

FCC ID: 2AF20-SAS-10
IC: 20700-SAS-10

Test Report # 4170-1
Dated: 11/3/15

Intentional Radiator Test Report

Test Standards:
FCC Part 15.223 (Subpart C – Intentional Radiators)
Industry Canada RSS-210, Issue 8

Prepared For:
Fullpower Technologies, Inc.
1200 Pacific Ave, Ste 300
Santa Cruz, CA 95060
USA

Product Name :
SleepTracker

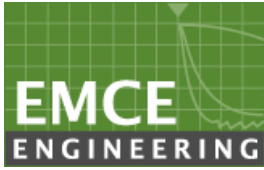
Model Name :
STS-10

Application Purpose : Original

Prepared by:

EMCE Engineering, Inc.
44366 S. Grimmer Blvd.
Fremont, CA 94538
USA

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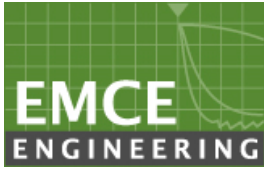


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Revision History

| Rev. | Issue Date | Description |
|------|------------|---------------|
| 0 | 11/3/15 | Initial Issue |

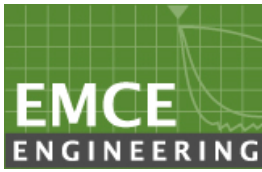


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FCC ID: 2AF2O-SAS-10
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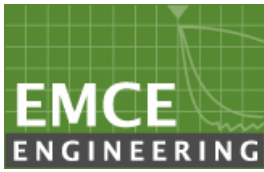
1.0 GENERAL INFORMATION

| | |
|------------------------------|---|
| Test Laboratory: | EMCE Engineering 44366 S. Grimmer Blvd. Fremont, CA 94538 USA Tel: 510-490-4307, Fax: 510-490-3441 bob@universalcompliance.com |
| | FCC registration number : 743299 |
| | Test Site : FCC : US5291, IC : 3324A |
| Applicant Name : | Fullpower Technologies, Inc. 1200 Pacific Ave, Ste 300 Santa Cruz, CA 95060 Tel: (831) 459-0447 Contact Person: Louis Bouchard |
| Application Purpose : | Original |
| EUT Description | Intentional Radiator 1.705 – 10 MHz Range |
| Product Name | SleepTracker |
| Model Name : | STS-10 |
| Applied Standards : | 47 CFR §15.207, 15.209, 15.223: 2010 & Canadian Standards RSS-GEN Issue 3, RSS-210 Issue 8 |
| FCC ID : | 2AF2O-STO-10 |
| IC : | 20700-STO-10 |
| RF Operating Frequency (ies) | 2.45 – 3.40 MHz |
| Modulation | N/A |
| Emission Designator | N0N |
| Receipt of EUT : | 10/16/15 |
| Date of Testing : | 10/16/15 – 10/29/15 |
| Date of Report : | 11/3/15 |

The tests listed in this report have been completed to demonstrated compliance to the CFR 47 Section 15.223, as well as Industry Canada Radio Standard RSS-210, Issue 8.

Contents approved:

| |
|---|
|  |
| Name: Bob Cole Title: President |

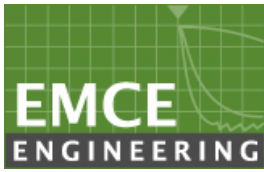


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2.0 EUT AND ACCESSORY INFORMATION

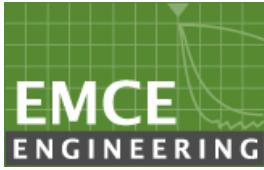
| <i>EUT</i> | | | | |
|--------------------------|-------------------------------------|------------------------|-----------------------|--------------------------------|
| <i>Model name:</i> | <i>STS-10</i> | | | |
| <i>Description:</i> | <i>SleepTracker</i> | | | |
| <i>Manufacturer:</i> | <i>Fullpower Technologies, Inc.</i> | | | |
| <i>Support Equipment</i> | | | | |
| <i>Description</i> | <i>Model Number</i> | <i>Serial Number</i> | <i>Manufacturer</i> | <i>Power Cable Description</i> |
| <i>AC Adapter</i> | <i>PSM10R-050</i> | <i>N/A</i> | <i>PhiHong</i> | <i>N/A</i> |
| | | | | |
| <i>Cable Description</i> | | | | |
| <i>From</i> | <i>To</i> | <i>Length (Meters)</i> | <i>Shielded (Y/N)</i> | <i>Ferrite Loaded (Y/N)</i> |
| <i>AC Adapter</i> | <i>EUT Processor</i> | <i>0.5</i> | <i>N</i> | <i>N</i> |



3.0 SUMMARY OF TEST RESULTS

| Test Standard | | Description | Pass / Fail |
|---|-----------------|---|-------------|
| 47 CFR Part 15.223: 2010 | RSS 210 Issue 8 | | |
| 15.203 | | Antenna Requirement | Pass |
| 15.207(a) | RSS Gen(7.2.2) | Conducted Emissions Voltage | Pass |
| 15.223(a) | RSS210(A2.3) | Peak Power Limit in the band of 1.705 - 10 MHz | Pass |
| 15.223(a) | RSS210(A2.3) | Occupied BW Limit in the band of 1.705 - 10 MHz | Pass |
| 15.223(b) | RSS210(A2.3) | Radiated Spurious Emissions Limit in the band of 1.705 - 10 MHz | Pass |
| | RSS-GEN(6.6) | Occupied Bandwidth | Pass |
| ANSI C63.4: 2009/ RSS-Gen Issue 4 | | | |
| PS: All measurement uncertainties are not taken into consideration for all presented test result. | | | |

PASS The EUT passed that particular test.
FAIL The EUT failed that particular test.
N/A Not Applicable due to product type.



FCC ID: 2AF20-SAS-10
IC: 20700-SAS-10

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4.0 MODIFICATIONS

There were no modifications.

5.0 TEST RESULTS

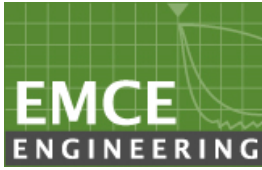
5.1 Antenna Requirement

Requirement(s): 47 CFR §15.203

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

Antenna requirement must meet at least one of the following:

- a) Antenna must be permanently attached to the device.
 - b) Antenna must use a unique type of connector to attach to the device.
 - c) Device must be professionally installed. Installer shall be responsible for ensuring that the correct antenna is employed with the device.
- 1) The antenna is integral to the main board permanently to the device which meets the requirement (See Internal Photographs submitted as another Exhibit).



5.2 Conducted Emissions Voltage

Requirement(s): 47 CFR §15.207

Requirement:

| Frequency of emission (MHz) | Conducted limit (dBµV) | |
|-----------------------------|------------------------|-----------|
| | Quasi-peak | Average |
| 0.15–0.5 | 66 to 56* | 56 to 46* |
| 0.5–5 | 56 | 46 |
| 5–30 | 60 | 50 |

*Decreases with the logarithm of the frequency.

Procedures:

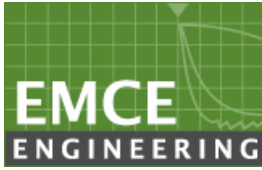
- All possible modes of operation were investigated. Only the 6 worst case emissions measured, using the correct CISPR and Average detectors, are reported. All other emissions were relatively insignificant.
- "Ave" margin indicates a PASS as it refers to the margin present below the limit line at the particular frequency.
- Conducted Emissions Measurement Uncertainty
All test measurements carried out are traceable to national standards. The uncertainty of measurement at a confidence level of approximately 95% (in the case where distributions normal), with a coverage factor of 2, in the range 9kHz – 30MHz (Average & Quasi-peak) ±3.5dB.
- Environmental Conditions

| | |
|----------------------|----------|
| Temperature | 24°C |
| Relative Humidity | 45% |
| Atmospheric Pressure | 1010mbar |

Test Date : 10/16/2015

Tested By : Bob Cole

Results: Pass



FCC ID: 2AF20-SAS-10
IC: 20700-SAS-10

Test Report # 4170-1
Dated: 11/3/15

FCC Part 15.207 Line Conducted Emissions
120V / 60 Hz - Line 1
150kHz – 30 MHz

Test Location: EMCE Engineering • 44366 S. Grimmer Blvd • Fremont, CA 94538 •

Customer: **FullPower**
Specification: **EN55022 B COND**
Work Order #: **4170**
Test Type: **Conducted Emissions**
Equipment: **SleepTracker**
Manufacturer: Fullpower Technologies
Model: STS-10
S/N: N/A

Date: 10/16/2015
Time: 15:04:38
Sequence#: 11
Tested By: Bob Cole
120V 60Hz

Equipment Under Test (* = EUT):

| Function | Manufacturer | Model # | S/N |
|--------------|------------------------|---------|-----|
| SleepTracker | Fullpower Technologies | STS-10 | N/A |

Support Devices:

| Function | Manufacturer | Model # | S/N |
|----------|--------------|---------|-----|
|----------|--------------|---------|-----|

Test Conditions / Notes:

| |
|----------------------------|
| Reworked PCB A - 2 Sensors |
|----------------------------|

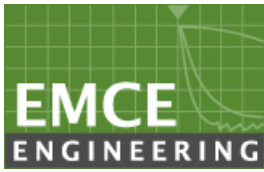
Transducer Legend:

| | |
|---------------------------------|-----------------------------------|
| T1=25' LMR #001 | T2=EMCO 3810-2 LISN S/N 9807-1988 |
| T3=HP 11947A Trans. Limiter TL1 | |

Ext Attn: 0 dB

Measurement Data: Reading listed by frequency. Test Lead: Line 1

| # | Freq MHz | Rdng dB μ V | T1 dB | T2 dB | T3 dB | dB | Dist Table | Corr dB μ V | Spec dB μ V | Margin dB | Polar Ant |
|---|-------------|--------------------|----------|----------|----------|----|---------------|--------------------|--------------------|--------------|--------------|
| 1 | 927.720k | 29.4 | +0.1 | +0.5 | +9.9 | | +0.0 | 39.9 | 56.0 | -16.1 | Line |
| | QP | | | | | | | | | | |
| 2 | 927.720k | 21.3 | +0.1 | +0.5 | +9.9 | | +0.0 | 31.8 | 46.0 | -14.2 | Line |
| | Ave | | | | | | | | | | |
| 3 | 1.346M | 28.0 | +0.1 | +0.5 | +9.9 | | +0.0 | 38.5 | 56.0 | -17.5 | Line |
| | QP | | | | | | | | | | |
| 4 | 1.346M | 23.5 | +0.1 | +0.5 | +9.9 | | +0.0 | 34.0 | 46.0 | -12.0 | Line |
| | Ave | | | | | | | | | | |
| 5 | 8.968M | 32.7 | +0.1 | +0.8 | +10.0 | | +0.0 | 43.6 | 60.0 | -16.4 | Line |
| | QP | | | | | | | | | | |
| 6 | 8.968M | 9.9 | +0.1 | +0.8 | +10.0 | | +0.0 | 20.8 | 50.0 | -29.2 | Line |
| | Ave | | | | | | | | | | |
| 7 | 9.566M | 31.0 | +0.1 | +0.8 | +10.0 | | +0.0 | 41.9 | 60.0 | -18.1 | Line |
| | QP | | | | | | | | | | |
| 8 | 9.566M | 9.1 | +0.1 | +0.8 | +10.0 | | +0.0 | 20.0 | 50.0 | -30.0 | Line |
| | Ave | | | | | | | | | | |

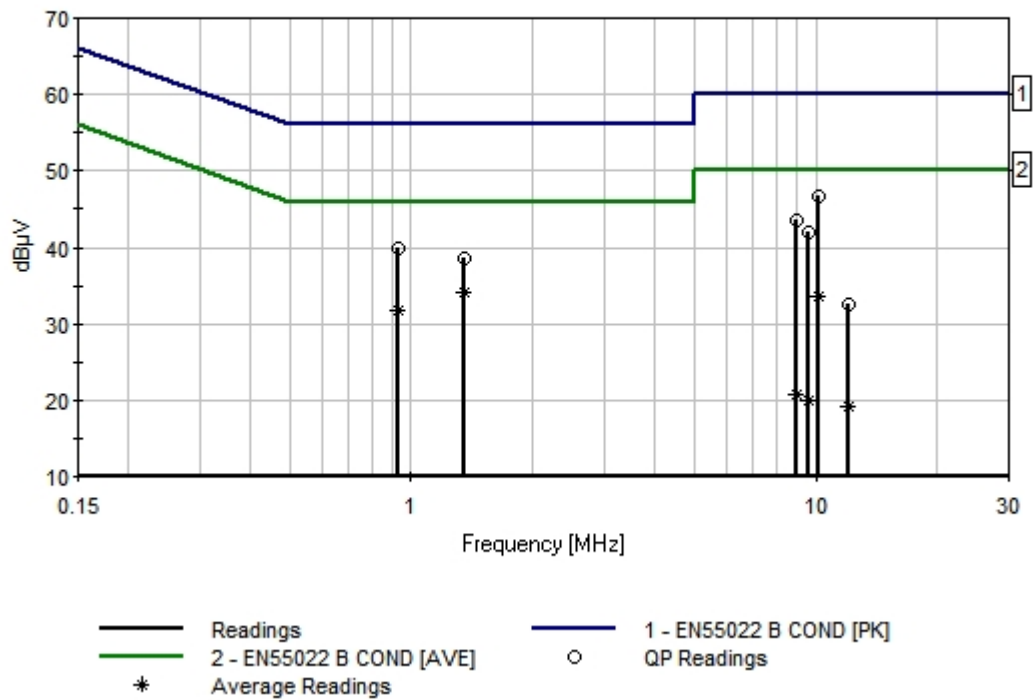


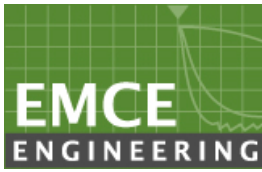
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| | | | | | | | | | | |
|-----|---------|------|------|------|-------|------|------|------|-------|------|
| 9 | 10.114M | 35.7 | +0.1 | +0.8 | +10.0 | +0.0 | 46.6 | 60.0 | -13.4 | Line |
| QP | | | | | | | | | | |
| 10 | 10.114M | 22.8 | +0.1 | +0.8 | +10.0 | +0.0 | 33.7 | 50.0 | -16.3 | Line |
| Ave | | | | | | | | | | |
| 11 | 12.108M | 21.6 | +0.1 | +0.9 | +10.0 | +0.0 | 32.6 | 60.0 | -27.4 | Line |
| QP | | | | | | | | | | |
| 12 | 12.108M | 8.1 | +0.1 | +0.9 | +10.0 | +0.0 | 19.1 | 50.0 | -30.9 | Line |
| Ave | | | | | | | | | | |

EMCE Engineering Date: 10/16/2015 Time: 15:04:38 FullPower WO#: 4170
 EN55022 B COND [AVE] Test Lead: Line 1 120V 60Hz Sequence#: 11 Ext ATTN: 0 dB





FCC ID: 2AF20-SAS-10
IC: 20700-SAS-10

Test Report # 4170-1
Dated: 11/3/15

FCC Part 15.207 Line Conducted Emissions
120V / 60 Hz - Line 2
150kHz – 30 MHz

Test Location: EMCE Engineering • 44366 S. Grimmer Blvd • Fremont, CA 94538 •

Customer: **FullPower**
Specification: **EN55022 B COND**
Work Order #: **4170**
Test Type: **Conducted Emissions**
Equipment: **SleepTracker**
Manufacturer: Fullpower Technologies
Model: STS-10
S/N: N/A

Date: 10/16/2015
Time: 15:16:07
Sequence#: 12
Tested By: Bob Cole
120V 60Hz

Equipment Under Test (* = EUT):

| Function | Manufacturer | Model # | S/N |
|--------------|------------------------|---------|-----|
| SleepTracker | Fullpower Technologies | STS-10 | N/A |

Support Devices:

| Function | Manufacturer | Model # | S/N |
|----------|--------------|---------|-----|
|----------|--------------|---------|-----|

Test Conditions / Notes:

| |
|----------------------------|
| Reworked PCB A - 2 Sensors |
|----------------------------|

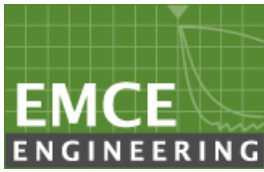
Transducer Legend:

| | |
|---------------------------------|-----------------------------------|
| T1=25' LMR #001 | T2=EMCO 3810-2 LISN S/N 9807-1988 |
| T3=HP 11947A Trans. Limiter TL1 | |

Ext Attn: 0 dB

Measurement Data: Reading listed by frequency. Test Lead: Line 2

| # | Freq MHz | Rdng dBµV | T1 dB | T2 dB | T3 dB | Dist dB | Table | Corr dBµV | Spec dBµV | Margin dB | Polar Ant |
|---|-------------|--------------|----------|----------|----------|------------|-------|--------------|--------------|--------------|--------------|
| 1 | 1.184M | 10.7 | +0.1 | +0.5 | +9.9 | +0.0 | | 21.2 | 56.0 | -34.8 | Line |
| | QP | | | | | | | | | | |
| 2 | 1.184M | 4.0 | +0.1 | +0.5 | +9.9 | +0.0 | | 14.5 | 46.0 | -31.5 | Line |
| | Ave | | | | | | | | | | |
| 3 | 1.287M | 11.0 | +0.1 | +0.5 | +9.9 | +0.0 | | 21.5 | 56.0 | -34.5 | Line |
| | QP | | | | | | | | | | |
| 4 | 1.287M | 2.5 | +0.1 | +0.5 | +9.9 | +0.0 | | 13.0 | 46.0 | -33.0 | Line |
| | Ave | | | | | | | | | | |
| 5 | 1.346M | 10.4 | +0.1 | +0.5 | +9.9 | +0.0 | | 20.9 | 56.0 | -35.1 | Line |
| | QP | | | | | | | | | | |
| 6 | 1.346M | 0.1 | +0.1 | +0.5 | +9.9 | +0.0 | | 10.6 | 46.0 | -35.4 | Line |
| | Ave | | | | | | | | | | |
| 7 | 1.406M | 9.6 | +0.1 | +0.6 | +9.9 | +0.0 | | 20.2 | 56.0 | -35.8 | Line |
| | QP | | | | | | | | | | |
| 8 | 1.406M | -0.8 | +0.1 | +0.6 | +9.9 | +0.0 | | 9.8 | 46.0 | -36.2 | Line |
| | Ave | | | | | | | | | | |

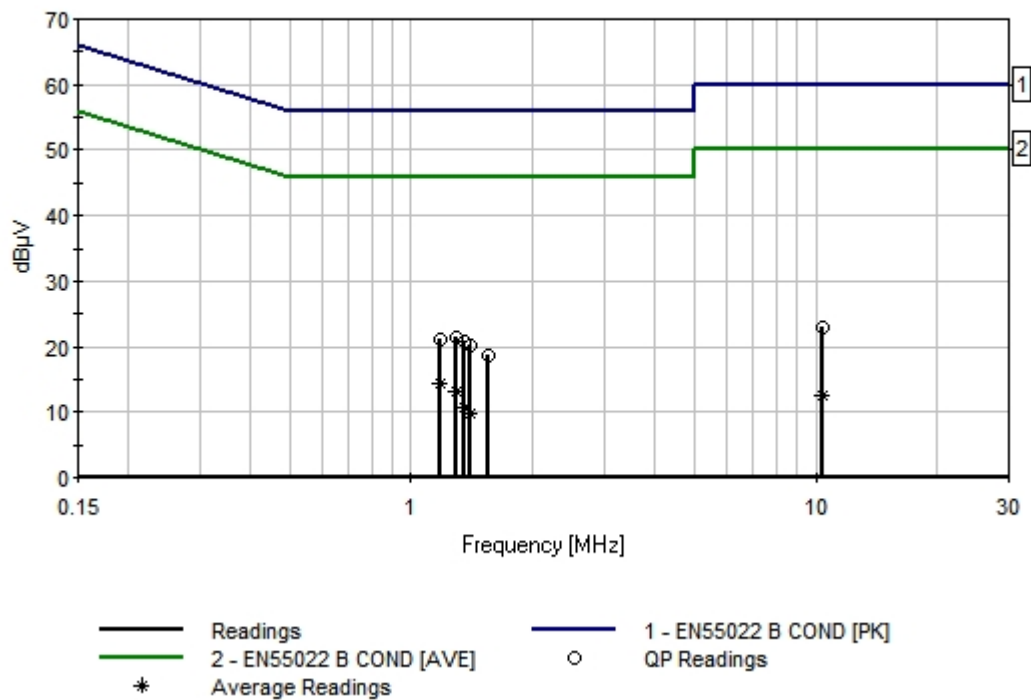


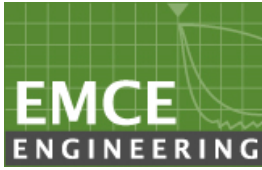
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| | | | | | | | | | | |
|-----|---------|------|------|------|-------|------|------|------|-------|------|
| 9 | 1.559M | 8.2 | +0.1 | +0.6 | +9.9 | +0.0 | 18.8 | 56.0 | -37.2 | Line |
| QP | | | | | | | | | | |
| 10 | 10.351M | 12.0 | +0.1 | +0.8 | +10.0 | +0.0 | 22.9 | 60.0 | -37.1 | Line |
| QP | | | | | | | | | | |
| 11 | 10.351M | 1.5 | +0.1 | +0.8 | +10.0 | +0.0 | 12.4 | 50.0 | -37.6 | Line |
| Ave | | | | | | | | | | |

EMCE Engineering Date: 10/16/2015 Time: 15:16:07 FullPower WO#: 4170
 EN55022 B COND [AVE] Test Lead: Line 2 120V 60Hz Sequence#: 12 Ext ATTN: 0 dB





5.3 Peak Power Limit in the band of 1.705 - 10 MHz

Requirement(s): 47 CFR §15.223(a) & RSS-210 (A2.3)

Procedures: For < 30MHz, Radiated emissions were measured according to ANSI C63.4. The EUT was set to transmit at the highest output power.

- After exploratory readings at 3 meters failed to detect a signal, the EUT was set 1 meter away from the measuring antenna. The loop antenna was positioned 1 meter above the ground from the centre of the loop.
- The measuring bandwidth was set to 9 kHz. (Note: During testing the receive antenna was rotated about its axis to maximize the emission from the EUT.)
- CISPR Average Detector was used for Peak Power and OBW measurements

Sample Calculation: The limit is converted from microvolt/meter to decibel microvolt/meter.

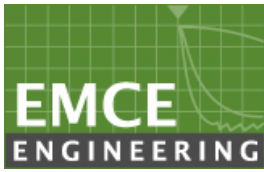
Corrected Amplitude = Raw Amplitude (dBµV/m) + ACF (dB) + Cable Loss (dB) – Distance Correction Factor

NOTE: Distance Correction factor of 40 dB/decade was used per ANSI 63.10, section 6.4.4

Limit per CFR 47 15.223 (a): The field strength of any emission within the band 1.705-10.0 MHz shall not exceed 100 microvolts/meter at a distance of 30 meters. However, if the bandwidth of the emission is less than 10% of the center frequency, the field strength shall not exceed 15 microvolts/meter or (the bandwidth of the device in kHz) divided by (the center frequency of the device in MHz) microvolts/meter at a distance of 30 meters, whichever is the higher level.

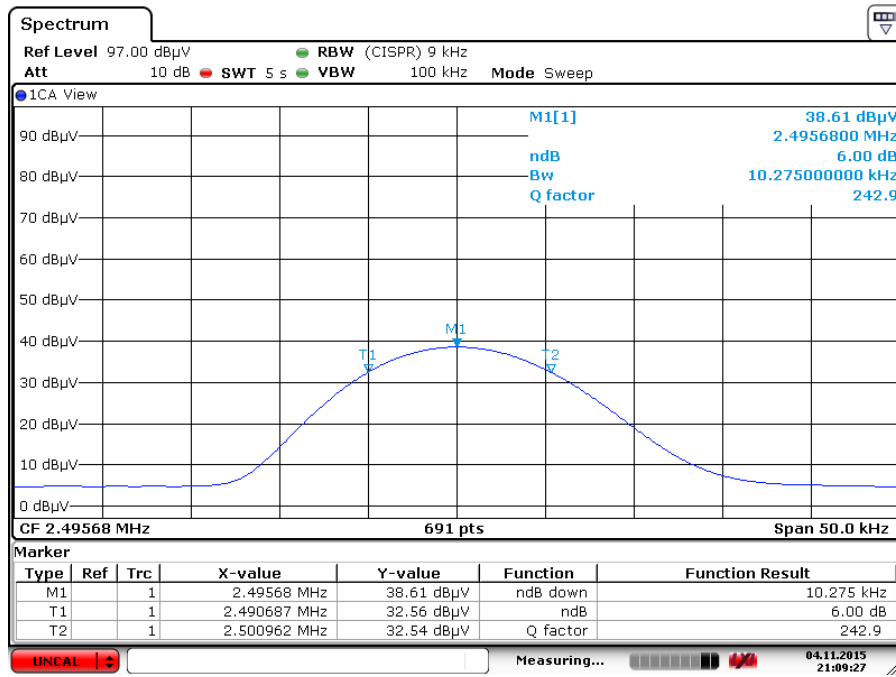
$$\begin{aligned} \text{OBW} & \qquad \text{Center Frequency} \\ 10.275 \text{ [kHz]} & \ / \ 2.4956 \text{ [MHz]} = 4.117 \\ & \qquad \qquad \qquad 4.117 < 15 \end{aligned}$$

Therefore, limit is 15 uV @ 30M, or 23.52 dBuV/m



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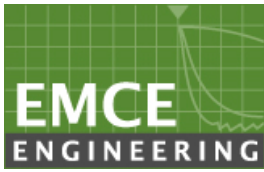
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Date: 4 NOV 2015 21:09:27

$$\text{Raw Amp } 38.61 + \text{Cable Factor } 0.1 + \text{Antenna Factor } 48.4 - \text{Pre-Amp Gain } 25.4 - \text{Distance Factor } 59.08 = \text{Peak Power } 2.63 \text{ dBuV/m}$$

EUT Peak Power passes by 20.89 dB



FCC ID: 2AF20-SAS-10
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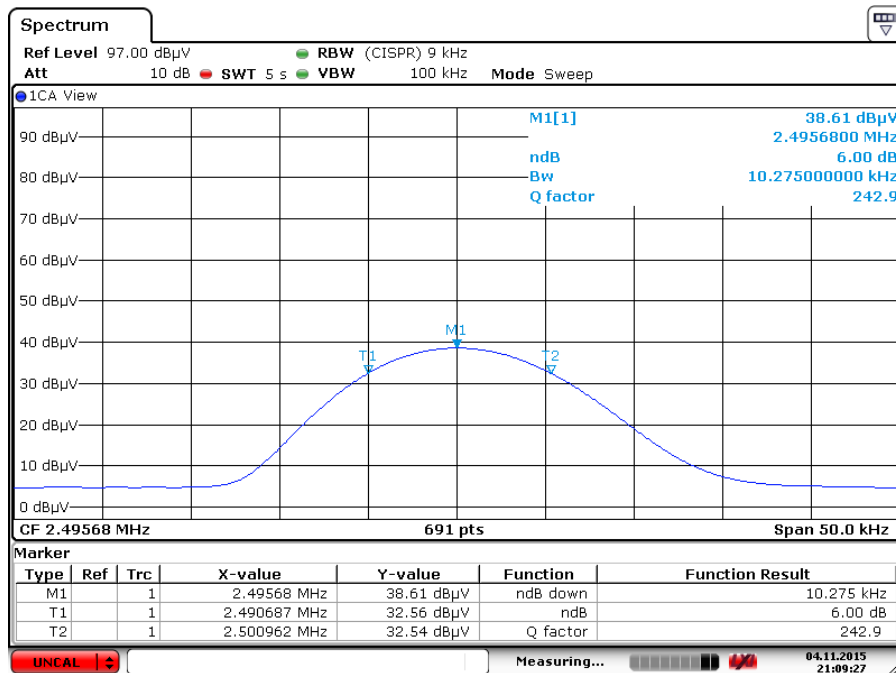
5.3 Occupied BW in the band of 1.705 - 10 MHz

Requirement(s): 47 CFR §15.223(a) & RSS-210 (A2.3)

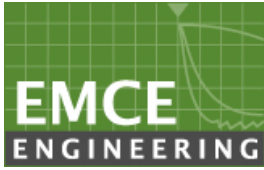
Procedures: For < 30MHz, Radiated emissions were measured according to ANSI C63.4. The EUT was set to transmit at the highest output power.

- After exploratory readings at 3 meters failed to detect a signal, the EUT was set 1 meter away from the measuring antenna. The loop antenna was positioned 1 meter above the ground from the centre of the loop.
- The measuring bandwidth was set to 9 kHz. (Note: During testing the receive antenna was rotated about its axis to maximize the emission from the EUT.)
- CISPR Average Detector was used for Peak Power and OBW measurements

Limit per CFR 47 15.223 (a): For the purposes of this section, bandwidth is determined at the points 6 dB down from the modulated carrier.



Date: 4 NOV 2015 21:09:27



5.4 Radiated Emission < 30MHz (9kHz - 30MHz, H-Field)

Requirement(s): 47 CFR §15.223 & RSS-210 (A2.3) & RSS-310 (3.7)

Procedures: For < 30MHz, Radiated emissions were measured according to ANSI C63.4. The EUT was set to transmit at the highest output power. The EUT was set 3 meter away from the measuring antenna. The loop antenna was positioned 1 meter above the ground from the centre of the loop. The measuring bandwidth was set to 10 kHz. (Note: During testing the receive antenna was rotated about its axis to maximize the emission from the EUT.)

The limit is converted from microvolt/meter to decibel microvolt/meter.

Sample Calculation: Corrected Amplitude = Raw Amplitude (dBµV/m) + ACF (dB) + Cable Loss (dB) – Distance Correction Factor

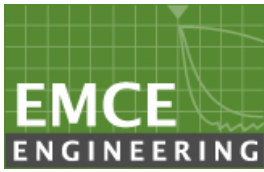
1. All possible modes of operation were investigated. Only the 6 worst case emissions measured, using the correct CISPR detectors, are reported. All other emissions were relatively insignificant.
2. A negative margin indicates a PASS as it refers to the margin present below the limit line at the particular frequency.
3. Radiated Emissions Measurement Uncertainty
All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2, is +/-4.77 dB.
4. Environmental Conditions

| | |
|----------------------|----------|
| Temperature | 24°C |
| Relative Humidity | 45% |
| Atmospheric Pressure | 1010mbar |

Test Date : 10/29/15

Tested By : Bob Cole

Results: Pass



FCC ID: 2AF20-SAS-10
IC: 20700-SAS-10

Test Report # 4170-1
Dated: 11/3/15

FCC Part 15.209 Radiated Emissions 9 kHz – 30 MHz

Test Location: EMCE Engineering •44366 S. Grimmer Blvd • Fremont, CA 94538 •

| | | | |
|----------------|-------------------------------------|------------|------------|
| Customer: | FullPower | Date: | 10/29/2015 |
| Specification: | 15.209 9k-30M FCC Limits 10M | Time: | 14:34:34 |
| Work Order #: | 4170 | Sequence#: | 1 |
| Test Type: | Radiated Scan | Tested By: | Bob Cole |
| Equipment: | SleepTracker | | |
| Manufacturer: | Fullpower Technologies | | |
| Model: | STS-10 | | |
| S/N: | N/A | | |

Equipment Under Test (* = EUT):

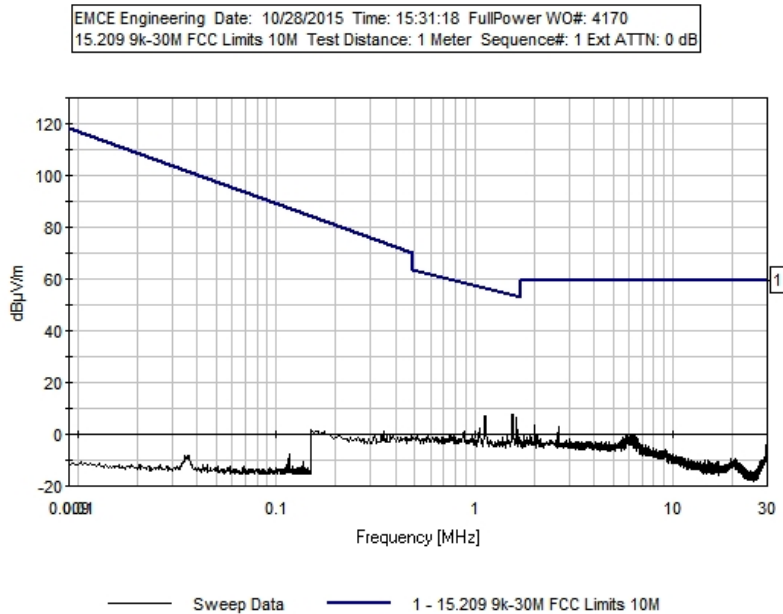
| Function | Manufacturer | Model # | S/N |
|--------------|------------------------|---------|-----|
| SleepTracker | Fullpower Technologies | STS-10 | N/A |

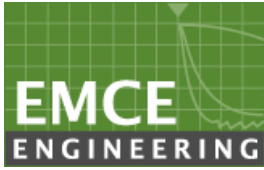
Support Devices:

| Function | Manufacturer | Model # | S/N |
|----------|--------------|---------|-----|
|----------|--------------|---------|-----|

Test Conditions / Notes:

No Signals Within 20 dB of Limit





5.5 Radiated Emissions > 30 MHz (30MHz – 1 GHz, E-Field)

Requirement(s): 47 CFR §15.209; 47 CFR §15.223(d) & RSS-210 (A2.3)

Procedures: For > 30MHz, Radiated emissions were measured according to ANSI C63.4. The EUT was set to transmit at the highest output power. The EUT was set 10 meter away from the measuring antenna. The Log periodic antenna was positioned 1 meter above the ground from the centre of the antenna. The measuring bandwidth was set to 120 kHz. (Note: During testing the receive antenna was raise from 1~4 meters to maximize the emission from the EUT.)

The limit is converted from microvolt/meter to decibel microvolt/meter.

Sample Calculation: Corrected Amplitude = Raw Amplitude (dBµV/m) + ACF (dB) + Cable Loss(dB) – Distance Correction Factor

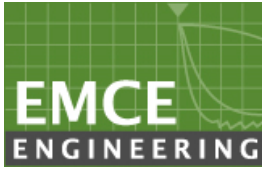
1. All possible modes of operation were investigated. Only the 6 worst case emissions measured, using the correct CISPR detectors, are reported. All other emissions were relatively insignificant.
2. A “-ve” margin indicates a PASS as it refers to the margin present below the limit line at the particular frequency.
3. Radiated Emissions Measurement Uncertainty
All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2, is +/-4.96dB.
4. Environmental Conditions

| | |
|----------------------|----------|
| Temperature | 25.5°C |
| Relative Humidity | 41.4% |
| Atmospheric Pressure | 1074mbar |

Test Date : 10/16/15

Tested By : Bob Cole

Results: Pass



FCC ID: 2AF20-SAS-10
IC: 20700-SAS-10

Test Report # 4170-1
Dated: 11/3/15

FCC Part 15B Radiated Emissions
30 MHz – 1 GHz
Horizontal Polarization

Test Location: EMCE Engineering •44366 S. Grimmer Blvd • Fremont, CA 94538 •

Customer: **FullPower**
Specification: **FCC B RADIATED 1 GHz**
Work Order #: **4170** Date: 10/16/2015
Test Type: **Radiated Scan** Time: 15:57:56
Equipment: **SleepTracker** Sequence#: 9
Manufacturer: Fullpower Technologies Tested By: Bob Cole
Model: STS-10
S/N: N/A

Equipment Under Test (* = EUT):

| Function | Manufacturer | Model # | S/N |
|--------------|------------------------|---------|-----|
| SleepTracker | Fullpower Technologies | STS-10 | N/A |

Support Devices:

| Function | Manufacturer | Model # | S/N |
|----------|--------------|---------|-----|
|----------|--------------|---------|-----|

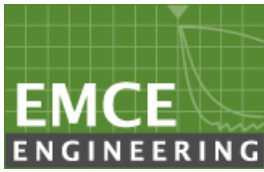
Test Conditions / Notes:

| |
|----------------------------|
| Reworked PCB A - 2 Sensors |
|----------------------------|

Transducer Legend:

| | |
|---------------------------|-------------------------|
| T1=8447 Pre-Amp Asset 377 | T2=Sunol JB6 S/N A42610 |
| T3=25' LMR #001 | |

Ext Attn: 0 dB



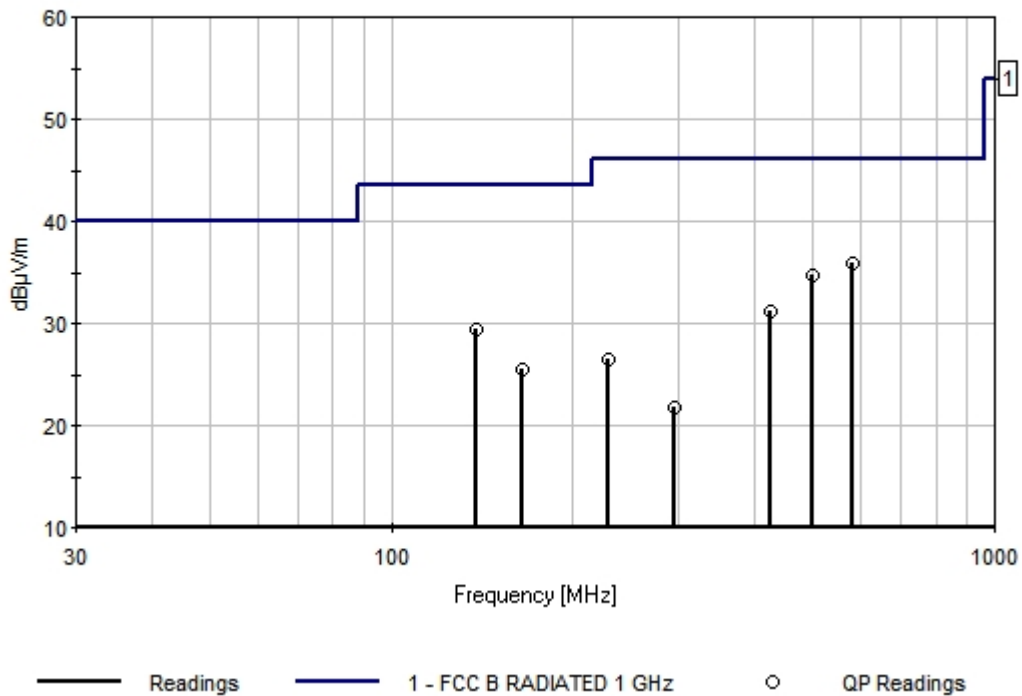
FCC ID: 2AF20-SAS-10
 IC: 20700-SAS-10

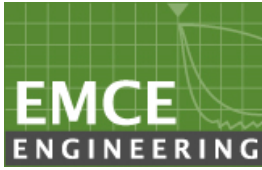
Test Report # 4170-1
 Dated: 11/3/15

Measurement Data: Reading listed by margin. Test Distance: 10 Meters

| # | Freq MHz | Rdng dBμV | T1 dB | T2 dB | T3 dB | Dist Table | Corr dBμV/m | Spec dBμV/m | Margin dB | Polar Ant |
|---|----------------|-----------|-------|-------|-------|--------------|-------------|-------------|-----------|--------------|
| 1 | 582.960M QP | 33.4 | +27.0 | +19.0 | +0.5 | +10.0 180 | 35.9 | 46.0 | -10.1 | Horiz 150 |
| 2 | 499.930M QP | 33.4 | +26.9 | +17.9 | +0.4 | +10.0 154 | 34.8 | 46.0 | -11.2 | Horiz 145 |
| 3 | 138.656M QP | 32.8 | +26.7 | +13.2 | +0.1 | +10.0 154 | 29.4 | 43.5 | -14.1 | Horiz 150 |
| 4 | 425.860M QP | 31.5 | +26.9 | +16.3 | +0.3 | +10.0 154 | 31.2 | 46.0 | -14.8 | Horiz 150 |
| 5 | 165.050M QP | 30.0 | +26.8 | +12.1 | +0.1 | +10.0 210 | 25.4 | 43.5 | -18.1 | Horiz 122 |
| 6 | 229.359M QP | 32.2 | +26.9 | +11.1 | +0.1 | +10.0 352 | 26.5 | 46.0 | -19.5 | Horiz 118 |
| 7 | 294.363M QP | 25.1 | +27.0 | +13.5 | +0.1 | +10.0 180 | 21.7 | 46.0 | -24.3 | Horiz 118 |

EMCE Engineering Date: 10/16/2015 Time: 15:57:56 FullPower WO#: 4170
 FCC B RADIATED 1 GHz Test Distance: 10 Meters Sequence#: 9 Ext ATTN: 0 dB





FCC ID: 2AF20-SAS-10
IC: 20700-SAS-10

Test Report # 4170-1
Dated: 11/3/15

FCC Part 15B Radiated Emissions 30 MHz – 1 GHz Vertical Polarization

Test Location: EMCE Engineering •44366 S. Grimmer Blvd • Fremont, CA 94538 •

| | | | |
|----------------|-----------------------------|------------|------------|
| Customer: | FullPower | Date: | 10/16/2015 |
| Specification: | FCC B RADIATED 1 GHz | Time: | 15:39:42 |
| Work Order #: | 4170 | Sequence#: | 10 |
| Test Type: | Radiated Scan | Tested By: | Bob Cole |
| Equipment: | SleepTracker | | |
| Manufacturer: | Fullpower Technologies | | |
| Model: | STS-10 | | |
| S/N: | N/A | | |

Equipment Under Test (* = EUT):

| Function | Manufacturer | Model # | S/N |
|--------------|------------------------|---------|-----|
| SleepTracker | Fullpower Technologies | STS-10 | N/A |

Support Devices:

| Function | Manufacturer | Model # | S/N |
|----------|--------------|---------|-----|
|----------|--------------|---------|-----|

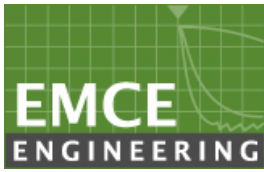
Test Conditions / Notes:

| |
|----------------------------|
| Reworked PCB A - 2 Sensors |
|----------------------------|

Transducer Legend:

| | |
|---------------------------|-------------------------|
| T1=8447 Pre-Amp Asset 377 | T2=Sunol JB6 S/N A42610 |
| T3=100' LMR 900 Rad Cable | |

Ext Attn: 0 dB



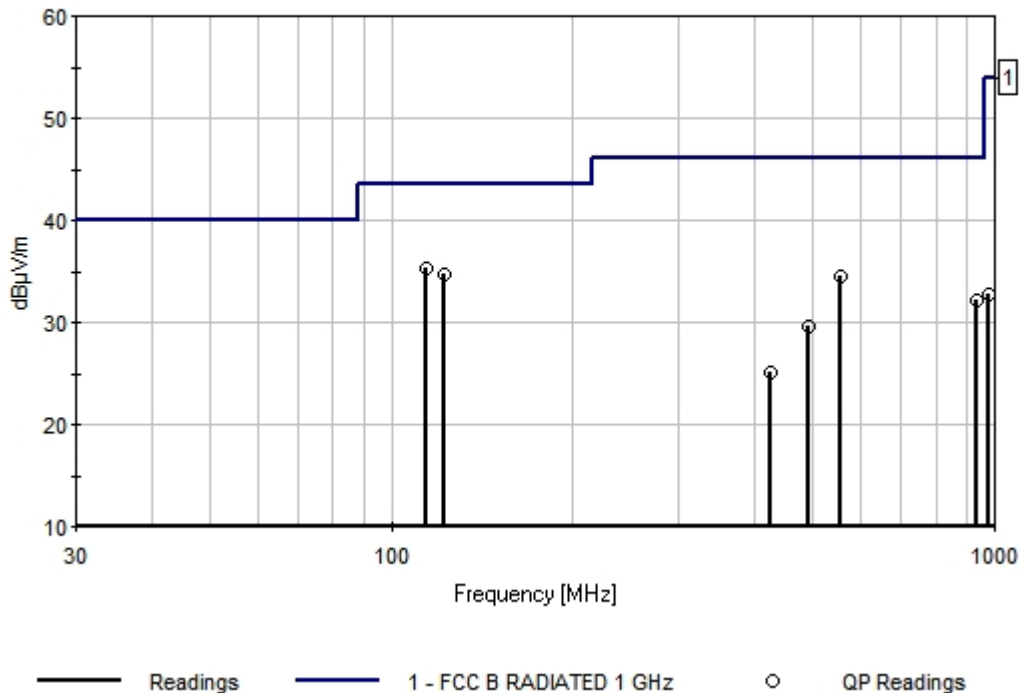
FCC ID: 2AF20-SAS-10
IC: 20700-SAS-10

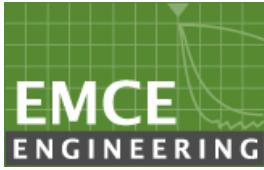
Test Report # 4170-1
Dated: 11/3/15

Measurement Data: Reading listed by margin. Test Distance: 10 Meters

| # | Freq MHz | Rdng dB μ V | T1 dB | T2 dB | T3 dB | Dist Table | Corr dB μ V/m | Spec dB μ V/m | Margin dB | Polar Ant |
|---|----------------|-----------------|-------|-------|-------|--------------|-------------------|-------------------|-----------|-------------|
| 1 | 114.409M QP | 39.1 | +26.8 | +13.0 | -0.1 | +10.0 180 | 35.2 | 43.5 | -8.3 | Vert 120 |
| 2 | 122.324M QP | 38.1 | +26.7 | +13.4 | -0.1 | +10.0 170 | 34.7 | 43.5 | -8.8 | Vert 122 |
| 3 | 557.047M QP | 32.3 | +27.0 | +18.2 | +1.1 | +10.0 180 | 34.6 | 46.0 | -11.4 | Vert 142 |
| 4 | 937.009M QP | 24.6 | +26.9 | +22.4 | +2.1 | +10.0 | 32.2 | 46.0 | -13.8 | Vert 122 |
| 5 | 491.384M QP | 27.8 | +26.9 | +17.8 | +0.9 | +10.0 90 | 29.6 | 46.0 | -16.4 | Vert 120 |
| 6 | 426.052M QP | 24.9 | +26.9 | +16.3 | +0.8 | +10.0 180 | 25.1 | 46.0 | -20.9 | Vert 128 |
| 7 | 980.641M QP | 24.2 | +26.8 | +22.8 | +2.5 | +10.0 | 32.7 | 54.0 | -21.3 | Vert 122 |

EMCE Engineering Date: 10/16/2015 Time: 15:39:42 FullPower WO#: 4170
FCC B RADIATED 1 GHz Test Distance: 10 Meters Sequence#: 10 Ext ATTN: 0 dB





FCC ID: 2AF2O-SAS-10
 IC: 20700-SAS-10

Test Report # 4170-1
 Dated: 11/3/15

5.7 Occupied Bandwidth (99%)

Requirement(s): RSS-210 (5.9.1)

Procedures: Occupied Bandwidth was measured according to RSS-210 (5.9.1). Measurement was taken with spectrum analyzer. The spectrum analyzer bandwidth and span was set to read in hertz.

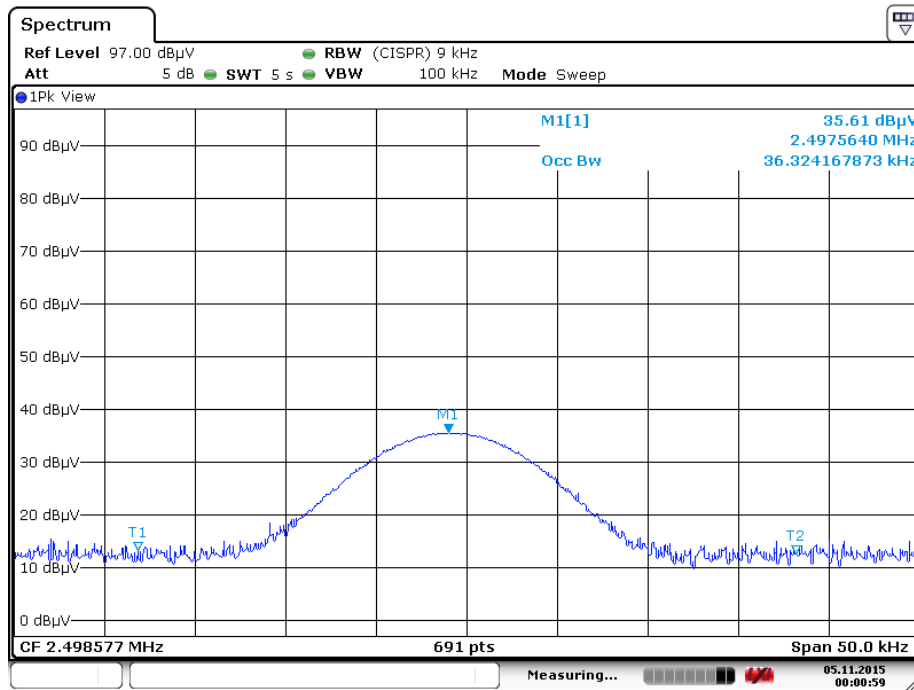
| | | |
|--------------------------|----------------------|------------|
| Environmental Conditions | Temperature | 24.4°C |
| | Relative Humidity | 51.6% |
| | Atmospheric Pressure | 101026mbar |

Test Date : 10/29/15

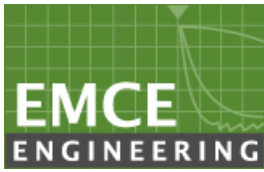
Tested By : Bob Cole

Results: Pass

| Frequency | Occupied Bandwidth (99%) |
|-----------|--------------------------|
| 2.497 MHz | 36.32 kHz |



Date: 5 NOV 2015 00:00:59



FCC ID: 2AF20-SAS-10
IC: 20700-SAS-10

Test Report # 4170-1
Dated: 11/3/15

6.0 TEST EQUIPMENT

Line Conducted Emissions Measurements:

| Equipment | Type | Manufacturer | Calibration Date | Calibration Due Date |
|-------------------|--------------|-----------------|------------------|----------------------|
| Spectrum Analyzer | FSV40 | Rohde & Schwarz | 7/27/14 | 7/27/16 |
| Transient Limiter | 11947A | Hewlett-Packard | 5/2/15 | 5/2/17 |
| Cable | N – N, 25 ft | LMR | 5/10/15 | 5/10/17 |

Radiated Emissions Measurements:

| Equipment | Type | Manufacturer | Calibration Date | Calibration Due Date |
|-------------------|---------------|-----------------|------------------|----------------------|
| Spectrum Analyzer | FSV40 | Rohde & Schwarz | 7/27/14 | 7/27/16 |
| Antenna | JB6 BiConiLog | Sunol Sciences | 2/17/15 | 2/17/17 |
| Loop Antenna | LP-105 | Empire Devices | 10/27/15 | 10/27/17 |
| Cable | N – N, 100 ft | LMR | 5/10/15 | 5/10/17 |