



RF Exposure evaluation for mobile devices

Model: *MAYA W161-00B-00*

FCC ID: *XPYMAYAW161*

IC: *8595A- MAYAW161*

Standards
OET Bulletin 65 Edition 97-01 August 1997
FCC 47 CFR §1.1307
FCC 47 CFR §1.1310
RSS-102 Issue 5 – March 2015

Test limits

As specified in Table 1B of 47 CFR 1.1310 – Limits for Maximum Permissible Exposure (MPE), Limits for General Population/Uncontrolled Exposure.

Frequency range (MHz)	Power density (mW/cm ²)
300 – 1,500	f/1500
1,500 – 100,000	1.0

Limits specified per RSS-102, Issue 5.

Frequency range (MHz)	Power density (W/m ²)	Power density (mW/cm ²)
300 – 6000	$0.02619 f^{0.6834}$	$\text{mW/cm}^2 = \text{W/m}^2 * 0.1$

Equation OET bulletin 65, page 18, edition 97-01: $S = \frac{PG}{4\pi R^2} = \frac{EIRP}{4\pi R^2}$

Where:

S = power density

P = power input to the antenna

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

R = distance to the center of radiation of the antenna = 20cm

Co-Location Considerations

The calculation below is used to consider situations in which simultaneous exposure to fields of different frequencies occur. The calculation is performed by the sum of each relative exposure for each equipment according to the following criteria.

$$\sum_{1}^N \frac{S_{eqn}}{S_{Limn}} = \frac{S_{eq1}}{S_{Lim1}} + \frac{S_{eq2}}{S_{Lim2}} + \dots + \frac{S_{eqN}}{S_{LimN}} \leq 1$$

Where:

S_{eq} is the power density of the electromagnetic field at a given distance by a specific transmitter and a defined frequency.

S_{lim} is the MPE limit for the frequency being evaluated.



					P		S									
Operational Bands	Ant	Frequency (MHz)	Antenna Gain (dBi)	Output Power -conducted- (dBm)	Output Power -conducted- (mW)	IC Limit (mW/cm²)	FCC Limit (mW/cm²)	Power Density value (mW/cm²)	Verdict	FCC (Seq / SLim)	ISED (Seq / SLim)					
BLE	1	2402	2.5	9.00	7.94	0.5351	1.00	0.0028	Pass	0.0028	0.0053					
BLE	2	2402	2.2	9.00	7.94	0.5351	1.00	0.0026	Pass	0.0026	0.0049					
BLE	3	2402	-3.42	9.00	7.94	0.5351	1.00	0.0007	Pass	0.0007	0.0013					
Classic BT	1	2402	2.5	11.00	12.59	0.5351	1.00	0.0045	Pass	0.0045	0.0083					
Classic BT	2	2402	2.2	11.00	12.59	0.5351	1.00	0.0042	Pass	0.0042	0.0078					
Classic BT	3	2402	-3.42	11.00	12.59	0.5351	1.00	0.0011	Pass	0.0011	0.0021					
WLAN 2.4 GHz	1	2412	2.5	19.00	79.43	0.5366	1.00	0.0281	Pass	0.0281	0.0524					
WLAN 2.4 GHz	2	2412	2.2	19.00	79.43	0.5366	1.00	0.0262	Pass	0.0262	0.0489					
WLAN 2.4 GHz	3	2412	-3.42	19.00	79.43	0.5366	1.00	0.0072	Pass	0.0072	0.0134					
WLAN 5 GHz UNII 1	1	5240	4.6	18.00	63.10	0.9119	1.00	0.0362	Pass	0.0362	0.0397					
WLAN 5 GHz UNII 1	3	5240	-1.51	18.00	63.10	0.9119	1.00	0.0089	Pass	0.0089	0.0097					
WLAN 5 GHz UNII 2A	1	5300	4.6	18.00	63.10	0.9190	1.00	0.0362	Pass	0.0362	0.0394					
WLAN 5 GHz UNII 2A	3	5300	-1.51	18.00	63.10	0.9190	1.00	0.0089	Pass	0.0089	0.0096					
WLAN 5 GHz UNII 2C	1	5580	4.6	18.00	63.10	0.9519	1.00	0.0362	Pass	0.0362	0.0380					
WLAN 5 GHz UNII 2C	3	5580	-1.51	18.00	63.10	0.9519	1.00	0.0089	Pass	0.0089	0.0093					
WLAN 5 GHz UNII 3	1	5825	4.6	18.00	63.10	0.9803	1.00	0.0362	Pass	0.0362	0.0369					
WLAN 5 GHz UNII 3	3	5825	-2.08	18.00	63.10	0.9803	1.00	0.0078	Pass	0.0078	0.0079					
Antennas Considered								Sum of (Seqn / SLimn) Max BT + Max 2.4 WLAN	0.0326	0.0607						
									Passed							
								Distance to Antenna (R) in cm: 20	Ant 1	ANT-DB1-RAF-xxx				Sum of (Seqn / SLimn) Max BT + Max 5 GHz WLAN	0.0407	0.0480
									Ant 2	ANT-2.4-CW-RCT-xx					Passed	

Yours sincerely,

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