

Maximum Permissible Exposure Evaluation

FCC ID: 2AEIN-J1222

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) Radiation as specified in §1.1307(b).

EUT Specification

Product Name:	Product Name1: JCB UX MEDIA UNIT Product Name2: DIGITAL MEDIA CAN RADIO													
Trade Mark:	KENWOOD													
Model/Type Reference:	Model1: KMM-J100 Model2: KMM-D110													
Model Differences:	Product name: JCB UX MEDIA UNIT, main model: KMM-J100, additional models KMM-D110 (Product Name: DIGITAL MEDIA CAN RADIO) are consistent with the schematic, PCB layout, hardware version, and software version. The differences are shown in the table below, but they do not affect RF performance: <table border="1"> <thead> <tr> <th rowspan="2">Different content points</th><th>Product name: JCB UX MEDIA UNIT</th><th>Product Name: DIGITAL MEDIA CAN RADIO</th></tr> <tr> <th>KMM-J100</th><th>KMM-D110</th></tr> </thead> <tbody> <tr> <td>Flash (DSP)</td><td>128Mbit</td><td>No</td></tr> <tr> <td>JCB LOGO (In the metal shell)</td><td>Yes</td><td>No</td></tr> </tbody> </table> Note: The above products have the same wireless IC, radiation circuit, power circuit and other circuits, with same shell.			Different content points	Product name: JCB UX MEDIA UNIT	Product Name: DIGITAL MEDIA CAN RADIO	KMM-J100	KMM-D110	Flash (DSP)	128Mbit	No	JCB LOGO (In the metal shell)	Yes	No
Different content points	Product name: JCB UX MEDIA UNIT	Product Name: DIGITAL MEDIA CAN RADIO												
	KMM-J100	KMM-D110												
Flash (DSP)	128Mbit	No												
JCB LOGO (In the metal shell)	Yes	No												
Frequency Band (Operating)	BT: 2402MHz ~ 2480MHz													
Device Category	☐ Portable (<5mm separation) ☐ Mobile (>20cm separation) ☒ Fixed (>20cm separation) ☐ Others ____													
Exposure Classification	☐ Occupational/Controlled exposure (S=5mW/cm ²) ☐ General Population/Uncontrolled exposure (S=1mW/cm ²)													
Antenna Diversity	☒ Single antenna ☐ Multiple antennas ☐ Tx diversity ☐ Rx diversity ☐ Tx/Rx diversity													
Antenna Gain (Max)	BT: 2.81dBi													
Evaluation Applied	☒ MPE Evaluation ☐ SAR Evaluation													

Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minutes)
(A) Limits for Occupational/Controlled Exposure				
300-1500	--	--	F/300	<6
1500-100000	--	--	5	<6
(B) Limits for General Population/Uncontrolled Exposure				
300-1500	--	--	F/1500	<30
1500-100000	--	--	1	<30

Calculation Method

Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * R^2)$

Where:

P_d = Power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

P_d limit of MPE is 1mW/cm². If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

Measurement Result

Mode	Frequency (MHz)	Antenna Gain (dBi)	Maximum Power (dBm)	Max. Tune Up Power (dBm)	Power Density at 20cm (mW/cm ²)	Limit (mW/cm ²)
BT/EDR	2402	2.81	3.99	4	0.001	1

Note:

1. Calculate in the worst-case mode.
2. Max. Tune Up Power is declared by manufacturer, and used to calculate.
3. For a more detailed features description, please refer to the RF Test Report.

*****THE END*****