

**RF POWER OUTPUT DATA**

The RF power output was measured with the indicated voltage applied to and current into the final RF amplifying device.

|                                   |        |       |
|-----------------------------------|--------|-------|
| Measured Conducted RF Output      | 0.580  | Watts |
| * Calculated Radiated RF Output * | 0.3338 | Watts |
| Normal DC Voltage                 | 4.20   | Volts |
| Normal DC Current                 | 650    | ma    |
| Primary Supply Voltage            | 4.50   | Volts |

RF Conducted output measured at 4.5 Volts

\*Calculated Radiated RF output. The conducted power measurements converted to dBm minus the antenna loss,

Which is 2.4dB (see exhibit 6A-2) and converted back to watts ERP

$10\log(580\text{mw}/1\text{mw}) = 27.635\text{dBm}$

$\text{ERP} = 27.635\text{dBm} - 2.4\text{dB} = 25.235\text{dBm}$

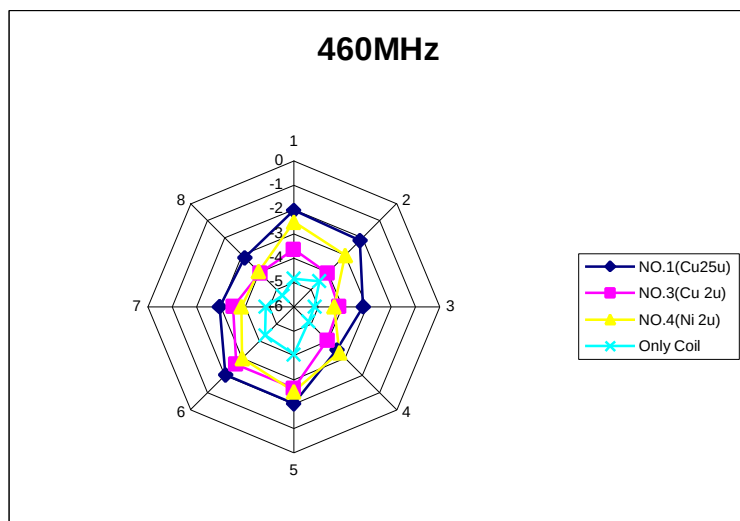
$\text{ERP} = 10^{(25.235/10)} = 10^{2.5235} = 333.8 \text{ mWatts.}$

The antenna gain (loss) is measured in an anechoic chamber free of outside radiation, refraction, defraction and interference. The anechoic chamber's path loss = 37.9 dBm. The antenna was placed on an infinite ground plane, and 10dBm was transmitted from the antenna. The receiving spectrum analyzer registered -30.3 dBm. Therefore, the antenna gain =  $P_r - P_t + \text{Pathloss} = -30.3 - 10 + 37.9 = -2.4 \text{ dB.}$

Antenna performance data over frequency is on the next page.

EXHIBIT: 6A-1

| <b>460MHz</b> |             | <b>UNIT:dBi</b> |             |           |
|---------------|-------------|-----------------|-------------|-----------|
| Degree        | NO.1(Cu25u) | NO.3(Cu 2u)     | NO.4(Ni 2u) | Only Coil |
| 0             | -2.05       | -3.65           | -2.52       | -4.85     |
| 45            | -2.15       | -4.05           | -3.02       | -4.52     |
| 90            | -3.15       | -4.15           | -4.35       | -5.15     |
| 135           | -3.49       | -4.05           | -3.35       | -5.15     |
| 180           | -2.02       | -2.65           | -2.52       | -4.05     |
| 225           | -2.05       | -2.65           | -3.02       | -4.35     |
| 270           | -2.95       | -3.52           | -3.85       | -4.85     |
| 315           | -3.15       | -4.05           | -3.95       | -5.35     |
| Average       | -2.63       | -3.60           | -3.32       | -4.78     |



| <b>470MHz</b> |             | <b>UNIT:dBi</b> |             |           |
|---------------|-------------|-----------------|-------------|-----------|
| Degree        | NO.1(Cu25u) | NO.3(Cu 2u)     | NO.4(Ni 2u) | Only Coil |
| 0             | -2.53       | -2.51           | -3.35       | -4.18     |
| 45            | -2.68       | -3.18           | -3.51       | -4.68     |
| 90            | -2.35       | -3.51           | -3.68       | -5.18     |
| 135           | -2.68       | -2.99           | -3.95       | -4.68     |
| 180           | -2.35       | -2.93           | -3.19       | -4.68     |
| 225           | -2.01       | -2.35           | -3.34       | -4.35     |
| 270           | -2.51       | -2.51           | -2.85       | -4.52     |
| 315           | -2.69       | -2.99           | -3.68       | -4.01     |
| Average       | -2.48       | -2.87           | -3.44       | -4.54     |

