

|                                        |                                                                  |
|----------------------------------------|------------------------------------------------------------------|
| <b>Test Report:</b>                    | 2004-080553-FCC-E                                                |
| <b>Applicant:</b>                      | Trapeze Networks                                                 |
| <b>Equipment Under Test:<br/>(EUT)</b> | 802.11b/g/a Combo Access Point                                   |
| <b>FCC ID:</b>                         | QZE100                                                           |
| <b>In Accordance With:</b>             | <b>FCC Part 15.401, Subpart E<br/>Class II Permissive Change</b> |
| <b>Tested By:</b>                      | Nemko San Diego Inc.                                             |
| <b>Authorized By:</b>                  | Chip Fleury                                                      |
| <b>Date:</b>                           | 8/25/2004                                                        |
| <b>Total Number of Pages:</b>          | 15                                                               |

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*EQUIPMENT: QZE100*

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## **Section 1. Summary of Test Results**

### **General**

**All measurements are traceable to national standards.**

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15, Subpart E. Radiated tests were conducted in accordance with ANSI C63.4-1992. Radiated emissions are made on an open area test site. A description of the test facility is on file with the FCC.

THIS TEST REPORT RELATES ONLY TO THE ITEM(S) TESTED.

THE FOLLOWING DEVIATIONS FROM, ADDITIONS TO, OR EXCLUSIONS FROM THE  
TEST SPECIFICATIONS HAVE BEEN MADE.

See " Summary of Test Data".

TESTED BY: Alan Laudani DATE: 8-4-04—9-3-04

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This report applies only to the items tested.

*EQUIPMENT: QZE100*

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**Summary Of Test Data**

| <b>Name Of Test</b>           | <b>Para. No.</b> | <b>Result</b> |
|-------------------------------|------------------|---------------|
| Powerline Conducted Emissions | 15.207(a)        | N/A           |
| Emission Bandwidth            | 15.403(c)        | N/A           |
| Peak Conducted Transmit Power | 15.407(a)(3)     | N/A           |
| Peak Power Spectral Density   | 15.407(a)(3)     | N/A           |
| Peak Excursion Measurement    | 15.407(a)(6)     | N/A           |
| Undesirable Emissions         | 15.407(b)(3)(5)  | Complies      |

Note:

- (1) This application is for a class II permissive change to this device approved under FCC ID# QZE100.
- (2) The scope of changes are as follows:
  - (a) Addition of an integral Centurion puck 3dBi antenna.
  - (b) Re-layout of the PCB.
- (3) The radio circuitry and RF characteristics are unchanged from the original certification, and as such only the relevant radiated data has been provided.
- (4) The RF exposure requirements comply as per the original certification.

**Test Conditions:**

**Outdoor**                      Temperature: 25°C  
                                     Humidity: 30%

## **Section 2.        General Equipment Specification**

|                                     |                                                |
|-------------------------------------|------------------------------------------------|
| <b>Manufacturer:</b>                | Trapeze Networks                               |
| <b>Model No.:</b>                   | MP-100                                         |
| <b>Serial No.:</b>                  |                                                |
| <b>Date Received In Laboratory:</b> | 12 Aug. 2004                                   |
| <b>Nemko Identification No.:</b>    |                                                |
| <b>Operating Frequency(s):</b>      | 5180-5240MHz<br>5260-5320MHz                   |
| <b>Rated Power (maximum):</b>       | 5150-5250MHz = 11dBm<br>5250-5350MHz = 13.8dBm |
| <b>Modulation/Access Method:</b>    | 802.11a, OFDM                                  |
| <b>Antenna Data:</b>                | 3dBi Centurion Puck (integral)                 |

*EQUIPMENT: QZE100*

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### **Section 3. Undesirable Emissions**

**Para. No.: 15.407(b)(2)**

|                                         |                                  |
|-----------------------------------------|----------------------------------|
| <b>Test Performed By: Glen Westwell</b> | <b>Date of Test: 12 Aug 2004</b> |
|-----------------------------------------|----------------------------------|

**Test Results:** Complies

**Measurement Data:** See attached plots and table.

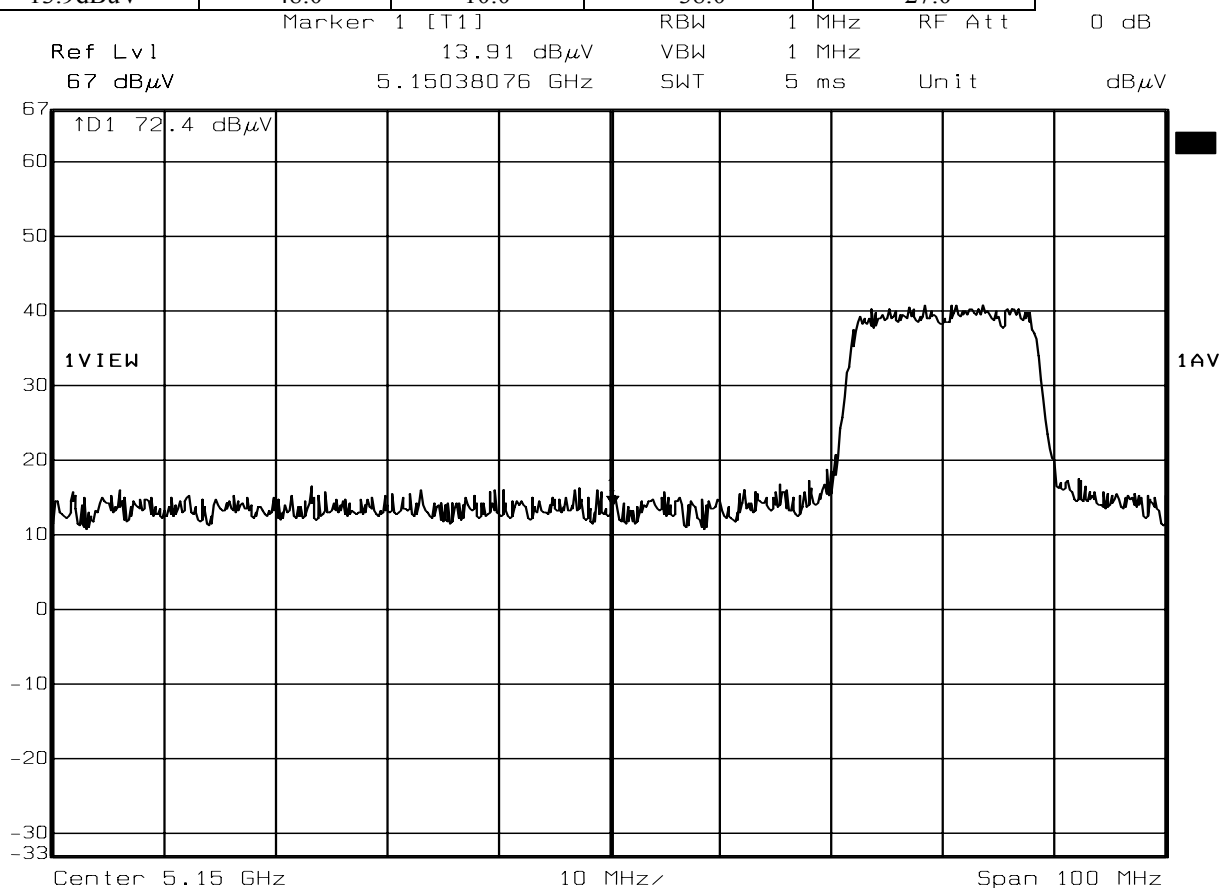
- Emissions were searched for all possible configurations. Worst case data has been presented.
- The DUT was searched from 30MHz to the 10<sup>th</sup> harmonic. Only those emissions within 20dB of the limit were reported.
- Bandedge emissions were measured at the lowest and highest operating frequencies.
- The power supply source was varied +/-15% to verify worst case emissions.

EQUIPMENT: QZE100

5150-5250MHz

Lower Band Edge, 802.11a, Integral 3dBi puck antenna, Ch. 36

| Band Edge Level<br>(dBuV) | Signal<br>Substitution<br>Level (dBm) | Antenna Gain<br>(dBi) | Emission Power<br>Level<br>(dBm) | Limit<br>(dBm) |
|---------------------------|---------------------------------------|-----------------------|----------------------------------|----------------|
| 13.9dBuV                  | -48.0                                 | 10.0                  | -38.0                            | -27.0          |



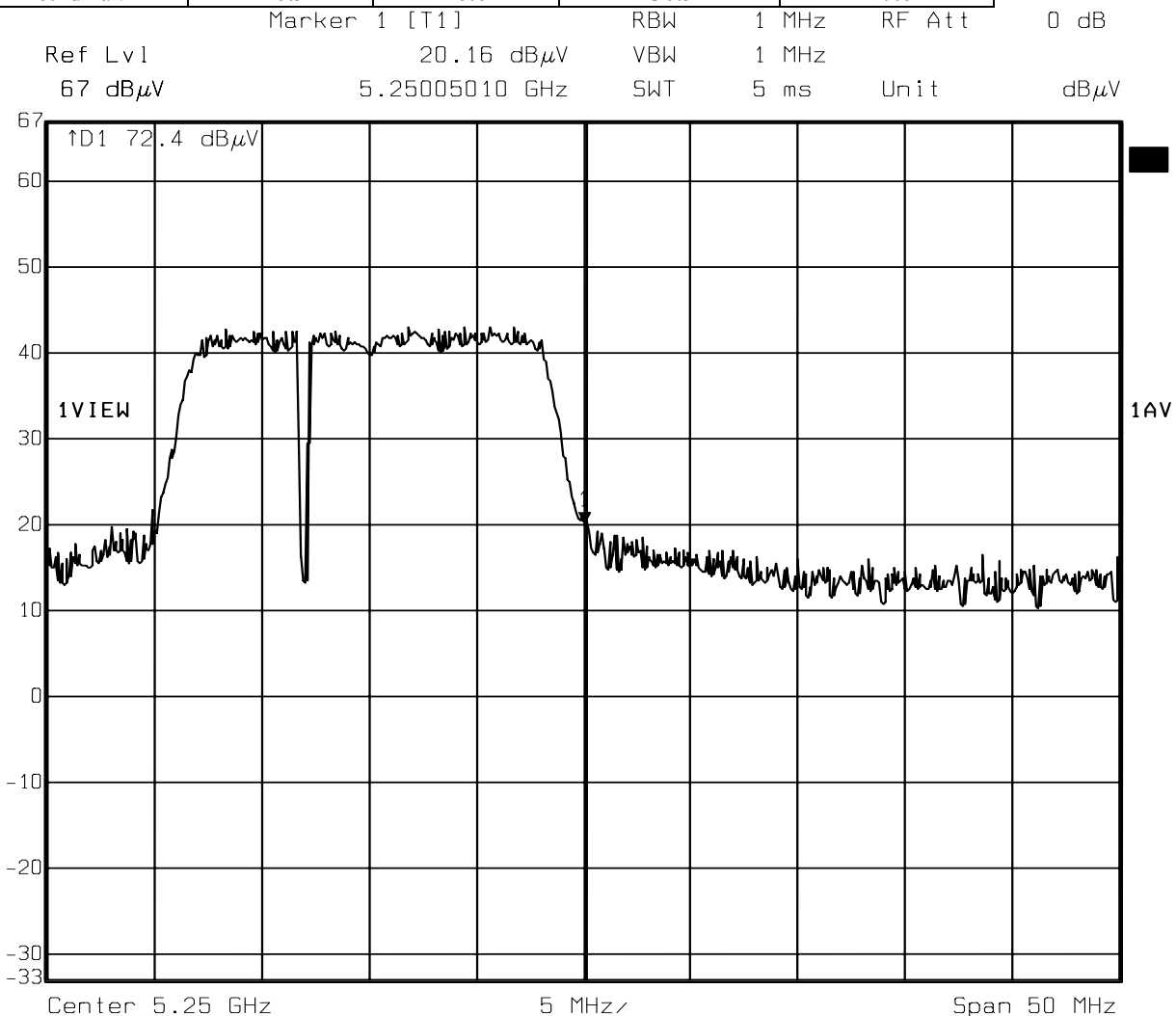
Date: 12.AUG.2004 15:32:52

EQUIPMENT: QZE100

5150-5250MHz

Upper Band Edge, 802.11a, Integral 3dBi puck antenna, Ch. 48

| Band Edge Level<br>(dBuV) | Signal<br>Substitution<br>Level (dBm) | Antenna Gain<br>(dBi) | Emission Power<br>Level<br>(dBm) | Limit<br>(dBm) |
|---------------------------|---------------------------------------|-----------------------|----------------------------------|----------------|
| 20.2dBuV                  | -40.9                                 | 10.0                  | -30.9                            | -27.0          |



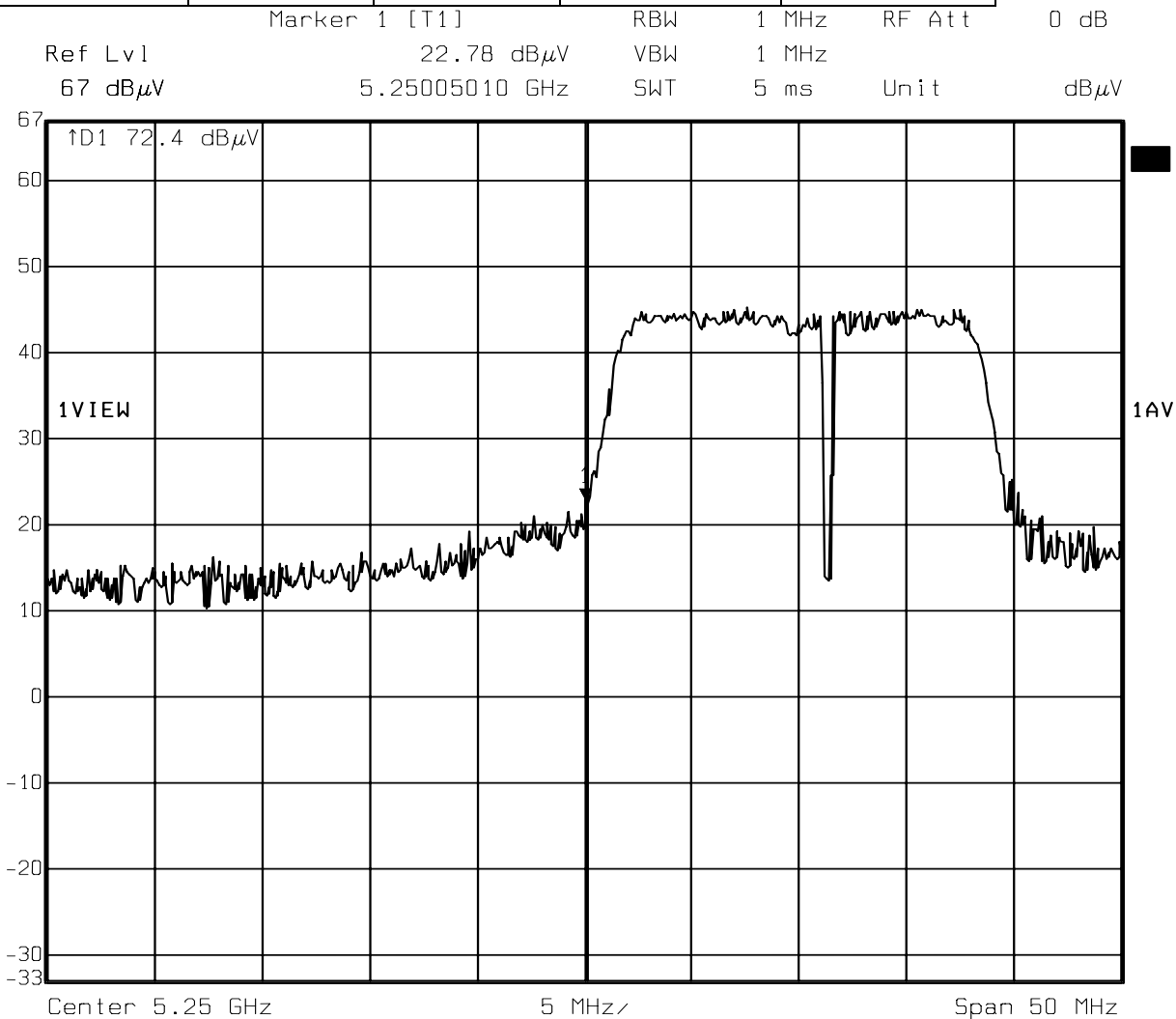
Date: 12.AUG.2004 15:39:57

EQUIPMENT: QZE100

5250-5350MHz

Upper Band Edge, 802.11a, Integral 3dBi puck antenna, Ch. 52

| Band Edge Level<br>(dBuV) | Signal<br>Substitution<br>Level (dBm) | Antenna Gain<br>(dBi) | Emission Power<br>Level<br>(dBm) | Limit<br>(dBm) |
|---------------------------|---------------------------------------|-----------------------|----------------------------------|----------------|
| 22.8dBuV                  | -38.2                                 | 10.0                  | -28.2                            | -27.0          |



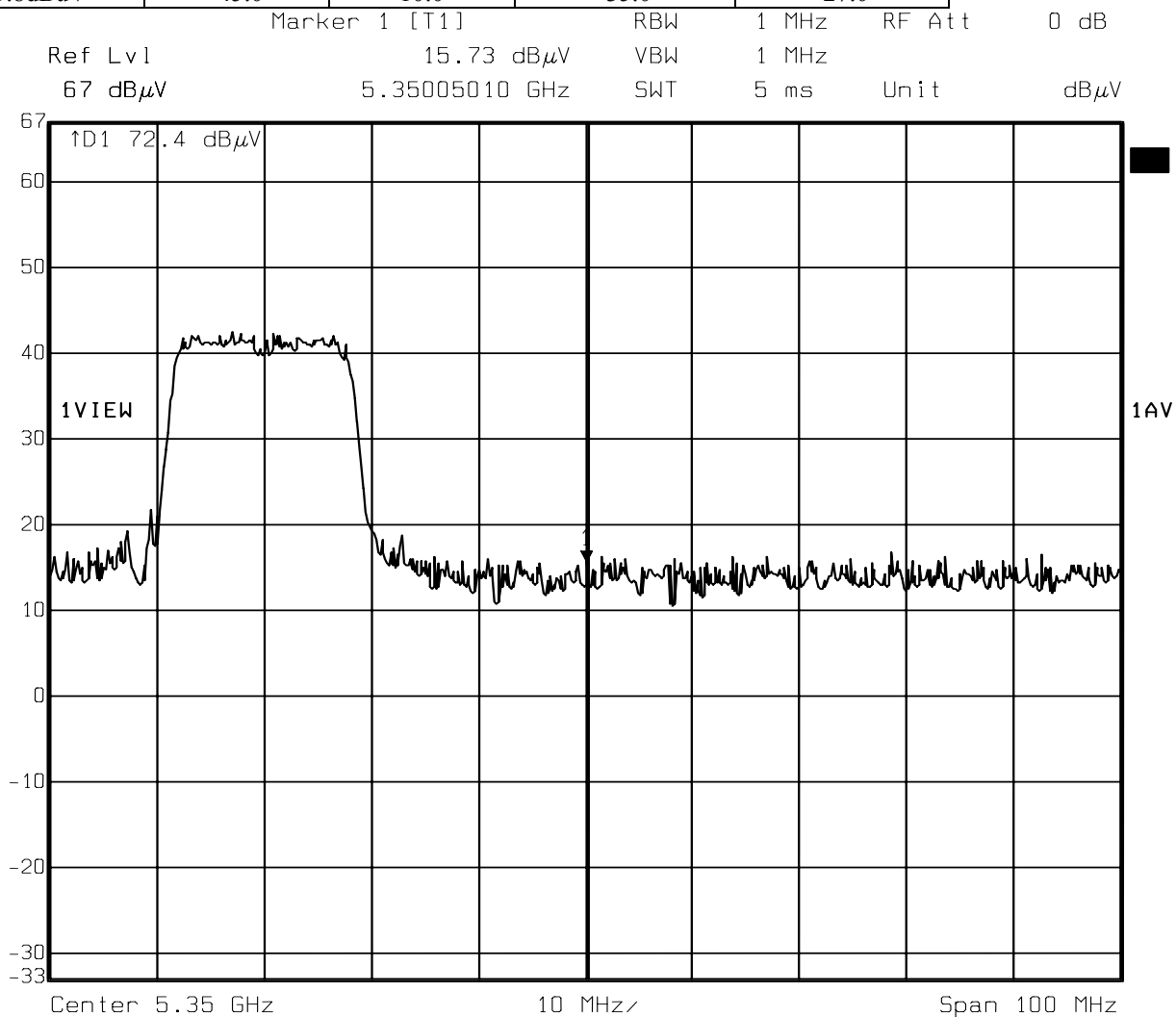
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EQUIPMENT: QZE100

5250-5350MHz

Upper Band Edge, 802.11a, Integral 3dBi puck antenna, Ch. 64

| Band Edge Level<br>(dBuV) | Signal<br>Substitution<br>Level (dBm) | Antenna Gain<br>(dBi) | Emission Power<br>Level<br>(dBm) | Limit<br>(dBm) |
|---------------------------|---------------------------------------|-----------------------|----------------------------------|----------------|
| 15.8dBuV                  | -45.0                                 | 10.0                  | -35.0                            | -27.0          |



Date: 12.AUG.2004 15:48:02

*EQUIPMENT: QZE100*

## 1. Radiated Disturbance Test Data:



**NEMKO USA, Inc.**

**San Diego Headquarters:**  
11696 Sorrento Valley Rd.  
San Diego, CA 92121  
Tel: (858) 755-5525  
Fax: (858) 452-1810

## Radiated Emissions Data

|                 |                                                                                    |                  |                   |                                           |
|-----------------|------------------------------------------------------------------------------------|------------------|-------------------|-------------------------------------------|
| Complete        | <u>Yes</u>                                                                         | Job # :          | <u>24-446-TRA</u> | Test # : <u>5</u>                         |
| Preliminary     | <u>          </u>                                                                  |                  | Page <u>1</u>     | of <u>1</u>                               |
| <br>            |                                                                                    |                  |                   |                                           |
| Client Name :   | <u>Trapeze Networks</u>                                                            |                  |                   |                                           |
| EUT Name :      | <u>Mobility Point</u>                                                              |                  |                   |                                           |
| EUT Model # :   | <u>100</u>                                                                         |                  |                   |                                           |
| EUT Part # :    | <u>                                </u>                                            |                  |                   |                                           |
| EUT Serial # :  | <u>                                </u>                                            |                  |                   |                                           |
| EUT Config. :   | <u>Emissions found from ch. 64, power level 14, channels 36, 48, 64 searched.</u>  |                  |                   |                                           |
| EUT Mode :      | <u>Mode A</u>                                                                      |                  |                   |                                           |
| Note:           | <u>EUT was scanned for emissions from the Fundamental up to the 10th Harmonic.</u> |                  |                   |                                           |
| Specification : | <u>FCC part 15.209, 15.407</u>                                                     |                  |                   |                                           |
| Rod. Ant. #:    | <u>NA</u>                                                                          | Temp. (deg. C) : | <u>24</u>         | Reference : <u>                    </u>   |
| Bicon Ant.#:    | <u>NA</u>                                                                          | Humidity (%) :   | <u>56</u>         | Date : <u>8/24/2004</u>                   |
| Log Ant.#:      | <u>NA</u>                                                                          | EUT Voltage :    | <u>NA</u>         | Time : <u>                    </u>        |
| DRG Ant. #      | <u>529</u>                                                                         | EUT Frequency :  | <u>NA</u>         | Staff : <u>A. Laudani</u>                 |
| Dipole Ant.#:   | <u>NA</u>                                                                          | Phase:           | <u>NA</u>         | Photo ID: <u>                    </u>     |
| Cable#:         | <u>20ft</u>                                                                        | Location:        | <u>SOATS</u>      | Peak Bandwidth: <u>RBW-1MHz, VBW-1MHz</u> |
| Preamp#:        | <u>40db</u>                                                                        | Distance:        | <u>3m</u>         | AV Bandwidth <u>RBW-1MHz, VBW-10Hz</u>    |
| Spec An.#:      | <u>NA</u>                                                                          |                  |                   |                                           |
| QP #:           | <u>NA</u>                                                                          |                  |                   |                                           |
| PreSelect#:     | <u>NA</u>                                                                          |                  |                   |                                           |

[illegible]

*EQUIPMENT: QZE100*



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**San Diego Headquarters:**  
11696 Sorrento Valley Rd.  
San Diego, CA 92121  
Tel: (858) 755-5525  
Fax: (858) 452-1810

## Substitution Method For Radiated Emissions

|                 |                                              |                  |            |                 |                    |
|-----------------|----------------------------------------------|------------------|------------|-----------------|--------------------|
| Complete        | Yes                                          | Job # :          | 24-446-TRA | Test # :        | 7                  |
| Preliminary     |                                              |                  | Page 1     | of              | 1                  |
| Client Name :   | Trapeze Networks                             |                  |            |                 |                    |
| EUT Name :      | Mobility Point                               |                  |            |                 |                    |
| EUT Model # :   | 100                                          |                  |            |                 |                    |
| EUT Part # :    |                                              |                  |            |                 |                    |
| EUT Serial # :  |                                              |                  |            |                 |                    |
| EUT Config. :   | Centurian internal Antenna -- Power level 15 |                  |            |                 |                    |
|                 | Mode A                                       |                  |            |                 |                    |
| Specification : | FCC part 15.209                              |                  |            |                 |                    |
| Rod. Ant. #:    | NA                                           | Temp. (deg. C) : | 24         | Reference :     |                    |
| Bicon Ant.#:    | NA                                           | Humidity (%) :   | 56         | Date :          | 8/24/2004          |
| Log Ant.#:      | NA                                           | EUT Voltage :    | NA         | Time :          |                    |
| DRG Ant. #      | 529                                          | EUT Frequency :  | NA         | Staff :         | A. Laudani         |
| Dipole Ant.#:   | NA                                           | Phase:           | NA         | Photo ID:       |                    |
| Cable#:         | 20ft                                         | Location:        | SOATS      | Peak Bandwidth: | RBW-1MHz, VBW-1MHz |
| Preamp#:        | 40db                                         | Distance:        | 3m         | AV Bandwidth    | RBW-1MHz, VBW-10Hz |
| Spec An.#:      | NA                                           |                  |            |                 |                    |
| QP #:           | NA                                           |                  |            |                 |                    |
| PreSpec#:       | NA                                           |                  |            |                 |                    |

| target    |        | Horn | cable | Signal    | Total  | Spec  | Margin |
|-----------|--------|------|-------|-----------|--------|-------|--------|
| Frequency | level  | Gain | loss  | Generator | (EIRP) |       |        |
| mHz       | dBuV/m | dBi  | dB    | dBm       | dBm    | dBm   | dBm    |
| 10640     | 66.7   | 12.1 | 11.6  | -31.2     | -30.7  | -27.0 | -3.7   |

*EQUIPMENT: QZE100*

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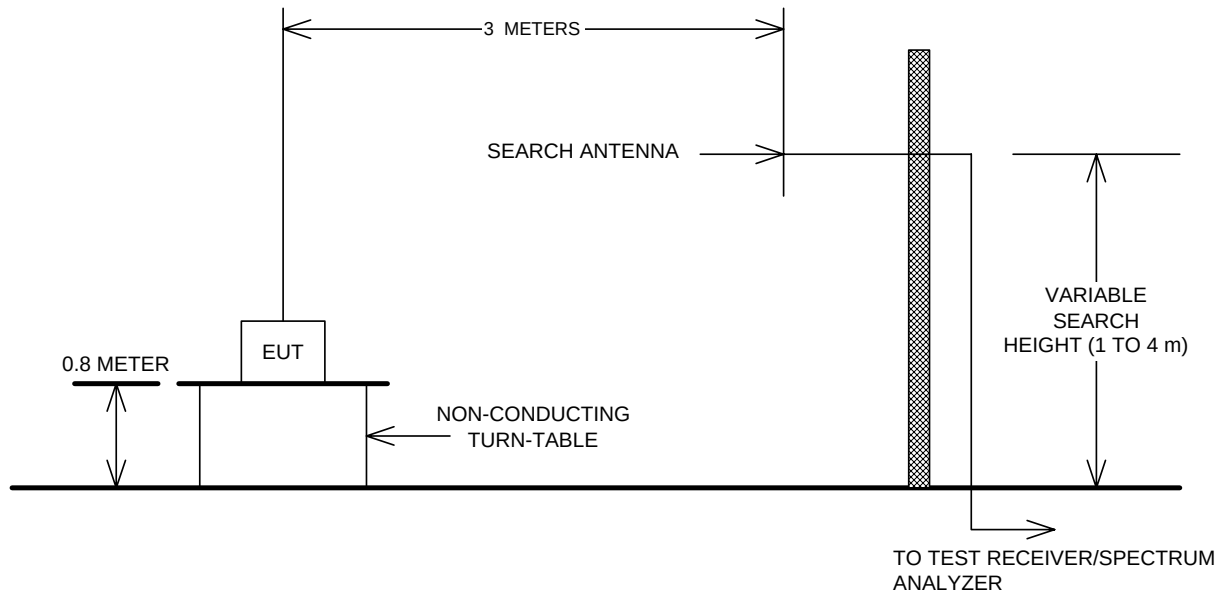
## **Radiated Emissions**

### **1. Integral 3dBi Puck Antenna**

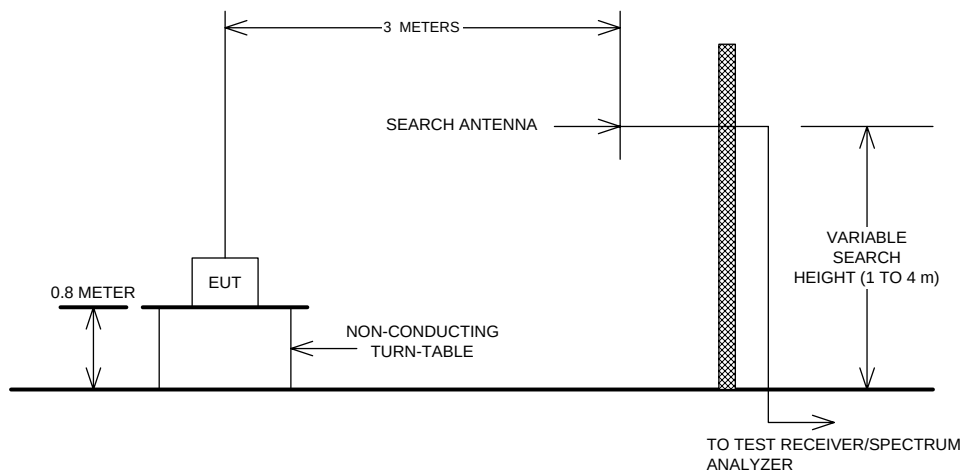


## Section 4. Block Diagrams

### Test Site For Radiated Emissions



### TIA/EIA 603, Signal Substitution Method



EQUIPMENT: QZE100

## Section 5. Test Equipment List

| Radiated Emissions Test Equipment |                                    |         |           |                          |          |
|-----------------------------------|------------------------------------|---------|-----------|--------------------------|----------|
| Client                            | Error! Cannot open file.           |         | EUT Name  | Error! Cannot open file. |          |
| PAN #                             | Error! Reference source not found. |         | EUT Model | Error! Cannot open file. |          |
| Device Type                       | Model #                            | MFG     | Asset #   | SN                       | Cal Due  |
| OATS #1 (North)                   |                                    |         |           |                          |          |
| Spectrum Analyzer                 | 1088.3494.30                       | R & S   | 835       | 830320/002               | 12/11/04 |
| Antenna, Ridged Guide             | 3115                               | EMCO    | 529       | 2505                     | 3/30/04  |
| Antenna, Ridged Guide             | 3116                               | EMCO    | 625       | 9611-2325                | 1/12/05  |
| Preamplifier                      | 40 dB                              | Miteq   | 171       | NA                       | NCR      |
| 4 GHz High Pass Filter            | 9SH10-4000                         | K&L     | NA        | 55                       | NCR      |
| Antenna, Ridged Guide             | 3115                               | EMCO    | 752       | 9609-4943                | 12/19/04 |
| Signal Generator                  | E8254A                             | Agilent | 836       | US41140229               | 11/6/04  |

NA: Not Applicable  
NCR: No Cal Required  
COU: CAL On Use