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Maximum RF Exposure Evaluation

FCC ID: XRH-NPE109

According to KDB447498 D01 General RF Exposure Guidance v06, Clause 4.3.1(a)

EUT Specification

Product Name	GEM3NFC
Model	GEM3NFC0105
Listed Model	N/A
Frequency band (Operating)	<input checked="" type="checkbox"/> ANT+: 2457MHz, 2472MHz <input checked="" type="checkbox"/> BLE: 2.402GHz ~ 2.480GHz <input type="checkbox"/> WLAN: 2.412GHz ~ 2.462GHz <input type="checkbox"/> RLAN: 5.190GHz ~ 5.230GHz <input type="checkbox"/> RLAN: 5.745GHz ~ 5.825GHz <input checked="" type="checkbox"/> Others: NFC 13.56Hz
Device category	<input checked="" type="checkbox"/> Portable (<5mm separation) <input type="checkbox"/> Mobile (>20cm separation) <input type="checkbox"/> fixed (>20cm separation) <input type="checkbox"/> Others _____
Antenna diversity	<input checked="" type="checkbox"/> Single antenna <input type="checkbox"/> Multiple antennas <input type="checkbox"/> Tx diversity <input type="checkbox"/> Rx diversity <input type="checkbox"/> Tx/Rx diversity
Antenna gain (Max)	5.46dBi
Evaluation applied	<input checked="" type="checkbox"/> MPE Evaluation <input type="checkbox"/> SAR Evaluation

Limit

$$\left[\frac{\text{(max. power of channel, including tune-up tolerance, mW)}}{\text{(min. test separation distance, mm)}} \right] \cdot \sqrt{f_{\text{(GHz)}}} \leq 3.0$$

Where

- $f_{\text{(GHz)}}$ is the RF channel transmit frequency in GHz

-Power and distance are rounded to the nearest mW and mm before calculation

-The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm, and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 4.1 f) is applied to determine SAR test exclusion.

Measurement Result

Type	Channel frequency (MHz)	Max. Measured Power (dBm)	Max. Tune up Power (dBm)	Antenna Gain (dBi)	Calculation Value	Threshold Value
ANT+	2457	0.16	1	5.46	1.387	3.0
	2472	0.72	1	5.46	1.392	3.0

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Type	Channel frequency (MHz)	Max. Measured Power (dBm)	Max. Tune up Power (dBm)	Antenna Gain (dBi)	Calculation Value	Threshold Value
GFSK	2402	1.56	2	5.46	1.727	3.0
	2440	0.51	1	5.46	1.383	3.0
	2480	-0.9	0	5.46	1.107	3.0

Note

For a more detailed features description, please refer to the RF Test Report.

*****THE END*****