

PART 6 - MAXIMUM PERMISSIBLE EXPOSURE (MPE) TEST



Maximum Permissible Exposure (MPE) Test Setup

FCC Part 1.1310 Maximum Permissible Exposure (MPE) Results

Operating Mode	Bluetooth	Temperature	24°C
Test Input Power	110V 60Hz	Relative Humidity	52%
Test Distance	20cm	Atmospheric Pressure	1029mbar
		Tested By	Foo Kai Maun

Channel	Channel Frequency (GHz)	Power Density Value (mW/cm ²)	Margin (mW/cm ²)	Averaging Time (min)	Limit (mW/cm ²)
0	2.402	0.0001	-0.9999	30	1.0
39	2.441	0.0001	-0.9999	30	1.0
78	2.480	0.0001	-0.9999	30	1.0

PART 6 - MAXIMUM PERMISSIBLE EXPOSURE (MPE) TEST

Operating Mode	Bluetooth + WLAN 802.11b	Temperature	24°C
Test Input Power	110V 60Hz	Relative Humidity	52%
Test Distance	20cm	Atmospheric Pressure	1029mbar
		Tested By	Foo Kai Maun

Channel	Channel Frequency (GHz)	Power Density Value (mW/cm ²)	Margin (mW/cm ²)	Averaging Time (min)	Limit (mW/cm ²)
0 (Bluetooth) + 1 (802.11b)	2.402 (Bluetooth) + 2.412 (802.11b)	0.0158	-0.9842	30	1.0
39 (Bluetooth) + 7 (802.11b)	2.441 (Bluetooth) + 2.437 (802.11b)	0.0162	-0.9838	30	1.0
78 (Bluetooth) + 11 (802.11b)	2.480 (Bluetooth) + 2.462 (802.11b)	0.0155	-0.9845	30	1.0

Operating Mode	Bluetooth + WLAN 802.11g	Temperature	24°C
Test Input Power	110V 60Hz	Relative Humidity	52%
Test Distance	20cm	Atmospheric Pressure	1029mbar
		Tested By	Foo Kai Maun

Channel	Channel Frequency (GHz)	Power Density Value (mW/cm ²)	Margin (mW/cm ²)	Averaging Time (min)	Limit (mW/cm ²)
0 (Bluetooth) + 1 (802.11g)	2.402 (Bluetooth) + 2.412 (802.11g)	0.0112	-0.9888	30	1.0
39 (Bluetooth) + 7 (802.11g)	2.441 (Bluetooth) + 2.437 (802.11g)	0.0120	-0.9880	30	1.0
78 (Bluetooth) + 11 (802.11g)	2.480 (Bluetooth) + 2.462 (802.11g)	0.0115	-0.9885	30	1.0

PART 6 - MAXIMUM PERMISSIBLE EXPOSURE (MPE) TEST

Operating Mode	Bluetooth + WLAN 802.11a	Temperature	24°C
Test Input Power	110V 60Hz	Relative Humidity	52%
Test Distance	20cm	Atmospheric Pressure	1029mbar
		Tested By	Foo Kai Maun

Channel	Channel Frequency (GHz)	Power Density Value (mW/cm ²)	Margin (mW/cm ²)	Averaging Time (min)	Limit (mW/cm ²)
0 (Bluetooth) + 36 (802.11a)	2.402 (Bluetooth) + 5.180 (802.11a)	0.0135	-0.9865	30	1.0
78 (Bluetooth) + 48 (802.11a)	2.480 (Bluetooth) + 5.240 (802.11a)	0.0136	-0.9864	30	1.0
0 (Bluetooth) + 52 (802.11a)	2.402 (Bluetooth) + 5.260 (802.11a)	0.0144	-0.9856	30	1.0
78 (Bluetooth) + 64 (802.11a)	2.480 (Bluetooth) + 5.320 (802.11a)	0.0145	-0.9855	30	1.0
0 (Bluetooth) + 149 (802.11a)	2.402 (Bluetooth) + 5.745 (802.11a)	0.0144	-0.9856	30	1.0
39 (Bluetooth) + 157 (802.11a)	2.441 (Bluetooth) + 5.785 (802.11a)	0.0156	-0.9844	30	1.0
78 (Bluetooth) + 161 (802.11a)	2.480 (Bluetooth) + 5.805 (802.11a)	0.0154	-0.9846	30	1.0

Operating Mode	Bluetooth + WLAN 802.11a (ISM Band)	Temperature	24°C
Test Input Power	110V 60Hz	Relative Humidity	52%
Test Distance	20cm	Atmospheric Pressure	1029mbar
		Tested By	Foo Kai Maun

Channel	Channel Frequency (GHz)	Power Density Value (mW/cm ²)	Margin (mW/cm ²)	Averaging Time (min)	Limit (mW/cm ²)
0 (Bluetooth) + 165 (802.11a)	2.402 (Bluetooth) + 5.825 (802.11a)	0.0143	-0.9857	30	1.0
39 (Bluetooth) + 165 (802.11a)	2.441 (Bluetooth) + 5.825 (802.11a)	0.0144	-0.9856	30	1.0
78 (Bluetooth) + 165 (802.11a)	2.480 (Bluetooth) + 5.825 (802.11a)	0.0139	-0.9861	30	1.0

Notes

1. All possible modes of operation were investigated. Only the worst case highest radiation levels were measured. Measurements were taken at the required averaging time. All other radiation levels were relatively insignificant.

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- 2 A "-ve" margin indicates a PASS as it refers to the margin present below the limit line at the particular frequency.
- 3 Measurement Uncertainty
All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95%, with a coverage factor of 2, in the range 0.1MHz – 3GHz is $\pm 15\%$.