

| APPLICATION |           |          |
|-------------|-----------|----------|
| DASH NO.    | NEXT ASSY | USED ON  |
| -404        |           | 940-0530 |

## TITLE SHEET INDEX

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|                              |            |                                                        |                                                                                      |                                                                |                                |                  |  |
|------------------------------|------------|--------------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------|--------------------------------|------------------|--|
| <b>CONTRACT NO.</b><br>----- |            | <b>PRECIOUS METAL<br/>INDICATOR CODE:</b><br><b>NA</b> |                                                                                      | Honeywell International Inc.<br>Redmond, Washington 98073-9701 |                                | <b>Honeywell</b> |  |
| <b>DRAWN</b>                 | B. Piper   | 09 MAR 06                                              | Qualification Test Report for the<br><br>TPL-100A,<br><br>Honeywell PN: 940-0530-001 |                                                                |                                |                  |  |
| <b>CHECK</b>                 | K. Peavler | 09 MAR 06                                              |                                                                                      |                                                                |                                |                  |  |
| <b>ENGR</b>                  | A. Vdolek  | 09 MAR 06                                              |                                                                                      |                                                                |                                |                  |  |
| <b>MFG</b>                   | NA         | .                                                      |                                                                                      |                                                                |                                |                  |  |
| <b>QA</b>                    | W. Lambert | 09 MAR 06                                              | <b>SIZE</b><br>A                                                                     | <b>CAGE CODE</b><br>97896                                      | <b>DWG NO.</b><br>940-0530-404 | <b>REV.</b><br>- |  |
| <b>APVD</b>                  |            |                                                        | <b>SCALE: NONE</b>                                                                   |                                                                | <b>SHEET 1 OF 483</b>          |                  |  |

Current State: Release

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## Appendix A - Test Data

### A.1 Equipment List

#### EMI/EMS EQUIPMENT LIST

|                   |               |                    |              |
|-------------------|---------------|--------------------|--------------|
| <b>Procedure:</b> | 940-0530-101  | <b>Test Unit:</b>  | TPL-100A     |
| <b>Paragraph:</b> | 7 through 9.5 | <b>Part No.:</b>   | 940-0530-001 |
| <b>Operator:</b>  | Reza Nahcheri | <b>Serial No.:</b> | TPL00210     |

#### Input Power Tests

| Description                     | Mfgr      | Model No. | CCN/SN | Cal. Due |
|---------------------------------|-----------|-----------|--------|----------|
| Digital Oscilloscope 500 MHz    | Tektronix | TDS520D   | 205659 | 02/23/07 |
| Dual Display Multimeter         | Fluke     | 45        | 204264 | 04/05/06 |
| AC/DC Power Source              | Elgar     | SW1750A   | 520    | NCR      |
| AC Power Interrupt/Surge Tester | HON       | PIT001    | 2      | NCR      |
| Power Analyzer                  | Voltech   | Voltech   | 208751 | 18Mar06  |
| EMI Test Receiver               | R&S       | ESIB 26   | 207856 | 14NOV06  |

#### Voltage Spike Conducted Tests

| Description                  | Mfgr      | Model No. | CCN/SN | Cal. Due |
|------------------------------|-----------|-----------|--------|----------|
| DC Power Supply              | KH        | UHR-245   | 0204   | NCR      |
| Voltage Spike Tester         | HON       | VS001     | 1      | NCR      |
| Digital Oscilloscope 500 MHz | Tektronix | TDS520D   | 205659 | 23Feb07  |

#### AF Conducted Susceptibility Tests

| Description                   | Mfgr     | Model No. | CCN/SN | Cal. Due |
|-------------------------------|----------|-----------|--------|----------|
| Waveform Synthesizer 50MHz    | Wavetek  | 178       | 201721 | 28JAN06  |
| Waveform Synthesizer 50MHz    | Wavetek  | 178       | 201823 | 30Sept06 |
| Power Amp. 10k - 100MHz       | AR       | 25A100    | 391    | NCR      |
| Power Amp. 10 - 100KHz        | McIntosh | MC 2500   | 202186 | NCR      |
| Phase-Shift Network           | Solar    | 7021-1    | 776907 | NCR      |
| Transformer, Audio Isolation  | Solar    | 6220-1A   | None   | NCR      |
| Dual Display Multi-Meter      | Fluke    | 45        | 204264 | 05APR06  |
| Digital Multimeter (True RMS) | HP       | 3478A     | 203017 | 01Aug07  |

**Induced Signal Susceptibility Tests**

| <b>Description</b>           | <b>Mfgr</b> | <b>Model No.</b> | <b>CCN/SN</b> | <b>Cal. Due</b> |
|------------------------------|-------------|------------------|---------------|-----------------|
| Multimeter                   | Agilent     | 34401A           | 208185        | 14JUL06         |
| True RMS Multimeter          | Fluke       | 87               | 208836        | 23MAY06         |
| Digital Oscilloscope 500 MHz | Tektronix   | TDS520D          | 205659        | 23FEB07         |
| Dual Display Multimeter      | Fluke       | 45               | 204264        | 05APR06         |
| AC Current Probe             | Fluke       | 80i-400          | 203887        | 17DEC09         |
| AC Power Source              | C.I.        | 501TC            | 2658          | NCR             |
| Precision Oscillator         | C.I.        | 800T             | 200480        | NCR             |
| Chattering Relay Tester      | HW          | 951-6802-001     | N/A           | NCR             |
| Transformer, Current         | UTC         | S-63             | None          | NCR             |
| Transformer, Power           | abbott      | 7739             | None          | NCR             |

**RF Conducted Susceptibility**

| <b>Description</b>                   | <b>Mfgr</b> | <b>Model No.</b> | <b>CCN/SN</b> | <b>Cal. Due</b> |
|--------------------------------------|-------------|------------------|---------------|-----------------|
| Directional Coupler 220M – 400MHz    | AR          | DC5000           | 204626        | 15JUN06         |
| Directional Coupler 10k – 220MHz     | AR          | DC2000           | 204627        | 15JUN06         |
| RF Injection Probe 10k – 100MHz      | FCC         | F-120-1          | 204541        | 10JUL07         |
| RF Injection Probe 100M – 400MHz     | FCC         | F-130-1          | 204542        | 10JUL07         |
| RF Monitor Probe 10k – 100MHz        | FCC         | F-35-1           | 204671        | 10JUL07         |
| RF Monitor Probe 100M – 400MHz       | FCC         | F-51             | 204672        | 10JUL07         |
| Line Impedance Stabilization Network | FCC         | FCC-LISN-DO-160  | 204892        | 13FEB07         |
| Line Impedance Stabilization Network | FCC         | FCC-LISN-DO-160  | 204893        | 13FEB07         |
| Power Amp. 10k-100MHz                | AR          | 25A100           | 391           | NCR             |
| Power Amp. 100M – 520MHz             | Eaton       | 3552B            | 202185        | NCR             |
| Current Probe Calibration Fixture    | FCC         | FCC-BCICF-1      | 4-08090       | NCR             |
| Capacitor, 10 $\mu$ F feed through   | Genistron   | GF-4150-1        | 1521          | NCR             |
| Capacitor, 10 $\mu$ F feed through   | Genistron   | GF-4150-1        | 1523          | NCR             |
| Capacitor, 10 $\mu$ F feed through   | Genistron   | GF-4150-1        | 1524          | NCR             |
| Capacitor, 10 $\mu$ F feed through   | Genistron   | GF-4150-1        | 1525          | NCR             |
| Current Probe Calibration Fixture    | FCC         | FCC-BCICF-1      | 4-08090       | NCR             |
| Spectrum Analyzer 9KHz to 1.8GHz     | HP          | 8591E            | 207911        | 02MAR07         |
| Spectrum Analyzer 9KHz to 12.8GHz    | HP          | 8596E            | 205415        | 08NOV06         |
| Synthesized Sig Gen 10k - 1280MHz    | HP          | 8662A            | 207154        | 15JUN06         |
| Waveform Generator                   | EMC Partner | MIG-05-MB        | 389           | NCR             |
| Waveform Generator                   | EMC Partner | MIG0600SS        | 265           | NCR             |

**RF Radiated Susceptibility**

| <b>Description</b>                   | <b>Mfgr</b>  | <b>Model No.</b> | <b>CCN/SN</b> | <b>Cal. Due</b> |
|--------------------------------------|--------------|------------------|---------------|-----------------|
| Field Probe, Isotropic 80M – 40GHz   | AR           | FP5083           | 207390        | 26APR06         |
| Sweep Gen. 10M – 26.5GHz             | HP           | 8340A            | 204635        | 01JAN07         |
| Line Impedance Stabilization Network | FCC          | FCC-LISN-DO-160  | 204892        | 18JAN07         |
| Line Impedance Stabilization Network | FCC          | FCC-LISN-DO-160  | 204893        | 13FEB07         |
| Capacitor, 10 $\mu$ F feed through   | Genistron    | GF-4150-1        | 1521          | NCR             |
| Capacitor, 10 $\mu$ F feed through   | Genistron    | GF-4150-1        | 1523          | NCR             |
| Arbitrary Waveform Generator         | HP           | 33120A           | 208170        | 08MAR06         |
| Directional Coupler                  | Werlatone    | C3908-51         | 208827        | 11MAY06         |
| Universal Power Meter                | Giga-Tronics | 8542C            | 205420        | 07JUN06         |
| Power Sensor 10M - 18GHz             | Giga-Tronics | 80401A           | 205422        | 07JUN06         |
| Biconical Antenna 100M - 200MHz      | Ailtech      | 96002            | 202196        | NCR             |
| Log Periodic Antenna 200M - 1GHz     | Ailtech      | 96005            | 202200        | NCR             |
| DRG Horn Antenna 1G – 18GHz          | Ailtech      | 96001            | 202194        | NCR             |
| Power Amplifier 100M – 1GHz          | AR           | 500W1000M7       | 16927         | NCR             |
| TWT Amplifier 1 - 2GHz               | LogiMetrics  | A600/L           | 6641          | NCR             |
| TWT Amplifier 2 - 4GHz               | LogiMetrics  | A600/S           | 6642          | NCR             |
| TWT Amplifier 4 - 8GHz               | LogiMetrics  | A600/C           | 6638          | NCR             |

**Conducted and Radiated Emissions**

| <b>Description</b>                   | <b>Mfgr</b> | <b>Model No.</b> | <b>CCN/SN</b> | <b>Cal. Due</b> |
|--------------------------------------|-------------|------------------|---------------|-----------------|
| Current Probe 10k - 100MHz           | Ailtech     | 91550-2B         | 201822        | 10JUL07         |
| EMI Test Receiver 20Hz to 26.5GHz    | R&S         | 1088.7490.26     | 207856        | 14NOV06         |
| Broadband Rod Antenna 10k - 40MHz    | EMCO        | 3301B            | 206619        | 03MAY06         |
| Broadband Rod Antenna 10k - 40MHz    | EMCO        | 3301B            | 206623        | 14APR06         |
| Log Periodic Antenna 200M - 1GHz     | Ailtech     | 96005            | 202200        | NCR             |
| DRG Horn Antenna 1G-18GHz            | Ailtech     | 96001            | 202192        | NCR             |
| Biconical Antenna 20M-200MHz         | Ailtech     | 94455-1          | 202201        | NCR             |
| Line Impedance Stabilization Network | FCC         | FCC-LISN-DO-160  | 204892        | 13FEB07         |
| Line Impedance Stabilization Network | FCC         | FCC-LISN-DO-160  | 204893        | 13FEB07         |
| Capacitor, 10 $\mu$ F feed through   | Genistron   | GF-4150-1        | 1521          | NCR             |
| Capacitor, 10 $\mu$ F feed through   | Genistron   | GF-4150-1        | 1523          | NCR             |

### General Test Equipment

| Description          | Mfgr               | Model No. | CCN/SN     | Cal. Due |
|----------------------|--------------------|-----------|------------|----------|
| TCAS Test Set        | JC Air             | RGS 2000  | 167        | 24AUG06  |
| TCAS Interface Unit  | JC Air             | TTA 100A  | 81         | NCR      |
| Transponder Test Set | JC Air             | SDX 2000  | 216        | 12MAY06  |
| Oscilloscope         | Agilent            | 54831D    | MY42001910 | 07NOV06  |
| Spectrum Analyzer    | Agilent            | E4405B    | MY4130127  | 24OCT06  |
| TCAS Display         | Honeywell          | ITA81A    | 1032       | NCR      |
| Pulse Generator      | Systron-<br>Donner | 101C      | 17006      | NCR      |

\*NCR= No Calibration Required