

MPE

FCC ID: 2AGHCHBMT01

Applicant: Guangdong Hisense Broadband Technology Co.,Ltd

Exposure category: General population/uncontrolled environment

EUT Type: Production Unit

Device Type: Mobile Device

Refer Standard: FCC Part 2.1091: Radio Frequency (RF) Exposure Compliance of Radio communication Apparatus (All Frequency Bands)

FCC MPE Limited:

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minutes)
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

Test Data

Predication of MPE limit at a given distance

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

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, the power gain factor, is normally numeric gain.

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

Max. Conducted Output Power Results

Antenna	Mode/Channel	Frequency (MHz)	Max.RF Power(dBm)
0	802.11b/1	2412	25.83
	802.11b/6	2437	25.02
	802.11b/11	2462	24.88
1	802.11g/1	2412	24.18
	802.11n40/6	2437	22.75
	802.11g/11	2462	23.16
0+1	802.11n20/1	2412	26.98
	802.11n20/6	2437	26.07
	802.11n20/11	2462	26.07

Manufacturing tolerance

Antenna	Mode/Channel	Frequency (MHz)	Max. RF Power(dBm)	Target (dBm)	Tolerance ±(dB)
0	802.11b/1	2412	25.83	25	1
	802.11b/6	2437	25.02	25	1
	802.11b/11	2462	24.88	25	1
1	802.11g/1	2412	24.18	24	1
	802.11n40/6	2437	22.75	23	1
	802.11g/11	2462	23.16	23	1
0+1	802.11n20/1	2412	26.98	26	1
	802.11n20/6	2437	26.07	26	1
	802.11n20/11	2462	26.07	26	1

Calculation results (for FCC): pass

Antenna	Mode/Channel	Frequency (MHz)	Maximum tune up power(dBm)	RF distance(cm)	Result (mW/cm2)	Limit (mW/cm2)
0	802.11b/1	2412	26	20	0.17	1.0
	802.11b/6	2437	26	20	0.17	
	802.11b/11	2462	26	20	0.17	
1	802.11g/1	2412	25	20	0.14	
	802.11n40/6	2437	24	20	0.11	
	802.11g/11	2462	24	20	0.11	
0+1	802.11n20/1	2412	27	20	0.43	
	802.11n20/6	2437	27	20	0.43	
	802.11n20/11	2462	27	20	0.43	

NOTE:

Antenna 0 Gain 3.34dBi=2.16, Antenna 1 Gain 3.34dBi=2.16

Antenna 0+1=6.35dBi=4.32