

	Cage Code:	Title:	Date:	Rev:	Model no:
	02WL0	PRODUCT DATA (subject to change)	09/16/05	None	M21-043

This document describes the performance of a high power 1P2T/TR switch. This is a cold-switched design i.e.; switched while RF is off. Proper bias per section 11 must be applied before operating this switch.

ITEM NO	CHARACTERISTIC	CONDITIONS	MIN	MAX	UNITS	COMMENTS
1	POWER SPECIFICATION	IN BAND				
1.1	FREQUENCY		400	500	MHz	
1.2	PEAK POWER			800	WATTS	TRANSMIT PATH
1.3	PULSE WIDTH		5	100	us	
1.4	DUTY			10	%	TRANSMIT PATH
1.5	AVG POWER			80	WATTS	TRANSMIT PATH
1.6	Receive power			5	WATTS	RECEIVE PATH
2	POWER SPECIFICATIONS	GUARD BAND				
2.1	FREQUENCY		500	1450	MHz	
2.2	PEAK POWER			5	WATTS	
2.3	PULSE WIDTH				µs	
2.4	DUTY			10	%	
2.5	CW POWER			.5	WATTS	
3	POWER SPECIFICATIONS	OUT OF BAND				
3.1	FREQUENCY		>1450		MHz	
3.2	PEAK POWER			20	dBm	
3.3	PULSE WIDTH			CW	µs	
3.4	DUTY			CW	%	
3.5	CW POWER			20	dBm	
4	OPERATING FREQUENCY		420	450	MHz	
5	INSERTION LOSS					
5.1	RCV			0.6	dB	
5.2	TX			0.5	dB	
6	ISOLATION					
6.1	TX		40		dB	
6.2	RCV		50		dB	
7	PHASE/GAIN					
7.1	PHASE TRACKING	UNIT TO UNIT		+/-10	Deg	
7.2	GAIN TRACKING	UNIT TO UNIT		+/-0.2	dB	

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ITEM NO	CHARACTERISTIC	CONDITIONS	MIN	MAX	UNITS	COMMENTS
8	VSWR					
8.1	RCV PORT SELECTED			1.5:1		RECEIVE PATH
8.1.1	TX PORT SELECTED			1.3:1		TRANSMIT PATH
8.2	PORT NOT SELECTED			>20:1		INFINITY
8.3	LOAD			2.0:1		
8.4	SOURCE			1.3:1		
9	HARMONICS & SPURS					
9.1	INTERNALLY GENERATED	TRANSMIT MODE		-50	dBc	
10	SWITCHING					
10.1	SPEED	TO 0.50DB I.L.		1	μs	
10.2	SWITCHING RATE			50	kHz	
10.3	VIDEO LEAKAGE				Vpp	NOT SPECIFIED
10.4	COMMAND LOGIC	TTL				See Note 1
10.5	LOGIC TABLE					DWG:03H02194-01 below
11	D.C. POWER					
11.1	POSITIVE BIAS VOLTAGE		4.80	5.20	VDC	
11.3	NEGATIVE BIAS VOLTAGE		-66	-74	VDC	
11.4	POSITIVE BIAS CURRENT			300	mA	
11.4	NEGATIVE BIAS CURRENT			40	mA	
11.5	NOTE 1: Over-voltage protection is present on both inputs. No reverse voltage protection is provided.					
12	CONNECTORS					
12.1	RF	INPUT & XMIT				Type SMAF
12.3	DC					Solder pins
13	MECHANICAL					
13.1	WEIGHT			0.4	LBS	
13.2	OUTLINE					DWG:03H02194-01 below
14	ENVIRONMENTAL					Airborne, Un-pressurized
14.1	ALTITUDE	Operating		35K	FT	(50 K ft storage)
14.2	OPERATING TEMPERATURE		-40	+85	°C	
14.3	STORAGE TEMPERATURE		-50	+95	°C	
14.4	VIBRATION LEVEL					SEE BELOW
14.5	HUMIDITY RH			90%		Non-condensing

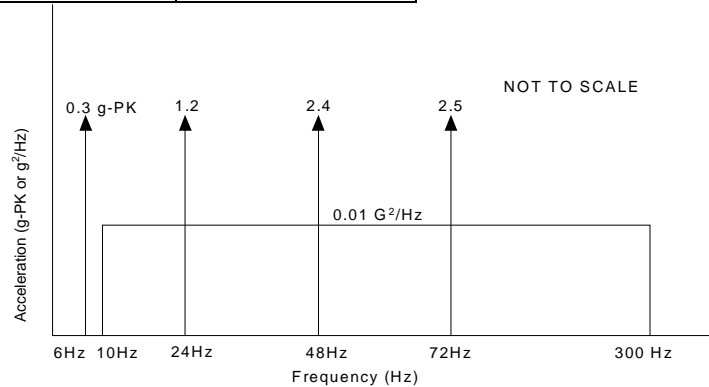
Federal Cage Code 02WL0

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ITEM NO	CHARACTERISTIC	CONDITIONS	MIN	MAX	UNITS	COMMENTS
14.8	SEAL					Non-Hermetic
14.9	SCREEN	Thermal Shock, Gross leak test, 48hrs Burn-in				PER QC-121 LEVEL I

Vibration specifications:

	Frequency	Acceleration
f1	6 Hz	0.3 g (pk)
f2	24	1.2
f3	48	2.4
f4	72	2.5
W ₀	10-300 Hz	0.01 g ² /Hz



Note: The switch is designed to meet the above environmental requirements, but has not been formally qualified by actual test at Comtech PST.



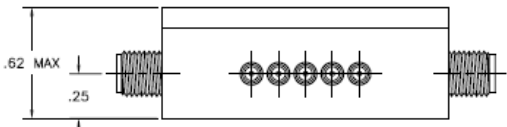
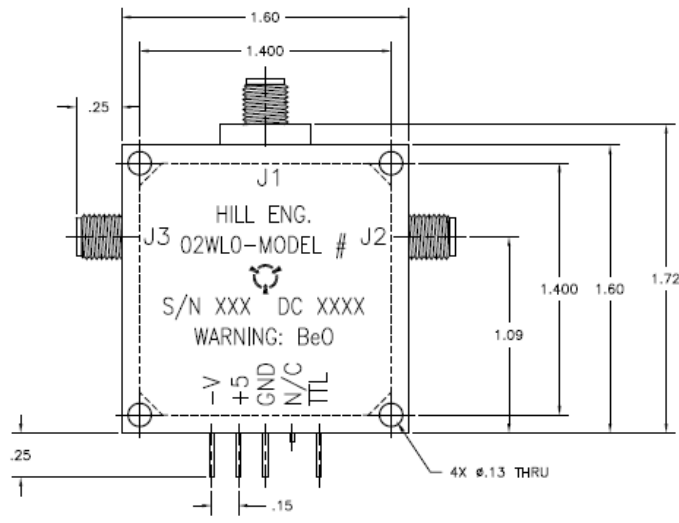
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Date: 09/16/05

Rev: None

Model no: M21-043



REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
-	INITIAL RELEASE	7/23/96	J HILL
A	REVISED PER ECN #416	1/26/98	J HILL
B	REVISED PER ECN #696	2/12/99	SPL
C	REVISED PER ECN #2325 (dgb)	12/7/01	SPL
D	REVISED PER ECN #3348 (hrb)	8/25/04	AG

- NOTES:
- FINISH
 - PAINT PER PROCEEDURE MEI-105.
 - PRIMER: ZRC ZINC PRIMER HILL P/N 172-0003
 - PAINT: FLAT BLACK EPOXY ENAMEL HILL P/N 172-0002
 - MARKING
 - MARK PER PROCEEDURE MEI-147.
 - MARKING: .09" HIGH BLACK CHARACTERS
 - LABEL: METALIZED POLYESTER SHEET HILL P/N 127-0010.
 - DATECODE FORMAT SHALL BE (YYWK) EXAMPLE: 0445.
 - V IS A GENERIC TERM. REFER TO PRODUCT SPEC. LISTED IN JOB FOLDER FOR ACTUAL NEG. VOLTAGE VALUE AND MARK ACCORDINGLY. DO NOT MARK "-V."

LOGIC TABLE

OUTPUT	TTL	PATH
J1-J2	0	RCV
J1-J3	1	XMT

PROVISIONS	REVISIONS	DATE	BY
H22-081			
M21-044			
M21-043			
M21-038			
NEXT ASSY	USED ON		

APPROVALS	DATE
DESIGN BY DC BARKER	7/23/96
CHECKED BY J HILL	7/23/96
DATE J HILL	12/95
CUSTOMER APPROVALS	

COMTECH PST Hill Engineering Division

DRAWING TITLE: **OUTLINE, 1P2T TTL LOGIC, I/R**

REV	ONE CODE	DRAWING NO.	REV
B	02WL0	03H02194-01	D

SCALE: 2/1 FILENAME: 03H02194-01a SHEET 1 of 1