

	Cage Code:	Title:	Date:	Rev:	Model no:
	02WL0	PRODUCT DATA (subject to change)	2/17/99	N/A	WS51-004

This document describes the performance of a high power 1P1T switched receiver protector. This is a cold switched design i. e; switched while RF is off. Proper bias levels per item no. 11 must be applied for active mode protection.

ITEM NO	CHARACTERISTIC	CONDITIONS	MIN	MAX	UNITS	COMMENTS
1	POWER SPECIFICATION	IN BAND				
1.1	FREQUENCY		15.2	18.2	GHZ	
1.2	PEAK POWER			40	WATTS	
1.3	PULSE WIDTH		10	250	μS	
1.4	DUTY		---	35	%	
1.5	AVERAGE POWER		---	N/A	WATTS	
1.6	CW POWER		---	14	WATTS	
2	POWER SPECIFICATIONS	GUARD BAND				
2.1	FREQUENCY		18.2	19.5	GHZ	
2.2	PEAK POWER		---	1	WATTS	
2.3	PULSE WIDTH		CW	---	μS	
2.4	DUTY		CW	---	%	
2.5	AVERAGE POWER		---	N/A	WATTS	
2.6	CW POWER		---	1	WATTS	
3	POWER SPECIFICATIONS	OUT OF BAND				
3.1	FREQUENCY		---	>19.5	GHZ	
3.2	PEAK POWER		---	0.003	WATTS	
3.3	PULSE WIDTH		CW	---	μS	
3.4	DUTY		CW	---	%	
3.5	AVERAGE POWER		---	N/A	WATTS	
3.6	CW POWER		---	0.003	WATTS	
4	OPERATING FREQUENCY		15.2	18.2	GHZ	
5	INSERTION LOSS		---	0.80	dB	
6	ISOLATION	INPUT TO OUTPUT	40	---	dB	
7	PHASE					
7.1	MATCHING					NOT SPECIFIED
7.2	PHASE TRACKING					NOT SPECIFIED
8	VSWR					
8.1	INPUT	15.2 TO 18.2 GHz	---	1.60:1	---	
8.2	OUTPUT	15.2 TO 18.2 GHz	---	1.60:1	---	
8.3	INPUT	16.4 TO 17.0 GHz	---	1.40:1	---	
8.4	OUTPUT	16.4 TO 17.0 GHz	---	1.40:1	---	

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9	HARMONICS & SPURS					
9.1	INTERNALLY GENERATED					NOT SPECIFIED
9.2		MEASURED AT INCIDENT POWER		0	WATTS	
10	SWITCHING					
10.1	SPEED	TO 0.50dB	---	250	nS	
10.2	SWITCHING RATE		---	20	kHz	
10.3	COMMAND LOGIC	TTL				
10.4	LOGIC TABLE					SEE DWG 2257 below
11	D.C. POWER					
11.1	POSITIVE BIAS VOLTAGE		4.8	5.2	VDC	
11.2	NEGATIVE BIAS VOLTAGE		-14	-18	VDC	
11.3	POSTIVE BIAS CURRENT		---	300	mA	
11.4	NEGATIVE BIAS CURRENT		---	40	mA	
12	CONNECTORS					
12.1	RF					WR-62 FLAT FLANGE
12.2	DC					DEMME-9P
13	MECHANICAL					
13.1	WEIGHT		---	7.0	oz.	
13.2	OUTLINE & FINISH					SEE DWG 2257 below
14	ENVIRONMENTAL					
14.1	OPERATING TEMPERATURE		-55	+71	°C	
14.2	STORAGE TEMPERATURE		-55	+71	°C	
14.3	VIBRATION LEVEL					AIRBORNE INHABITED
14.4	WAVEGUIDE PRESSURE		---	15	PSIG	
14.5	DEVICE SCREENING	LEVEL 2	---	---	---	SCREENING PER HILL QUALITY PROCEDURE 121 (QP-121)



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8X 6-32UNC-2B HELICOIL x .25 DP

WR62

PIN 1

DEM-9P

2.10

2.00

.81

.50

.60

.956

.48

.66

.994

1.62

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
-	INITIAL RELEASE	9/4/96	JCH
A	REVISED PER ECN #334	11/11/97	JCH
B	REVISED PER ECN #366	12/04/97	JCH
C	REVISED PER ECN #409	1/20/98	J HILL
D	REVISED PER ECN #1130 (dgb)	11/23/99	JCH
E	REVISED PER ECN #3230 (trb)	3/19/04	JA

TTL	OPERATION
1	INS. LOSS
0	ISOLATION

P1	FUNCTION
1	+5VDC
2	-15V
3	N/C
4	TTL
5	N/C
6	DC RTN
7	N/C
8	N/C
9	LOGIC RTN

CAUTION
ELECTRIC SHOCK
HAZARD
SEE SAFETY DATA SHEET

NOTES:

- FINISH: CHEMICAL FILM PER HILL IP-125.
- MARKING:
 - MARK PER MEI-147.
 - MARKING: .09" BLACK CHARACTERS.
 - LABEL: METALIZED POLYESTER SHEET P/N 127-0010.

HILL ENGINEERING (HICED) (MAGNETIC AND IN BAND) TELEPHONE: 408			
DESIGNED BY DG BARKER	DATE 9/4/96	APPROVED DATE 5/7/97	
DESIGNED BY JC HILL	DATE 5/7/97	APPROVED DATE 5/7/97	
REVISIONS			
REVISED BY JC HILL	DATE 5/7/97	APPROVED DATE 5/7/97	
OTHER APPROVALS			

PARTS LIST		DRAWING TITLE	
QTY	PART NO.	OUTLINE BAND SWITCH	
1	WS51-004	REV	
NEXT ASSY USED ON		REV	
APPLICATIONS		REV	

THE DRAWING NUMBER INDICATES THE YEAR OF RELEASE IS CONTROLLED BY THE HILL ENGINEERING DIVISION. THE DATE THE DRAWING IS CONTROLLED BY THE HILL ENGINEERING DIVISION IS THE DATE OF THE LAST REVISION. THE DATE OF THE LAST REVISION IS THE DATE OF THE LAST REVISION. THE DATE OF THE LAST REVISION IS THE DATE OF THE LAST REVISION.