

	Cage Code:	Title:	Date:	Rev:	Model no:
	02WLO	PRODUCT DATA (subject to change)	10/22/99	N/A	UH20-107

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	VHF INPUT	20	110	MHz	
1.1.1		UHF INPUT	100	500	Mhz	
1.1.2		OUTPUT TO RCVR	20	500	MHz	
1.2	POWER, CW	VHF	---	10	WATTS	SEE SECTION 8.2
1.2.1		UHF	---	1000	WATTS	Max at input into 1.1:1 LOAD. 950 WCW into 2.5:1 LOAD
2	POWER SPECIFICATIONS	GUARD BAND				
2.1	FREQUENCY		500	550	MHz	
2.2	POWER, CW		---	30	WATTS	
3	POWER SPECIFICATIONS	OUT OF BAND				
3.1	FREQUENCY		>550		MHz	
3.2	POWER		---	38	dBm	
4	OPERATING FREQUENCY	XMIT	100	500	MHz	SUBJECT TO POWER LIMITS OF SECTION 1.2 AND 1.2.1
4.1		RCV	20	500	MHz	
5	INSERTION LOSS	XMIT	---	0.40	dB	
5.1		RCV		0.60	dB	
6	ISOLATION					
6.1	INPUT TO OUTPUT		50	---	dB	
6.2	OUTPUT TO OUTPUT		50	---	dB	
7	PHASE					NOT SPECIFIED
8	VSWR					
8.1	PORTS NOT SELECTED					INFINITE
8.2	LOAD			2.5:1		At 950WCW input max in XMT path
8.3	INPUT			1.5:1		
8.4	OUTPUT			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	50% TTL TO 90% RF	---	30	μS	

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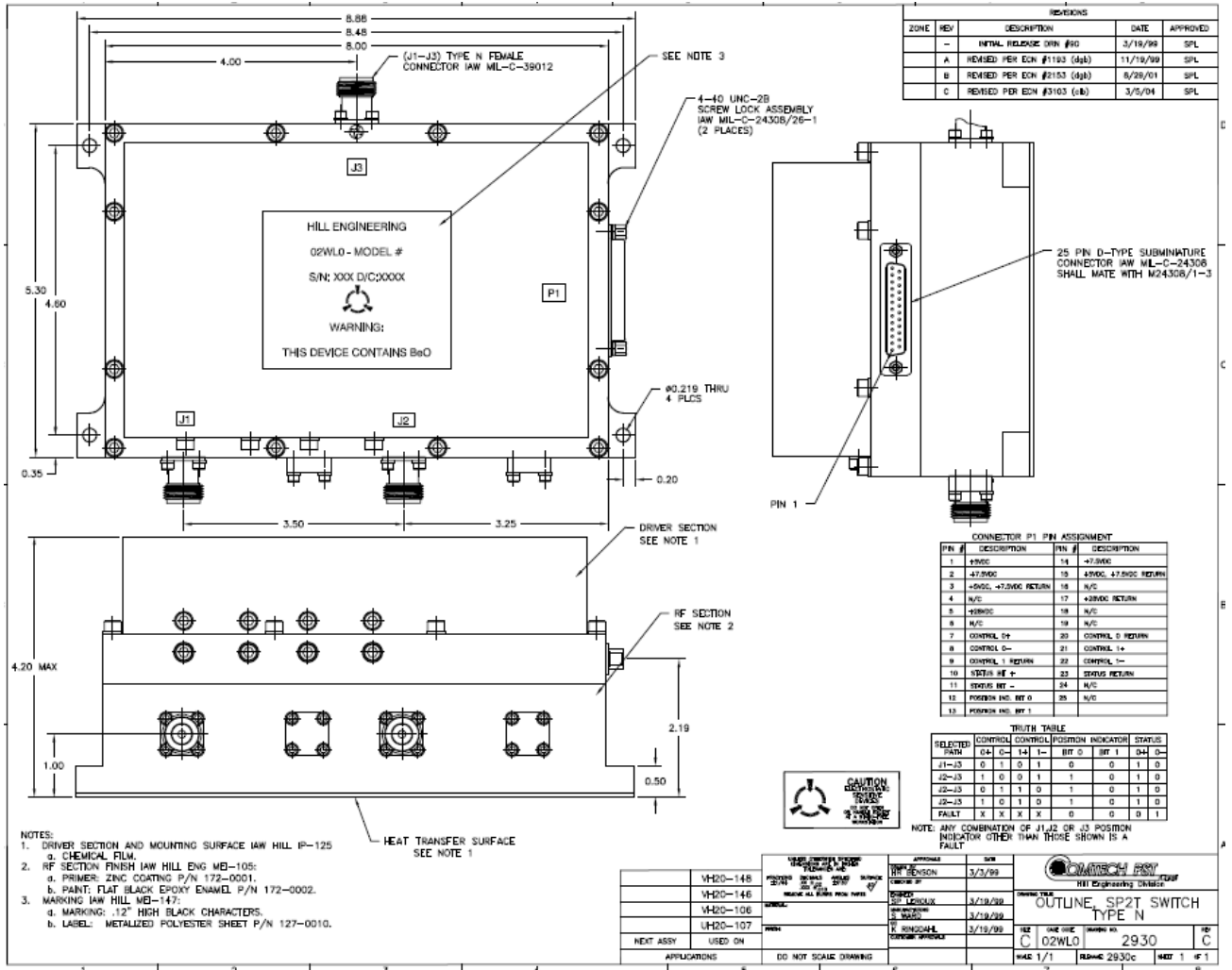
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ITEM NO	CHARACTERISTIC	CONDITIONS	MIN	MAX	UNITS	COMMENTS
10.2	SWITCHING RATE			2	kHz	
10.3	VIDEO LEAKAGE			40	V p-p	
10.4	COMMAND LOGIC	Rs-422				
10.5	LOGIC TABLE					SEE DWG 2930 below
11	D.C. POWER					
11.1	POSITIVE 1 BIAS VOLTAGE		4.8	5.5	VDC	
11.2	POSITIVE 2 BIAS VOLTAGE		26	30	VDC	
11.3	POSITIVE 3 BIAS VOLTAGE		7.2	7.7	VDC	
11.4	NEGATIVE BIAS VOLTAGE		---	---		DEVELOPED INTERNALLY
11.5	POSITIVE 1 BIAS CURRENT			1000	mA	
11.6	POSITIVE 2 BIAS CURRENT			2000	mA	
11.7	POSITIVE 3 BIAS CURRENT		---	1400	mA	
11.8	POWER ON SEQUENCE: APPLY +5V FIRST, THEN +28V					
11.9	THIS UNIT DOES NOT HAVE OVER-VOLTAGE OR REVERSE POLARITY PROTECTION ON ANY BIAS PORT					
12	CONNECTORS					
12.1	RF					NF
12.2	DC					DAM-37
13	MECHANICAL					
13.1	WEIGHT			5.5	LBS	
13.2	OUTLINE					SEE DWG 2930 below
14	ENVIRONMENTAL					
14.1	OPERATING TEMPERATURE		-20	+60	°C	
14.2	STORAGE TEMPERATURE		-40	+75	°C	
14.3	VIBRATION LEVEL					Ground Mobile
14.4	DEVICE SCREENING	LEVEL 2				QP-121 LEVEL 2

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REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
-	-	INITIAL RELEASE DWN #10	3/19/99	SPL
A	A	REVISED PER EDN #1103 (4pk)	11/19/99	SPL
B	B	REVISED PER EDN #1153 (4pk)	8/29/01	SPL
C	C	REVISED PER EDN #1103 (4pk)	3/5/04	SPL

CONNECTOR P1 PIN ASSIGNMENT			
PIN #	DESCRIPTION	PIN #	DESCRIPTION
1	+5VDC	14	+2.5VDC
2	+7.5VDC	15	+5VDC +7.5VDC RETURN
3	+5VDC +7.5VDC RETURN	16	N/C
4	N/C	17	+2.5VDC RETURN
5	+5VDC	18	N/C
6	N/C	19	N/C
7	CONTROL 0+	20	CONTROL 0 RETURN
8	CONTROL 0-	21	CONTROL 1+
9	CONTROL 1 RETURN	22	CONTROL 1-
10	STATUS 0+	23	STATUS 0 RETURN
11	STATUS 0-	24	N/C
12	POSITION IND. BIT 0	25	N/C
13	POSITION IND. BIT 1		

TRUTH TABLE						
SELECTED POSITION	CONTROL 0+	CONTROL 0-	CONTROL 1+	CONTROL 1-	STATUS 0+	STATUS 0-
04	0	1	0	1	0	0
11	0	1	0	1	0	1
12	0	1	0	1	1	0
13	0	1	0	1	1	1
14	1	0	1	0	0	0
15	1	0	1	0	0	1
16	1	0	1	0	1	0
17	1	0	1	0	1	1
18	X	X	X	X	X	X

- NOTES:
- DRIVER SECTION AND MOUNTING SURFACE IAW HILL IP-125
 - CHEMICAL FILM
 - PRIMER: ZINC COATING P/N 172-0001.
 - PAINT: FLAT BLACK EPOXY ENAMEL P/N 172-0002.
 - MARKING IAW HILL MB-147:
 - MARKING: .12" HIGH BLACK CHARACTERS.
 - LABEL: METALLIZED POLYESTER SHEET P/N 127-0010.



REV	DESCRIPTION	DATE	BY	CHKD
1	INITIAL RELEASE	3/19/99		
2	REVISED PER EDN #1103	11/19/99		
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4	REVISED PER EDN #1103	3/5/04		

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