

### **6a.3: Radiated Spurious Emissions -- Pursuant 47 CFR 2.1053, 2.1057, 90.210(g)(3), 90.691(a)(2)**

#### **6a3.1 800-900 MHz Band**

##### FCC Limits

-Per 90.210(g) (3) and 90.691(a)(2), radiated spurious emissions shall be attenuated below the maximum level of emission of the carrier frequency in accordance with the following formula:

Spurious attenuation in dB =  $43 + 10 \log_{10} (P)$   
(Thus the effective limit is -13 dBm for any transmitter power level).

*NOTE 1: Spurious emissions are dependent on the linearity of the Power Amplifier and are independent of modulation type or TDM interleaving. Thus emissions were tested with the radio set to Quad-16QAM at both maximum and minimum radio output power settings.*

*NOTE 2: Spurious emission levels were measured with the non-detachable antenna mounted on the radio product, as in intended use. Measurement setup is described at the end of this exhibit.*

*NOTE 3: Spurious emissions are dependent on the linearity of the Power Amplifier (U2050) and are independent of modulation type or TDM interleaving. Thus, for the Land Mobile Band, emissions were tested with the radio set to Quad-16QAM.*

Test Report

Product Name: iDEN i580 Tx RADIATED

FCC ID: AZ489FT5848

Applicant:

MOTOROLA, INC.  
8000 WEST SUNRISE BLVD,  
FT. LAUDERDALE FL 33322-9947  
USA

**NAME OF TEST:** RADIATED SPURIOUS EMISSIONS  
**RULES PART:** PART 90  
**REQUIREMENTS:**  $43 + 10 \log (.64) = 41.10 \text{ dB}$

## TEST DATA:

| <b>Emission Frequency MHz</b> | <b>Ant. Polarity</b> | <b>dB Below Carrier (dBc)</b> |
|-------------------------------|----------------------|-------------------------------|
| <b>806.00</b>                 | <b>0</b>             | <b>0</b>                      |
| <b>1612.00</b>                | <b>V</b>             | <b>*</b>                      |
| <b>2418.00</b>                | <b>H</b>             | <b>*</b>                      |
| <b>3224.00</b>                | <b>V</b>             | <b>*</b>                      |

| <b>Emission Frequency MHz</b> | <b>Ant. Polarity</b> | <b>dB Below Carrier (dBc)</b> |
|-------------------------------|----------------------|-------------------------------|
| <b>813.00</b>                 | <b>0</b>             | <b>0</b>                      |
| <b>1627.13</b>                | <b>V</b>             | <b>*</b>                      |
| <b>2440.69</b>                | <b>H</b>             | <b>*</b>                      |
| <b>3254.25</b>                | <b>V</b>             | <b>*</b>                      |
| <b>8135.63</b>                | <b>H</b>             | <b>*</b>                      |

\* Indicates the spurious emission was less than -61 dBc or could not be detected due to noise limitations or ambients.

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TEST DATA CONTD.

| Emission Frequency MHz | Ant. Polarity | dB Below Carrier (dBc) |
|------------------------|---------------|------------------------|
| 820.00                 | 0             | 0                      |
| 1641.98                | V             | *                      |
| 2462.96                | H             | *                      |
| 3283.95                | H             | *                      |
| 8209.88                | H             | *                      |

| Emission Frequency MHz | Ant. Polarity | dB Below Carrier (dBc) |
|------------------------|---------------|------------------------|
| 824.00                 | 0             | 0                      |
| 1649.98                | V             | *                      |
| 2474.96                | H             | 63.05                  |
| 3299.95                | V             | *                      |

| Emission Frequency MHz | Ant. Polarity | dB Below Carrier (dBc) |
|------------------------|---------------|------------------------|
| 896.00                 | 0             | 0                      |
| 1792.04                | V             | *                      |
| 2688.06                | H             | *                      |
| 4480.09                | H             | *                      |
| 8064.17                | H             | *                      |

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TEST DATA CONTD.

| <b>Emission<br/>Frequency<br/>MHz</b> | <b>Ant.<br/>Polarity</b> | <b>dB<br/>Below<br/>Carrier<br/>(dBc)</b> |
|---------------------------------------|--------------------------|---|
| <b>900.00</b>                         | <b>0</b>                 | <b>0</b>                                  |
| <b>1081.96</b>                        | <b>V</b>                 | <b>*</b>                                  |
| <b>2702.94</b>                        | <b>H</b>                 | <b>*</b>                                  |
| <b>3603.93</b>                        | <b>H</b>                 | <b>*</b>                                  |
| <b>8108.83</b>                        | <b>H</b>                 | <b>*</b>                                  |

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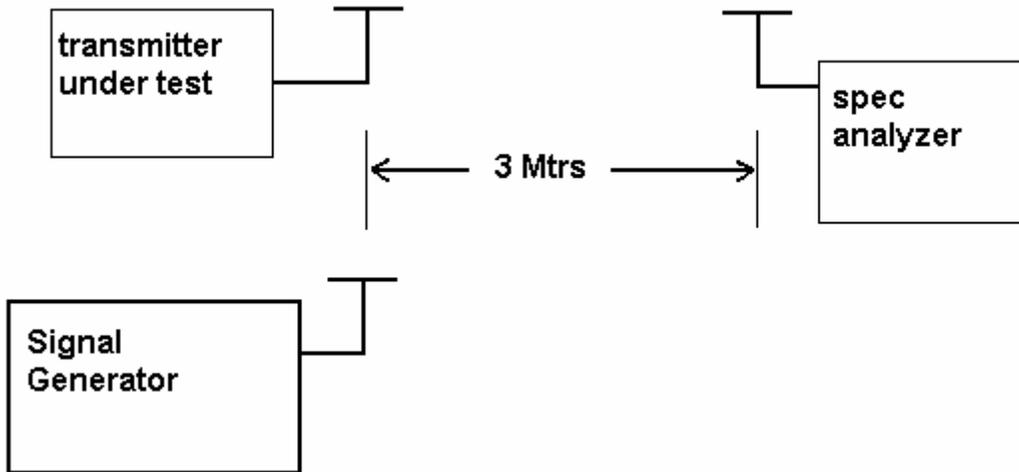
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**In this configuration, no spurious emissions were found.**

Method of Measuring Radiated Spurious Emissions



**METHOD OF MEASUREMENTS:** The tabulated data shows the results of the radiated field strength emissions test. The spectrum was scanned from 30 MHz to at least the tenth harmonic of the fundamental. This test was conducted per TIA/EIA STANDARD 603 using the substitution method. Measurements were made at the open field test site of TIMCO ENGINEERING, INC. located at 849 NW State Road 45, Newberry, FL 32669.