

	Cage Code:	Title:	Date:	Rev:	Model no:
	02WLO	PRODUCT DATA (subject to change)	11/16/2009	None	H22-088

This document describes the Specification for a high power 1P2T switch. 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	FREQUENCY		1000	2000	MHz	
1.2	PEAK POWER			1000	Watts	
1.3	PULSE WIDTH			10	uS	
1.4	DUTY			0.5	%	
1.5	AVERAGE POWER			5	Watts	
2	POWER SPECIFICATIONS	GUARD BAND				
2.1	FREQUENCY		2000	2350	MHz	
2.2	PEAK POWER			10	Watts	
2.3	PULSE WIDTH		CW		--	
2.4	DUTY		CW		--	
2.5	AVERAGE POWER			1	Watt	
3	POWER SPECIFICATIONS	OUT OF BAND				
3.1	FREQUENCY			>2350	MHz	
3.2	PEAK POWER			30	dBm	
3.3	PULSE WIDTH			CW	--	
3.4	DUTY			CW	--	
3.5	AVERAGE POWER			20	dBm	
4	OPERATING FREQUENCY		1000	2000	MHz	
5	INSERTION LOSS	70% BAND		0.4	dB	
5.1		@ 2000 MHz		0.55	dB	
6	ISOLATION					
6.1			40		dB	
7	PHASE					
7.1	MATCHING					NOT SPECIFIED
7.2	TRACKING					NOT SPECIFIED
8	VSWR					
8.1	PORTS NOT SELECTED					INFINITE

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ITEM NO	CHARACTERISTIC	CONDITIONS	MIN	MAX	UNITS	COMMENTS
8	VSWR (CONT.)					
8.2	INPUT & OUTPUT, SELECTED PORTS			1.5:1		
8.3	TERMINATION			2.0:1		
8.4	SOURCE			1.25:1		
9	HARMONICS & SPURS					
9.1	INTERNALLY GENERATED					NOT SPECIFIED
9.2	MEASURED AT INCIDENT POWER					NOT SPECIFIED
10	SWITCHING					
10.1	SPEED	50% logic TO 0.5 dB RF		1	uS	
10.2	SWITCHING RATE			20	kHz	
10.3	COMMAND LOGIC	RS-422				Balanced
10.4	VIDEO LEAKAGE				Vpp	NOT SPECIFIED
10.4	LOGIC TABLE					SEE DWG 2319 below
10.5	Position sense	TTL				Pins 7&8 (USE OF SENSE IS OPTIONAL)
11	D.C. POWER					
11.1	POSITIVE BIAS VOLTAGE		4.8	5.4	VDC	
11.2	NEGATIVE BIAS VOLTAGE		-46	-54	VDC	
11.4	POSITIVE BIAS CURRENT			300	mA	
11.5	NEGATIVE BIAS CURRENT			60	mA	
11.6	VOLTAGE PROTECTION					THIS UNIT DOES NOT HAVE OVERVOLTAGE OR REVERSE POLARITY PROTECTION ON ANY BIAS PORT
12	CONNECTORS					
12.1	RF					NF
12.3	DC					Type D miniature 9 pin
13	MECHANICAL					
13.1	WEIGHT			0.6	Lbs.	
13.2	OUTLINE					SEE DWG 2319 below
14	ENVIRONMENTAL					
14.1	OPERATING TEMPERATURE		0	+60	°C	
14.2	STORAGE TEMPERATURE		-20	+55	°C	
14.3	VIBRATION LEVEL					Ground Transport
15	ESS SCREENING					48 Hrs B/I

1.60
1.40
.73
2.09
2.40
2.72
4X #.13 THRU
PIN 1
.75
.36
DEM-9P
3X TYPE N
HEATSINK/MOUNTING SURFACE
FREE OF PAINT SEE NOTE 1d

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
-	INITIAL RELEASE ECH #103	12/9/95	J HILL
A	REMOVED FOR ECH #416	1/28/98	J HILL
B	REMOVED FOR ECH #500	8/24/98	SPL
C	REVISED FOR ECH #3000 (P/N)	5/28/04	SPL

P1 CONNECTIONS	
PIN	SIGNAL
1	+5V
2	-V
3	GND
4	LOGIC+ (75-422)
5	LOGIC- (75-422)
6	GND
7	J2 SENSE (TTL)
8	J3 SENSE (TTL)
9	GND

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

NOTES:
 1. FINISH
 1a. PAINT PER HILL ME-105.
 1b. PRIMER: ZINC COATING (ZRC) HILL P/N 172-0003.
 1c. PAINT: FLAT BLACK EPOXY ENAMEL, P/N 172-0002.
 1d. HEATSINK/MOUNTING SURFACE SILVER PLATE PER QQ-5-385.
 2. MARKING
 2a. MARKING: .09" HIGH BLACK CHARACTERS.
 2b. LABEL: METALIZED POLYESTER SHEET P/N 127-0010.

CAUTION
 HOT SURFACE
 DO NOT TOUCH

DATE OF DESIGN	12/9/95
DATE OF RELEASE	8/28/98
DATE OF REVISION	12/11/98
DATE OF APPROVAL	12/11/98

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OUTLINE, SPDT BALANCED SENSE, TYPE N

02WLO 2319

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