RF Exposure evaluation for mobile devices

Model: *JODY-W263-00B*

FCC ID*:*   *XPYJODYW263*
IC*:*   *8595A- JODYW263*

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/cm²)*
300 – 1,500	f/1500
1,500 – 100,000	1.0

Limits specified per RSS-102, Issue 5.

Frequency range (MHz)	*Power density (W/m²)*	*Power density (mW/cm²)*
300 – 6000	$0.02619\ f^{0.6834}$	*mW/cm² = W/m² * 0.1*

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

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

			G				P			S			
erational Bands	Frequency (MHz)	Antenna Gain (dBi)	Antenna Gain -numeric-	Output Power -conducted- (dBm)	Duty Cycle correction factor	Max. mean output power (dBm)	Output Power -conducted- (mW)	Output Power (EIRP) (mW)	IC Limit (mW/cm²)	FCC Limit (mW/cm²)	Power Density value (mW/cm²)	Margin to FCC Limit (mW/cm²)	Margin to IC Limit (mW/cm²)
BLE	2480	2.2	1.6596	4.00	0	4.00	2.51	4.17	0.5469	1.00	0.0008	0.9992	0.5461
Classic BT	2480	2.2	1.6596	11.00	0	11.00	12.59	20.89	0.5469	1.00	0.0042	0.9958	0.5427
WLAN 2.4 GHz	2457	2.5	1.7783	16.00	0	16.00	39.81	70.79	0.5434	1.00	0.0141	0.9859	0.5293
WLAN 5 GHz	5825	4.9	3.0903	16.00	0	16.00	39.81	123.03	0.9803	1.00	0.0245	0.9755	0.9558

Distance to Antenna (R) in cm:	20

Simultaneous Transmission 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.

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

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.

Assessment of Simultaneous transmission for FCC

	Classic BT	WLAN 5 GHz	WLAN 2.4 GHz
(S_{eq} / S_{Lim})	0.0042	0.0245	0.0141
Sum of (S_{eqn} / S_{Limn}) BT + WLAN 2.4 GHz	0.0183		
Sum of (S_{eqn} / S_{Limn}) BT + WLAN 5 GHz	0.0287		
Limit	1		
Assessment	**passed**		

Assessment of Simultaneous transmission for ISED

	Classic BT	WLAN 5 GHz	WLAN 2.4 GHz
(S_{eq} / S_{Lim})	0.0077	0.025	0.0295
Sum of (S_{eqn} / S_{Limn}) BT + WLAN 2.4 GHz	0.0336		
Sum of (S_{eqn} / S_{Limn}) BT + WLAN 5 GHz	0.0327		
Limit	1		
Assessment	**passed**		

Yours sincerely,

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