |           |  |  |
| 300         164         192         219         246         274           450         134         157         179         201         224           835         98         115         131         148         164           900         95         111         126         142         158           1500         73         86         98         110         122           1900         65         76         87         98         109           2450         57         67         77         86         96           3600         47         55         63         71         79           5200         39         46         53         59         66           5400         39         45         52         58         65  | MHz  | 30  | 35  | 40  | 45  | 50  | mm        |  |  |
| 450         134         157         179         201         224           835         98         115         131         148         164           900         95         111         126         142         158           1500         73         86         98         110         122           1900         65         76         87         98         109           2450         57         67         77         86         96           3600         47         55         63         71         79           5200         39         46         53         59         66           5400         39         45         52         58         65  | 150  | 232 | 271 | 310 | 349 | 387 |           |  |  |
| 835         98         115         131         148         164           900         95         111         126         142         158           1500         73         86         98         110         122           1900         65         76         87         98         109           2450         57         67         77         86         96           3600         47         55         63         71         79           5200         39         46         53         59         66           5400         39         45         52         58         65  | 300  | 164 | 192 | 219 | 246 | 274 |           |  |  |
| 900         95         111         126         142         158           1500         73         86         98         110         122           1900         65         76         87         98         109           2450         57         67         77         86         96           3600         47         55         63         71         79           5200         39         46         53         59         66           5400         39         45         52         58         65   | 450  | 134 | 157 | 179 | 201 | 224 |           |  |  |
| 1500         73         86         98         110         122         SAR Test Exclusion Threshold (mW)           1900         65         76         87         98         109           2450         57         67         77         86         96           3600         47         55         63         71         79           5200         39         46         53         59         66           5400         39         45         52         58         65  | 835  | 98  | 115 | 131 | 148 | 164 |           |  |  |
| 1500  | 900  | 95  | 111 | 126 | 142 | 158 | Exclusion |  |  |
| 1900 65 76 87 98 109  2450 57 67 77 86 96  3600 47 55 63 71 79  5200 39 46 53 59 66  5400 39 45 52 58 65  | 1500 | 73  | 86  | 98  | 110 | 122 |           |  |  |
| 2450         57         67         77         86         96           3600         47         55         63         71         79           5200         39         46         53         59         66           5400         39         45         52         58         65   | 1900 | 65  | 76  | 87  | 98  | 109 |           |  |  |
| 5200         39         46         53         59         66           5400         39         45         52         58         65   | 2450 | 57  | 67  | 77  | 86  | 96  |           |  |  |
| 5400         39         45         52         58         65   | 3600 | 47  | 55  | 63  | 71  | 79  |           |  |  |
|   | 5200 | 39  | 46  | 53  | 59  | 66  |           |  |  |
| 5800         37         44         50         56         62   | 5400 | 39  | 45  | 52  | 58  | 65  |           |  |  |
|   | 5800 | 37  | 44  | 50  | 56  | 62  |           |  |  |

<u>Note</u>: 10-g Extremity SAR Test Exclusion Power Thresholds are 2.5 times higher than the 1-g SAR Test Exclusion Thresholds indicated above. These thresholds do not apply, by extrapolation or other means, to occupational exposure limits.

Alternatively, for 100 MHz to 6 GHz and test separation distances  $\leq$  50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following: [(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)]  $\cdot$  [ $\sqrt{f(GHz)}$ ]  $\leq$  7.5 for 1-g SAR, and  $\leq$  7.5 for 10-g extremity SAR. When the minimum test separation distance is <45 mm, where a distance of 45 mm is applied to determine SAR test exclusion. The max output power is reference to report number: **EM-F190380**.

| Frequency<br>(GHz)   | Max Output<br>Power (mW) | Tune-upfactor | Tune-up max power (mW) | Min. Distance<br>(mm) | Exclusion<br>Threshold |  |  |  |
|--|--------------------------|---------------|------------------------|-----------------------|------------------------|--|--|--|
| 2.402  | 3.034                    | 1.04          | 3.162                  | 40                    | 0.1225                 |  |  |  |
| Since the exclusion threshold calculated is <b>0.1225</b> < 7.5. thus SAR test is exclusion. |                          |               |                        |                       |                        |  |  |  |

Sincerely Yours,

Mr. Johnny Hsueh Section Manager

**AUDIX Technology Corporation** 



