RF EXPOSURE INFORMATION

1. EUT information

Type of equipment	Wireless Microphone System
Device Category	Mobile Device
Model Name	CCR24RMOT
FCC ID	ROYCCR24RMOT
IC Number	5479A-CCR24RMOT
Tx Frequency Band	2401.056 MHz ~ 2,482.272 MHz
Antenna Gain	2.51 dBi

2. FCC MPE Limits

The limit for Maximum Permissible Exposure (MPE), specified in FCC §1.1310, is listed in Table 1. According to FCC §1.1310: the criteria listed in the following table shall be used to evaluate the environmental impact of human exposure to radio-frequency(RF) radiation as specified in §1.1307(b).

Table1. FCC LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Average Time (Minutes)
(A) Limits For Occupational / Control Exposures (f= frequency)				
30-300	61.4	0.163	1.0	6
300-1500	…	…	…	6
1500-100,000	…	…	…	6
(B) Limits For General Population / Uncontrolled Exposure (f=frequency)				
30-300	27.5	0.073	0.2	30
300-1500	…	…	f/1500	30
1500-100,000	…	…	1.0	30

3. IC MPE Limits

The limit for Maximum Permissible Exposure (MPE), specified in IC RSS-102, is listed in Table 2. According to IC RSS-102: the criteria listed in the following table shall be used to evaluate the environmental impact of human exposure to radio-frequency(RF) radiation as specified in RSS-102

Table2. IC LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (Uncontrolled Environment)

Frequency Range (MHz)	Electric Field (V/m rms)	Magnetic Field (A/m rms)	Power Density (W/m^2)	Average Time (Minutes)
0.003-1	280	2.19	-	6
1-10	280/f	2.19/f	-	6
10-30	28	2.19/f	-	6
30-300	28	0.073	2*	6
300-1500	$1.585\ f^{0.5}$	$0.0042\ f^{0.5}$	f/150	6
1500-15000	61.4	0.163	10	6
15000-150000	61.4	0.163	10	$616000/f^{1.2}$
150000-300000	$0.158\ f^{0.5}$	$4.21 \times 10^{-4}\ f^{0.5}$	$6.67 \times 10^{-5}\ f$	$616000/f^{1.2}$

4. PROCEDURES

The procedure used to determine the RF power density was based upon a calculation for determining compliance with the MPE requirements.

This calculation is based on the highest EIRP possible from the system, considering maximum power and antenna gain, and considering the limit of uncontrolled exposure limit.

The power density level is calculated at a distance of 20 cm. And Minimum distance is also calculated.

MPE evaluations are calculated under Maximum Power condition in the band.

Formula

$P_d = PG / (4\pi r^2)$

Where,

P_d= Power Density (mW/cm^2)

P= Power input to the antenna (in appropriate units, e.g., mW)

G= Power gain of the antenna in the direction of interest relative to an isotropic radiator

π=3.1416

r=distance between observation point and centre of the radiator (cm)

5. Calculated MPE Result

The power density limit for General Population/Uncontrolled Exposure at each frequency is determined based on the information in Table 1(FCC) & Table 2(IC). MPE evaluations are calculated under Maximum Power condition.

Table3. Calculated MPE Data according to FCC/IC limit

Frequency	2,482.272 MHz
Limit	1 mW/cm^2
Distance (cm), R	20 cm
ERP	24.88 dBm (307.6 mW)
Ant. Gain, G	2.51 dBi
Power Density (mW/cm^2)	**0.109**