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|---|------------|---|---------|------|-----------------|
|  | Cage Code: | Title: | Date: | Rev: | Model no: |
| | 02WLO | PRODUCT DATA (subject to change) | 7/14/06 | N/A | UH20-224 |

This document describes the performance of a high power 1P2T switch. This is a cold-switched design i.e.; switched while RF is off.

| ITEM NO | CHARACTERISTIC | CONDITIONS | MIN | MAX | UNITS | COMMENTS |
|---------|----------------------|---|-------|-------|-------|---------------|
| 1 | POWER SPECIFICATION | IN BAND | | | | |
| 1.1 | FREQUENCY | | 150 | 1000 | MHz | |
| 1.2 | PEAK POWER | Absolute max including Amplifier overshoot and load effects | | 2000 | WATTS | |
| 1.3 | PULSE WIDTH | | 0.4 | 10 | uS | |
| 1.4 | DUTY | | | 6 | % | |
| 1.5 | AVERAGE | | | 120 | WATTS | |
| 1.6 | CW POWER | | | 120 | WATTS | |
| 2 | POWER SPECIFICATIONS | GUARD BAND | | | | |
| 2.1 | FREQUENCY | | 1000 | 1090 | MHz | |
| 2.2 | PEAK POWER | | | 200 | WATTS | |
| 2.3 | PULSE WIDTH | | CW | | μS | |
| 2.4 | DUTY | | CW | | % | |
| 2.5 | AVERAGE POWER | | | 12 | WATTS | |
| 3 | POWER SPECIFICATIONS | OUT OF BAND | | | | |
| 3.1 | FREQUENCY | | >1090 | | MHz | |
| 3.2 | PEAK POWER | | | 10 | Watts | |
| 3.3 | PULSE WIDTH | | | CW | μS | |
| 3.4 | DUTY | | | CW | % | |
| 3.5 | AVERAGE POWER | | | 10 | Watts | |
| 4 | OPERATING FREQUENCY | | 150 | 1000 | MHz | |
| 5 | INSERTION LOSS | | | | | |
| 5.1 | | | | 0.8 | dB | |
| 6 | ISOLATION | | | | | |
| 6.1 | | I/O – 0-0 | 40 | | dB | |
| 7 | PHASE | | | | | |
| 7.1 | MATCHING | | | | | NOT SPECIFIED |
| 7.2 | TRACKING | | | | | NOT SPECIFIED |
| 8 | VSWR | | | | | |
| 8.1 | PORT SELECTED | | | 1.6:1 | | |
| 8.2 | PORT NOT SELECTED | | | >20:1 | | INFINITY |



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|---------|--|----------------------------|------|-------|-------|-----------------------|
| 8.3 | LOAD | | | 2.0:1 | | |
| 8.4 | SOURCE | | | 1.5:1 | | |
| 9 | HARMONICS & SPURS | | | | | |
| 9.1 | INTERNALLY GENERATED | | | -70 | dBc | |
| 9.2 | | MEASURED AT INCIDENT POWER | | 0 | dBm | |
| 10 | SWITCHING | | | | | |
| 10.1 | SPEED | TO 0.50DB I.L. | | 4 | μS | |
| 10.2 | SWITCHING RATE | | | 10 | KHz | |
| 10.3 | VIDEO LEAKAGE | | | 25 | Vpp | MEASURED INTO 50 OHMS |
| 10.4 | COMMAND LOGIC | RS-422 | | | | Internally terminated |
| 10.5 | LOGIC TABLE | | | | | SEE DWG 3454 below |
| 11 | D.C. POWER | | | | | |
| 11.1 | POSITIVE BIAS VOLTAGE 1 | | 4.80 | 5.20 | VDC | |
| 11.2 | POSITIVE BIAS VOLTAGE 2 | | 26 | 32 | VDC | |
| 11.3 | POSITIVE BIAS CURRENT 1 | | | 1.0 | A | |
| 11.4 | POSITIVE BIAS CURRENT 2 | | | 0.5 | A | |
| 11.5 | NOTE 1: Voltage Protection – This unit does not have over-voltage or reverse polarity protection on any bias port. | | | | | |
| 12 | CONNECTORS | | | | | |
| 12.1 | RF | | | | | NF |
| 12.2 | DC | | | | | DCM-25 |
| 13 | MECHANICAL | | | | | |
| 13.1 | WEIGHT | | | 5.5 | LBS | |
| 13.2 | OUTLINE | | | | | SEE DWG 3454 below |
| 14 | ENVIRONMENTAL | | | | | |
| 14.1 | OPERATING TEMPERATURE | | -25 | +70 | °C | |
| 14.2 | STORAGE TEMPERATURE | | -40 | +70 | °C | |
| 14.3 | VIBRATION LEVEL | | | | | GROUND TRANSPORT |



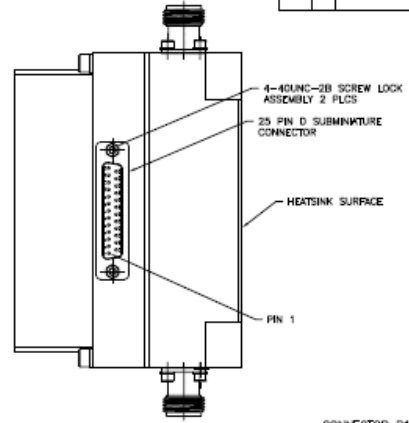
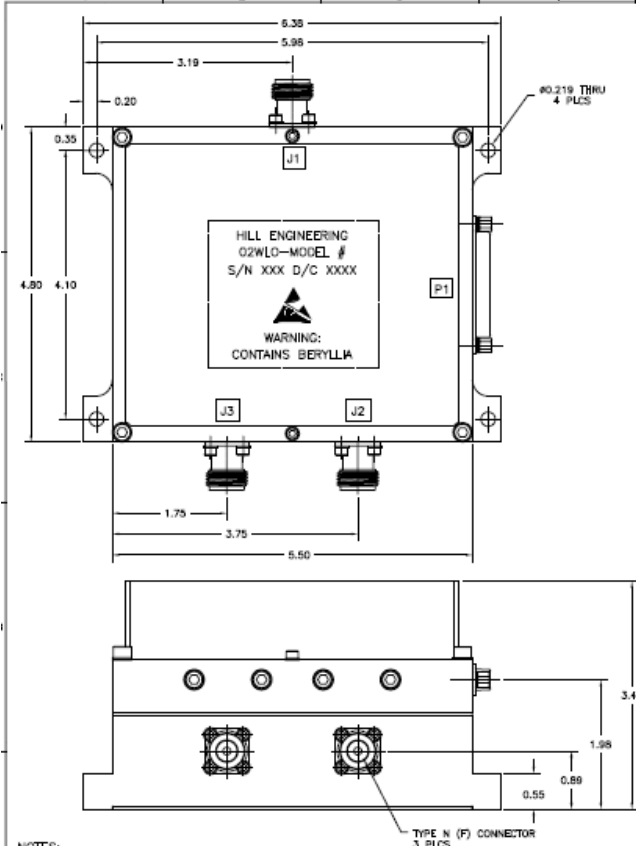
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| REVISIONS | | | | |
|-----------|-----|---------------------------|----------|----------|
| ZONE | REV | DESCRIPTION | DATE | APPROVED |
| | A | INITIAL RELEASE DRN #1472 | 10/30/01 | SPL |

CONNECTOR P1 PIN ASSIGNMENT

| PIN # | DESCRIPTION | PIN # | DESCRIPTION |
|-------|------------------|-------|----------------|
| 1 | +5VDC | 14 | N/C |
| 2 | +25VDC | 15 | +5VDC RETURN |
| 3 | +5VDC RETURN | 16 | N/C |
| 4 | N/C | 17 | +25VDC RETURN |
| 5 | +25VDC | 18 | N/C |
| 6 | N/C | 19 | N/C |
| 7 | CONTROL + RS422 | 20 | CONTROL RETURN |
| 8 | CONTROL - RS422 | 21 | N/C |
| 9 | N/C | 22 | N/C |
| 10 | STATUS BIT + | 23 | STATUS RETURN |
| 11 | STATUS BIT - | 24 | N/C |
| 12 | POSITION IND. TL | 25 | N/C |
| 13 | POSITION IND. TR | | |

TRUTH TABLE

| FILTER BAND | SELECTED PATH | CONTROL | | POSITION INDICATOR | | STATUS | |
|-------------|---------------|---------|---|--------------------|--------|--------|---|
| | | + | - | PIN 12 | PIN 13 | + | - |
| 1 | J1-J2 | 0 | 1 | 0 | 1 | 1 | 0 |
| 2 | J1-J3 | 1 | 0 | 1 | 0 | 1 | 0 |
| - | FAULT | X | X | 0 | 0 | 0 | 1 |

- NOTES:
- FINISH:
 - CHEMICAL FILM IAW HILL IP-125 YELLOW
 - MARKING
 - MARK PER HILL MEI-147
 - MARKING: 0.12" HIGH BLACK CHARACTERS
 - LABEL: METALIZED POLYESTER SHEET, P/N 127-0010



| | | | | |
|----------|---------------|----------|-----------|----|
| UH20-238 | DATE OF ISSUE | 10/30/01 | ISSUED BY | ME |
| UH20-225 | DATE OF ISSUE | 10/30/01 | ISSUED BY | ME |
| UH20-224 | DATE OF ISSUE | 10/30/01 | ISSUED BY | ME |
| UH20-109 | DATE OF ISSUE | 10/30/01 | ISSUED BY | ME |
| UH20-168 | DATE OF ISSUE | 10/30/01 | ISSUED BY | ME |

OUTLINE 1P2T RF SWITCH
C 02WLO 03H03454-01 A