

	Cage Code:	Title:	Date:	Rev:	Model no:
	02WLO	PRODUCT DATA (subject to change)	12/6/06	N/A	WL4-008

This document describes the performance of a high power active receiver protector/limiter. Proper bias levels per item no. 9 must be applied for active mode protection.

ITEM NO	CHARACTERISTIC	CONDITIONS	MIN	MAX	UNITS	COMMENTS
1.0	POWER SPECIFICATIONS	IN BAND				
1.1.1	FREQUENCY	At high power	8.5	10.5	GHz	
1.1.2	FREQUENCY	At receive power	8.2	10.7	GHz	
1.1.3	PEAK POWER	Active mode		1250	WATTS	
1.1.4	PULSE WIDTH			50	μS	
1.1.5	DUTY			5	%	
1.1.6	AVERAGE POWER			65	WATTS	
1.1.7	PASSIVE POWER	50 μS max. pulse		120	WATTS	
1.1.8	PRF		1	20	kHz	
1.1.9	NOTE 1: At 1 kHz PRF, the max. pulse width of 50 μS must be maintained.					
1.2	POWER SPECIFICATIONS	GUARD BAND				
1.2.1	FREQUENCY		10.5	11.5	GHz	
1.2.2	PEAK POWER			5	WATTS	
1.2.3	PULSE WIDTH		CW		μS	
1.2.4	DUTY		CW		%	
1.2.5	CW POWER			5	WATTS	
1.3	POWER SPECIFICATIONS	OUT OF BAND				
1.3.1	FREQUENCY		>11.5		GHz	
1.3.2	PEAK POWER			0.3	WATTS	
1.3.3	PULSE WIDTH		CW		μS	
1.3.4	DUTY		CW		%	
1.3.5	CW POWER			0.3	WATTS	
2.0	OPERATING FREQUENCY		8.2	10.7	GHz	
3.0	INSERTION LOSS	LOGIC 1				
3.1.1	HIGH POWER BAND	8.5 – 10.5		2.2	dB	
3.1.2	RECEIVE BAND	8.2 – 10.7		2.5	dB	
3.1.3	AMPLITUDE FLATNESS	8.5 – 10.5		+/-0.2	dB	
4.0	LEAKAGE POWER					
4.1.1	FLAT LEAKAGE	Act. mode Logic 0		150	mW	
4.1.2	FLAT LEAKAGE	Passive mode		200	mW	

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4.1.3	SPIKE LEAKAGE	Act. mode Logic 0		0.5	WATTS	
4.1.4	SPIKE LEAKAGE	Passive mode		0.7	WATTS	
4.1.5	SPIKE DURATION			20	nS	
4.1.6	NOTE 2: Spike duration will vary with pulse rise time.					
5.0	PHASE					
5.1.1	MATCHING					NOT SPECIFIED
5.1.2	TRACKING, TX	8.5 TO 10.5 GHz		+/-5	DEG.	
5.1.3	TRACKING, RCV	8.2 TO 8.5 AND 10.5 TO 10.7 GHz GOAL		+/-10	DEG.	
6.0	VSWR					
6.1.1	UNIT, LOW LOSS	LOGIC 1 8.5 TO 10.5 GHz		1.6:1		
6.1.2	UNIT, ISOLATION	LOGIC 0		infinity		REFLECTIVE
6.1.3	LOAD, SOURCE			2.5:1		
7.0	SWITCHING SPECIFICATIONS					
7.1	Speed To 3.0 dB			800	nS	
7.2	Speed To 0.1 dB			1.1	μS	
7.3	Switching Rate			50	KHz	
7.4	Logic			TTL		
8.0	RECOVERY TIME					
8.1	PASSIVE RECOVERY	3 dB point		10	μS	
9.0	D.C. POWER					
9.1.1	POSITIVE BIAS VOLTAGE		4.8	5.2	VDC	
9.1.2	NEGATIVE BIAS VOLTAGE			-15	VDC	
9.1.3	POSTIVE BIAS CURRENT			200	mA	
9.1.4	NEGATIVE BIAS CURRENT			50	mA	
9.1.5	NOTE 3: No over-voltage or reverse polarity protection is provided in this switch.					

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10	CONNECTORS					
10.1.1	RF					WR-90 FLAT FLANGE
10.1.2	DC					DEM-9
11	MECHANICAL					
11.1.1	WEIGHT			1.2	LBS	
11.1.2	OUTLINE					SEE DWG 3566 below
11.1.3	WAVEGUIDE PRESSURE			15	PSIG	
12	ENVIRONMENTAL					
12.1.1	OPERATING TEMPERATURE		-40	+70	°C	
12.1.2	STORAGE TEMPERATURE		-50	+85	°C	
12.1.3	VIBRATION LEVEL					GROUND TRANSPORT

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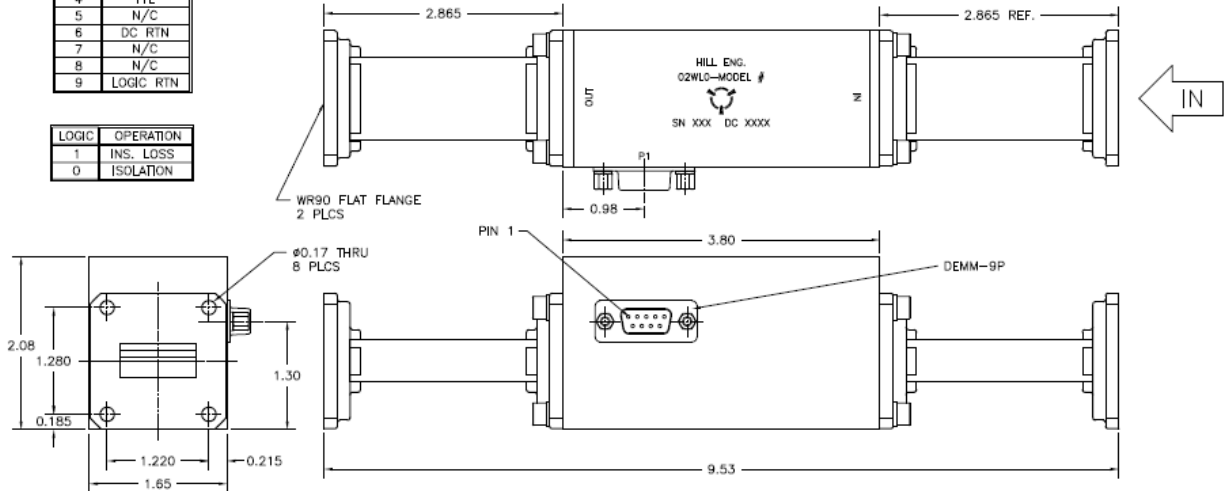
Rev: N/A

Model no: **WL4-008**

P1 PIN #	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

LOGIC	OPERATION
1	INS. LOSS
0	ISOLATION

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
1	INITIAL RELEASE DRN #1715	12/11/02	JC HILL
-	REVISED PER ECN #2827 (hrb)	3/26/03	JC HILL
A	REVISED PER ECN #2839 (hrb)	4/7/03	JC HILL



- NOTES:
- FINISH:
 - CHEMICAL FILM PER HILL IP-125
 - MARKING:
 - MARK PER MEI-147.
 - MARKING: 0.08" BLACK CHARACTERS.
 - LABEL: METALIZED POLYESTER SHEET P/N 127-0010.



UNLESS OTHERWISE SPECIFIED (INCLUDES ARE IN BRACKET)		APPROVALS		DATE
FUNCTION	21794	DESIGNED BY	DE BARKER	11/20/02
MATERIAL	304 # 202 4850	CHECKED BY	JC HILL	12/11/02
FINISH		MANUFACTURED BY	JC HILL	12/20/02
		DESIGNED BY	JC HILL	12/11/02
		CUSTOMER APPROVALS		

NEXT ASSY	USED ON	APPROVALS	DATE

SCALE	1/1	REV	A
FILE NO	3566	REV	A
SCALE	1/1	REV	A