



Cage Code:  
**02WLO**

Title:  
**PRODUCT DATA**  
**(Subject to change)**

Date:  
2/14/00

Rev:  
N/A

Model no:  
**H23-003**

This document describes the performance of a high power 1P2T switch. This is a cold switched designed to switch cold; i.e; switching occurs only when RF is off. Proper bias levels per item no. 11 must be applied when operating this device.

ITEM NO	CHARACTERISTIC	CONDITIONS	MIN	MAX	UNITS	COMMENTS
1	POWER SPECIFICATION	IN BAND				
1.1	FREQUENCY		3.8	8.2	GHz	
1.2	PEAK POWER		--	2000	WATTS	
1.3	PULSE WIDTH		--	0.5	μS	
1.4	DUTY		--	4	%	
1.5	AVERAGE POWER		--	80	WATTS	
1.6	CW POWER		--	--	WATTS	
2	POWER SPECIFICATIONS	GUARD BAND				
2.1	FREQUENCY		8.2	8.5	GHz	
2.2	PEAK POWER		--	20	WATTS	
2.3	PULSE WIDTH		--	0.5	μS	
2.4	DUTY		--	5	%	
2.5	AVERAGE POWER		--	1	WATTS	
2.6	CW POWER		--	--	WATTS	
3	POWER SPECIFICATIONS	OUT OF BAND				
3.1	FREQUENCY			>8.5	GHz	
3.2	PEAK POWER		--	0.03	WATTS	
3.3	PULSE WIDTH		CW	--	μS	
3.4	DUTY		CW	--	%	
3.5	AVERAGE POWER		--	--	WATTS	
3.6	CW POWER		--	0.03	WATTS	
4	OPERATING FREQUENCY		4.0	8.0	GHz	
5	INSERTION LOSS		--	1.1	dB	
6	ISOLATION					
6.1	ISOLATION	INPUT TO OUTPUT	40	--	dB	
6.1	ISOLATION	OUTPUT TO OUTPUT	40	--	dB	
7	PHASE					
7.1	MATCHING					NOT SPECIFIED
7.2	PHASE TRACKING					NOT SPECIFIED
8	VSWR					
8.1	INPUT	SELECTED PORTS	--	1.40:1	--	



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8.2	OUTPUT	SELECTED PORTS	--	1.40:1	--	
8.3	PORT NOT SELECTED		--	∞	--	
8.4	TERMINATION		--	2.5:1	--	
	VSWR					
8.5	SOURCE		--	1.2:1	--	
9	HARMONICS & SPURS					
9.1	INTERNALLY GENERATED					NOT SPECIFIED
9.2		MEASURED AT INCIDENT POWER		0	dBm	
10	SWITCHING					
10.1	SPEED	TO 0.50DB	--	1	μS	
10.2	SWITCHING RATE		--	200	KHz	
10.3	COMMAND LOGIC	RS-422				
10.4	LOGIC TABLE					SEE OUTLINE DWG 2308
10.5	VIDEO LEAKAGE					NOT SPECIFIED
11	D.C. POWER					
11.1	POSITIVE BIAS VOLTAGE		4.8	5.2	VDC	
11.2	NEGATIVE BIAS VOLTAGE		-66	-74	VDC	
11.3	POSTIVE BIAS CURRENT			300	mA	
11.4	NEGATIVE BIAS CURRENT			50	mA	
12	CONNECTORS					
12.1	RF					SMA(F)
12.2	DC					DEMM-9P M24308/3-1
13	MECHANICAL					
13.1	WEIGHT		--	8	OZ	
13.2	OUTLINE					SEE DWG 2308
14	ENVIRONMENTAL					
14.1	OPERATING TEMPERATURE		-20	+60	°C	
14.2	STORAGE TEMPERATURE		-55	+85	°C	
14.3	VIBRATION LEVEL					SHELTERED GND MOBILE
14.4	DEVICE SCREENING	LEVEL 2				QP-121

Dimensions: 1.60, 1.400, 0.38, 2.09, 2.400, 2.72, 0.75, 0.36

Labels: J1, J2, J3, HILL ENG. 02WLO-MODEL #, SN: XXXX, DC: XXXX, WARNING BeO, P1, SMA TYP 3 PLCS, MOUNTING SURFACE TO BE FREE OF PAINT, DEM-9P, PIN 1, Ø0.13 THRU 4 PLCS

REV	DESCRIPTION	DATE	APPROVED
-	INITIAL RELEASE ECN #163	12/9/96	J HILL
A	REVISED PER ECN #416	1/2/98	J HILL
B	REVISED PER ECN #500 (dgb)	8/1/98	SPL
C	REVISED PER ECN #823-1 (dgb)	11/9/98	SPL
D	REVISED PER ECN #997 (HRB)	8/24/99	SPL
E	REVISED PER ECN #2328 (hrb)	5/3/02	SPL

PIN	SIGNAL
1	+5V
2	-V
3	GND
4	LOGIC + (RS-422)
5	LOGIC - (RS-422)
6	GND
7	J2 SENSE (TTL)
8	J3 SENSE (TTL)
9	GND

	LOGIC+	LOGIC-	J2 SENSE	J3 SENSE
J1-J2	0	1	1	0
J1-J3	1	0	0	1

NOTES:

- FINISH:
  - PAINT PER HILL ENG. MEI-105.
  - PRIMER: YELLOW ZINC OXIDE, HEI P/N: 172-0001.
  - PAINT: FLAT BLACK EPOXY ENAMEL, P/N: 172-0002.
- MARKING:
  - MARK PER MEI-147.
  - MARKING: 0.09" HIGH BLACK CHARACTERS.
  - LABEL: METALIZED POLYESTER SHEET, P/N: 127-0010.

CAUTION: ELECTRONIC SENSITIVE DEVICE. DO NOT EXPOSE TO A THERMAL SHOCK.

APPROVALS	DATE	
DESIGNED BY: DC BARKER	12/9/96	
CHECKED BY:		DRAWING TITLE: <b>OUTLINE, SPDT BALANCED SENSE, SMA</b>
DESIGNED BY: SP LEBLOUX	12/11/98	
MANUFACTURED BY: S. WARD	11/9/98	SIZE: B QTY: 02WLO DRAWING NO: 2308 REV: E
DC: J HILL	12/11/98	SCALE: 1/1 FILENAME: 2308e SHEET: 1 of 1

APPLICATIONS: DO NOT SCALE DRAWING