
	Cage Code:	Title:	Date:	Rev:	Model no:
	02WLO	PRODUCT DATA (subject to change)	3/26/01	None	M25-002

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 per item no.11 must be applied when operating this device.

ITEM NO	CHARACTERISTIC	CONDITIONS	MIN	MAX	UNITS	COMMENTS
1	POWER SPECIFICATION	IN BAND				
1.1	FREQUENCY		12.80	14.80	GHz	
1.2	PEAK POWER	ABSOLUTE MAXIMUM	--	100	WATTS	
1.3	PULSE WIDTH		--	1	μS	
1.4	DUTY		--	.0005	%	
1.5	AVERAGE POWER		--	.5	WATTS	
1.6	CW POWER		--	.5	WATTS	
2	POWER SPECIFICATION	GUARD BAND				
2.1	FREQUENCY		15.00	15.50	GHz	
2.2	PEAK POWER		--	1	WATT	
2.3	PULSE WIDTH		-	1	μS	
2.4	DUTY		_	.0005	%	
2.5	AVERAGE POWER		--	--	WATT	N/A
2.6	CW POWER		--	1	WATT	
3	POWER SPECIFICATION	OUT OF BAND				
3.1	FREQUENCY		>15.50	--	GHz	
3.2	PEAK POWER		--	-30	dBm	
3.3	PULSE WIDTH		CW	--	μS	
3.4	DUTY		CW	--	%	
3.5	AVERAGE POWER		--	--	WATTS	N/A
3.6	CW POWER		--	-30	dBm	
4	OPERATING FREQUENCY		12.80	14.80	GHz	
5	INSERTION LOSS					
5.1			--	1.5	dB	
6	ISOLATION					
6.1	INPUT TO OUTPUT		50	--	dB	
6.2	OUTPUT TO OUTPUT		50	--	dB	
7	PHASE SPECIFICATION					
7.1	MATCHING		--	--	DEG	NOT SPECIFIED
7.2	PHASE TRACKING		--	--	DEG	NOT SPECIFIED

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8	VSWR					
8.1	INPUT & OUTPUT	SELECTED PORTS	---	1.6:1	--	
8.2	PORTS NOT SELECTED		--	--	--	INFINITY
8.3	TERMINATION		---	2.0:1	--	
8.4	SOURCE		---	1.2:1	--	
9	HARMONICS & SPURS					
9.1	INTERNALLY GENERATED		--	--	dBc	NOT SPECIFIED
9.2		MEASURED AT INCIDENT POWER	--	0	dBm	
10	SWITCHING SPECIFICATIONS					
10.1	SWITCHING SPEED	TO 0.5 dB OF I.L.	--	500	nS	
10.2	SWITCHING RATE		--	50	kHz	
10.3	VIDEO LEAKAGE		--	--	Vpp	NOT SPECIFIED
10.4	COMMAND LOGIC TYPE					TTL
10.5	LOGIC TABLE					SEE DWG 2684
11	D.C. SPECIFICATIONS					
11.1	POSITIVE BIAS VOLTAGE		4.8	5.5	V	
11.2	NEGATIVE BIAS VOLTAGE		-48	-54	V	
11.3	POSITIVE BIAS CURRENT		--	300	mA	
11.4	NEGATIVE BIAS CURRENT		--	60	mA	
11.5	NOTE 1: Power on sequence: To prevent possible damage to the switch apply the +5V first then the negative voltage.					
11.6	NOTE 2: No over-voltage or reverse polarity protection is provided in this switch.					
12	CONNECTORS & INTERFACE					
12.1	RF					SMA(F)
12.2	DC					DEMM-9P
13	MECHANICAL					
13.1	WEIGHT		--	8	OZ.	
13.2	SIZE		--	--	IN.	SEE DWG 2684
13.3	FINISH		--	--	--	SEE DWG 2684
14	ENVIRONMENTAL					
14.1	OPERATING TEMPERATURE		-0	+55	°C	
14.2	STORAGE TEMPERATURE		-20	+70	°C	
14.3	VIBRATION LEVEL					GND TRANSPORT
14.4	DEVICE SCREENING	LEVEL 2				SCREENING PER HILL ENGINEERING QUALITY PROCEDURE 121

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1.60
1.400
2.090
2.400
2.72
Ø0.13 THRU 4 PLCS
PIN 1
0.750
0.360
DEM-9P

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
-	INITIAL RELEASE ECN# 437	2/24/98	J HILL
A	REVISED PER ECN #625	12/15/98	SFL
B	REVISED PER ECN #1893 (dgb)	10/4/2000	SFL

P1 CONNECTIONS	
PIN	SIGNAL
1	+5V
2	-V
3	GND
4	TTL
5	N/C
6	GND
7	J2 SENSE (TTL)
8	J3 SENSE (TTL)
9	GND

OUTPUT	TTL	J2 SENSE	J3 SENSE
J1-J2	0	1	0
J1-J3	1	0	1

DESIGN BY D. BARKER	DATE 2/24/98
DESIGNED BY SP LENOIX	DATE 2/24/98
MANUFACTURED BY J. WARD	DATE 2/24/98
QC J. HILL	DATE 2/24/98

SIZE	DATE CODE	DRAWING NO.	REV
B	02WLO	2684	B

SCALE	FILE NO	SHEET
1/1	2684B	1 of 1

NOTES:
1. FINISH:
1a. PAINT PER HILL ENG. MEI-105.
1b. PRIMER: ZRC ZINC COATING P/N 172-0003.
1c. PAINT: FLAT BLACK EPOXY ENAMEL P/N 172-0002.
1d. MOUNTING SURFACE: SILVER PLATED PER QQ-S-365.
2. MARKING:
2a. MARK PER MEI-147.
2b. MARKING: 0.09" BLACK CHARACTERS.
2c. LABEL: METALIZED POLYESTER SHEET P/N 127-0010.

WARNING: CONTAINS BeO

CAUTION: ELECTRIC SHOCK HAZARD DO NOT OPEN UNLESS YOU ARE QUALIFIED TO DO SO