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|---|------------|---|----------|------|-----------------|
|  | Cage Code: | Title: | Date: | Rev: | Model no: |
| | 02WLO | PRODUCT DATA (subject to change) | 12/22/03 | N/A | WS42-009 |

This document describes the performance of a high power 1P2T switch. This is a cold switched design i. e; switched while RF is off. Proper bias levels per item no. 11 must be applied before operating this switch.

| ITEM NO | CHARACTERISTIC | CONDITIONS | MIN | MAX | UNITS | COMMENTS |
|---------|---------------------|-------------|-------|------|-------|---------------|
| 1 | POWER SPECIFICATION | IN BAND | | | | |
| 1.1 | FREQUENCY | | 8.0 | 12.4 | GHz | |
| 1.2 | PEAK POWER | | | 2000 | WATTS | |
| 1.3 | PULSE WIDTH | UP TO | | 10 | μS | |
| 1.4 | DUTY | | | 4 | % | |
| 1.5 | AVE. POWER | | | 80 | WATTS | |
| 2 | POWER SPECIFICATION | GUARD BAND | | | | |
| 2.1 | FREQUENCY | | 12.4 | 14.0 | GHz | |
| 2.2 | PEAK POWER | | | 200 | WATTS | |
| 2.3 | PULSE WIDTH | | | 10 | μS | |
| 2.4 | DUTY | | | 4 | % | |
| 2.5 | CW POWER | | | 8.0 | WATTS | |
| 3 | POWER SPECIFICATION | OUT OF BAND | | | | |
| 3.1 | FREQUENCY | | >14.0 | | GHz | |
| 3.2 | PEAK POWER | | | 5 | WATTS | |
| 3.3 | PULSE WIDTH | | | 10 | μS | |
| 3.4 | DUTY | | | 4 | % | |
| 3.5 | CW POWER | | | 0.2 | WATTS | |
| 4 | OPERATING FREQUENCY | | 8.0 | 12.4 | GHz | |
| 5 | INSERTION LOSS | | | 1.5 | dB | |
| 6 | ISOLATION | | | | | |
| 6.1 | INPUT TO OUTPUT | | 40 | | dB | |
| 6.2 | OUTPUT TO OUTPUT | | 40 | | dB | |
| 7 | PHASE/AMPLITUDE | | | | | Not Specified |

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| 8 | VSWR | | | | | |
| 8.1 | INPUT & OUTPUT SELECTED PORTS | | | 1.8:1 | --- | |
| 8.2 | PORTS NOT SELECTED | | | | --- | INFINITY |
| 8.3 | TERMINATION | | | 2.0:1 | --- | |
| 8.4 | SOURCE | | | 1.4:1 | --- | |
| 9 | HARMONICS & SPURS | | | | | |
| 9.1 | INTERNALLY GENERATED | | | | dBc | NOT SPECIFIED |
| 10 | SWITCHING | | | | | |
| 10.1 | SPEED | TO 0.50 dB | | 1.0 | MicroS | |
| 10.2 | RATE | | | 75 | kHz | |
| 10.3 | VIDEO LEAKAGE | | | | Vpp | NOT SPECIFIED |
| 10.4 | COMMAND LOGIC | | | | | RS-422 |
| 11 | D.C. POWER | | | | | |
| 11.1 | POSITIVE BIAS VOLTAGE | | 4.8 | 5.5 | VDC | |
| 11.2 | NEGATIVE BIAS VOLTAGE | | -66 | -72 | VDC | |
| 11.3 | POSTIVE BIAS CURRENT | | | 300 | mA | |
| 11.4 | NEGATIVE BIAS CURRENT | | | 20 | mA | |
| 12 | CONNECTORS | | | | | |
| 12.1 | RF | | | | | WR-90 FLAT FLANGE |
| 12.2 | DC & LOGIC | | | | | DAM-9P, MATES W/ M24308/1-1 |
| 12.3 | PIN DESIGNATION & LOGIC TABLE | | | | | SEE DWG 3778 below |
| 13 | MECHANICAL | | | | | |
| 13.1 | WEIGHT | | | 36 | OZ | |
| 13.2 | OUTLINE | | | | | SEE DWG 3778 below |
| 13.3 | PRESSURIZATION | | | 15 | PSIG | |
| 14 | ENVIRONMENTAL | | | | | |
| 14.1 | OPERATING TEMPERATURE | | -20 | +60 | °C | |
| 14.2 | STORAGE TEMPERATURE | | -40 | +85 | °C | |

Federal Cage Code 02WLO



Cage Code:
02WL0

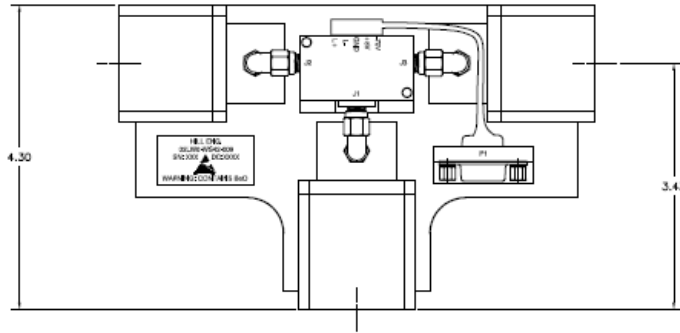
Title:
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Date:
12/22/03

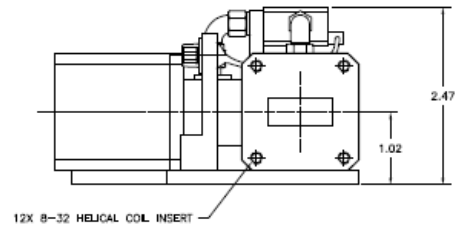
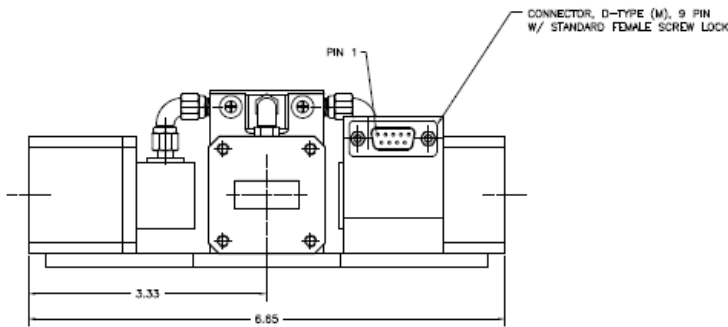
Rev:
N/A

Model no:
WS42-009

| REVISIONS | | | | |
|-----------|-----|-----------------------------|----------|----------|
| ZONE | REV | DESCRIPTION | DATE | APPROVED |
| | - | INITIAL RELEASE EDWIN #2208 | 12/17/03 | JC HILL |
| | | | | |
| | | | | |



| P1 CONNECTIONS | |
|----------------|------------------|
| PIN | SIGNAL |
| 1 | +5V |
| 2 | -70V |
| 3 | GND |
| 4 | N/C |
| 5 | N/C |
| 6 | GND |
| 7 | LOGIC + (RS-422) |
| 8 | LOGIC - (RS-422) |
| 9 | GND |



| | | | |
|---|--|--|---|
| USE PREVIOUS EDITIONS PROHIBITED PRINTED BY: HILL ENGINEERING DATE: 12/11/03 DRAWING NO: 3778 CHECKED BY: JC HILL DATE: 12/17/03 APPROVED BY: JC HILL DATE: 12/17/03 DESIGNED BY: JC HILL DATE: 12/17/03 CHECKED BY: JC HILL DATE: 12/17/03 APPROVED BY: JC HILL DATE: 12/17/03 | | APPROVALS DATE 12/11/03 12/17/03 12/17/03 | |
| MODEL: WS42-009 PART: USED ON APPLICATIONS: DO NOT SCALE DRAWING | | DRAWING TITLE: OUTLINE, 1P2T X BAND POLARITY SWITCH | HILL ENGINEERING DIVISION 3778 1/1 3778- 1 of 1 |

Federal Cage Code 02WL0