

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



MPE/RF EXPOSURE TEST REPORT

FROM



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:

MiCOM Labs, Inc.
575 Boulder Court
Pleasanton California 94566
USA
Phone: +1 (925) 462-0304
Fax: +1 (925) 462-0306
www.micomlabs.com



MiCOM Labs is an ISO 17025 Accredited Testing Laboratory

1. MAXIMUM PERMISSABLE EXPOSURE

Calculations for Maximum Permissible Exposure Levels

Power Density = P_d (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



575 Boulder Court
Pleasanton, California 94566, USA
Tel: +1 (925) 462 0304
Fax: +1 (925) 462 0306
www.micomlabs.com