



**TEST REPORT**  
**ON**  
**2 TO 3 GHz**  
**SINGLE POLE TWO THROW**  
**NON-REFLECTIVE / ABSORPTIVE SWITCH MODULE**

**AMC MODEL No:**  
**SWN-218-2DT-STANDARD**  
**OPTION 23, HPR1W, SHL**

Serial Numbers: 2MS003054 THRU 2MS003059

DESIGNED  
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**November 2, 2004**

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**ISO9001 : 2000 CERTIFIED**

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## SINGLE POLE TWO THROW NON-REFLECTIVE / ABSORPTIVE SWITCH MODULE AMC MODEL No: SWN-218-2DT-STANDARD OPT 23, HPR1W, SHL

### FEATURES:

- **DESIGNED FOR NARROW BAND OPERATION**
- **VERY LOW INSERTION LOSS**
- **LOW ISOLATION**
- **INTEGRAL TTL DRIVER**
- **HIGH POWER CAPABILITIES**

### SPECIFICATIONS:

- |                  |   |
|------------------|---|
| ● FREQUENCY      | : 2 TO 3 GHz                                    |
| ● INSERTION LOSS | : 1.5 dB MAXIMUM, 1.3 dB TYPICAL                |
| ● ISOLATION      | : 40 dB MINIMUM                                 |
| ● SPEED          | : RISE: 15 nS                                   |
|                  | : FALL: 15 nS                                   |
|                  | : DELAY ON: 100 nS MAXIMUM                      |
|                  | : DELAY OFF: 100 nS MAXIMUM                     |
| ● POWER INPUT    | : (CW) +20 dBm (STANDARD), +10 dBm (HIGH SPEED) |
| ● RF POWER       | : 1 WATT CW MAXIMUM                             |
| ● CONTROL        | : TTL LOGIC "0"=J1-J2 ON, "1"=J1-J3 ON          |
| ● POWER SUPPLY   | : +5 V @ 100 mA MAXIMUM                         |
|                  | : -5 V @ 100 mA MAXIMUM                         |
| ● CONNECTORS     |   |
| RF               | : SMA FEMALE                                    |
| CONTROL          | : SOLDER PIN                                    |
| ● SIZE           | : 1.20" (L) x 1.00" (W) x 0.50" (H)             |
| ● WEIGHT         | : 1.5 OUNCE TYPICAL                             |

## PRODUCT FEATURE

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	—	ORIGINAL RELEASE, JOB# 003045E	11/06/08	

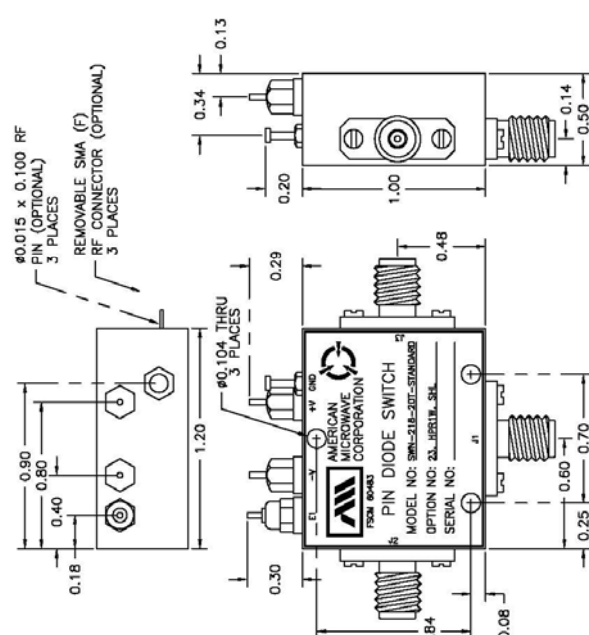
**DESCRIPTION:**

AMC MODEL SWN-218-2DT-STANDARD OPTIONS 23, HPR1W, SHL IS A SINGLE POLE TWO THROW, ABSORPTIVE/NON-REFLECTIVE SWITCH MODULE WITH VERY LOW INSERTION LOSS, LOW ISOLATION AND WITH INTEGRAL TTL DRIVER, DESIGNED FOR NARROW BAND OPERATIONS.

**SPECIFICATIONS:**

- FREQUENCY: ..... 2.0 GHz TO 3.0 GHz
- INSERTION LOSS: ..... 1.5 dB MAXIMUM, 1.3 dB TYPICAL
- ISOLATION: ..... 40 dB MINIMUM
- VSWR: ..... ABSORPTIVE IN/OUT: 2.0:1  
 ABSORPTIVE OUT/OFF: 2.0:1
- SPEED: ..... RISE: 15 nS  
 FALL: 15 nS  
 DELAY ON: 100 ns MAXIMUM  
 DELAY OFF: 100 ns MAXIMUM
- POWER INPUT: ..... (CW)+20dBm (STANDARD), +10 dBm (HIGH SPEED)
- RF POWER: ..... 1 WATT CW MAXIMUM
- CONTROL: ..... TTL LOGIC "0"= J1-J2 ON "1"= J1-J3 ON
- POWER SUPPLY: ..... +5V @ 100 mA MAXIMUM  
 -5V @ 100 mA MAXIMUM
- CONNECTORS:  
 RF SMA FEMALE  
 CONTROL SOLDER PIN
- SIZE: ..... 1.20" (L) x 1.00" (W) x 0.50" (H)
- WEIGHT: ..... 1.5 OUNCE TYPICAL

**MECHANICAL OUTLINE**



Model: SWN-218-2DT-STANDARD  
 Option No: 23, HPR1W, SHL  
 Serial No: [blank]

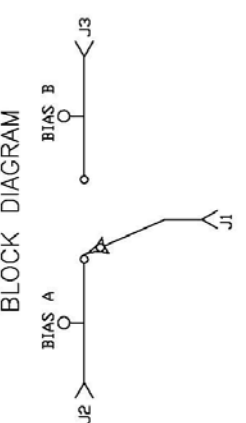
  

**ENVIRONMENTAL RATINGS:**

- TEMPERATURE: ..... -55C TO +85C (OPERATING)  
 -65C TO +125C (STORAGE)
- HUMIDITY: ..... MIL-STD-202F, METHOD 103B COND. B
- SHOCKS: ..... MIL-STD-202F, METHOD 213B COND. B
- VIBRATION: ..... MIL-STD-202F, METHOD 213B COND. B
- ALTITUDE: ..... MIL-STD-202F, METHOD 105C COND. B
- TEMPERATURE CYCLE: ..... MIL-STD-202F, METHOD 107D COND. A

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

**BLOCK DIAGRAM**



**CONFIDENTIAL AND PROPRIETARY**

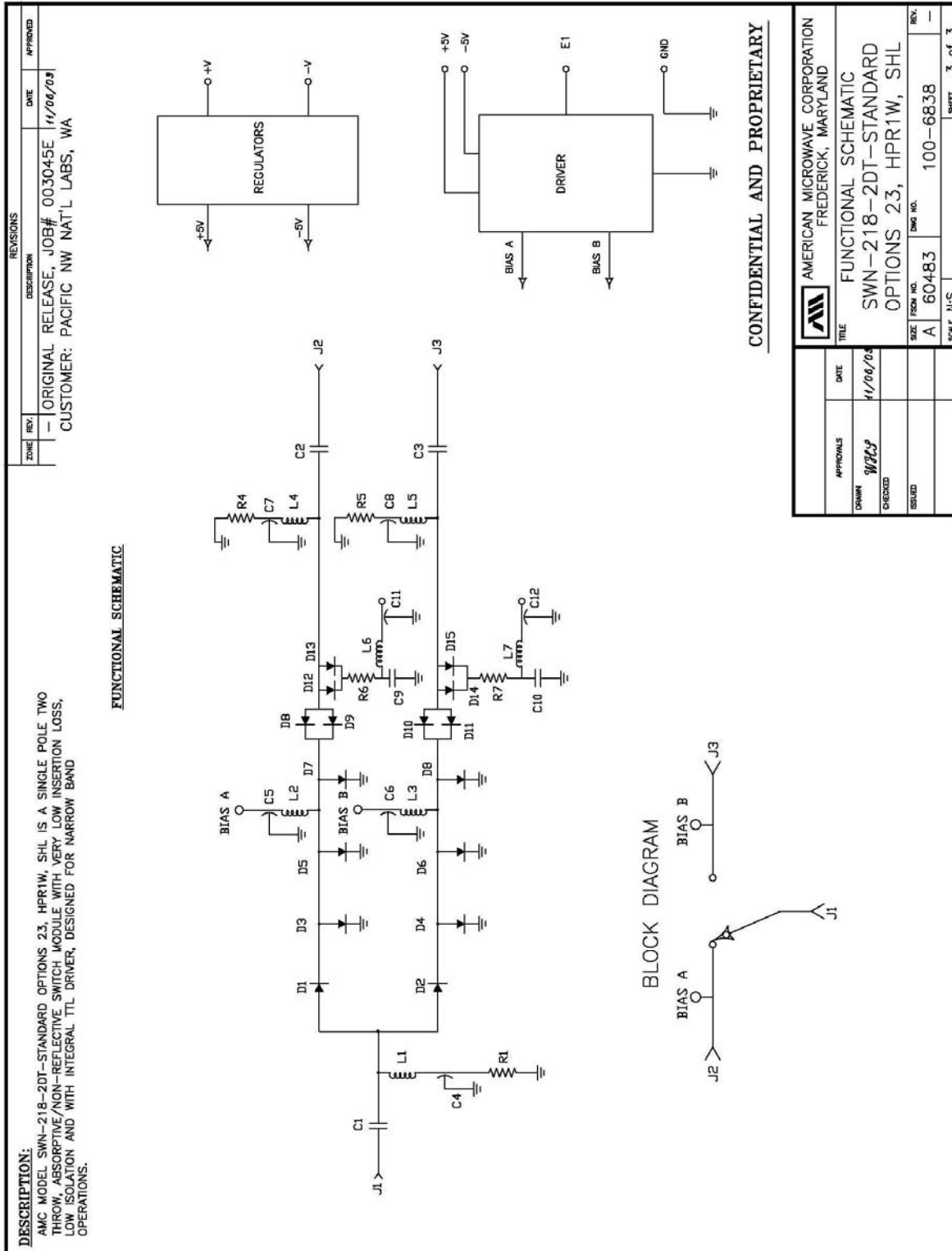
APPROVALS	DATE	TITLE	REV.	SHEET
WALP	11/06/08	PRODUCT FEATURE SWN-218-2DT-STANDARD OPTIONS 23, HPR1W, SHL	—	1 of 3

AMERICAN MICROWAVE CORPORATION  
 FREDERICK, MARYLAND

SCALE: N/S      DWG NO: 100-6838



## FUNCTIONAL SCHEMATIC



## FINAL TEST DATA

FINAL TEST DATA SHEETS

FOR

AMC MODEL NUMBER

**SWN-218-2DT-STANDARD**  
OPTION 23, HPR1W, SHL

Serial Numbers:

2MS003054 THRU 2MS003059















**FINAL TEST DATA**

AMC MODEL NO: SWN-218-2DT-STANDARD OPTIONS 23, HPR1W, SHL  
 SERIAL NUMBER: 2MS003059

AMERICAN MICROWAVE CORPORATION  
 7311-G GROVE RD., FREDERICK MD. 21704  
 TEL: 301-662-4700 FAX: 301-662-4938

FINAL TEST DATA  
 ON  
 MICROWAVE SWITCH

DATE: 3/18/00

CUSTOMER: PACIFIC NW NAT'L LABS      TECHNICIAN: K. Mason      E #29  
 JOB NO: 0030045E  
 MODEL NO: SWN-218-2DT-STANDARD      OPTION NO: 23, HPR1W, SHL  
 SERIAL NO: 2MS003059      SPECIFICATION:  
 CURRENT DRAW: +5 VDC @ 70 mA; - 5 VDC @ 30 mA      FREQUENCY RANGE: 2 GHz TO 3 GHz

INSERTION LOSS (WORST CASE)	RETURN LOSS (WORST CASE)					
	INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
J1-J2 <u>1.59</u> dB	<u>14.75</u> dB	<u>1.44</u> : 1	<u>19.10</u> dB	<u>1.25</u> : 1	<u>10.19</u> dB	<u>1.89</u> : 1
J1-J3 <u>1.63</u> dB	<u>14.73</u> dB	<u>1.44</u> : 1	<u>17.87</u> dB	<u>1.29</u> : 1	<u>10.09</u> dB	<u>1.91</u> : 1
	dB	1. : 1	dB	1. : 1	dB	1. : 1
	dB	1. : 1	dB	1. : 1	dB	1. : 1
	dB	1. : 1	dB	1. : 1	dB	1. : 1
	dB	1. : 1	dB	1. : 1	dB	1. : 1
	dB	1. : 1	dB	1. : 1	dB	1. : 1
	dB	1. : 1	dB	1. : 1	dB	1. : 1
	dB	1. : 1	dB	1. : 1	dB	1. : 1
	dB	1. : 1	dB	1. : 1	dB	1. : 1
ISOLATION	SWITCHING SPEED					
	DELAY ON	RISE TIME	DELAY OFF	FALL TIME		
J1-J2 <u>&gt;40</u> dB	<u>390</u> nS	<u>77</u> nS	<u>36</u> nS	<u>11</u> nS		
J1-J3 <u>&gt;40</u> dB	<u>320</u> nS	<u>90</u> nS	<u>32</u> nS	<u>8</u> nS		
	nS	nS	nS	nS		
	nS	nS	nS	nS		
	nS	nS	nS	nS		
	nS	nS	nS	nS		
	nS	nS	nS	nS		
	nS	nS	nS	nS		
	nS	nS	nS	nS		

NOTE: Any additional test data on back

TESTED ON: HP 8350B/8757A

QA/QC APPROVAL: [Signature]

DATED: 3/18/00