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|---|------------|---|---------|------|-----------------|
|  | Cage Code: | Title: | Date: | Rev: | Model no: |
| | 02WLO | PRODUCT DATA (subject to change) | 9/17/99 | N/A | VH20-027 |

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 operation is insured only when bias is applied per section 11.

| ITEM NO | CHARACTERISTIC | CONDITIONS | MIN | MAX | UNITS | COMMENTS |
|---------|------------------------------|---------------|------|--------|-------|---------------|
| 1 | POWER SPECIFICATION | IN BAND | | | | |
| 1.1 | FREQUENCY | | 20 | 140 | MHz | |
| 1.2 | PEAK POWER | ABSOLUTE MAX. | | 2000 | WATTS | |
| 1.3 | PULSE WIDTH | | | 10 | ms | |
| 1.4 | DUTY | | | 10 | % | |
| 1.5 | CW POWER | | | 200 | WATTS | |
| 2 | POWER SPECIFICATIONS | GUARD BAND | | | | |
| 2.1 | FREQUENCY | | 140 | 160 | MHz | |
| 2.2 | PEAK POWER | | | 100 | WATTS | |
| 2.3 | PULSE WIDTH | | CW | | μS | |
| 2.4 | DUTY | | CW | | % | |
| 2.5 | CW POWER | | | 100 | WATTS | |
| 3 | POWER SPECIFICATIONS | OUT OF BAND | | | | |
| 3.1 | FREQUENCY | | >160 | | MHz | |
| 3.2 | PEAK POWER | | | 38 | dBm | |
| 3.3 | PULSE WIDTH | | | 65 | μS | |
| 3.4 | DUTY | | | 10 | % | |
| 3.5 | CW POWER | | | 28 | dBm | |
| 4 | OPERATING FREQUENCY | | 20 | 140 | MHz | |
| 5 | INSERTION LOSS | | | 0.20 | dB | |
| 6 | ISOLATION | | | | | |
| 6.1 | INPUT TO OUTPUT | | 63 | | dB | |
| 6.2 | OUTPUT TO OUTPUT | | 63 | | dB | |
| 7 | PHASE | MATCH/TRACK | | | | NOT SPECIFIED |
| 8 | VSWR | | | | | |
| 8.1 | INPUT, OUTPUT SELECTED PORTS | | | 1.5:1 | | |
| 8.2 | LOAD | | | 1.5:1 | | |
| 8.3 | SOURCE | | | 1.15:1 | | |
| 8.4 | PORTS NOT SELECTED | | | | | INFINITE |
| | | | | | | |



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|---------|-----------------------|---------------------|------|------|-------|--|
| 9 | HARMONICS & SPURS | | | | | |
| 9.1 | INTERNALLY GENERATED | | | | | NOT SPECIFIED |
| 10 | SWITCHING | | | | | |
| 10.1 | SPEED | 50% Logic to 90% RF | | 50 | μS | |
| 10.2 | SWITCHING RATE | | | 2 | kHz | |
| 10.3 | VIDEO LEAKAGE | | | 15 | Vpp | |
| 10.4 | COMMAND LOGIC | RS-422 | | | | |
| 10.5 | LOGIC TABLE | | | | | SEE DWG 2611 BELOW |
| 11 | D.C. POWER | | | | | |
| 11.1 | POSITIVE BIAS VOLTAGE | | 7.25 | 8.00 | VDC | |
| 11.2 | NEGATIVE VOLTAGE BIAS | | | -400 | VDC | |
| 11.3 | POSITIVE BIAS CURRENT | | | 2000 | mA | |
| 11.4 | NEGATIVE BIAS CURRENT | | | 30 | mA | |
| 11.5 | VOLTAGE PROTECTION | | | | | NOTE 1: Power on sequence - To prevent possible damage to the switch, the +7.5V should be applied first, then the -400V. |
| 11.6 | POWER ON SEQUENCE | | | | | NOTE 2: Voltage Protection - This unit does not have over-voltage or reverse polarity protection on any bias port. |
| 12 | CONNECTORS | | | | | |
| 12.1 | RF | | | | | NF |
| 12.3 | DC | | | | | DCMM-37 |
| 13 | MECHANICAL | | | | | |
| 13.1 | WEIGHT | | | 4 | LBS | |
| 13.2 | OUTLINE | | | | | SEE DWG 2611 BELOW |
| 14 | ENVIRONMENTAL | | | | | |
| 14.1 | OPERATING TEMPERATURE | | 0 | +60 | °C | |
| 14.2 | STORAGE TEMPERATURE | | -20 | +55 | °C | |
| 14.3 | VIBRATION LEVEL | | | | | GROUND TRANSPORT |
| 14.4 | MAGNETIC FIELD | | | | | NOTE 3: This switch is designed using non-magnetic parts. It will be applied in a high intensity magnetic field. |
| 15 | ESS SCREENING | | | | | Q121 LEVEL 2 |



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