
	Cage Code:	Title:	Date:	Rev:	Model no:
	02WL0	PRODUCT DATA (subject to change)	09/15/05	N/A	VH20-195

This document describes the performance of a high power 1P2T/TR switch. This is a cold-switched design i.e.; switched while RF is off. Proper bias per section 11 must be applied before operating this switch.

ITEM NO	CHARACTERISTIC	CONDITIONS	MIN	MAX	UNITS	COMMENTS
1	POWER SPECIFICATION	IN BAND				
1.1	FREQUENCY		20	500	MHz	
1.2	PEAK POWER	ABSOLUTE MAX.		400	WATTS	
1.3	PULSE WIDTH			1	mS	
1.4	DUTY		CW	-	%	
1.5	CW POWER	ABSOLUTE MAX into 2:1 VSWR		500	WATTS	
1.6	INTO OPEN/SHORT	ALL PHASE ANGLES	CW	125	WATTS	
2	POWER SPECIFICATIONS	GUARD BAND				
2.1	FREQUENCY		500	540	MHz	
2.2	PEAK POWER			50	WATTS	
2.3	PULSE WIDTH		CW		μS	
2.4	DUTY		CW		%	
2.5	CW POWER			50	WATTS	
3	POWER SPECIFICATIONS	OUT OF BAND				
3.1	FREQUENCY		>540		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	500	MHz	
5	INSERTION LOSS	TRANSMIT		0.50	dB	
6	ISOLATION					
6.1	TRANSMIT		30		dB	
6.2	RECEIVE		60		dB	
7	PHASE	MATCH/TRACK				NOT SPECIFIED
8	VSWR					
8.1	PORT SELECTED			1.5:1		
8.2	PORT NOT SELECTED			>20:1		INFINITY
8.3	LOAD			2.0:1		
8.4	SOURCE			1.15:1		

Federal Cage Code 02WLO

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ITEM NO	CHARACTERISTIC	CONDITIONS	MIN	MAX	UNITS	COMMENTS
9	HARMONICS & SPURS					
9.1	INTERNALLY GENERATED			-50	dBc	
9.2		MEASURED AT INCIDENT POWER		0	dBm	
10	SWITCHING					
10.1	SPEED	TO 0.50DB I.L.		40	μS	
10.2	SWITCHING RATE			1	KHz	
10.3	VIDEO LEAKAGE			+/-100	Vpp	MEASURED INTO 50 OHMS
10.4	COMMAND LOGIC	RS-422				CONTROL AND BIT
10.5	POSITION SENSE	TTL				
10.6	LOGIC TABLE					SEE DWG 4003 BELOW
11	D.C. POWER					
11.1	POSITIVE BIAS VOLTAGE		4.80	5.20	VDC	
11.2	NEGATIVE BIAS VOLTAGE		390	410	VDC	
11.3	POSITIVE BIAS CURRENT			2.5	A	
11.4	NEGATIVE BIAS CURRENT			1.2	A	
11.5	NOTE : Voltage Protection – This unit does not have over-voltage or reverse polarity protection on any bias port.					
12	CONNECTORS					
12.1	RF	INPUT & XMIT				NF
12.3	DC					DAMM-9P
13	MECHANICAL					
13.1	WEIGHT			5.3	LBS	
13.2	OUTLINE					SEE DWG 4003 BELOW
14	ENVIRONMENTAL					
14.1	OPERATING TEMPERATURE		0	+60	°C	
14.2	STORAGE TEMPERATURE		-20	+55	°C	
14.3	VIBRATION LEVEL					GROUND TRANSPORT



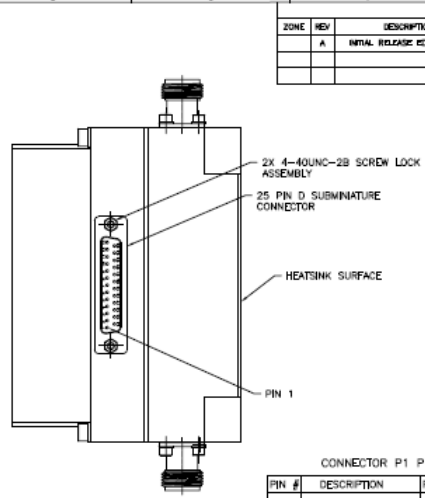
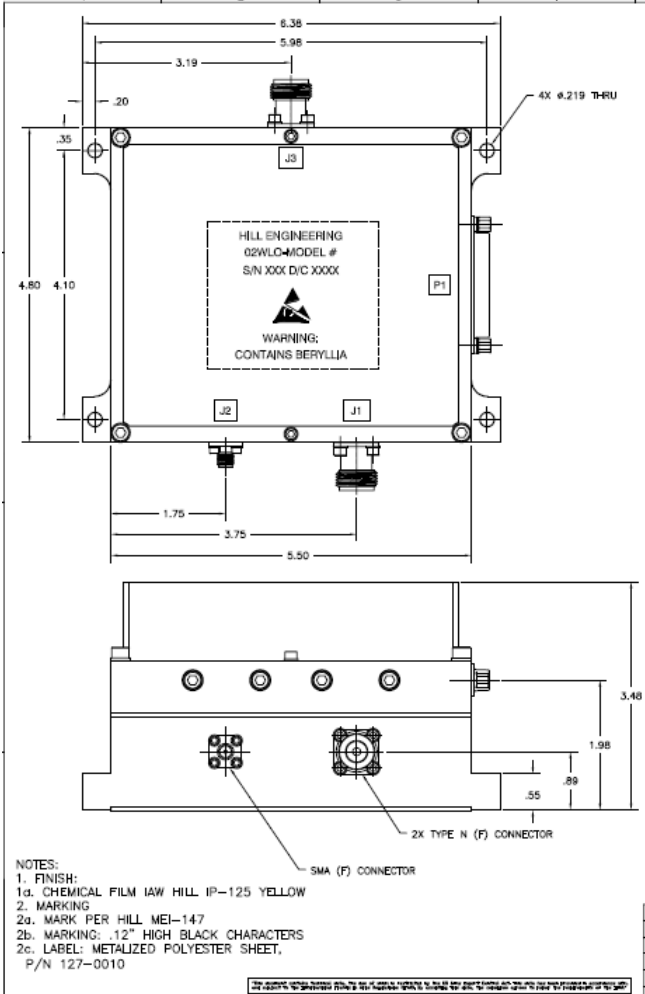
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Date: 09/15/05

Rev: N/A

Model no: **VH20-195**



REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	INITIAL RELEASE CORR #2788	8/21/05	SFL

CONNECTOR P1 PIN ASSIGNMENT

PIN #	DESCRIPTION	PIN #	DESCRIPTION
1	+5VDC	14	N/C
2	-5VDC	15	+5VDC RETURN
3	+5VDC RETURN	16	N/C
4	N/C	17	+28VDC RETURN
5	+28VDC	18	N/C
6	N/C	19	N/C
7	CONTROL + (RS-422)	20	CONTROL RETURN
8	CONTROL - (RS-422)	21	N/C
9	N/C	22	N/C
10	STATUS BIT + (RS-422)	23	STATUS RETURN
11	STATUS BIT - (RS-422)	24	N/C
12	POSITION INCL. (TTL)	25	N/C
13	POSITION INCL. (TTL)		

TRUTH TABLE

MODE	SELECTED PATH	CONTROL		POSITION INDICATOR		STATUS	
		+	-	PIN 12	PIN 13	+	-
XMT	J1-J3	0	1	0	1	1	0
RCV	J3-J2	1	0	1	0	1	0
FAULT	---	0	1	0	0	0	1
FAULT	---	1	0	0	0	0	1

- NOTES:
- FINISH:
 - CHEMICAL FILM IAW HILL IP-125 YELLOW
 - MARKING
 - MARK PER HILL MEI-147
 - MARKING: .12" HIGH BLACK CHARACTERS
 - LABEL: METALIZED POLYESTER SHEET, P/N 127-0010



V-20-212 V-20-195 NEXT ASSY USED ON	APPROVALS DATE 8/21/05 8/23/05	
APPLICATIONS DO NOT SCALE DRAWING	PART NO. 03H04003-01	TITLE OUTLINE 1P2T T/R SWITCH