



9. RF EXPOSURE TEST

9.1 APPLIED PROCEDURES / LIMIT

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ; *Plane-wave equivalent power density

9.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Power Meter	Anritsu	ML2487A	6K00004714	Feb. 17, 2012
2	Power Meter Sensor	Anritsu	MA2491A	34138	Feb. 17, 2012

Remark: " N/A" denotes No Model Name , Serial No. or No Calibration specified.

9.1.2 MPE CALCULATION METHOD

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d}$$

$$\text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

E = Electric field (V/m)

P = Peak RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$

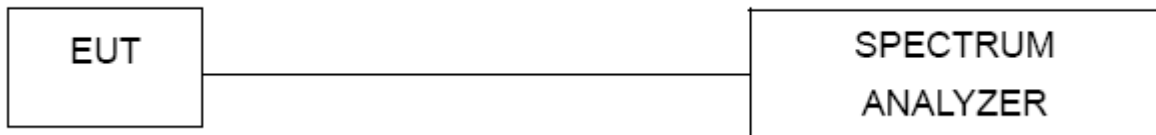
From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained



9.1.3 DEVIATION FROM STANDARD

No deviation.

9.1.4 TEST SETUP



9.1.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.



9.1.6 TEST RESULTS

EUT :	A Versatile Multi-Function Terminal	Model Name :	MT688
Temperature :	25 °C	Relative Humidity :	31%
Test Voltage :	AC 120V/60Hz		
Test Mode :	802.11b/CH01, CH06, CH11		

Frequency (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)
2412	0.0	1.0000	13.2800	21.2814	0.004236	1
2437	0.0	1.0000	12.8600	19.3197	0.003845	1
2462	0.0	1.0000	12.6600	18.4502	0.003672	1



EUT :	A Versatile Multi-Function Terminal	Model Name :	MT688
Temperature :	25 °C	Relative Humidity :	31%
Test Voltage :	AC 120V/60Hz		
Test Mode :	802.11g/CH01, CH06, CH11		

Frequency (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)
2412	0.0	1.0000	22.5600	180.3018	0.035888	1
2437	0.0	1.0000	23.3200	214.7830	0.042751	1
2462	0.0	1.0000	23.1600	207.0141	0.041205	1