

	Cage Code:	Title:	Date:	Rev:	Model no:
	02WLO	PRODUCT DATA (subject to change)	11/23/2009	None	AB-049

This document describes the performance of a high power dual in line SPDT switch. It is used to switch a filter or fixed attenuator in/out of the RF line. This is a cold switched design i.e.; switched while RF is off. Proper bias levels must be applied when operating this device.

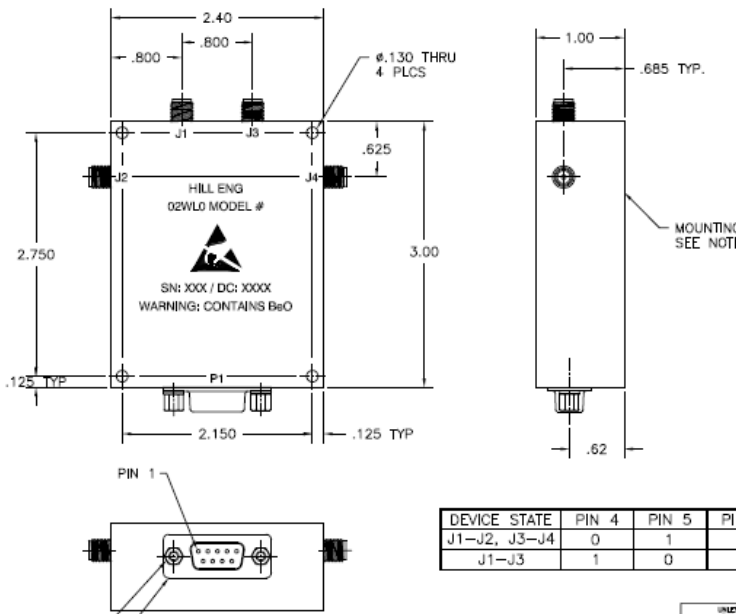
ITEM NO	CHARACTERISTIC	CONDITIONS	MIN	MAX	UNITS	COMMENTS
1	POWER SPECIFICATION	IN BAND				
1.1	OPERATING FREQUENCY	J1-J2	12.1	18.0	GHz	
1.2	PEAK POWER	J1-J2		800	WATTS	
1.3	PULSE WIDTH	J1-J2		40	μS	
1.4	DUTY	J1-J2		8	%	
1.5	AVG. POWER	J1-J2		64	WATTS	
1.6	CW POWER	J1-J2		64	WATTS	
1.7	HARMONICS IN	J1-J2		-10	dBc	
2	POWER SPECIFICATIONS	GUARD BAND				
2.1	FREQUENCY	J1-J2	18.0	19.0	GHz	
2.2	PEAK POWER	J1-J2		10	WATTS	
2.3	PULSE WIDTH	J1-J2		40	μS	
2.4	DUTY	J1-J2		8	%	
2.5	AVG POWER	J1-J2		.8	WATTS	
3	POWER SPECIFICATIONS	OUT OF BAND				
3.1	FREQUENCY	ALL PORTS	>19.0		GHz	
3.2	PEAK POWER	ALL PORTS		0.1	WATTS	
3.3	PULSE WIDTH	ALL PORTS	CW		μS	
3.4	DUTY	ALL PORTS	CW		%	
3.5	CW POWER	ALL PORTS		0.1	WATTS	
4	POWER SPECIFICATION					
4.1	MAX POWER, CW OR PULSED	J1-J3; J3-J4		1.0	WATT	
5	INSERTION LOSS					
5.1			3.2		dB	
6	ISOLATION					
6.1	J1-J3		100		dB	

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6.2	J1-J2; J1-J4		40		dB	
7	PHASE					
7.1	MATCHING					NOT SPECIFIED
7.2	TRACKING					NOT SPECIFIED
8	VSWR					
8.1	PORTS NOT SELECTED					INFINITE (Reflective)
8.2	INPUT & OUTPUT, SELECTED PORTS			1.8:1		
8.3	TERMINATION			2.0:1		
8.4	SOURCE			2.0:1		
9	HARMONICS & SPURS					
9.1	INTERNALLY GENERATED					NOT SPECIFIED
10	SWITCHING					
10.1	SPEED	50% Logic To 0.5dB		600	nS	
10.2	reserved					
10.3	SWITCHING RATE			125	kHz	
10.4	COMMAND LOGIC	RS-422				Balanced
10.5	VIDEO LEAKAGE	J3 PORT ONLY		0.5	V	
10.6	LOGIC TABLE					SEE DWG 3557
11	D.C. POWER					
11.1	POSITIVE BIAS VOLTAGE		4.8	5.2	VDC	
11.2	NEGATIVE BIAS VOLTAGE		-46	-54	VDC	
11.4	POSITIVE BIAS CURRENT			250	mA	
11.5	NEGATIVE BIAS CURRENT			50	mA	
	NOTE: NO OVER-VOLTAGE OR REVERSE POLARITY PROTECTION IS PROVIDED WITH THIS SWITCH.					
12	CONNECTORS					
12.1	RF					SMAF
12.3	DC & LOGIC					9 PIN "D"
13	MECHANICAL					
13.1	WEIGHT			18	Oz.	
13.2	OUTLINE					SEE DWG 3557

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14	ENVIRONMENTAL					
14.1	OPERATING TEMPERATURE		0	+60	°C	
14.2	STORAGE TEMPERATURE		-20	+85	°C	
14.3	VIBRATION LEVEL					SHELTERED GROUND MOBILE



REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
-	INITIAL RELEASE PER EDNR #1704	11/12/02	JC HILL
A	REVISED PER ECN #2961 (hnb)	7/16/03	SPL
B	REVISED PER ECN #2970 (hnb)	7/23/03	SPL

NOTES:

- FINISH
 - Mounting surface chemical film per Hill IP-125
 - Paint per procedure MEI-105
 - Primer: ZRC ZINC PRIMER HILL P/N 172-0003
 - Paint: FLAT BLACK EPOXY ENAMEL HILL P/N 172-0002
- MARKING
 - Mark per procedure MEI-147
 - Marking: .10" HIGH BLACK CHARACTERS
 - Label: METALIZED POLYESTER FILM HILL P/N: 127-0010
- DATECODE FORMAT SHALL BE (YYWK) EXAMPLE: 0322
- P1 PIN ASSIGNMENTS:

PIN	FUNCTION
1	+5VDC
2	-50VDC
3	GND
4	LOGIC + (RS-422)
5	LOGIC - (RS-422)
6	GND
7	Xmit (TTL)
8	Test (TTL)
9	GND

DEVICE STATE	PIN 4	PIN 5	PIN 7	PIN 8
J1-J2, J3-J4	0	1	0	1
J1-J3	1	0	1	0

	<small>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:</small> FINISHES: DECIMALS ANGLES SURFACE .015 .005 .015 .015 <small>SEE 4.10 20137</small> REMOVE ALL BURRS FROM PARTS	APPROVALS DRAWN BY: DG BARKER CHECKED BY: JC HILL MANUFACTURING: JJA DATE: 11/12/02	DATE: 11/12/02 DRAWING TITLE: OUTLINE, 2P2T SWITCH
PARTS LIST QTY: 1 PART NO: AB-049 DESCRIPTION: 2P2T SWITCH USED ON: AB-048	APPLICATIONS: DO NOT SCALE DRAWING	DATE: 11/12/02 DRAWING TITLE: OUTLINE, 2P2T SWITCH	SHEET: B CASE CODE: 02WLO DRAWING NO: 03H03557-01 REV: B SCALE: 1/1 REVISION: 03H03557-01B SHEET: 1 OF 1