

Company: SensThys Inc.

Test of: SensArray

To: FCC CFR 47 Part 1.1310

Report No.: TIME01-U2_MPE Rev A

MPE/RF EXPOSURE TEST REPORT



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Test of: SensThys, Inc. SensArray⁺

To: FCC CFR 47 Part 1.1310

Test Report Serial No.: TIME01-U2_MPE Rev A

This report supersedes: NONE

Applicant: SensThys, Inc.
21060 Homestead Road
Cupertino, California 95014
USA

Product Function: Integrated RFID reader

Issue Date: 5th September 2017

This Test Report is Issued Under the Authority of:

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TESTING CERT #2381.01

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1. MAXIMUM PERMISSABLE EXPOSURE

Calculations for Maximum Permissible Exposure Levels

Power Density = Pd (mW/cm²) = EIRP/(4* π *d²)

EIRP = P * G

P = Peak output power (mW)

G = Antenna numeric gain (numeric)

d = Separation distance (cm)

Numeric Gain = 10 ^ (G (dBi)/10)

The calculations in the table below use the highest conducted power values together with the lowest antenna gain specified for the EUT. These calculations represent worst case in terms of the exposure levels.

Maximum Permissible Exposure

Freq. Band (MHz)	Ant Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Power Density (mW/cm ²) @ 20cm	Power Density Limit (mW/cm ²)	Min Calculated safe distance for Limit (cm)	Calculated Power Density (mW/cm ²) @ Safe Distance
902.0 - 928.0	3.00	2.00	29.34	859.01	0.34	0.60	16.00	0.60
902.0 - 928.0	8.00	6.31	27.24	529.66	0.66	0.60	21.02	0.60

Note: for mobile or fixed location transmitters the minimum separation distance is 20cm, even if calculations indicate the MPE distance to be less.

Specification - Maximum Permissible Exposure Limits

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f ²	6
30-300	61.4	0.163	1.0	6
300-1,500	--	--	f/300	6
1,500-100,000	--	--	5	6
(B) Limits for General Population/Uncontrolled Exposure				
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
300-1,500	--	--	f/1500	30
1,500-100,000	--	--	1.0	30

f = frequency in MHz * = Plane-wave equivalent power density



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