

## RF EXPOSURE EVALUATION

### 1. PRODUCT INFORMATION

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Description | Car MP3 Player                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Model Name          | T25, T15, T16, T17, T18, T19, T20, T21, T22, T23, T24, T50 ,T51, T52, T53, T55, T56, T57, T58, T59, T60, T35Q, T25S, T25Q, T25C, T35, T35C, T29, T32, T45Q, T45C, T46Q, T46C, T47, T48Q, T48C, T49Q, T49C, CP24, CP89, CP89Q, CP93, CP94, CP123, CP98.NX10, NX11, HL-t25s, AMT22, AM6EB, AM6EW, CAD6005, X7, V8, BT02, BT03, BT04, BT05, SRXA-ABFM46, SRXA-ABFM60, SRXA-ABFM50, Peakage S6, IPH-1088N, 68491760054, PT-736, PT-737, PT-805, VO2101, 7946, TRACER T1, MY2119, MY2121, NOVELEKA-FM1, NOVELEKA-FM2, SWM 3535, SWM 4545, SWM 4848, SWM 5858, T71, T74, EBH05045GA01 |
| FCC ID              | 2AMBA-T25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

### 2. EVALUATION METHOD

According to 447498 D01 General RF Exposure Guidance v05

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

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

Where  $f(\text{GHz})$  is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation

### 3. CALCULATION

According to the follow transmitter output power ( $P_t$ ) formula:

$$P_t = (E \times d)^2 / (30 \times g_t)$$

$P_t$ =transmitter output power in watts

$g_t$ =numeric gain of the transmitting antenna (unitless)

$E$ =electric field strength in V/m

$d$ =measurement distance in meters (m)

$$\text{BT } P_t = 6.657\text{dBm} = 4.63\text{mW}$$

The result for RF exposure evaluation

$$\text{SAR} = (4.63\text{mW} / 5\text{mm}) \cdot [\sqrt{2.402(\text{GHz})}] = 1.44 < 3.0 \text{ for 1-g SAR}$$

$$\text{FM } P_t = 0.0000098\text{mW}$$

The result for RF exposure evaluation

$$\text{SAR} = (0.0000098\text{mW} / 5\text{mm}) \cdot [\sqrt{0.0881(\text{GHz})}] = 0.00000059 < 3.0 \text{ for 1-g SAR}$$

Simultaneous transmission between Bluetooth and FM transmitter

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})/x}] \text{ W/kg}$ , for test separation distances  $\leq 50$  mm;

where  $x = 7.5$  for 1-g SAR and  $x = 18.75$  for 10-g SAR.

$$\text{SAR} = (1.44 + 0.00000059) / 7.5 = 0.192\text{W/kg} < 1.6\text{W/kg}$$

### 4. CONCLUSION

The SAR evaluation is not required.