
	Cage Code:	Title:	Date:	Rev:	Model no:
	02WLO	PRODUCT DATA (subject to change)	11/25/2009	N/A	M22-115

This document describes the performance of a high power 1P2T T/R 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		800	3000	MHz	
1.2	PEAK POWER			300	WATTS	
1.3	PULSE WIDTH			CW		
1.4	DUTY			CW	%	
1.6	CW POWER			300	WATTS	
2	POWER SPECIFICATIONS	GUARD BAND				
2.1	FREQUENCY		3000	3120	MHz	
2.2	PEAK POWER			10	WATTS	
2.3	PULSE WIDTH			CW		
2.5	CW POWER			10	WATTS	
3	POWER SPECIFICATIONS	OUT OF BAND				
3.1	FREQUENCY		>3120		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		1000	3000	MHz	
5	INSERTION LOSS			1.3	dB	
6	ISOLATION					
6.1			40		dB	
7	PHASE	MATCH/TRACK				NOT SPECIFIED
8	VSWR					
8.1	PORT SELECTED			2.0:1		
8.2	PORT NOT SELECTED			2.0:1		
8.3	LOAD			2.0:1		
8.4	SOURCE			2.0:1		

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9	HARMONICS & SPURS					
9.1	INTERNALLY GENERATED		60		dBc	
10	SWITCHING					
10.1	SPEED	50% LOGIC to 10/90% RF		30	uS	
10.2	SWITCHING RATE			2	KHz	
10.3	VIDEO LEAKAGE			10	Vpp	Across 50 Ohms
10.4	COMMAND LOGIC	RS-422				
10.5	LOGIC TABLE					SEE DWG 03H04238-01 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					Type NF
12.3	DC					DAMM-9
13	MECHANICAL					
13.1	WEIGHT			1	lb	
13.2	OUTLINE					See Dwg 03H04238-01 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 EDN #3267	11/15/06	SPL
A	REVISED PER EDN #4155	3/20/07	SPL
B	REVISED PER EDN #4317	7/3/07	MCS RMP

P1 CONNECTIONS	
PIN	SIGNAL
1	+5V
2	+2BV
3	GND
4	LOGIC + (RS-422)
5	LOGIC - (RS-422)
6	GND
7	J1-J3 SENSE OUT (TTL)
8	J3-J2 SENSE OUT (TTL)
9	GND

TRUTH TABLE						
MODE	SELECTED PATH	CONTROL		SENSE OUT		
		PIN 4	PIN 5	PIN 7	PIN 8	
XMT	J1-J3	0	1	1	0	
RCV	J3-J2	1	0	0	1	
FAULT	---	0	1	0	0	
FAULT	---	1	0	0	0	

NOTES:

- FINISH
 - PAINT PER PROCEDURE MEI-105.
 - PRIMER: ZRC ZINC PRIMER HILL P/N 172-0003
 - PAINT: FLAT BLACK EPOXY ENAMEL HILL P/N 172-0002
 - MOUNTING SURFACE: CHEMICAL FILM.
- MARKING
 - MARK PER PROCEDURE MEI-147.
 - MARKING: .125" HIGH BLACK CHARACTERS
 - LABEL: METALIZED POLYESTER SHEET HILL P/N 127-0010.
- DATECODE FORMAT SHALL BE (YYWK)
EXAMPLE: 0438.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DECIMALS AND FRACTIONS	APPROVALS	DATE									
DESIGNED BY: SP LEROUX	DESIGNED BY: EFW	11/15/06									
DRAWN BY: J.A. ALLEN	CHECKED BY: J.A. ALLEN	11/15/06									
DATE: 11/15/06	BY: RM PADULA	3/20/07	<p style="text-align: center;">OUTLINE T/R SWITCH</p>								
FRONT: M22-115	CUSTOMER APPROVALS:		<table border="1" style="width: 100%;"> <tr> <th>REV</th> <th>DATE CODE</th> <th>DRAWING NO.</th> <th>REV</th> </tr> <tr> <td>B</td> <td>02WLO</td> <td>03H04238-01</td> <td>B</td> </tr> </table>	REV	DATE CODE	DRAWING NO.	REV	B	02WLO	03H04238-01	B
REV	DATE CODE	DRAWING NO.	REV								
B	02WLO	03H04238-01	B								
NEXT ASSY: USED ON			<p>SCALE: 1/1 FEDERAL: 03H04238-01b SHEET 1 OF 1</p>								

APPLICATIONS	DO NOT SCALE DRAWING
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