



11. RF EXPOSURE TEST

11.1 APPLIED PROCEDURES / LIMIT

These devices are not exempted from compliance does not exceed the Commission's RF exposure guidelines. Unless a device operates at substantially low power levels, with a low gain antenna(s), supporting information is generally needed to establish the various potential operating configurations and exposure conditions of a transmitter and its antenna(s) in order to determine compliance with the RF exposure guidelines.

In order to demonstrate compliance with MPE requirement (see Section 2.1091), the following information is typically needed:

Calculation that estimates the minimum separation distance (20 cm or more) between an antenna and persons required to satisfy power density limits defined for free space.

Antenna installation and device operating instructions for installers (professional/unskilled users), and the parties responsible for ensuring compliance with the RF exposure requirement. Any caution statements and/or warning labels that are necessary in order to comply with the exposure limits. Any other RF exposure related issues that may affect MPE compliance.

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).

(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

11.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Nov.26.2011

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



11.1.2 MPE CALCULATION METHOD

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi R^2} = \frac{EIRP}{4\pi R^2}$$

- P :power input to the antenna in Mw
- EIRP :Equivalent(effective) isotropic radiated power.
- S :power density mW/ cm²
- G :numeric gain of antenna relative to isotropic radiator
- R :distance to centre of radiation in cm

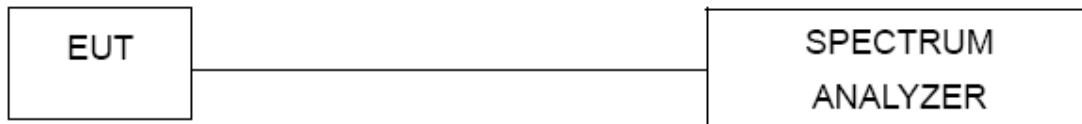
FCC radio frequency exposure limits may be exceeded at distances closer than r cm from the antenna of this device

$$r = \sqrt{\frac{PG}{4\pi S}} = \sqrt{\frac{EIRP}{4\pi S}}$$

11.1.3 DEVIATION FROM STANDARD

No deviation.

11.1.4 TEST SETUP



11.1.5 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.



11.1.6 TEST RESULTS

EUT :	BLS BT mono headset	Model Name :	BH M500
Temperature :	25 °C	Relative Humidity :	58 %
Pressure :	1009 hPa	Test Voltage :	DC 3.7V
Test Mode :	CH00 (2402 MHz), CH39(2441 MHz), CH78 (2480 MHz) -1Mbps		

Frequency (MHz)	Antenna Gain (dBi)	Peak Output Power (dBm)	Calculated EIRP (mW)	FCC Threshold (mW)	Test Result
2402	-1.90	-3.33	0.4645	24.98	Complies
2441	-1.90	-2.87	0.5164	24.58	Complies
2480	-1.90	-2.69	0.5383	24.19	Complies

Note: Shown calculated EIRP is "worst case" scenario (peak power value) showing definite compliance with the threshold level.

EUT :	BLS BT mono headset	Model Name :	BH M500
Temperature :	25 °C	Relative Humidity :	58 %
Pressure :	1009 hPa	Test Voltage :	DC 3.7V
Test Mode :	CH00 (2402 MHz), CH39(2441 MHz), CH78 (2480 MHz) -3Mbps		

Frequency (MHz)	Antenna Gain (dBi)	Peak Output Power (dBm)	Calculated EIRP (mW)	FCC Threshold (mW)	Test Result
2402	-1.90	-0.13	0.9705	24.98	Complies
2441	-1.90	0.17	1.0399	24.58	Complies
2480	-1.90	0.28	1.0666	24.19	Complies

Note: Shown calculated EIRP is "worst case" scenario (peak power value) showing definite compliance with the threshold level.