



**TEST REPORT**  
**ON**  
**60 MHz FIXED FREQUENCY**  
**SINGLE POLE TWO THROW**  
**NON-REFLECTIVE / ABSORPTIVE SWITCH MODULE**

**AMC MODEL No:**  
**SWN-218-2DT-STANDARD**  
**OPTION 60F, LVT**

**Serial Numbers: 2MS101011 THRU 2MS101016**

**DESIGNED**  
**BY**  
**R. Afable**

**TESTED**  
**BY**  
**T. Phung**

**REPORTED**  
**BY**  
**E. Elder**

**November 2, 2004**

*Handwritten signatures and initials: JDT, DRH, MGS, PA, EJE, [unclear], [unclear], [unclear]*

**AMERICAN MICROWAVE CORPORATION., 7311-G Grove Road, Frederick, MD 21704**  
**Tel: 301-662-4700 • Fax: 301-662-4938 • Email: [sales@americanmicrowavecorp.com](mailto:sales@americanmicrowavecorp.com)**  
**Website: <http://www.americanmicrowavecorp.com>**

**ISO9001 : 2000 CERTIFIED**

## TABLE OF CONTENTS

●	PRODUCT DESCRIPTION AND ELECTRICAL SPECIFICATIONS	PAGE 3
●	PRODUCT FEATURE AND ENVIRONMENTAL SPECIFICATIONS	PAGE 4
●	OUTLINE DRAWING	PAGE 5
●	FUNCTIONAL SCHEMATIC	PAGE 6
●	TEST DATA ON SWN-218-2DT-STANDARD OPTIONS 60F, LVT SERIAL NUMBERS 2MS101011 THRU 2MS101016	PAGE 7
●	TEST DATA FOR SWN-218-2DT-STANDARD OPTION 60F, LVT SERIAL NUMBER 2MS101011	PAGE 8
●	TEST DATA FOR SWN-218-2DT-STANDARD OPTION 60F, LVT SERIAL NUMBER 2MS101012	PAGE 9
●	TEST DATA FOR SWN-218-2DT-STANDARD OPTION 60F, LVT SERIAL NUMBER 2MS101013	PAGE 10
●	TEST DATA FOR SWN-218-2DT-STANDARD OPTION 60F, LVT SERIAL NUMBER 2MS101014	PAGE 11
●	TEST DATA FOR SWN-218-2DT-STANDARD OPTION 60F, LVT SERIAL NUMBER 2MS101015	PAGE 12
●	TEST DATA FOR SWN-218-2DT-STANDARD OPTION 60F, LVT SERIAL NUMBER 2MS101016	PAGE 13

## SINGLE POLE TWO THROW NON-REFLECTIVE / ABSORPTIVE SWITCH MODULE AMC MODEL No: SWN-218-2DT-STANDARD OPT 60F, LVT

### FEATURES:

- **LOW INSERTION LOSS**
- **HIGH ISOLATION**
- **INTEGRAL TTL DRIVER**
- **LOW VIDEO TRANSIENTS**

### SPECIFICATIONS:

- |                   |   |
|-------------------|---|
| ● FREQUENCY       | : 60 MHz FIXED FREQUENCY                        |
| ● INSERTION LOSS  | : 2.0 dB  |
| ● ISOLATION       | : 80 dB   |
| ● VSWR            | : 2.0:1   |
| ● SPEED           | : RISE: 10 nS TYPICAL, 15 nS MAXIMUM            |
|                   | : FALL: 10 nS TYPICAL, 15 nS MAXIMUM            |
|                   | : DELAY ON: 20 nS MAXIMUM                       |
|                   | : DELAY OFF: 20 nS MAXIMUM                      |
| ● POWER INPUT     | : (CW) +20 dBm (STANDARD), +10 dBm (HIGH SPEED) |
| ● SURVIVAL POWER  | : 1 WATT CW, 10 WATTS PEAK TO PEAK 1 $\mu$ S    |
| ● VIDEO TRANSIENT | : 50 mV   |
| ● 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 OUNCES TYPICAL                            |

## PRODUCT FEATURE

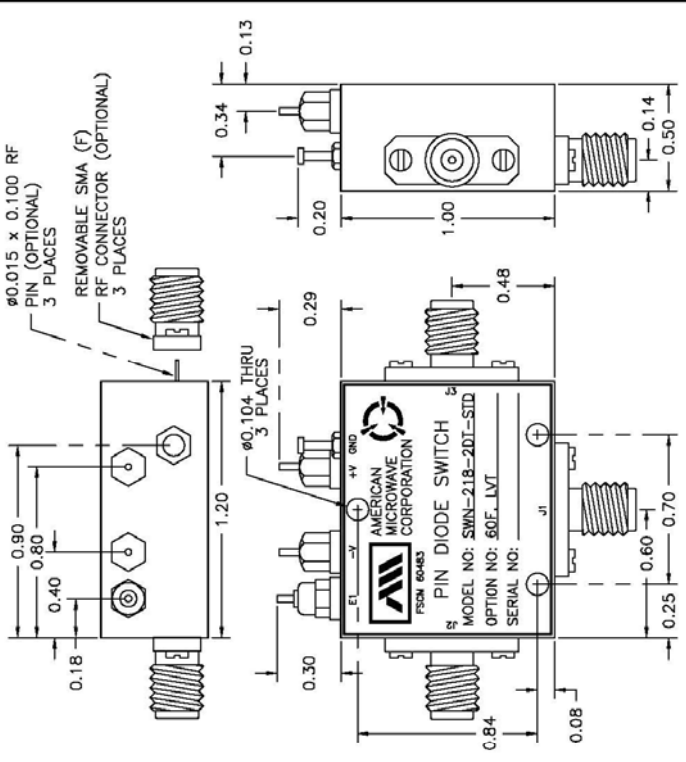
ZONE	REV.	DESCRIPTION	DATE	APPROVED
		ORIGINAL JOB# 009214E	10/16/00	

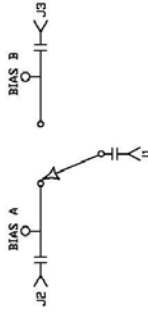
**DESCRIPTION:**  
 AMC MODEL SWN-218-2DT-STANDARD IS A SINGLE POLE TWO THROW, ABSORPTIVE/NON-REFLECTIVE SWITCH MODULE WITH LOW INSERTION LOSS LOW VIDEO TRANSIENTS, HIGH ISOLATION AND WITH INTEGRAL TTL DRIVER.

**SPECIFICATIONS:**

- FREQUENCY: ..... 60 MHz
- INSERTION LOSS: ..... 2.0 db
- ISOLATION: ..... 80 db ISOLATION
- VSWR: ..... ABSORPTIVE IN/OUT: 2.0:1  
 ABSORPTIVE OUT/OFF: 2.0:1
- SPEED: ..... RISE: 10ns TYPICAL, 15ns MAX.  
 FALL: 10ns TYPICAL, 15ns MAX.  
 DELAY ON: 20ns MAX.  
 DELAY OFF: 20ns MAX.
- POWER INPUT: ..... (CW)+20dBm (STANDARD), +10 dBm (HIGH SPEED)
- SURVIVAL POWER: ..... 1 WATT CW, 10 WATTS PEAK 1 usec
- VIDEO TRANSIENT: ..... 50 mV
- CONTROL: ..... TTL LOGIC "0"= J1-J2 ON "1"= J1-J3 ON
- POWER SUPPLY: ..... +5V @ 100 mA MAX.  
 -5V @ 100 mA MAX.(ABSORPTIVE/NON-REFLECTIVE)
- CONNECTORS:  
 RF ..... SMA FEMALE  
 CONTROL ..... SOLDER PIN
- SIZE: ..... 1.20" (L) x 1.00" (W) x 0.50" (H)
- WEIGHT: ..... 1.5 OUNCE TYPICAL



**BLOCK DIAGRAM**



BIAS A      BIAS B

**NOTE:**  
 DR=WITH DRIVER, REFLECTIVE  
 DT=WITH DRIVER, NON-REFLECTIVE/ABSORPTIVE

**CONFIDENTIAL AND PROPRIETARY**

APPROVALS	DATE	TITLE	AMERICAN MICROWAVE CORPORATION FREDERICK, MARYLAND
WBC	10/16/00	PRODUCT FEATURE	
CHECKED		SWN-218-2DT-STANDARD	
DESIGNED		OPTIONS: 60F, LVT	
		SIZE FROM NO.	REV.
		A 60483	100-5757
		SCALE 1.5:1	SHEET 1 of 3

ALL DIMENSIONS ARE IN INCHES  
 TOLERANCES:  
 X.XXX ±0.020  
 X.XXX ±0.010

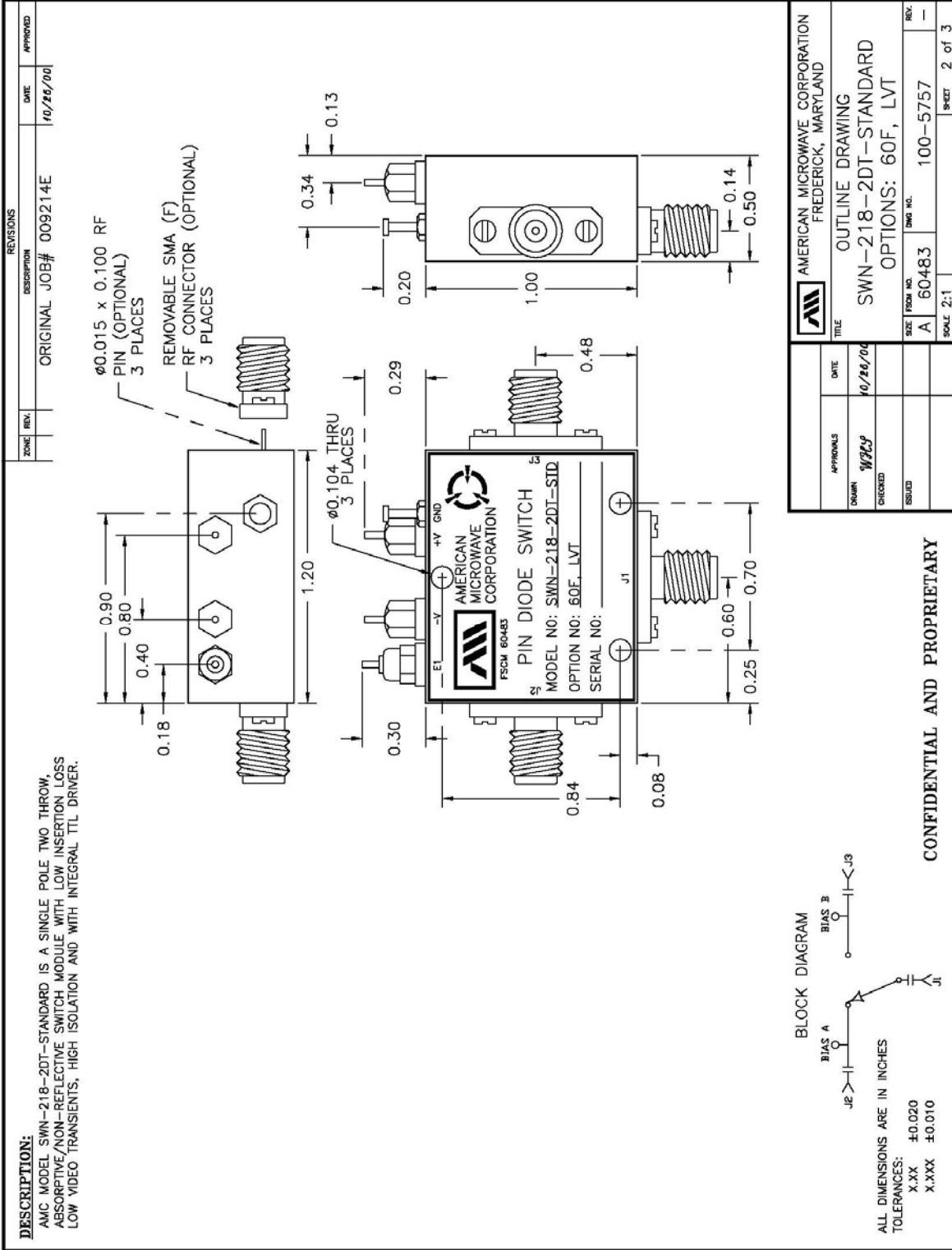
**ENVIRONMENTAL RATINGS:**

- TEMPERATURE: ..... -55C TO +85C (OPERATING)
- ..... -55C TO +125C (STORAGE)
- HUMIDITY: ..... MIL-STD-202F, METHOD 103B COND. B
- ..... MIL-STD-202F, METHOD 213B COND. B
- SHOCK: ..... MIL-STD-202F, METHOD 204D COND. B
- ..... MIL-STD-202F, METHOD 105C COND. B
- VIBRATION: ..... MIL-STD-202F, METHOD 105C COND. B
- ..... MIL-STD-202F, METHOD 107D COND. A
- TEMPERATURE CYCLE: ..... MIL-STD-202F, METHOD 107D COND. A

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

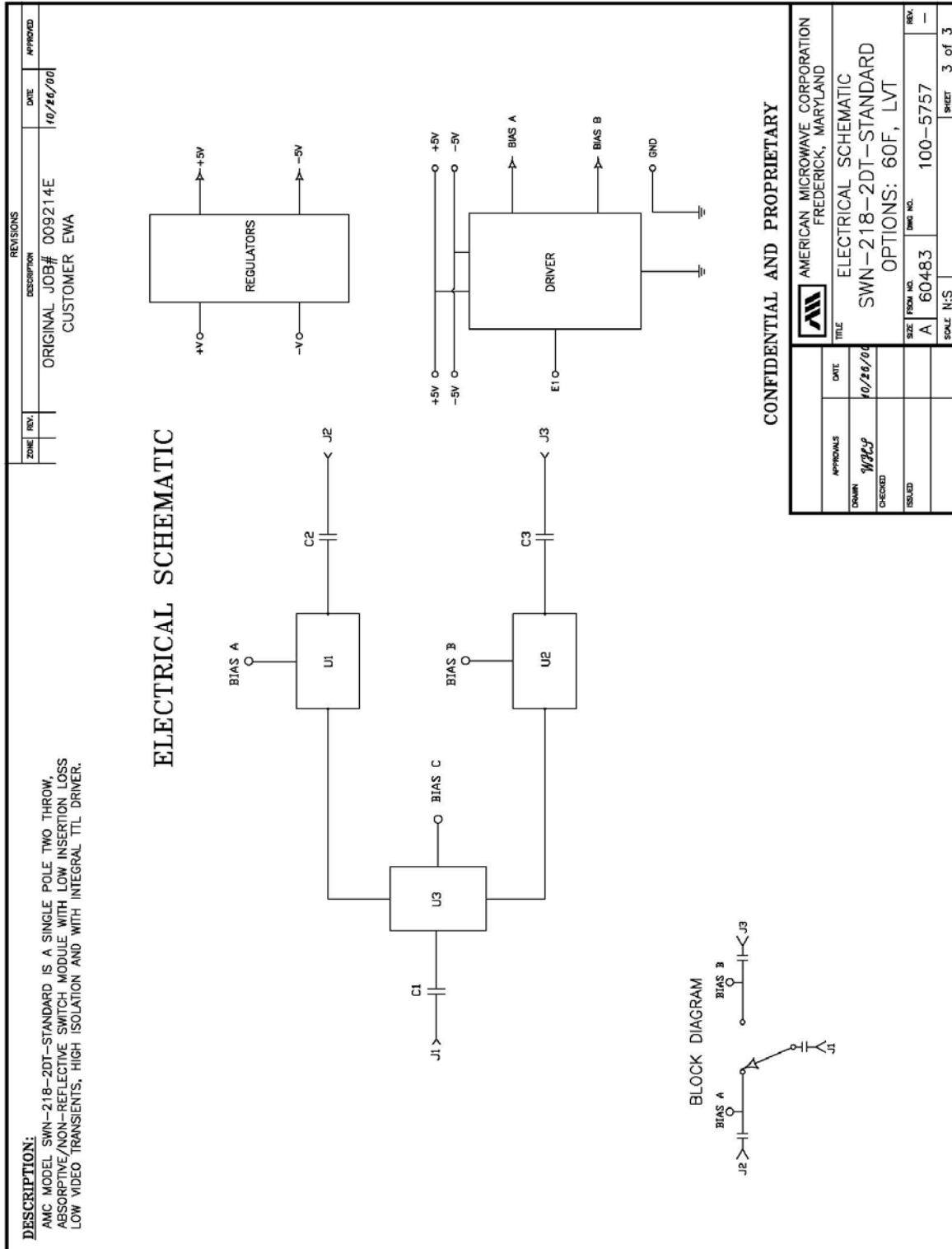


**OUTLINE DRAWING**





**FUNCTIONAL SCHEMATIC**



**FINAL TEST DATA**

**FINAL TEST DATA SHEETS**

**FOR**

**AMC MODEL NUMBER**

**SWN-218-2DT-STANDARD  
OPTION 60F, LVT**

**Serial Numbers:**

**2MS101011 THRU 2MS101016**







**FINAL TEST DATA**

AMC MODEL NO: SWN-218-2DT-STANDARD OPTIONS 60F, LVT SERIAL NUMBER: 2MS101012

FORM: 100-5763



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: 02/22/01

CUSTOMER: EWA  
 JOB NO: 009214E  
 MODEL NO: SWN-218-2DT-STANDARD  
 SERIAL NO: 2MS101012  
 CURRENT DRAW: +5 VDC @ 5 mA; -5 VDC @ 5 mA FREQUENCY RANGE: 60 MHz

TECHNICIAN: THACH  
 OPTION NO: 60F, LVT  
 SPECIFICATION:

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 1.34 dB	14.4 dB	1.47 : 1	15.1 dB	1.43 : 1	20.4 dB	1.21 : 1
J1-J3 1.26 dB	14.6 dB	1.46 : 1	15.3 dB	1.55 : 1	20.9 dB	1.20 : 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
	dB	1. : 1	dB	1. : 1	dB	1. : 1
ISOLATION	SWITCHING SPEED					
	DELAY ON	RISE TIME	DELAY OFF	FALL TIME		
J1-J2 > 80 dB	< 30 nS	/ nS	< 30 nS	/ nS		
J1-J3 > 80 dB	< 30 nS	/ nS	< 30 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	nS		

NOTE: Any additional test data on back

TESTED ON: HP 8757A

QA/QC APPROVAL: Q4 Donald Harmon DATED: 2/26/01







