

This document describes the performance of a high power dual in line SPDT switch. It is used to switch a filter or fixed attenuator in/out of the RF line. This is a cold switched design i.e.; switched while RF is off. Proper bias levels must be applied when operating this device.

ITEM NO	CHARACTERISTIC	CONDITIONS	MIN	MAX	UNITS	COMMENTS
1	POWER SPECIFICATION	IN BAND				
1.1	FREQUENCY	J1-J2	3.8	8.2	GHz	
1.2	PEAK POWER	J1-J2		800	WATTS	
1.3	PULSE WIDTH	J1-J2		40	μS	
1.4	DUTY	J1-J2		8	%	
1.5	AVG. POWER	J1-J2		64	WATTS	
1.6	CW POWER	J1-J2		64	WATTS	
1.7	HARMONICS IN	J1-J2		-10	dBc	
2	POWER SPECIFICATIONS	GUARD BAND				
2.1	FREQUENCY	J1-J2	8.2	9.2	GHz	
2.2	PEAK POWER	J1-J2		10	WATTS	
2.3	PULSE WIDTH	J1-J2		40	μS	
2.4	DUTY	J1-J2		8	%	
2.5	AVG POWER	J1-J2		.8	WATTS	
3	POWER SPECIFICATIONS	OUT OF BAND				
3.1	FREQUENCY	ALL PORTS	>9.2		GHz	
3.2	PEAK POWER	ALL PORTS		0.1	WATTS	
3.3	PULSE WIDTH	ALL PORTS	CW		μS	
3.4	DUTY	ALL PORTS	CW		%	
3.5	CW POWER	ALL PORTS		0.1	WATTS	
4	POWER SPECIFICATION					
4.1	MAX POWER, CW OR PULSED	J1-J3; J3-J4		1.0	WATTS	
5	INSERTION LOSS					
5.1			2.4		dB	
6	ISOLATION					
6.1	J1-J3			100	dB	
6.2	J1-J2; J1-J4			40	dB	
7	PHASE					NOT SPECIFIED



Cage Code: 02WLO

Title: PRODUCT DATA (subject to change) Date: Rev: 11/23/2009

Model no: None

**AB-047** 

ITEM	CHARACTERISTIC	CONDITIONS	MIN	MAX	UNITS	COMMENTS
NO						
8	VSWR					
8.1	PORTS NOT SELECTED					INFINITE (Reflective)
8.2	INPUT & OUTPUT,			1.8:1		
0.0	SELECTED PORTS			0.0.4		
8.3	TERMINATION			2.0:1		
8.4	SOURCE			2.0:1		
9	HARMONICS & SPURS					
9.1	INTERNALLY					NOT SPECIFIED
	GENERATED					NOT OF EOIL IED
10	SWITCHING					
10.1	SPEED	50% Logic To 0.5dB		600	nS	
10.2	reserved					
10.3	SWITCHING RATE			125	kHz	
10.4	COMMAND LOGIC	RS-422				Balanced
10.5	VIDEO LEAKAGE	J3 PORT ONLY		0.5	V	
10.6	LOGIC TABLE					SEE DWG 3558
11	D.C. POWER					
11.1	POSITIVE BIAS		4.8	5.2	VDC	
	VOLTAGE					
11.2	NEGATIVE BIAS		-46	-54	VDC	
	VOLTAGE			050		
11.4	POSITIVE BIAS CURRENT			250	mA	
11.5	NEGATIVE BIAS			50	mA	
	CURRENT	D DEVEROE BOLAR	T) ( DD 03	FEATION	10.000.45	
40	NOTE: NO OVER-VOLTAGE (	JR REVERSE POLARI	TYPROI	ECTION	IS PROVIL	DED WITH THIS SWITCH.
12	CONNECTORS					CMAE
12.1	RF					SMAF
12.3	DC & LOGIC					9 PIN "D"
13	MECHANICAL			16		
13.1	WEIGHT			18	Oz.	
13.2	OUTLINE					SEE DWG 3558 BELOW
14	ENVIRONMENTAL					
14.1	OPERATING TEMPERATURE		0	+60	°C	
14.2	STORAGE TEMPERATURE		-20	+85	°C	
14.3	VIBRATION LEVEL					SHELTERED GROUND MOBILE



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REVISIONS DESCRIPTION APPROVED REV DATE INITIAL RELEASE PER EDRN #1705 11/12/02 JC HILL REMSED PER ECN #2973 (hnb) 7/23/03 SPL ø.130 THRU 4 PLCS - 1.00 -REMSED PER ECN #3011 (hnb) 8/20/03 .685 TYP. NOTES:

1. FINISH

d. MOUNTING SUPFACE CHEMICAL FILM
PER HILL IP—125

b. PAINT PER PROCEDURE MEI—105.
c. PRIMER: ZRG ZING PRIMER HILL
P/N 172—0003

PAINT: FLAT BLACK EPOXY ENAMEL
HILL F/N 172—0002

2. MARKING: .TO\* HIGH BLACK CHARACTERS
c. LAGEL: METALZED POLYESTER FILM
HILL F/N: 127—001

3. DATECODE FORMAT SHALL BE (YYWK)
EXAMPLE; 0322.
4. PI PIN ASSIGNMENTS: ∢ .625 Ф J4 HILL BNG 02WL0 MODBL# 3.00 2.750 SN: XXX / DC: XXXX WARNING: CONTAINS BO PIN FUNCTION +5VDC -50VDC .125 TYP I 爴 闡 冲 GND LOGIC + (RS-422) LOGIC - (RS-422) 3.750 - .125 TYP .62 3.292 -40 UNC-28 SCREW LOCK -6 -7 GND Xmit (TTL) 2.308 DEVICE STATE J1-J2, J3-J4 PIN 4 Test (TTL) GND 8 <del>( .... ) ( )</del> Hill Engineering Division DG BARKER CHECKED BY 11/12/02 MOUNT WITHOUT THE STAND 9 PIN MALE D SUBMINIATURE CONNECTOR 11/12/02 ÖÜTLINE, 2P2T SWITCH AB-047 PIN 1 7/24/03 CAUTION CAUTION CAUTION AB-046 NEXT ASSY USED ON

DO NOT SCALE DRAWING