
	Cage Code:	Title:	Date:	Rev:	Model no:
	02WL0	PRODUCT DATA (Subject to change)	12/2/2009	N/A	M22-121
13H04544-01					

This document describes the performance of a high power 1P2T switch. This is a cold-switched design i.e.; switched while RF is off.

ITEM NO	CHARACTERISTIC	CONDITIONS	MIN	MAX	UNITS	COMMENTS
1	POWER SPECIFICATION	IN BAND				
1.1	FREQUENCY		220	1020	MHz	
1.2	PEAK POWER			400	WATTS	
1.3	PULSE WIDTH		50	500	nS	
1.4	DUTY			15	%	
1.5	AVG POWER			60	WATTS	
1.6	CW POWER			10	WATTS	
2	POWER SPECIFICATIONS	GUARD BAND				
2.1	FREQUENCY		1020	1120	MHz	
2.2	PEAK POWER			10	WATTS	
2.3	PULSE WIDTH		50	500	nS	
2.4	DUTY			15	%	
2.5	CW POWER			10	WATTS	
3	POWER SPECIFICATIONS	OUT OF BAND				
3.1	FREQUENCY		>1120		MHz	
3.2	PEAK POWER			30	dBm	
3.3	PULSE WIDTH			CW	μS	
3.4	DUTY			CW	%	
3.5	CW POWER			30	dBm	
4	OPERATING FREQUENCY		240	1000	MHz	
5	INSERTION LOSS			0.9	dB	
6	ISOLATION					
6.1			40		dB	
7	PHASE					
7.1	MATCHING					NOT SPECIFIED
7.2	TRACKING					NOT SPECIFIED
8	VSWR					
8.1	PORT SELECTED			1.6:1		
8.2	PORT NOT SELECTED			2.0:1		
8.2.1	OFF TERMINATION POWER	PEAK POWER AVERAGE POWER		20 5	WATTS	
8.3	LOAD			2.0:1		

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ITEM NO	CHARACTERISTIC	CONDITIONS	MIN	MAX	UNITS	COMMENTS
9	HARMONICS & SPURS					
9.1	INTERNALLY GENERATED		40		dBc	
10	SWITCHING					
10.1	SPEED	50% LOGIC to 10/90% RF		500	nS	
10.2	SWITCHING RATE			150	KHz	
10.3	VIDEO LEAKAGE			5	Vpp	Across 50 Ohms
10.4	COMMAND LOGIC	TTL				
10.5	LOGIC TABLE					See Dwg 03H02997-01 below
11	D.C. POWER					
11.1	POSITIVE BIAS VOLTAGE 1		4.80	5.20	VDC	
11.2	NEGATIVE BIAS VOLTAGE		-26	-32.0	VDC	
11.3	POSITIVE BIAS CURRENT 1			300	mA	
11.4	NEGATIVE BIAS CURRENT			100	mA	
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				SMAF
12.3	DC					Solder Pins
13	MECHANICAL					
13.1	WEIGHT			4	Oz	
13.2	OUTLINE					See Dwg 03H02997-01 below
14	ENVIRONMENTAL					
14.1	OPERATING TEMPERATURE		0	+50	°C	
14.2	STORAGE TEMPERATURE		-20	+55	°C	
14.3	VIBRATION LEVEL					GROUND TRANSPORT



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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
-	INITIAL RELEASE DRN #322	6/18/99	SPL
A	REVISED PER ECN #1082 (dgb)	9/10/99	SPL
B	REVISED PER ECN #4800	5/6/08	CTN
C	REVISED PER ECN #4860	6/3/08	SPL

SMA (F) CONNECTOR
TYP 3 PLCS

0.100 TYP

1.40

1.200

0.100 TYP

1.900

J3

J1

J2

HILL ENG.
02WL0-WX-XXX
SN XXX DC XXXX
WORKING: S20

S2

S3

Vin +5V

GND

TTL

Ø0.130 THRU
TYP 4 PLCS

0.38 TYP

0.51

1.35

2.10

0.15

0.25 TYP

MOUNTING/HEATSINK SURFACE
FREE OF PAINT SEE NOTE 1d

MODEL	Vin
M22-035	+28V
M20-080	-28V
M22-121	-28V

NOTES:

- FINISH:
 - PAINT PER HILL ENG. MEI-105.
 - PRIMER: YELLOW ZINC OXIDE P/N 172-0001.
 - PAINT: FLAT BLACK EPOXY ENAMEL P/N 172-0002.
 - MOUNTING SURFACE SILVER PLATED PER QQ-S-365.
- MARKING:
 - MARK PER MB-147.
 - MARKING: 0.08" BLACK CHARACTERS.
 - LABEL: METALIZED POLYESTER SHEET P/N 127-0010.

0.48

0.250

0.15 TYP

Ø0.025 PIN
TYP 7 PLCS

LOGIC TABLE			
OUTPUT	TTL	S2	S3
J1-J2	0	1	0
J1-J3	1	0	1

WARNING: TOXIC CONTAINS BERYLLIA DO NOT OPEN THIS DEVICE

UNLESS OTHERWISE SPECIFIED (INCLUDES ALL IN HARDWARE)	APPROVALS	DATE
DESIGN BY: DC BARKER		6/2/99
DESIGNED BY: SP LEBLOUX		6/18/99
DESIGNED BY: SA WARD		6/24/99
DESIGNED BY: KL RINGDAHL		6/18/99

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
M22-121			
M20-080			
M22-035			
USED ON			

REV	DATE	DESCRIPTION	BY
B	02WL0	03H02997-01	C

SCALE: 1/1 PART NO: 03H02997-01 SHEET 1 OF 1