	Cage Code:	Title:	Date:	Rev:	Model no:
Hill Engineering Division	02WLO	PRODUCT DATA	09/25/01	N/A	H24-204
Hill Eligineering Division		(Subject to change)			

This document describes the performance of 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.

1	ITEM NO	CHARACTERISTIC	CONDITIONS	MIN	MAX	UNITS	COMMENTS
1.2 PEAK POWER 2000 WATTS 1.3 PULSE WIDTH 10 μS 1.4 DUTY 4 4 % 1.5 AVG. POWER 80 WATTS 2 POWER SPECIFICATIONS GUARD BAND 2.1 FREQUENCY 12 12.5 GHz 2.2 PEAK POWER 20 WATTS 2.3 PULSE WIDTH 0.5 μS 2.4 DUTY 5 % 2.5 CW POWER 1 WATT 3 POWER SPECIFICATIONS OUT OF BAND 3.1 FREQUENCY >12.5 GHz 3.2 PEAK POWER 0.03 WATTS 3.3 PULSE WIDTH CW μS 3.4 DUTY CW % 3.5 CW POWER 0.03 WATTS 4 OPERATING FREQUENCY 8 12 GHz 5 INSERTION LOSS 5.1 6 ISOLATION 6.1 INPUT TO OUTPUT 40 dB 6.2 OUTPUT TO OUTPUT 40 dB 6.3 OUT OF SPECIFIED 7 PHASE 7.1 MATCHING NOT SPECIFIED 7 TRACKING NOT SPECIFIED 8 VSWR NOT SPECIFIED 8 VSWR NOT SPECIFIED 1.5 MATCHING NOT SPECIFIED 1.5 NOT SPECIFICATION 1.5 NOT SPECIFIC	1	POWER SPECIFICATION	IN BAND				
1.3	1.1	FREQUENCY		8	12	GHz	
1.4 DUTY	1.2	PEAK POWER			2000	WATTS	
1.5	1.3	PULSE WIDTH			10	μS	
2 POWER SPECIFICATIONS GUARD BAND 2.1 FREQUENCY 2.2 PEAK POWER 2.3 PULSE WIDTH 2.4 DUTY 2.5 CW POWER 3.1 FREQUENCY 3.1 FREQUENCY 3.2 PEAK POWER 3.3 POWER SPECIFICATIONS 3.1 FREQUENCY 3.2 PEAK POWER 3.3 PULSE WIDTH CW μS 3.4 DUTY CW % 3.5 CW POWER 3.6 INSERTION LOSS 5.1 INSERTION LOSS 5.1 INPUT TO OUTPUT 40 dB 6.2 OUTPUT TO OUTPUT 40 dB 7 PHASE 7.1 MATCHING 7 TRACKING 8 VSWR 12 GHZ 12.5 GHZ 1 WATT	1.4	DUTY			4	%	
2.1 FREQUENCY 12 12.5 GHz 2.2 PEAK POWER 20 WATTS 2.3 PULSE WIDTH 0.5 μS 2.4 DUTY 5 % 2.5 CW POWER 1 WATT 3 POWER SPECIFICATIONS OUT OF BAND 3.1 FREQUENCY >12.5 GHz 3.2 PEAK POWER 0.03 WATTS 3.3 PULSE WIDTH CW % 3.4 DUTY CW % 3.5 CW POWER 0.03 WATTS 4 OPERATING FREQUENCY 8 12 GHz 5 INSERTION LOSS 1.5 dB 6.1 INPUT TO OUTPUT 40 dB 6.1 INPUT TO OUTPUT 40 dB 7.1 MATCHING NOT SPECIFIED 7.2 TRACKING NOT SPECIFIED	1.5	AVG. POWER			80	WATTS	
2.2 PEAK POWER 20 WATTS 2.3 PULSE WIDTH 0.5 μS 2.4 DUTY 5 % 2.5 CW POWER 1 WATT 3 POWER SPECIFICATIONS OUT OF BAND 3.1 FREQUENCY >12.5 GHz 3.2 PEAK POWER 0.03 WATTS 3.3 PULSE WIDTH CW % 3.4 DUTY CW % 3.5 CW POWER 0.03 WATTS 4 OPERATING FREQUENCY 8 12 GHz 5 INSERTION LOSS 1.5 dB 6.1 INPUT TO OUTPUT 40 dB 6.1 INPUT TO OUTPUT 40 dB 6.2 OUTPUT TO OUTPUT 40 dB 7 PHASE NOT SPECIFIED 7.2 TRACKING NOT SPECIFIED	2	POWER SPECIFICATIONS	GUARD BAND				
2.3 PULSE WIDTH 0.5 μS 2.4 DUTY 5 % 2.5 CW POWER 1 WATT 3 POWER SPECIFICATIONS OUT OF BAND WATT 3.1 FREQUENCY >12.5 GHz 3.2 PEAK POWER 0.03 WATTS 3.3 PULSE WIDTH CW μS 3.4 DUTY CW % 3.5 CW POWER 0.03 WATTS 4 OPERATING FREQUENCY 8 12 GHz 5 INSERTION LOSS 6 ISOLATION 40 dB 6.1 INPUT TO OUTPUT 40 dB 6.2 OUTPUT TO OUTPUT 40 dB 7 PHASE 7 NOT SPECIFIED 7.2 TRACKING NOT SPECIFIED	2.1	FREQUENCY		12	12.5	GHz	
2.4 DUTY 5 % 2.5 CW POWER 1 WATT 3 POWER SPECIFICATIONS OUT OF BAND 3.1 FREQUENCY >12.5 GHz 3.2 PEAK POWER 0.03 WATTS 3.3 PULSE WIDTH CW μS 3.4 DUTY CW % 3.5 CW POWER 0.03 WATTS 4 OPERATING FREQUENCY 8 12 GHz 5 INSERTION LOSS 5 1.5 dB 6.1 INPUT TO OUTPUT 40 dB 6.1 INPUT TO OUTPUT 40 dB 7 PHASE 7 7.1 MATCHING NOT SPECIFIED 7.2 TRACKING NOT SPECIFIED	2.2	PEAK POWER			20	WATTS	
2.5 CW POWER 1 WATT 3 POWER SPECIFICATIONS OUT OF BAND 3.1 FREQUENCY >12.5 GHz 3.2 PEAK POWER 0.03 WATTS 3.3 PULSE WIDTH CW μS 3.4 DUTY CW % 3.5 CW POWER 0.03 WATTS 4 OPERATING FREQUENCY 8 12 GHz 5 INSERTION LOSS 5 Insertion Loss 6 Insput to output 40 dB 6.1 INPUT TO OUTPUT 40 dB dB 7. PHASE PHASE NOT SPECIFIED 7.2 TRACKING NOT SPECIFIED NOT SPECIFIED	2.3	PULSE WIDTH			0.5	μS	
3 POWER SPECIFICATIONS OUT OF BAND 3.1 FREQUENCY >12.5 GHz 3.2 PEAK POWER 0.03 WATTS 3.3 PULSE WIDTH CW μS 3.4 DUTY CW % 3.5 CW POWER 0.03 WATTS 4 OPERATING FREQUENCY 8 12 GHz 5 INSERTION LOSS 5 INSERTION LOSS 6 ISOLATION 6.1 INPUT TO OUTPUT 40 dB 6.2 OUTPUT TO OUTPUT 40 dB 7 PHASE 7.1 MATCHING NOT SPECIFIED 7.2 TRACKING NOT SPECIFIED 8 VSWR NOT SPECIFIED 7 PASE NOT SPECIFIED 8 VSWR NOT SPECIFIED 7 PASE NOT SPECIFIED 8 VSWR NOT SPECIFIED 9 VSWR NOT SPECIFIED 10 VSWR VSWR	2.4	DUTY			5	%	
3.1 FREQUENCY >12.5 GHz 3.2 PEAK POWER 0.03 WATTS 3.3 PULSE WIDTH CW μS 3.4 DUTY CW % 3.5 CW POWER 0.03 WATTS 4 OPERATING FREQUENCY 8 12 GHz 5 INSERTION LOSS 5.1 1.5 dB 6 ISOLATION 6.1 INPUT TO OUTPUT 40 dB 6.2 OUTPUT TO OUTPUT 40 dB 7 PHASE 7.1 MATCHING NOT SPECIFIED 7.2 TRACKING NOT SPECIFIED 8 VSWR NOT SPECIFIED 8 VSWR NOT SPECIFIED 1.5 GHz MATCHING NOT SPECIFIED 8 VSWR NOT SPECIFIED 1.5 MATCHING NOT SPECIF	2.5	CW POWER			1	WATT	
3.2 PEAK POWER 0.03 WATTS	3	POWER SPECIFICATIONS	OUT OF BAND				
3.3 PULSE WIDTH CW μS 3.4 DUTY CW % 3.5 CW POWER 0.03 WATTS 4 OPERATING FREQUENCY 8 12 GHz 5 INSERTION LOSS 6 ISOLATION 6.1 INPUT TO OUTPUT 40 dB 6.2 OUTPUT TO OUTPUT 40 dB 7 PHASE 7.1 MATCHING NOT SPECIFIED 7.2 TRACKING NOT SPECIFIED 8 VSWR NOT SPECIFIED 7 VSWR NOT SPECIFIED 8 VSWR NOT SPECIFIED 7 NOT SPECIFIED 7 NOT SPECIFIED 8 VSWR NOT SPECIFIED 7 NOT SPECIFIED 7 NOT SPECIFIED 8 VSWR NOT SPECIFIED 7 NOT	3.1	FREQUENCY		>12.5		GHz	
3.4 DUTY CW % 3.5 CW POWER 0.03 WATTS 4 OPERATING FREQUENCY 8 12 GHz 5 INSERTION LOSS 1.5 dB 6 ISOLATION 40 dB 6.1 INPUT TO OUTPUT 40 dB 6.2 OUTPUT TO OUTPUT 40 dB 7 PHASE 7 7.1 MATCHING NOT SPECIFIED 7.2 TRACKING NOT SPECIFIED 8 VSWR NOT SPECIFIED	3.2	PEAK POWER			0.03	WATTS	
3.5 CW POWER	3.3	PULSE WIDTH		CW		μS	
4 OPERATING FREQUENCY 8 12 GHz 5 INSERTION LOSS 1.5 dB 6 ISOLATION 40 dB 6.1 INPUT TO OUTPUT 40 dB 6.2 OUTPUT TO OUTPUT 40 dB 7 PHASE 7.1 MATCHING NOT SPECIFIED 7.2 TRACKING NOT SPECIFIED 8 VSWR NOT SPECIFIED	3.4	DUTY		CW		%	
5 INSERTION LOSS 5.1 1.5 dB 6 ISOLATION 40 dB 6.1 INPUT TO OUTPUT 40 dB 6.2 OUTPUT TO OUTPUT 40 dB 7 PHASE 7.1 MATCHING NOT SPECIFIED 7.2 TRACKING NOT SPECIFIED 8 VSWR NOT SPECIFIED	3.5	CW POWER			0.03	WATTS	
5.1 1.5 dB 6 ISOLATION 40 dB 6.1 INPUT TO OUTPUT 40 dB 6.2 OUTPUT TO OUTPUT 40 dB 7 PHASE NOT SPECIFIED 7.1 MATCHING NOT SPECIFIED 7.2 TRACKING NOT SPECIFIED 8 VSWR	4	OPERATING FREQUENCY		8	12	GHz	
6 ISOLATION 40 dB 6.1 INPUT TO OUTPUT 40 dB 6.2 OUTPUT TO OUTPUT 40 dB 7 PHASE NOT SPECIFIED 7.1 MATCHING NOT SPECIFIED 7.2 TRACKING NOT SPECIFIED 8 VSWR	5	INSERTION LOSS					
6.1 INPUT TO OUTPUT 40 dB 6.2 OUTPUT TO OUTPUT 40 dB 7 PHASE NOT SPECIFIED 7.1 MATCHING NOT SPECIFIED 7.2 TRACKING NOT SPECIFIED 8 VSWR	5.1				1.5	dB	
6.2 OUTPUT TO OUTPUT 40 dB 7 PHASE NOT SPECIFIED 7.1 MATCHING NOT SPECIFIED 7.2 TRACKING NOT SPECIFIED 8 VSWR	6	ISOLATION					
7 PHASE 7.1 MATCHING 7.2 TRACKING 8 VSWR NOT SPECIFIED	6.1	INPUT TO OUTPUT		40		dB	
7.1 MATCHING NOT SPECIFIED 7.2 TRACKING NOT SPECIFIED 8 VSWR	6.2	OUTPUT TO OUTPUT		40		dB	
7.2 TRACKING NOT SPECIFIED 8 VSWR							
8 VSWR	7.1	MATCHING					NOT SPECIFIED
	7.2	TRACKING					NOT SPECIFIED
8.1 PORTS NOT SELECTED INFINITE	8	VSWR					
	8.1	PORTS NOT SELECTED					INFINITE

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COMTECH PST	02WLO	PRODUCT DATA	09/25/01	N/A	H24-204
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NO 8 VSWR (CONT.) 8.2 INPUT & OUTPUT. SELECTED PORTS 1.4:1				1			
8.2 INPUT & OUTPUT, SELECTED PORTS 8.3 TERMINATION 2.0:1 8.4 SOURCE 1.2:1 9 HARMONICS & SPURS 9.1 INTERNALLY GENERATED	ITEM NO	CHARACTERISTIC	CONDITIONS	MIN	MAX	UNITS	COMMENTS
SELECTED PORTS 2.0:1	8	·					
8.4 SOURCE 1.2:1 9 HARMONICS & SPURS 9.1 INTERNALLY GENERATED		SELECTED PORTS					
9 HARMONICS & SPURS 9.1 INTERNALLY GENERATED 9.2 MEASURED AT INCIDENT POWER 10 SWITCHING 10.1 SPEED 50% Logic To 0.5dB 1.5 μS 10.2 SWITCHING RATE 50 kHz 10.3 COMMAND LOGIC RS-422 10.4 VIDEO LEAKAGE NOT SPECIFIED 10.5 LOGIC TABLE SEE DWG 3414 11 D.C. POWER 11.1 POSITIVE BIAS VOLTAGE 4.8 5.2 VDC 11.2 NEGATIVE BIAS CURRENT 300 mA 11.5 NEGATIVE BIAS CURRENT 40 mA 11.5 NEGATIVE BIAS CURRENT 40 mA 11.5 NOTE: NO OVER-VOLTAGE OR REVERSE POLARITY PROTECTION IS PROVIDED WITH THIS SWITCH. 12 CONNECTORS 12.1 RF SMAF 12.3 DC Solder Pins	8.3	TERMINATION			2.0:1		
9.1 INTERNALLY GENERATED 9.2 MEASURED AT INCIDENT POWER 10 SWITCHING 10.1 SPEED 50% Logic To 0.5dB 1.5 μS 10.2 SWITCHING RATE 50 kHz 10.3 COMMAND LOGIC RS-422 NOT SPECIFIED 10.4 VIDEO LEAKAGE NOT SPECIFIED 10.5 LOGIC TABLE SEE DWG 3414 11 D.C. POWER 11.1 POSITIVE BIAS VOLTAGE 4.8 5.2 VDC 11.2 NEGATIVE BIAS CURRENT 300 mA 11.5 NEGATIVE BIAS CURRENT 40 mA NOTE: NO OVER-VOLTAGE OR REVERSE POLARITY PROTECTION IS PROVIDED WITH THIS SWITCH. 12 CONNECTORS 12.1 RF 13 MECHANICAL	8.4	SOURCE			1.2:1		
9.1 INTERNALLY GENERATED 9.2 MEASURED AT INCIDENT POWER 10 SWITCHING 10.1 SPEED 50% Logic To 0.5dB 1.5 μS 10.2 SWITCHING RATE 50 kHz 10.3 COMMAND LOGIC RS-422 10.4 VIDEO LEAKAGE NOT SPECIFIED 10.5 LOGIC TABLE SEE DWG 3414 11 D.C. POWER 11.1 POSITIVE BIAS VOLTAGE 4.8 5.2 VDC 11.2 NEGATIVE BIAS CURRENT 300 mA 11.5 NEGATIVE BIAS CURRENT 40 mA NOTE: NO OVER-VOLTAGE OR REVERSE POLARITY PROTECTION IS PROVIDED WITH THIS SWITCH. 12 CONNECTORS 12.1 RF 13 MECHANICAL NOT SPECIFIED NOT SPEC							
9.2 MEASURED AT INCIDENT POWER 10 SWITCHING 10.1 SPEED 50% Logic To 0.5dB 1.5 μS 10.2 SWITCHING RATE 50 kHz 10.3 COMMAND LOGIC RS-422 10.4 VIDEO LEAKAGE NOT SPECIFIED 10.5 LOGIC TABLE SEE DWG 3414 11 D.C. POWER 11.1 POSITIVE BIAS VOLTAGE 4.8 5.2 VDC 11.2 NEGATIVE BIAS CURRENT 300 mA 11.5 NEGATIVE BIAS CURRENT 40 mA 11.5 NEGATIVE BIAS CURRENT 40 mA NOTE: NO OVER-VOLTAGE OR REVERSE POLARITY PROTECTION IS PROVIDED WITH THIS SWITCH. 12 CONNECTORS 12.1 RF SMAF 12.3 DC Solder Pins	9	HARMONICS & SPURS					
POWER 10 SWITCHING 10.1 SPEED 50% Logic To 0.5dB 1.5 μS 10.2 SWITCHING RATE 10.3 COMMAND LOGIC RS-422 10.4 VIDEO LEAKAGE NOT SPECIFIED 10.5 LOGIC TABLE SEE DWG 3414 11 D.C. POWER 11.1 POSITIVE BIAS VOLTAGE 4.8 5.2 VDC 11.2 NEGATIVE BIAS VOLTAGE -48 -54 VDC 11.4 POSITIVE BIAS CURRENT 300 mA 11.5 NEGATIVE BIAS CURRENT 40 mA NOTE: NO OVER-VOLTAGE OR REVERSE POLARITY PROTECTION IS PROVIDED WITH THIS SWITCH. 12 CONNECTORS 12.1 RF 13 MECHANICAL	9.1	INTERNALLY GENERATED					NOT SPECIFIED
10.1 SPEED 50% Logic To 0.5dB 1.5 μS 10.2 SWITCHING RATE 50 kHz 10.3 COMMAND LOGIC RS-422 NOT SPECIFIED 10.4 VIDEO LEAKAGE SEE DWG 3414 SEE DWG 3414 11 D.C. POWER 11.1 POSITIVE BIAS VOLTAGE 4.8 5.2 VDC 11.2 NEGATIVE BIAS VOLTAGE -48 -54 VDC 11.4 POSITIVE BIAS CURRENT 300 mA 11.5 NEGATIVE BIAS CURRENT 40 mA NOTE: NO OVER-VOLTAGE OR REVERSE POLARITY PROTECTION IS PROVIDED WITH THIS SWITCH. 12 CONNECTORS SMAF 12.3 DC Solder Pins	9.2				0	WATTS	
10.1 SPEED 50% Logic To 0.5dB 1.5 μS 10.2 SWITCHING RATE 50 kHz 10.3 COMMAND LOGIC RS-422 10.4 VIDEO LEAKAGE NOT SPECIFIED 10.5 LOGIC TABLE SEE DWG 3414 11 D.C. POWER 11.1 POSITIVE BIAS VOLTAGE 4.8 5.2 VDC 11.2 NEGATIVE BIAS VOLTAGE -48 -54 VDC 11.4 POSITIVE BIAS CURRENT 300 mA 11.5 NEGATIVE BIAS CURRENT 40 mA 11.5 NEGATIVE BIAS CURRENT 40 mA 11.6 NOTE: NO OVER-VOLTAGE OR REVERSE POLARITY PROTECTION IS PROVIDED WITH THIS SWITCH. 12 CONNECTORS 12.1 RF SMAF 12.3 DC Solder Pins	10	CWITCHING					
10.2 SWITCHING RATE 50 kHz 10.3 COMMAND LOGIC RS-422 10.4 VIDEO LEAKAGE NOT SPECIFIED 10.5 LOGIC TABLE SEE DWG 3414 11 D.C. POWER			500/ Lasia Ta 0 54D		4.5	G	
10.3 COMMAND LOGIC RS-422			50% Logic 10 0.5dB			·	
10.4			DO 400		50	KHZ	
10.5 LOGIC TABLE			RS-422				NOT OBSOLSIS
11 D.C. POWER 11.1 POSITIVE BIAS VOLTAGE 4.8 5.2 VDC 11.2 NEGATIVE BIAS VOLTAGE -48 -54 VDC 11.4 POSITIVE BIAS CURRENT 300 mA 11.5 NEGATIVE BIAS CURRENT 40 mA NOTE: NO OVER-VOLTAGE OR REVERSE POLARITY PROTECTION IS PROVIDED WITH THIS SWITCH. 12 CONNECTORS 12.1 RF SMAF 12.3 DC Solder Pins							
11.1 POSITIVE BIAS VOLTAGE 4.8 5.2 VDC 11.2 NEGATIVE BIAS VOLTAGE -48 -54 VDC 11.4 POSITIVE BIAS CURRENT 300 mA 11.5 NEGATIVE BIAS CURRENT 40 mA NOTE: NO OVER-VOLTAGE OR REVERSE POLARITY PROTECTION IS PROVIDED WITH THIS SWITCH. 12 CONNECTORS 12.1 RF SMAF 12.3 DC Solder Pins	10.5	LOGIC TABLE					SEE DWG 3414
11.1 POSITIVE BIAS VOLTAGE 4.8 5.2 VDC 11.2 NEGATIVE BIAS VOLTAGE -48 -54 VDC 11.4 POSITIVE BIAS CURRENT 300 mA 11.5 NEGATIVE BIAS CURRENT 40 mA NOTE: NO OVER-VOLTAGE OR REVERSE POLARITY PROTECTION IS PROVIDED WITH THIS SWITCH. 12 CONNECTORS 12.1 RF SMAF 12.3 DC Solder Pins							
11.2 NEGATIVE BIAS VOLTAGE 11.4 POSITIVE BIAS CURRENT 11.5 NEGATIVE BIAS CURRENT 11.5 NEGATIVE BIAS CURRENT 12 CONNECTORS 12.1 RF 12.3 DC 13 MECHANICAL							
11.4 POSITIVE BIAS CURRENT 11.5 NEGATIVE BIAS CURRENT NOTE: NO OVER-VOLTAGE OR REVERSE POLARITY PROTECTION IS PROVIDED WITH THIS SWITCH. 12 CONNECTORS 12.1 RF SMAF 12.3 DC Solder Pins	11.1	POSITIVE BIAS VOLTAGE		4.8	5.2	VDC	
11.5 NEGATIVE BIAS CURRENT 40 mA NOTE: NO OVER-VOLTAGE OR REVERSE POLARITY PROTECTION IS PROVIDED WITH THIS SWITCH. 12 CONNECTORS 12.1 RF SMAF 12.3 DC Solder Pins 13 MECHANICAL	11.2	NEGATIVE BIAS VOLTAGE		-48	-54	VDC	
NOTE: NO OVER-VOLTAGE OR REVERSE POLARITY PROTECTION IS PROVIDED WITH THIS SWITCH. 12 CONNECTORS 12.1 RF SMAF 12.3 DC Solder Pins	11.4	POSITIVE BIAS CURRENT			300	mA	
12 CONNECTORS 12.1 RF 12.3 DC Solder Pins	11.5	NEGATIVE BIAS CURRENT			40	mA	
12.1 RF SMAF 12.3 DC Solder Pins 13 MECHANICAL MECHANICAL		NOTE: NO OVER-VOLTA	AGE OR REVERSE POL	ARITY F	ROTECT	ION IS PRO	OVIDED WITH THIS SWITCH.
12.3 DC Solder Pins 13 MECHANICAL	12	CONNECTORS					
13 MECHANICAL	12.1	RF					SMAF
	12.3	DC					Solder Pins
13.1 WEIGHT 6 Oz.	13	MECHANICAL					
	13.1	WEIGHT			6	Oz.	
13.2 OUTLINE SEE DWG 3414	13.2	OUTLINE					SEE DWG 3414
14 ENVIRONMENTAL	14	ENVIRONMENTAL					
14.1 OPERATING 0 +60 °C	14.1			0	+60	°C	
TEMPERATURE -20 +85 °C	14.2			-20	+85	°C	
14.3 VIBRATION LEVEL SHELTERED GROUND MOBILE							SHELTERED GROUND MOBILE



