

RF Exposure

Requirements

Test Requirement	RSS-102, Issue 5, 3.2	<p>A device requiring an RF exposure evaluation shall be made in accordance with the latest version of IEEE C95.3.</p> <p>If the device is designed such that more than one antenna can functionally transmit at the same time, the RF exposure evaluation shall be conducted while all antennas are transmitting. The individual exposure level ratios shall be totalled and used for compliance purposes.</p> <p>If the device has more than one antenna, but is not designed to have more than one antenna functionally transmit at the same time, the RF exposure evaluation of the device shall be performed for each of the individually transmitting antennas. The maximum RF field strength value shall be recorded and used for compliance purposes.</p>									
RF Exposure Limit	RSS-102, Issue 5, 4	<table border="1"> <thead> <tr> <th>Frequency Range (MHz)</th><th>Power Density (W/m²)</th><th>Reference Period (minutes)</th></tr> </thead> <tbody> <tr> <td>300-6000</td><td>$0.02619 \times f^{0.6834}$</td><td>6</td></tr> <tr> <td>6000-15000</td><td>10</td><td>6</td></tr> </tbody> </table> <p>Note: f is frequency in MHz.</p>	Frequency Range (MHz)	Power Density (W/m ²)	Reference Period (minutes)	300-6000	$0.02619 \times f^{0.6834}$	6	6000-15000	10	6
Frequency Range (MHz)	Power Density (W/m ²)	Reference Period (minutes)									
300-6000	$0.02619 \times f^{0.6834}$	6									
6000-15000	10	6									
Exemption Limits for Routine Evaluation—RF Exposure Evaluation	RSS-102, issue 5, 2.5.2	<p>RF exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm, except when the device operates</p> <ul style="list-style-type: none"> at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than <p>$1.31 \times 10^{-2} f^{0.6834}$ W (adjusted for tune-up tolerance), where f is in MHz;</p> <ul style="list-style-type: none"> at or above 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 5 W (adjusted for tune-up tolerance) 									



Results

20MHz Performance

BW [MHz]	Freq [MHz]	Conducted Power		Antenna Gain		EIRP [W]	EIRP exempt Limit [W]	Distance [m]	Power Density [W/m ²]	MPE Limit [W/m ²]
		[dBm]	[mW]	[dBi]	numeric					
20	5935	8.8	7.59	2	1.58	0.0120	4.9662	0.2	Exempt	N/A
20	6175	8.4	6.92	2	1.58	0.0110	5.0000	0.2	Exempt	N/A
20	6415	8.3	6.76	2	1.58	0.0107	5.0000	0.2	Exempt	N/A

40MHz Performance

BW [MHz]	Freq [MHz]	Conducted Power		Antenna Gain		EIRP [W]	EIRP exempt Limit [W]	Distance [m]	Power Density [W/m ²]	MPE Limit [W/m ²]
		[dBm]	[mW]	[dBi]	numeric					
40	5945	11.2	13.18	2	1.58	0.0209	4.9719	0.2	Exempt	N/A
40	6185	11	12.59	2	1.58	0.0200	5.0000	0.2	Exempt	N/A
40	6405	11.5	14.13	2	1.58	0.0224	5.0000	0.2	Exempt	N/A

Judgment

The device was found to be exempt from MPE evaluation for 20cm separation distance.